

GIVING AN “E-HUMAN TOUCH” TO E-TAILING: THE MODERATING ROLES OF STATIC INFORMATION QUANTITY AND CONSUMPTION MOTIVE IN THE EFFECTIVENESS OF AN ANTHROPOMORPHIC INFORMATION AGENT

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This study examines the impact of having an anthropomorphic information agent (a humanlike chatbot that acts as an interactive online information provider) in an online store on consumers' attitude toward the Web site, product, and their purchase intentions. Using consumer experiments, we show that the impact of the anthropomorphic information agent is moderated by the amount of static product information available on the Web site and the consumer's consumption motive at the time of visiting the Web site. Our results indicate that the anthropomorphic information agent has a positive effect when static product information on the Web site is limited. Furthermore, we show that when detailed product information is readily available on the Web site, the anthropomorphic information agent can prove detrimental when the consumer has a utilitarian consumption motive.

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INTRODUCTION

An Ernst and Young (1999) study on barriers to online shopping found that the inability to talk to a salesperson and inadequacy of product information were among the most important reasons for not buying. Jupiter Research's (1999) study on online shopping behavior found that 90% of online shoppers wanted some sort of human interaction during the shopping process. According to an Accenture (2000) survey of 25 top e-commerce sites, 62% of shoppers never complete their purchases due to lack of real-time customer service. All these reports have indicated that the absence of a salesperson and the consumer's inability to obtain additional information translate into lost sales for e-tailers (Raymond, 2001).

Online marketers are increasingly addressing these two issues by utilizing sophisticated artificial intelligence programs in the form of anthropomorphic information agents (AIAs) to provide product information in real time. An AIA is an artificial intelligence chatbot program that acts as an interactive online information provider. AIAs typically consist of humanlike characters that simulate human conversations, enabling the consumer to obtain real-time information from them in a text-based conversational format using a natural language such as English. An increasing number of Web sites nowadays utilize such AIAs, which play two roles: They provide information to the consumer as well as add a human touch to an otherwise impersonal Web site. For example, Coca-Cola uses "Hank" and IKEA uses "Anna"—AIAs that provide online customer service. Furthermore, companies such as Kiwilogic (www.kiwilogic.com) and Oddcast (www.oddcast.com) market such custom-made AIAs.

Industry observers (e.g., Luh, 2000; McKeefry, 2000) have noted that today AIAs play an important role in providing a human touch to online customers. Consumers visiting an online store may look for the same personal interaction that they can have with a salesperson in a brick-and-mortar store. With advances in artificial intelligence, such interaction is possible by allowing Web site visitors to have an online chat with an anthropomorphic sales or customer service representative that closely simulates a human. McKeefry (2000) reported that online consumers interacting with AIAs viewed them more as

consultants and advisers rather than as sales or service people.

Although AIAs are being increasingly adopted by e-tailers (Komiak, Wang, & Benbasat, 2005), the marketing literature has not yet addressed the effects AIAs have on consumers' attitude toward the Web site, product, and their likelihood of buying. Is providing a "human touch" to a Web site beneficial? Does receiving product information from an AIA rather than from a static listing make a difference in terms of consumer response? What are some contingencies when an AIA can help (or hurt)? In this article, we attempt to answer these questions. Specifically, we examine whether the impact of the AIA is moderated by the amount of static information available on the Web site and the consumer's consumption motive during the shopping process. We argue that when the Web site has only limited static product information available, the AIA can be rather useful for the consumer to obtain product information and can positively affect consumer attitude and purchase intention. On the other hand, the effectiveness of the AIA as an information provider would diminish when the Web site has sufficient static product information. We further propose that the "human touch" provided by the AIA can positively impact consumer attitude and purchase intentions when consumers have an experiential consumption motive; however, when consumers have a utilitarian consumption motive, the AIA can adversely impact consumer attitude and purchase intentions.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

According to social response theory, when presented with social cues or technology (e.g., a computer) possessing a set of characteristics normally associated with humans, we respond by exhibiting social behaviors and making social attributions toward that technology (Moon, 2000; Nass & Moon, 2000). Moreover, social response research demonstrates that people engage in social behaviors with computers and treat them as humans (Moon, 1999; Moon & Nass, 1996; Nass, Moon, & Green, 1997).

Research has shown that social responses toward computer agents take place in e-tailing contexts as

well. In one study, when a computer's message style matched consumers' personality types, consumers perceived the computer (i.e., the information source) to be an expert and more competent (Moon, 2003a). Moon (2003b) demonstrated that consumers credited a computer, instead of themselves, for a smart product choice after they previously engaged in self-disclosure with the computer. These research findings have important implications for online marketing. For example, new online tools such as Intelligent Recommendation Agents and AIAs, empowered by advanced artificial intelligence, are capable of creating social cues and having meaningful conversations with consumers. Based on social response theory, consumers' instincts and reflexes to social cues are likely to make them unconsciously and automatically treat encounters with AIAs as social encounters (Moon, 1999; Moon & Nass, 1996; Nass et al., 1997). Based on these findings, we expect that the presence of an AIA and the consumer's ability to converse with it would provide a "human touch" to the Web site; that is, the Web site would be perceived as exhibiting humanlike behavior. Therefore, we hypothesize:

H1a: A Web site that allows consumers to interact with an anthropomorphic information agent will be considered more "human" than a Web site that does not.

A number of studies have shown that the interaction with service providers in retail settings creates positive results in terms of consumer response toward the store and product (e.g., Raney, Arpan, Pashupati, and Brill, 2003; Suprenant & Solomon, 1987). This has been attributed to the fact that people are basically social animals and desire human interaction. In the area of human-computer interactions, Sproull, Subramani, Kiesler, Walker, and Waters (1996) found that when people were asked questions in text form versus by a human face, they preferred the experience of responding to questions asked by the human face. These findings indicate that consumers would have a positive response interacting with a Web site that exhibits humanlike behavior rather than with a relatively inanimate Web site.

As Chen and Wells (1999) and Chen, Clifford, and Wells (2002) noted, consumers evaluate Web sites along both emotional and rational aspects. They posited that peripheral aspects such as color, music,

and video clips on the Web site improve emotional evaluation whereas central aspects such as information provided by the Web site improve rational evaluation. We expect that the human touch provided to the Web site by the presence of an AIA will serve as a peripheral aspect and therefore impact evaluation of the Web site along emotional aspects.

H1b: A Web site that allows consumers to interact with an AIA will be evaluated more positively on emotional aspects than a Web site that does not.

Research on the use of heuristics in marketing has shown that when consumers do not have sufficient information, they are prone to using peripheral or heuristic cues in their judgments and behaviors (e.g., Chang & Wildt, 1996; Maheswaran, Mackie, & Chaiken, 1992). A recent study by Smith, Menon, and Sivakumar (2005) found that when consumers were not provided with any product recommendation, they were more likely to pursue any readily available effort-reducing cues available on the Web site for decision making. Social cues of computers can work as heuristics or peripheral cues when consumers are neither motivated nor capable of engaging in more elaborative information processing (Chaiken, 1980; Petty & Cacioppo, 1986). The presence of an AIA in an online store can serve as such a peripheral cue, when central cues (e.g., product information) are limited on the Web site. Moreover, consumers may seek the help of the AIA for additional product information in such a case. Social response theory would predict that interactions with an AIA are likely to generate social responses or feelings. Information processing theory would predict that the fun, entertainment, and human touch resulting from the interaction can serve as peripheral cues for consumers to form their evaluations of the Web site, product, and consequently, their purchase intention (Mathwick & Ridgion, 2004; Zeithaml, Parasuraman, & Malhotra, 2002). On the other hand, when consumers are provided with sufficient product information, the need to interact with the AIA, and the emotional response to it is likely to diminish.

H2a: An AIA will enhance Web site evaluation along emotional aspects more when product information on the Web site is limited than when detailed product information is available on the Web site.

H2b: Having an AIA will enhance attitude toward the product more when product information on the Web site is limited than when detailed product information is available on the Web site.

H2c: Having an AIA will enhance purchase intention more when product information on the Web site is limited than when detailed product information is available on the Web site.

The following study was conducted to test our hypotheses.

STUDY 1

Procedure

In this study, we adopted a 2 (gist vs. detailed product information) \times 2 (AIA vs. No AIA) between-subjects design. Eighty-nine undergraduate students participated for course credit. They were each seated at a PC as they entered the lab. After initial instructions, they were asked to imagine that they were in the process of shopping for a personal digital assistant (PDA) and were considering one shown on an online store's Web site (the fictitious e-tailer Web site was designed for the study). Participants were directed to the Web site, which presented a specific brand/model of PDA. Both e-tailer Web site and PDA brand were fictitious to avoid the confounding effects of any preconceived attitude that participants may have had toward certain retailers or PDA brands. Participants were allowed to browse the Web site and chat with the AIA (if they were in the AIA condition) at their own pace. Following this, they completed the dependent measures. All participants completed the study within 30 min.

Manipulations

Static information amount was manipulated by the Web site as either having only a short paragraph (gist) or a detailed listing (details) of features of the PDA. In addition, participants were randomly assigned to a Web site that either had an AIA or did not (see Appendix A [top and bottom] for samples of screenshots). Participants in the AIA conditions were given the option to chat with the AIA, which was an artificial intelligence program that mimicked a human salesperson. They could end the conversation with the AIA at their will. For the AIA, we used the

Artificial Linguistic Internet Computer Entity (ALICE), one of the smartest chatbots ever developed (BBC News, 2004). In addition to ALICE's existing knowledge bases that support general conversations, we added over 600 possible questions and answers pertaining to the PDA shown on the Web site and the online store. These questions were generated by a sample of 41 undergraduate students drawn from the same population as the main study; they were shown the Web site and product and asked to list questions they would ask as a consumer. With this added knowledge base, participants could ask ALICE product- or store-related questions or have a conversation with her on virtually any topic.

Dependent Measures

Participants evaluated the Web site along seven 7-point Likert scale items adapted from Chen and Wells (1999) and chosen to reflect respondents' evaluations along both emotional and rational dimensions. Product attitude was measured using three bipolar items (Negative-Positive, Disliked a lot-Liked a lot, Very Bad-Very Good). Purchase intention was measured with one item (Very Unlikely-Very Likely). To what extent the Web site provided a human touch was measured with three 7-point Likert scale items which measured how human the Web site was, how much like a real salesperson it was, and whether the Web site treated the participant as a human would. In addition, using 7-point bipolar items, participants indicated whether they got the information that they required and the extent to which they felt the need to talk to a real salesperson at the end of their visit to the Web site. Finally, participants completed manipulation check and demographic questions.

The three items used to measure human touch were averaged into a humanness index (Cronbach's $\alpha = .83$). The three items measuring attitude toward the PDA were averaged (Cronbach's $\alpha = .80$). An exploratory factor analysis of the seven items used to measure emotional and rational aspects of the Web site showed two clear factors with eigen values over 1.0, explaining 77.3% of the total variance. The four items (enjoyable, friendly, fun, and interesting) measuring the emotional aspect of the Web site loaded on one factor (all factor loadings > 0.6) and were therefore averaged (Cronbach's $\alpha = .91$), and hereafter are

referred to as Web Site_{Emotional}. The other three items (customer need-oriented, informative, and helpful) measuring the rational aspects of the Web site loaded on the second factor (all factor loadings > 0.8) and were therefore averaged (Cronbach’s $\alpha = .79$), and hereafter are referred to as Web Site_{Rational}.

Results

Manipulation Checks

Interaction with AIA. A log maintained by the AIA server showed that every participant who had the option of chatting with the salesperson had done so.

Information Quantity. The perceived extent of static information available on the Web site was measured using the item “In my opinion, the static product information provided by the Web site is:” to which participants indicated their response on a scale of 1 (*Very brief*) to 7 (*Very detailed*). An analysis of variance (ANOVA) on this item with both information and AIA conditions as independent variables revealed only a main effect of information, $M_{\text{details}} = 5.35$ versus $M_{\text{gist}} = 3.05$, $F(1, 87) = 37.94$, $p < .001$. Neither the main effect of AIA nor the interaction was significant (both $p > .10$), indicating that the manipulation of static information on the Web site was successful.

MANOVA Results. A multivariate analysis of variance (MANOVA) was performed with humanness, attitude toward the product, purchase intention, and

Web Site_{Emotional} as dependent variables and information (gist or details), AIA (present or absent), and their interaction as independent variables. The MANOVA results revealed significant main effects for information, Wilk’s $\lambda = 0.84$; $F(4, 83) = 3.93$, $p < .01$, and AIA conditions, Wilk’s $\lambda = 0.69$; $F(4, 83) = 9.72$, $p < .001$, qualified by a significant interaction, Wilk’s $\lambda = 0.89$; $F(4, 83) = 2.50$, $p < .05$. Univariate tests showed that there was a significant main effect of the AIA on Humanness, $M_{\text{AIA}} = 3.13$ versus $M_{\text{No AIA}} = 2.30$, $F(1, 86) = 9.69$, $p < .01$, and Web Site_{Emotional}, $M_{\text{AIA}} = 4.10$ versus $M_{\text{No AIA}} = 2.55$, $F(1, 86) = 34.49$, $p < .001$. Therefore, H1a and H1b are supported.

There was a significant interaction for Web Site_{Emotional}, $F(1, 86) = 5.09$, $p < .03$. As can be seen in Table 1, the evaluation of the Web site along emotional aspects was enhanced more in the gist condition than in the details condition; however, the difference between the two details conditions also was significant, $F(1, 44) = 8.08$, $p < .01$, although the enhancement was not as great. Therefore, we have partial support for H2a.

Further, univariate tests showed that the interaction term was significant for both attitude toward the product, $F(1, 86) = 4.18$, $p < .05$, and purchase intention, $F(1, 86) = 4.73$, $p < .04$. When only a gist of product information was provided on the Web site, both attitude toward the product, $M_{\text{No AIA}} = 4.29$ ver-

TABLE 1 Study 1 Means of Dependent Measures (SDs)

EXPERIMENTAL CONDITION	HUMANNESS	WEB SITE _{Emotional}	WEB SITE _{Rational}	ATTITUDE TOWARD PDA	PURCHASE INTENTION
Gist–No AIA (n = 22)	2.09 ^a (1.11)	1.97 ^a (0.90)	2.70 ^a (0.98)	4.29 ^a (0.59)	2.18 ^a (0.96)
Gist–AIA (n = 21)	3.06 ^b (1.44)	4.12 ^b (1.52)	3.30 ^a (1.34)	4.87 ^b (1.08)	3.38 ^b (1.69)
Details–No AIA (n = 23)	2.49 ^a (1.12)	3.07 ^c (1.12)	4.65 ^b (0.88)	5.31 ^c (0.56)	3.37 ^b (1.83)
Details–AIA (n = 23)	3.19 ^b (1.40)	4.08 ^b (1.23)	4.25 ^b (1.19)	5.19 ^c (0.80)	3.09 ^b (1.86)

Note. Dependent variables were measured on 7-point scales. Column-wise means with different superscripts are different at $p < .05$.

sus $M_{AIA} = 4.87$, $F(1, 41) = 4.93$, $p < .04$, and purchase intention, $M_{No\ AIA} = 2.18$ versus $M_{AIA} = 3.38$, $F(1, 41) = 8.31$, $p < .01$, were significantly greater when an AIA was available. There were no significant differences in the details condition (both $p > .2$). Thus, H2b and H2c are supported.

A regression of attitude toward the product simultaneously on Web Site_{Rational} and Web Site_{Emotional} by information condition showed that only Web Site_{Rational} predicted product attitude in the details condition, $\beta = .40$, $t = 2.76$, $p < .01$, and only Web Site_{Emotional} did so in the gist condition, $\beta = .18$, $t = 2.04$, $p < .05$. This indicates that when detailed information is available, the attitude toward the product is driven by the rational evaluation of the Web site, which is based on how much static information is available. On the other hand, when information on the Web site is limited, peripheral aspects such as the AIA drive product attitude through emotional evaluation of the Web site.

To further examine our results, we conducted post hoc analyses with the two items that measured how well participants' need for product information was fulfilled and how much they felt the need to talk to a human salesperson after visiting the Web site. Analysis showed that in the gist condition, participants were more likely to report that they received all the information they needed when an AIA was present, $M_{No\ AIA} = 2.01$ versus $M_{AIA} = 2.74$, $t(41) = 1.90$, $p < .06$, whereas the difference was not significant in the details condition, $M_{No\ AIA} = 4.33$ versus $M_{AIA} = 3.99$, $t(44) = .76$, $p = .45$. Further, those in the gist condition had a lower need to talk to a human salesperson after they had visited the Web site that had an AIA, $M_{No\ AIA} = 6.01$ versus $M_{AIA} = 5.37$, $t(41) = 1.69$, $p < .10$, compared to participants in the details condition, $M_{No\ AIA} = 4.60$ versus $M_{AIA} = 4.46$, $t(44) = .23$, $p = .82$. These findings, along with those pertaining to Web Site_{Emotional}, indicate that when information is limited, the AIA plays a dual role of information and social agent; however, when product information on the Web site is plentiful, the utility of the AIA is limited to a social agent. As our findings indicate, participants in the details + AIA condition reported higher affective evaluation of the Web than did participants in the details-only condition, 4.08 versus 3.09, $F(1, 44) = 8.08$, $p < .01$, but the positive emotional evaluation of the Web site did not translate into more

positive product evaluation and higher purchase intention.

Finally, including individual-level variables such as age, gender, familiarity with PDAs, knowledge of PDAs, whether a PDA was owned, familiarity with AIAs or chatbots, number of hours of Internet use per week, number of times shopped on the Internet, and number of online purchases made in past year as covariates or as independent variables (based on median split) in the aforementioned analyses showed that none of these was a significant factor.

Discussion

In this study, we demonstrated that when participants had only limited static product information, the availability of an AIA enhanced affective evaluation of the Web site, product evaluation, and purchase intention. When detailed information was provided on the Web site, however, the AIA enhanced evaluation of the Web site along emotional aspects, but not attitude toward the product and purchase intention.

The explanation for this result could be that when only limited information was provided, participants used the AIA as a source of information. Several research studies have shown that, in general, consumers like more information compared to limited product information (Crocker, 1986; Jaccard & Wood, 1988). Therefore, it is possible that when only limited static information was available on the Web site, participants interacted with the AIA to obtain further information. This interaction led to a sense of human touch (which in turn led to higher affective evaluation of the Web site), more positive product evaluation, and higher purchase intention. When detailed information is readily available on the Web site, the function of the AIA as an information agent diminishes. Although all participants in the details condition interacted with the AIA, it could have been primarily for social reasons or due to its novelty, but not to obtain additional information. As such, while their perception of the humanness of the Web site was significantly higher when they had an AIA to talk to and when they had higher evaluations of the Web site on the affective component, their product evaluation and purchase intention were not significantly changed. This indicates that while the AIA can enhance evaluation of the Web site on the affective

component when it functions as a social agent, it improves product evaluation and purchase intention only when it serves as an information agent. Nevertheless, note that product evaluation was significantly higher in the details condition, regardless of whether an AIA was available. This indicates that although the AIA may be effective in providing a human touch and enhancing affective evaluation of the Web site, if enhancing product attitude is the goal, providing detailed information on the Web site can result in the desired response.

Study 1 clearly shows that the AIA has a favorable impact when information on the Web site is limited, but does little when detailed information is readily available on the Web site. Nevertheless, consumers are not always in an information-seeking mode while visiting Web sites. What happens when the consumer has a consumption motive that does not emphasize the need for information? In such a case, it can be expected that detailed information provided on the Web site may not be a benefit anymore, and other aspects may moderate the impact of the AIA. If so, it would be erroneous to conclude from Study 1 that the AIA has no impact on product attitude and purchase intention when detailed static information is available on the Web site. As we had established in this study that the AIA has positive effects in the gist condition, in the next study, we investigate the role of the AIA further in the details condition while manipulating the consumers' consumption motive (Babin, Darden, & Griffin, 1994; Childers, Carr, Peck, & Carson, 2001).

STUDY 2

Manipulating consumption motive—utilitarian versus experiential—allows us to test whether the AIA's role as a social agent is enhanced when the consumer has a motive that does not emphasize information, i.e., an experiential motive (Holbrook & Hirschman, 1982). Similarly, we wished to examine whether the AIA as a social agent can work as a detriment when detailed information is available on the Web site and the consumer is in an information-seeking mode, i.e., a utilitarian consumption motive.

Prior research in information processing has indicated that the consumer's consumption motive can

affect the way information is processed (e.g., Pham, 1998; Shiv & Fedorikhin, 1999). Individuals are likely to adopt a heuristic, holistic, and less effortful processing style when the consumption motive is based on experiential criteria (Adaval, 2001; Pham, 1998; Shiv & Fedorikhin, 1999). When consumption motives are detail/reason oriented, they engage in reason-based or rational processing (Bless, Mackie, & Schwarz, 1992; Isbell & Wyer, 1999). Further, research has shown that when consumers have an experiential consumption motive, they are likely to pay more attention to peripheral cues such as rapport or similarity with information source whereas when the consumption motive is utilitarian, they pick up central cues such as expertise and credibility of information source (Feick & Higie, 1992; Smith et al., 2005). Therefore, a consumer having an experiential consumption motive is likely to attend to peripheral cues (e.g., an AIA), and use them to evaluate the Web site and product. On the other hand, consumers with a utilitarian motive are more likely to base their Web and product evaluations on task-related or diagnostic cues such as product information and attributes rather than on the AIA. In fact, interaction with an AIA could be disruptive when consumers have a utilitarian consumption motive due to the effort required in obtaining information from the AIA. Thomas (1992) documented that consumers had more difficulty processing product information gathered from conversations because they had to tease out product-related information from non-product-related information. Similarly, Schlosser (2003) found that consumers who were browsers (i.e., those who are less information oriented) were more persuaded by interactive Web sites than they were by passive sites. In contrast, searchers (i.e., those who are more information oriented) preferred noninteractive, passive Web sites. In addition, for consumers with utilitarian consumption motives, a plain text format of product information is congruent with their information-processing style and is easier to process than is a narrative form of information as provided by the AIA (see Peracchio & Meyers-Levy, 1997). Therefore, we would expect that when consumers have an experiential consumption motive, the AIA will have positive effects; however, when they have a utilitarian consumption motive, trying to obtain additional product information from the AIA can disrupt their information-processing style and thus will lower their product evaluations and purchase intention. Accordingly, we hypothesize:

H4a: When the consumer has an experiential consumption motive, interaction with an AIA will enhance evaluation of the Web site on emotional aspects. Such an effect will not emerge when the consumer has a utilitarian consumption motive.

H4b: When the consumer has an experiential consumption motive, attitude toward the product and purchase intention will be higher when an AIA is available, compared to when an AIA is not available.

H5a: When the consumer has a utilitarian consumption motive, interaction with an AIA will lower the evaluation of the Web site on rational aspects. Such an effect will not emerge when the consumer has an experiential consumption motive.

H5b: When the consumer has a utilitarian consumption motive, attitude toward the product and purchase intention will be lower when an AIA is available, compared to when an AIA is not available.

Procedure

In a 2 (utilitarian vs. experiential consumption motive) \times 2 (AIA vs. No AIA) between-subjects design, 114 undergraduate marketing students participated for course credit. The experimental procedure was kept the same as in Study 1. All participants completed the study within 30 min.

Manipulations

The consumption motive in buying the PDA was manipulated both through instructions and Web site content. The initial instruction provided to participants primed them to adopt the assigned motive. Further, the graphics used on the Web site corresponded with the assigned motive (see Appendix B for samples of screenshots).

As in Study 1, those participants in the AIA condition had the option of chatting with an AIA whereas those in the no-AIA conditions did not.

Dependent Measures

The dependent measures were identical to those used in Study 1. As in Study 1, the seven items used to measure attitude toward the Web site were averaged into Web Site_{Rational} and Web Site_{Emotional} indices, respectively, following a factor analysis and reliability checks

(both Cronbach's $\alpha > .80$). In addition, participants' consumption motive was measured using nine 7-point Likert-scale items (four for utilitarian and five for experiential motive; see Appendix C) adapted from Shiv and Fedorikhin (1999). Following a factor analysis (corresponding factor loadings > 0.7), these were averaged into respective utilitarian (Cronbach's $\alpha = .80$) and experiential (Cronbach's $\alpha = .71$) motive measures.

Results

Manipulation Checks

Interaction with AIA. A log kept by the AIA server showed that every participant who had the option of chatting with the salesperson had done so. An ANOVA of the humanness variable with both AIA and consumption-motive conditions as independent variables showed only a main effect of AIA, $M_{\text{AIA}} = 2.79$ versus $M_{\text{No AIA}} = 2.14$, $F(1, 110) = 5.27$, $p < .03$. Neither the main effect of consumption motive nor the interaction term was significant. This indicates that those who had the AIA option considered the Web site to be more human than those who did not have the option.

Consumption Motive. An ANOVA of the utilitarian motive composite with both AIA and consumption motive as independent variables showed only a main effect of consumption motive, $M_{\text{Utilitarian}} = 6.08$ versus $M_{\text{Experiential}} = 5.18$, $F(1, 110) = 31.04$, $p < .001$; a higher mean indicates more utilitarian. Neither the main effect of AIA nor the interaction term was significant. An ANOVA of the experiential motive composite showed similar results, $M_{\text{Utilitarian}} = 4.61$ versus $M_{\text{Experiential}} = 5.04$, $F(1, 110) = 4.12$, $p < .05$; a higher mean indicates more experiential. These results show that the respective consumption-motive manipulations were effective.

MANOVA Results. A MANOVA was performed with Web Site_{Emotional}, Web Site_{Rational}, attitude toward the product, and purchase intention as dependent variables and consumption motive (utilitarian or experiential) and AIA (present or absent) and their interaction as independent variables. The MANOVA results revealed a significant main effect of AIA, Wilk's $\lambda = 0.87$; $F(4, 107) = 3.88$, $p < .01$, qualified by a significant interaction, Wilk's $\lambda = 0.91$; $F(4, 107) = 2.80$, $p < .03$. Univariate tests showed that there was a significant interaction for Web Site_{Rational}, $F(1, 110) = 4.08$, $p < .05$, attitude toward the product, $F(1, 110) = 4.50$,

$p < .04$, and purchase intention, $F(1, 110) = 5.38$, $p < .03$, but not for Web Site_{Emotional}, $F(1, 110) = .06$, $p = .81$. Planned comparisons showed that when participants had an experiential consumption motive, there were no significant differences on any of the dependent measures (all $p > .20$) when an AIA was available—contrary to our expectation. Therefore, our data do not support H4a and H4b. However, when consumers had a utilitarian motive, their evaluation of the Web site on rational aspects, $F(1, 56) = 8.02$, $p < .01$, attitude toward the PDA, $F(1, 56) = 14.84$, $p < .001$, and purchase intention, $F(1, 56) = 9.70$, $p < .01$, were significantly lower when an AIA was available (see Table 2). Thus, H5a and H5b are supported.

To further examine our results, a post hoc analysis with the item that measured how well participants' need for product information was fulfilled (i.e., While you were on the Web site, to what extent did you get all the information you would need to make a decision on whether or not to buy the PDA?) showed a marginally significant interaction between consumption motive and AIA, $F(1, 110) = 2.93$, $p < .09$. Closer examination showed that participants in the utilitarian condition were less likely (marginally significant) to report that they got all the information they needed when an AIA was present, $M_{No\ AIA} = 4.57$ versus $M_{AIA} = 4.00$, $F(1, 56) = 2.09$, $p < .07$, whereas the difference was not significant in the experiential condition, $M_{No\ AIA} = 1.31$ versus $M_{AIA} = 1.67$, $F(1, 54) = .96$, $p = .33$.

Including demographic and individual-level variables as covariates or as independent variables (based on median split) showed no significant differences for any of the dependent measures.

Discussion

In this study, we examined whether the impact of the AIA is moderated by the consumption motive the consumer has while visiting the Web site, particularly when detailed static product information is provided on the Web site. Note that those in the AIA conditions, being able to get more information from the AIA, had access to more product information than did those in the no-AIA conditions. Despite this, why is it that when consumers had a utilitarian motive, their responses were influenced in a negative direction when an AIA was available? There are two possible explanations for this.

As shown by Peracchio and Meyers-Levy (1997) and Schlosser (2003), it is possible that when consumers are in an information-seeking mode, they get “turned off” by peripheral aspects of the Web site, such as an AIA. This was evident from a post hoc analysis of the conversation log, which was coded by an independent coder blind to the hypotheses. Each statement by the participant during his or her conversation with the AIA was coded along several dimensions—whether the statement was a question or a response, product-

TABLE 2 Study 2 Means of Dependent Measures (SDs)

EXPERIMENTAL CONDITION	WEB SITE _{Emotional}	WEB SITE _{Rational}	ATTITUDE TOWARD PDA	PURCHASE INTENTION
Utilitarian–No AIA (n = 28)	4.09 ^a (1.35)	5.13 ^a (1.11)	5.87 ^a (0.92)	5.25 ^a (1.43)
Utilitarian–AIA (n = 30)	4.01 ^a (1.68)	4.16 ^b (1.47)	4.74 ^b (1.26)	4.07 ^b (1.46)
Experiential–No AIA (n = 28)	4.27 ^a (0.99)	4.56 ^b (0.76)	5.27 ^b (0.89)	4.64 ^b (1.31)
Experiential–AIA (n = 28)	4.06 ^a (1.26)	4.48 ^b (1.23)	4.99 ^b (1.09)	4.64 ^b (1.22)

Note. Dependent variables were measured on 7-point scales. Column-wise means with different superscripts are different at $p < .05$.

related or non-product-related, and abusive or nonabusive. Comparison by goal condition showed no significant difference in the total number of statements, number of questions versus answers, or number of product-related versus non-product-related statements. However, those participants in the utilitarian motive condition made significantly more abusive statements against the AIA than did those in the experiential motive condition, $M_{\text{Utilitarian}} = .36$ versus $M_{\text{Experiential}} = .04$, $F(1, 53) = 3.85$, $p < .05$. This indicates that although the AIA may have answered their questions, having to interact with an AIA to get additional product information may have been annoying to those consumers with a utilitarian motive. The alternative explanation is that when one has a utilitarian motive, having to get the information in narrative form may be perceived as an inconvenience and difficult to process (Peracchio & Meyers-Levy, 1997; Thomas, 1992), leading to a perception of having received less information than those in the AIA condition, as our post hoc analysis showed. Both these plausible explanations suggest that for those consumers with a utilitarian motive, it is not only the information that matters but also the mode by which they obtain it.

It was surprising that no significant differences were found in the experiential motive condition. It is possible that the detailed product information conflicted with the experiential motive and the utilization of the AIA. This is consistent with what researchers have defined as the interaction of systematic processing and heuristic processing (Chaiken & Maheswaran, 1994; Maheswaran et al., 1992). Prior research findings have demonstrated that systematic processing caused by large amounts of information often attenuates the judgment impact of heuristic processing (Chaiken, 1980; Maheswaran et al., 1992; Petty & Cacioppo, 1986). In our study, the detailed product information that was provided on the Web site may have triggered systematic processing among those with an experiential motive attenuating the heuristic impact of the AIA. However, there is also a possibility that our manipulation of the experiential motive was not strong enough, although our manipulation check showed that it was effective.

GENERAL DISCUSSION

This research is one of the first endeavors to explore the impact of an anthropomorphic information agent in an online retail environment. We used social-response and

information-processing theories to investigate the contingencies under which an AIA can enhance or inhibit consumer evaluations of the Web site, product, and their purchase intention. In Study 1, we showed that the AIA has a positive impact primarily when the amount of static information available on the Web site is limited. In Study 2, we found that when consumers are driven by a utilitarian consumption motive, the presence of an AIA can have a negative impact.

The findings of our studies provide answers to two interesting questions for e-tailers: how much static information to provide on the Web site and when to use or not use an AIA. The results of Study 1 indicate that the answer depends on whether the goal of the marketer is to enhance affective evaluation of the Web site or to enhance attitude toward the product and purchase intention. Although it may seem like the latter always would be preferable, many Web sites are designed simply to inform and not to sell. In such cases, the marketer may be interested in enhancing the affective evaluation of the Web site, especially if the consumer is expected to be a browser and not a searcher (Schlosser, 2003). Our findings imply that it is better to have an AIA available on the Web site to attain this goal; however, the results of Study 2 show that this could backfire if the consumer has a utilitarian motive while visiting the Web site. As Holbrook and Hirschman (1982) noted, some products are generally of a utilitarian consumption nature while others tend to be experiential. Therefore, considering the detrimental impact that the AIA could potentially have, it becomes important for the marketer to assess the consumption motive the consumer is likely to have while visiting the Web site. If the consumer is likely to have a utilitarian motive, our results imply that the marketer is better off refraining from having an AIA, and instead should provide detailed product information in a static form on the Web site. In summary, e-tailers need to take a good look at the nature of the products they offer (i.e., experiential vs. utilitarian) and the consumers' likely motive as well as the desired goal (i.e., affective evaluation of Web site vs. product sales) before they can employ innovative tools such as an AIA.

Our research is not without limitations. In our studies, the product that participants saw on the Web site was a PDA, which is generally an information-heavy product. Whether the effectiveness of the AIA would

be different for products that are less information heavy is worth examining. Though the AIA we used was one of the most sophisticated ones available, its ability to answer questions was limited to its knowledge base. With current technology, the only way to make a virtual agent more “intelligent” is to increase its knowledge base and number of algorithms. Although this research identified the effectiveness of an AIA as an information provider, it also demonstrated its lack of a clear advantage over static detailed listing of product information. This could change with advances in technology, as AIAs are developed with the complex selling strategies that expert human salespeople have. At that point, it will be interesting to repeat our study with such an AIA. AIAs are still a novelty, and it is therefore possible that the sheer novelty of interacting with a Web site simulating a human may have been responsible for higher affective evaluation of the Web site in the AIA conditions.

Future research could examine the effects of the AIA with longer and repeated interactions with it. Whether the results would be the same once the novelty wears off would be interesting to examine. There is increasing research indicating that having an AIA could enhance online consumer trust (Bart, Shankar, Sultan, & Urban, 2005; Komiak et al., 2005; Shankar, Rangaswamy, & Pusateri, 2001). In addition, Schlosser, White, and Lloyd (2006), in an online investment setting, showed that online trust is a key determinant of whether the consumer will convert from a browser to a buyer. However, our research indicates that when the consumer has a utilitarian consumption motive, the AIA can have a detrimental impact on consumer attitude. Therefore, future research could examine the possible moderating role of consumption motive on the impact of having an AIA on online consumer trust. Today, many e-tailers have an online chat option with a human representative. It will be interesting to compare consumer response to online interaction with an AIA versus with a real human. In Study 2, we noted that consumers with a utilitarian motive were more likely to use abusive language with the AIA than were those in the experiential condition. Investigating whether consumers modify their behavior knowing that the person at the other end is a human and not an AIA will make a useful contribution to research in online marketing and to the area of human-computer interaction.

REFERENCES

- Accenture. (2000). 9 Out of 10 Online Holiday Shoppers Experienced Problems, But Still Rated Web Better than Stores and Catalogs for Purchases, According to New Accenture Study, January 10, 2000, New York. Available: http://accenture.tekgroup.com/article_display.cfm?article_id=3612
- Adaval, R. (2001). Sometimes It Just Feels Right: The Differential Weighting of Affect-Consistent and Affect-Inconsistent Product Information. *Journal of Consumer Research*, 28(1), 1–17.
- Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or Fun: Measuring Experiential and Utilitarian Shopping Value. *Journal of Consumer Research*, 20(4), 644–656.
- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the Drivers and Role of Online Trust the Same for All Web Sites and Consumers? A Large-Scale Exploratory Empirical Study. *Journal of Marketing*, 69(4), 133–152.
- BBC News. (2004). Alice Chatbot Wins for Third Time: A Computer Chat Program Called Alice has Won a Prestigious Prize for Human-Like Conversation for the Third Time, September 20, 2004. Available: <http://news.bbc.co.uk/1/hi/technology/3672424.stm>
- Bless, H., Mackie, D. M., & Schwarz, N. (1992). Mood Effects on Encoding and Judgmental Processes in Persuasion. *Journal of Personality and Social Psychology*, 63, 585–595.
- Chaiken, S. (1980). Heuristic Versus Systematic Information Processing and the Use of Source Versus Message Cues in Persuasion. *Journal of Personality and Social Psychology*, 39, 752–766.
- Chaiken, S., & Maheswaran, D. (1994). Heuristic Processing Can Bias Systematic Processing: Effects of Source Credibility, Argument Ambiguity, and Task Importance on Attitude Judgment. *Journal of Personality and Social Psychology*, 66(3), 460–473.
- Chang, T., & Wildt, A. R. (1996). Impact of Product Information on the Use of Price as a Quality Cue. *Psychology and Marketing*, 13(1), 55–75.
- Chen, Q., Clifford, S. J., & Wells, W. D. (2002). Attitude Toward the Site: II. New Information. *Journal of Advertising Research*, 42(2), 33–45.
- Chen, Q., & Wells, W. D. (1999). Attitude Toward the Site. *Journal of Advertising Research*, 39(5), 27–37.
- Childers, T., Carr, C. L., Peck, J., & Carson, S. (2001). Experiential and Utilitarian Motivations for Online Retail Shopping Behavior. *Journal of Retailing*, 77, 511–535.
- Crocker, K. E. (1986). The Influence of the Amount and Type of Information on Individuals' Perception of Legal Services. *Journal of the Academy of Marketing Science*, 14(Winter), 18–27.
- Ernst & Young. (1999). The Second Annual Ernst & Young Internet Shopping Study: The Digital Channel Continues to Gather Steam. Ernst & Young Publication, Ernst & Young LLP, 1999.

- Feick, L., & Higie, R. A. (1992). The Effects of Preference Heterogeneity and Source Characteristics on Ad Processing and Judgments About Endorsers. *Journal of Advertising*, 21, 9–24.
- Holbrook, M., & Hirschman, E. (1982). The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun. *Journal of Consumer Research*, 9(2), 132–140.
- Isbell, L., & Wyer, R. S. (1999). Correcting for Mood-Induced Bias in the Evaluation of Political Candidates: The Roles of Intrinsic and Extrinsic Motivation. *Personality and Social Psychology Bulletin*, 25(2), 237–249.
- Jaccard, J., & Wood, G. (1988). The Effects of Incomplete Information on the Formation of Attitudes Toward Behavioral Alternatives. *Journal of Personality and Social Psychology*, 54(4), 580–591.
- Jupiter Research. (1999). Account Management: Reintermediating the Human Touch for Most Valuable Customers. By Robert Sterling and Marc Johnson, Vision Report, Jupiter Research, April 19, 1999.
- Komiak, S., Wang, W., & Benbasat, I. (2005). Trust Building in Virtual Salespersons Versus in Human Salespersons. *e-Service Journal*, 3(3), 49–63.
- Luh, J. C. (2000). A Personal Touch. *Internet World*, 16(11), 54–55.
- Maheswaran, D., Mackie, D. M., & Chaiken, S. (1992). Brand Name as a Heuristic Cue: The Effects of Task Importance and Expectancy Confirmation on Consumer Judgments. *Journal of Consumer Psychology*, 1(4), 317–336.
- Mathwick, C., & Rigdon, E. (2004). Play, Flow, and the Online Search Experience. *Journal of Consumer Research*, 31(3), 324–332.
- McKeefry, H. L. (2000). Can We Chat? Chat Technology Brings the Human Touch to Online Customer Service. *VARbusiness*, 1614, 43.
- Moon, Y. (1999). The Effects of Physical Distance and Response Latency on Persuasion in Computer-Mediated Communication and Human–Computer Interaction. *Journal of Experimental Psychology: Applied*, 5(4), 379–392.
- Moon, Y. (2000). Intimate Exchanges: Using Computers to Elicit Self-Disclosure From Consumers. *Journal of Consumer Research*, 26(4), 324–340.
- Moon, Y. (2003a). Personalization and Personality: Some Effects of Customizing Message Style Based on Computer Personality. *Journal of Consumer Psychology*, 12(4), 313–326.
- Moon, Y. (2003b). Don't Blame the Computer: When Self-Disclosure Moderates the Self-Serving Bias. *Journal of Consumer Psychology*, 13(1–2), 125–137.
- Moon, Y., & Nass, C. (1996). How “Real” are Computer Personalities? Psychological Responses to Personality Types in Human–Computer Interaction. *Communication Research*, 23, 651–674.
- Nass, C. L., & Moon, Y. (2000). Machines and Mindlessness: Social Responses to Computers. *Journal of Social Issues*, 56(1), 81–103.
- Nass, C. L., Moon, Y., & Green, N. (1997). Are Computers Gender-Neutral? Gender Stereotypic Responses to Computers With Voices. *Journal of Applied Social Psychology*, 27, 864–876.
- Peracchio, L., & Meyers-Levy, J. (1997). Evaluating Persuasion-Enhancing Techniques From a Resource-Matching Perspective. *Journal of Consumer Research*, 24(3), 178–191.
- Petty, R. E., & Cacioppo, J. T. (1986). *Communication and Persuasion*. New York: Springer.
- Pham, M. T. (1998). Representativeness, Relevance, and the Use of Feelings in Decision Making. *Journal of Consumer Research*, 25(2), 144–159.
- Raney, A. A., Arpan, L. M., Pashupati, K., & Brill, D. A. (2003). At the Movies, on the Web: An Investigation of the Effects of Entertaining and Interactive Web Content on Site and Brand Evaluations. *Journal of Interactive Marketing*, 17(4), 38–53.
- Raymond, J. (2001). No More Shoppus Interruptus. *American Demographics*, 23(5), 39–40.
- Schlosser, A. E. (2003). Experiencing Products in the Virtual World: The Role of Goal and Imagery in Influencing Attitudes Versus Purchase Intentions. *Journal of Consumer Research*, 30(3), 184–198.
- Schlosser, A. E., White, T. B., & Lloyd, S. (2006). Converting Web site Visitors Into Buyers: How Web site Investment Increases Consumer Trusting Beliefs and Online Purchase Intentions. *Journal of Marketing*, 70(2), 133–148.
- Shankar, V., Rangaswamy, A., & Pusateri, M. (2001). The Online Medium and Customer Price Sensitivity (Working Paper). University of Maryland, College Park.
- Shiv, B., & Fedorikhin, A. (1999). Heart and Mind in Conflict: The Interplay of Affect and Cognition in Consumer Decision Making. *Journal of Consumer Research*, 26(3), 278–292.
- Smith, D., Menon, S., & Sivakumar, K. (2005). Online Peer and Editorial Recommendations, Trust, and Choice in Virtual Markets. *Journal of Interactive Marketing*, 19(3), 15–38.
- Sproull, L., Subramani, M., Kiesler, S., Walker, J. H., & Waters, K. (1996). When the Interface Is a Face. *Human–Computer Interaction*, 11(2), 97–124.
- Suprenant, C. F., & Solomon, M. R. (1987). Predictability and Personalization in the Service Encounter. *Journal of Marketing*, 51(2), 86–96.
- Thomas, G. (1992). The Influence of Processing Conversational Information on Inference, Argument Elaboration, and Memory. *Journal of Consumer Research*, 19(1), 83–92.
- Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service Quality Delivery Through Web Sites: A Critical Review of Extant Knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362–375.

APPENDIX A

STUDY 1 MANIPULATION OF DETAILS + NO-AIA CONDITION



Introducing the ORION PK-112



- Dimensions 5.11 in (L) x 3.3 in (W) x 0.7 in (D)
- Weight 3.5 oz (105 grams)
- NEC/VR4121 MIPS 133 MHz processor
- 8 Mb ROM, 16 Mb RAM
- 2.7 inch diagonal backlit display screen
- Pen Input. Keyboard compatible
- Palm OS 4.5 operating system
- 56 Kbps external modem
- Preloaded with Date Book, Address Book, Phone Book, To-Do List, Memo Pad, Money Management, and Calculator software
- 12-hour rechargeable Li-Ion battery
- AC adapter included
- Fully connectable to PC, laptop, fax machine, or modem
- 1-year Parts and Labor warranty


CDN \$299

PRECISION ELECTRONICS


7% PST and 7% GST apply. Delivery charges \$6.99 (5-day), \$8.99 (3-day), or \$12.99 (overnight). Visa, MC, Amex accepted. Order online or call 1-800-PRECISION.

APPENDIX A

STUDY 1 MANIPULATION OF GIST + AIA CONDITION




Introducing the ORION PK-112



Scheduler, Calendar, Memo Pad, Internet Browser, Money Manager, Phone Book, Calculator, and Life Organizer, that can synch to a PC or laptop, all in one!

CDN \$299

PRECISION ELECTRONICS
Order online or call 1-800-PRECISION.



Talk to Virtual Salesperson

APPENDIX B

STUDY 2 MANIPULATION OF UTILITARIAN CONSUMPTION MOTIVE

"Over the last few months, you have been looking for a way to organize your daily schedule, store friends' telephone numbers and e-mail addresses, and maintain a To-do list. You recognize that a PDA (Personal Digital Assistant) would be the perfect solution for all these needs. Therefore, you are in the process of shopping for a PDA. You decide to shop for one on the Internet. Please remember that you are looking for a PDA that will allow you to organize your meetings, manage addresses and telephone numbers, keep a To-do list, etc." (Participants were then directed to the following Web page.)

PDA - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Precision Electronics **BargainPDA^{at} P.E.** Call 1-800-PRECISION
FIND THE BEST PRICE ON A PDA OR PDA ACCESSORY!

About PE | Privacy Policy | FAQs | Tell A Friend | Contact Us | Help

Home | Products | Services | PDA Advisor | Investor Relation

Introducing the Onix PK-112

- Dimension 5.11 in (L) x 3.3 in (W) x 0.7 in (D)
- Weight 3.5 oz
- Palm OS 4.5 operating system
- 12-hour rechargeable Li-Ion battery
- 16 MB RAM
- Organize your life with the preloaded Scheduler, Address Book, and Money Management software
- Experience fun with the built-in digital camera, MP3 player, and any of 42 popular games
- Rated the "Most Useful PDA" on the market by Consumer Digest.
- Rated the "Most Exciting PDA" on the market by Consumer Reports
- 1-year parts and labor warranty

\$259
PK-112

Chat with the Virtual Salesperson

7% tax applies. Delivery charges \$6.99 (5-day), \$8.99 (3-day), or \$12.99 (overnight). Visa, MC, Amex accepted. Order online or call 1-800-PRECISION

(Continued)

STUDY 2 MANIPULATION OF EXPERIENTIAL CONSUMPTION MOTIVE

“Over the last few months, you have been noticing an increasing number of advertised electronic gadgets such as fancy cell phones, MP3 players, and organizers. You have also been wanting to buy something that is trendy and hip. Essentially, you want a cool electronic gadget that you can enjoy owning. Although you don’t have much utility for one, you recognize that a PDA (Personal Digital Assistant) would be the perfect product for this. Therefore, you are in the process of shopping for a PDA. You decide to shop for one on the Internet. Please remember that you are looking for a cool PDA so that you can feel trendy and hip. You want to simply enjoy the experience of owning a PDA.” (Participants were then directed to the following Web page.)

PDA - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Precision Electronic **BargainPDA at P.E.** Call 1-800-PRECISION
FIND THE BEST PRICE ON A PDA OR PDA ACCESSORY!

About PE | Privacy Policy | FAQs | Tell A Friend | Contact Us | Help

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Introducing the Onix PK-112

- Dimension 5.11 in (L) x 3.3 in (W) x 0.7 in (D)
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- Organize your life with the preloaded Scheduler, Address Book, and Money Management software
- Experience fun with the built-in digital camera, MP3 player, and any of 42 popular games
- Rated the "Most Useful PDA" on the market by Consumer Digest.
- Rated the "Most Exciting PDA" on the market by Consumer Reports
- 1-year parts and labor warranty

\$259
PK-112

[Chat with the Virtual Salesperson](#)

7% tax applies. Delivery charges \$6.99 (5-day), \$8.99 (3-day), or \$12.99 (overnight). Visa, MC, Amex accepted. Order online or call 1-800-PRECISION

APPENDIX C

SCALE ITEMS TO MEASURE CONSUMPTION MOTIVE

Participants indicated their response on a scale of 1 (*Strongly Disagree*) to 7 (*Strongly Agree*).

Utilitarian

1. While I was thinking about buying a PDA for myself, I was looking for a PDA that would help me organize my day-today life.
2. While I was thinking about buying a PDA for myself, I was looking for a PDA that would deliver good performance.
3. The PDA shown on the Web site will be good for organizing daily events and schedules.
4. The PDA shown on the Web site will be good for storing addresses and telephone numbers.

Experiential

5. While I was thinking about buying a PDA for myself, I was looking for a PDA that would deliver an enjoyable experience.
 6. While I was thinking about buying a PDA for myself, I was looking for a PDA that would be cool to own.
 7. Owning the PDA shown on the Web site will be cool.
 8. The PDA shown on the Web site will be good for playing music.
 9. The PDA shown on the Web site will be good for taking pictures.
-