Virtual Onscreen Assistants: a Viable Strategy to Support Online Customer Relationship Building?

Kathy Keeling, Manchester Business School, University of Manchester, UK
Peter McGoldrick, Manchester Business School, University of Manchester, UK
Susan Beatty, University of Manchester, UK

The benefits of customer-salesperson relationships are difficult to obtain on retail websites when the interaction lacks direct human contact. This study verifies an association between the presence of a virtual Onscreen Assistant (OSA) and perceptions of functional and social relational benefits by potential customers. This has not previously been established. A theoretical model of relationships between relational benefit perceptions, trust building and patronage expectations is derived and tested. There is considerable potential for OSA use to build relational benefit perceptions but participants were only moderately positive about present OSA capabilities. Substantial technological development is still needed to support social interaction.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/12617/volumes/v34/NA-34

[copyright notice]:
This work is copyrighted by The Association for Consumer Research. For permission to copy or use this work in whole or in part, please contact the Copyright Clearance Center at http://www.copyright.com/.
Virtual Onscreen Assistants: A Viable Strategy to Support Online Customer Relationship Building?
Kathy Keeling, University of Manchester, UK
Peter McGoldrick, University of Manchester, UK
Susan Beatty, University of Manchester, UK

ABSTRACT
The benefits of customer-salesperson relationships are difficult to obtain on retail websites when the interaction lacks direct human contact. This study verifies an association between the presence of a virtual Onscreen Assistant (OSA) and perceptions of social benefits. The lack of opportunities for interaction can lead to positive responses from users. The additional benefits of customer-salesperson relationships are difficult to obtain online when the interaction lacks direct human contact.

INTRODUCTION
Fostering relationships between companies and customers is of interest to both parties. Salespeople are important in producing and maintaining customer allegiance to a firm (Crosby et al. 1990). For retailing, Beatty et al. (1996) find the relationship between a salesperson and customer associated with customer loyalty, purchasing and positive word of mouth activity (Reynolds and Beatty 1999).

Customer relationship building is also important to e-commerce website profitability (Reichheld, Markey, and Hopton 2000). However, although Yen and Gwinner (2003) demonstrate some offline customer relational benefits are mirrored in the e-commerce context, the lack of opportunities for interaction lead them to conclude that the removal of the ‘social-bond mechanism’ (p 88) in self-service technologies may damage customer loyalty. Thus, the additional benefits of customer-salesperson relationships are difficult to obtain online when the interaction lacks direct human contact.

An alternative strategy is to help replace the customer-salesperson interaction with a believable, engaging, synthetic salesperson or salescharacter on computer screens. We argue that the possibility for interactions added by the presence of an OSA on a retail website that remind customers of face to face communication will stimulate customer perceptions of social relationship benefits. Consequently, as offline, a form of relationship building can be used to help the online business achieve the financial benefits of loyal customers but with reduced overheads. There are some published studies on the use of OSAs on retail websites but little, if any, information on the relational benefits perceived by customers from such a strategy.

The aims of this study, therefore, are twofold. First, to confirm an association between OSA presence on a website and perceptions of relational benefits by potential customers; this has not previously been established. Yen and Gwinner (2003) excluded social benefits from their study of relationship benefit relevance in online retailing. Thus, we particularly seek to determine whether customers recognise potential for social benefits from the presence of an OSA on a retail website.

Second, to develop and test a theoretical model of the effects of relational benefits derived from an OSA on trust building and expectations of using a website. If customers feel that the presence of an OSA suggests relational benefits, then we need to understand and model relationships between such perceptions, trust building and interest in purchasing from the site. If such a model is developed and tested, the addition of an OSA represents an additional strategy for online retailers considering building social relationships with their customers.

THE POTENTIAL OF ONSCREEN ASSISTANTS
Characters representing the brand can be used to transfer meaning and positive attitudes to the products in the minds of the consumers; the use of animated spokes-characters is associated with brand preference and increased attention to advertising (Callcott and Phillips 1996). This suggests that introducing an OSA to a retail website will tap a familiar and attractive concept to customers with “remarkable endorsement power in modern commerce” (Stafford, Stafford, and Day 2002).

Furthermore, research suggests that customers will apply social rules and social expectations when interacting with computer technologies (Sundar and Nass 2000).

Despite this promising background and a broad literature on the study of animated interface agents generally, academic studies concerning the application of the OSA in e-retail are relatively sparse. Nevertheless, there is some agreement that on-screen characters can be more engaging and motivating for the user. In a study of female college students, Wood, Solomon, and Englis (2005) find the potential ‘promising’ as more than half were willing to use an OSA for online apparel product information for raincoats, lingerie and bathrobes. On the negative side, questions also arise about overall usefulness beyond novelty and entertainment; Sivaramakrishnan and Tang (2002) conclude that the OSA does not increase product evaluation or purchase intentions.

A number of potential dangers are also highlighted. For example, Witkowski, Neville, and Pitt (2003) find great disappointment when characters with human features raise expectations about high quality interactions that are not fulfilled. Interaction characteristics or OSA appearance found inappropriate to the context can lead to negative responses from users (Keeling et al. 2004). Thus, mere presence of an OSA is not enough to improve human-computer interaction or increase purchase intentions (Sivaramakrishnan and Tang 2002).

RELATIONAL BENEFITS
Customer benefits are related firstly to the core product/service and secondly, to benefits that come through the relationship itself (Gwinner, Gremler, and Bitner 1998; Reynolds and Beatty 1999). In the context of customer relationships with service compa-
nies, Gwinner, Gremler, and Bitner (1998) suggest a typology of three relational benefit outcomes that are positively associated with customer loyalty and word of mouth. Confidence benefits follow from experience of successful transactions, with a company or salesperson, these help a customer to reduce uncertainty and risk about future transactions. Social benefits are drawn from social support and personal reassurance given by a salesperson. Special treatment benefits include advantages such as price savings, time-savings, preferential treatment, and additional services. However, for retail settings, Beatty et al. (1996) and Reynolds and Beatty (1999) consider that just two types of benefits (functional and social) best explain customer perceptions. Reynolds and Beatty (1999) consider functional benefits to cover both confidence and special treatment benefits as found in service settings by Gwinner et al. (1998).

MODEL DEVELOPMENT

Offline Preferences

Hennig-Thurau et al. (2002) suggest customer relational preferences as a potential moderator of relational benefits and Beatty et al. (1996) advise that relationship motivation could be an important categorisation variable. Some customers may opt for self-service to avoid employee contact (Beatty et al., 1996). Thus, in the context of online shopping, customer preferences for assistance when shopping offline may be a significant factor in the perception of relational benefits from the presence of an OSA. For some online customers, the impersonal, efficient, and structured nature of the typical website ‘interaction’ may be an attraction, removing the need for time-consuming pleasantries or avoiding persistent shop assistants.

On the other hand, it is intuitive that those customers who prefer to interact with a salesperson during offline shopping should be more attracted to a situation that offers the potential to interact with an onscreen sales assistant. We propose that those who prefer salesperson assistance when shopping offline are more likely to associate the presence of an OSA on a retail website with potential relational benefits. Beatty et al. (1996) identify that customers engage in relationships with salespeople for functional and social benefits and also recognize the vital role of trust in the customer-salesperson relationship. Therefore, we expect that offline preference for assistance will be positively related to perceptions of functional and social benefits (see figure 1).

H1: There is a positive relationship between offline preference for help and perception of functional relational benefits.

H2: There is a positive relationship between offline preference for help and perception of social relational benefits

Online Relational Benefits

Online social benefits and onscreen assistants. In off-line retailing, the salesperson plays an important part in forming buyer-seller relationships (Beatty et al. 1996). The familiarity of the concept of a spokescharacter/person (Callcott and Phillips 1996) and the automatic use of established ‘rules’ of communication suggests these characters should make the website appear friendlier, and customer interaction with the website more natural and appealing. The opportunities for shared interaction could also reintroduce customer perceptions of social benefits in what otherwise may be perceived as an impersonal experience. We define online social benefits as the perceptions of a friendlier, less impersonal experience where the retailer manifests a personal interest in the customer and there are enjoyable social aspects to the website visit.

Online functional benefits and onscreen assistants. Offline functional benefits include time saving, convenience and better purchase decisions (Reynolds and Beatty 1999). Customers as decision makers have a bias to efficiency and reduced effort suggesting that a major benefit to customers would be to reduce search costs during online shopping (Semararo et al. 2003). Offline, the salesperson can substitute for customer effort; Beatty et al. (1996) find that customers engage in relationships with salespeople who help with problem solving. An early expectation of online shopping was that it would also provide time savings through easy product search and comparison and make recommendations based on previous purchases. Kim and Stoel (2003) confirm that these attributes are significant predictors of online purchase intent but that many online retailers are “failing to offer satisfactory online shopping experiences to their customers”. Some customers may have concerns that a retail website interface will be difficult to navigate or that search facilities will be inflexible and inadequate to their needs. For these customers, an OSA could help refine their needs and find products and compare prices in a more timely and familiar way, through interactions resembling those with offline assistants. We define functional benefits online as perceptions of time saving through finding products that meet purchaser needs more quickly and better purchase decisions through finding best prices or special deals.

Trust and Confidence

Yen and Gwinner (2003) identify an additional role for building confidence benefits during online shopping. Confidence and trust are considered essential in online shopping because it is an environment with high performance ambiguity and considerable perceived risk. The chance to interact with an OSA may enhance trust perceptions as salesperson-customer interaction plays a significant role in building trust (Beatty et al. 1997). The interactive characteristics of the OSA produce familiar cues associated with social interaction and are thus likely to promote trust building (Bickmore and Cassell 2001) and could help the consumer build confidence in the integrity and security of a website. Trust is associated with loyalty because of the importance of confidence in security and privacy issues in online transactions (Park and Kim 2003). Beatty et al. (1996) suggest that interpersonal interaction between salespersons and customers facilitates the understanding and thus the fulfilment of customer needs. Consequently, social benefits can be associated with better fulfilment of functional benefits. Beatty et al. (1996) posit a further association between higher social and functional benefits and building customer trust.

Consequently, we hypothesise that (see figure 1):

H3: There is a positive relationship between perceptions of social benefits and perceptions of trust/confidence

H4: There is a positive relationship between perceptions of social benefits and perceptions of functional benefits

H5: There is a positive relationship between perceptions of trust/confidence and perceptions of functional benefits

H6: There is positive relationship between perceptions of trust and patronage expectations.

METHOD

Online Assistant Pre-testing and Product Choice

User preferences for an OSA are very individual, so presenting respondents with no choice of OSA risks confounding perceptions
Virtual Onscreen Assistants: A Viable Strategy to Support Online Customer Relationship Building?

of possible relational advantages with the effects of user preference. Consequently, pilot work comprising interviews with a convenience sample of 30 Internet shoppers followed by a preliminary web-based study with 450 participants determined the most generally acceptable representations of online assistant for two product types: books/CDs and travel insurance. For this study, participants had the choice of a male or female human photograph, a male or female cartoon and a cartoon character (either bookworm or globe depending on site). Books/CDs and travel insurance product types provided a contrast on the search-experience-credence continuum; books and CDs are search goods, while travel insurance is a credence good.

Procedure and Measure Development

Using a dedicated website, www.screenresearch.co.uk, participants in the experimental study were randomly assigned to two specially constructed Internet shopping sites, purporting to sell books/CDs and travel insurance. For each site visited, respondents choose either no assistant or one online assistant out of the five described above. Those who chose an online assistant responded to items about perceptions of functional and social benefits resulting from having an online assistant. Interviews with Internet shoppers in the initial studies provided some of these items, others were adapted from Gwinner et al. (1998), Hennig-Thurau et al. (2002) and Yen and Gwinner (2003). Respondents also assessed their perceptions of confidence and trust as well as increased/decreased likelihood of visiting, purchasing and recommending the website (patronage expectations) and gave information on Internet shopping experience, preferences for salesperson assistance when shopping offline and brief demographics.

Respondent Sample

Data were collected through a) e-mails sent to 2286 addresses on an opt-in mailing list on the www.screenresearch.co.uk website; b) a sample of 427 males and 503 females from the UK obtained through a commercial company. A prize draw was offered as an incentive. Of the 2114 Internet user respondents, 62% were female (1314) and 57% were aged between 25 and 44. The largest percentage (57%) was from the UK, with 21% from North America. Most respondents (92%) bought goods online; 57.3% of these for three years or more.

RESULTS

Choosing No Online Assistant

The 124 participants (just under 6%) who chose not to have an online assistant on either site provided at least one reason for their choice, altogether, 264 reasons were listed. More experienced online shoppers were less likely to choose an OSA for either the book site ($\chi^2=38.49, df=4, p<.001$) or the travel insurance site ($\chi^2=34.77, df=4, p<.001$). This effect of expertise holds true for both genders.

The majority of reasons (93.2%) fell into one of six groups of negative outcomes: arousal of negative emotions; offer no advantage to the user; interfere with the task or not compatible with preferred methods of accomplishing task; and incompatibility of appearance or with self-image of user (see table 1). These are broadly representative of many of the negative issues surrounding OSA use outlined previously.

Groups one, two and three signify severe aversion to previous poorly planned, inappropriate interactions. These were experiences with OSAs where expectations were not met, the interaction thought inappropriate, or worse, interfered with user task achievement. Violations of interaction expectancies seem to produce negative emotional reactions (annoying, irritating, patronising) that prejudice subsequent evaluations resulting in rejection of future OSA interaction.

For some, the mere presence of an OSA generated perceptions of possible negative consequences. Group five comments illustrate the consequence of inappropriate appearance; group four comments indicate these users may be using online retailers to suit their preference for shopping without assistance. Together with group six, the comments underline the need for care in OSA selection and giving customers the choice not to use an OSA at all.

Consequences of Choosing an OSA: Perceived Relational Benefits

A majority (94.1%) chose an online assistant for at least one of the sites, (91.7% travel insurance; 88.4% books/CD) and 85.9% chose an OSA for both sites. Most popular on either site and for both genders were the non-human OSA characters (globe and bookworm). The second most popular were human female photographs. (Wood, Solomon, and Enliss (2005) found an idealistic female

Figure 1

MODEL OF HYPOTHESISED RELATIONSHIPS BETWEEN PERCEPTIONS OF FUNCTIONAL BENEFITS, SOCIAL BENEFITS, TRUST AND PATRONAGE EXPECTATIONS
TABLE 1
REASONS FOR NOT CHOOSING AN ONLINE ASSISTANT

<table>
<thead>
<tr>
<th>Reason (no.)</th>
<th>Examples (no.)</th>
<th>Illustrative quotes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Arousal of negative emotions (69).</td>
<td>Online assistants are annoying (23), irritating (18), patronizing (12), disliked (11), confusing (2), offensive, creepy, misleading (1 each).</td>
<td>&quot;I find that stupid paperclip and his alternates more annoying than words can say.&quot; &quot;Flash animations etc. are the work of the devil …&quot;</td>
</tr>
<tr>
<td>2. No advantage in using OSA (62).</td>
<td>Online assistants are not needed (35), no help (11), pointless (8), a useless gimmick (6), wouldn’t use it (2).</td>
<td>&quot;I don’t see the point.&quot;</td>
</tr>
<tr>
<td>3. Interfere with task completion (47).</td>
<td>Distracting (20), online assistants add clutter (11), slow things down (6), intrusive (5), are a hindrance (3), add complications (2).</td>
<td>&quot;They keep popping up and delaying what I’m doing.&quot; &quot;I find them more of a hindrance than a help.&quot;</td>
</tr>
<tr>
<td>4. Not compatible with preferred task accomplishment (36).</td>
<td>Prefer to use FAQ or help (11), a search engine that is easy to use (12), to do it myself (8), information that speaks for itself (3), prefer reading details (2).</td>
<td>&quot;I would prefer a help button if I got stuck.&quot; &quot;I much prefer a logical search engine-i.e. decent Boolean search facilities.&quot;</td>
</tr>
<tr>
<td>5. Appearance not compatible with task (17).</td>
<td>Didn’t like choice (11), not attractive/professional enough (5), not representative (1).</td>
<td>&quot;None of the characters appealed to me …&quot; &quot;Assistants do not look professional enough.&quot;</td>
</tr>
<tr>
<td>6. Not compatible with self-image (15).</td>
<td>Not the sort of person who needs an online assistant (10), experienced enough not to need one (5).</td>
<td>&quot;Experienced web user-do not require assistant.&quot; &quot;I am not an idiot.&quot;</td>
</tr>
</tbody>
</table>

TABLE 1
REASONS FOR NOT CHOOSING AN ONLINE ASSISTANT

Participants evaluated several outcomes relevant to potential relational benefits on five point Likert-type scales (1=disagree strongly, 5=agree strongly). Means and standard deviations are shown in table 2.

The measurement model. The research model depicted in figure 2 was tested using Structural Equation Modelling (LISREL 8.7). At the initial analysis, Confirmatory Factor Analysis (CFA) of the constructs of offline preference, functional and social benefits, trust/confidence and patronage expectations indicated the measurement model was an acceptable fit to the data but two items were deleted as poor indicators of their latent constructs (for items, see table 2). The chi square statistic can be distorted by sample size; thus table 3 reports three additional fit indices that all indicate a good fit of the data and the factor structure is taken as an acceptable fit of the data. Further, the composite reliability (corresponding to Cronbach alpha), and the R² values for all measures suggest an adequate overall fit, no further modification of the measurement model was considered necessary.

Test of model and hypotheses. The test of the structural model estimates the fit of the hypothesised model to the data. The first analysis provided a moderate fit to data on the fit indices (see table 3). Hypothesis one is upheld. In the presence of an OSA, offline preferences are reflected in perceptions of functional benefits. However, there is a stronger association from offline preferences to social benefit perceptions (hypothesis two). Hypothesis three is also upheld; there is a strong relationship between perceptions of social benefits and perceptions of functional benefits. Thus it appears potential customers may believe that, as offline, social interaction will facilitate understanding of their needs and the retail transaction (Beatty et al. 1996).

Hypothesis four is confirmed, perceptions of social benefits influence perceptions of trust and confidence. However, there is a much stronger impact of functional benefits on trust/confidence, confirming hypothesis five. Hypothesis six, the proposed positive relationship between trust/confidence and patronage expectations is accepted; perceptions of trust and confidence in the online vendor are associated with website patronage.

Perceptions of functional benefits are fully mediated by trust/confidence benefits and influence patronage expectations through their effect on trust. However, the modification indices strongly suggested the addition of an direct path from perceived social benefits to patronage expectations resulting in a significantly improved fit of the data on the fit indices (see table 3). Thus, in this study, perceptions of social benefits have both indirect and direct effects on patronage expectations (see figure 2). Perceptions of social benefits in themselves may be a powerful motivator for website patronage.

DISCUSSION

Firstly, the results confirm an association between OSA presence on a website and perceptions of relational benefits by potential customers. This had not previously been established. In particular, we show that customers recognise potential for social benefits from the presence of an OSA on a retail website. Consequently, this work
TABLE 2
MEASUREMENT MODEL: ITEM MEANS, STANDARD DEVIATION, STANDARDISED FACTOR LOADINGS, RELIABILITY

<table>
<thead>
<tr>
<th>Construct</th>
<th>Reliability</th>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>λ</th>
<th>var</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust/confidence</td>
<td>0.85</td>
<td>Less risk of something going wrong</td>
<td>3.32</td>
<td>0.97</td>
<td>.74</td>
<td>.45</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More confidence</td>
<td>3.32</td>
<td>0.98</td>
<td>.82</td>
<td>.32</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust the website provider</td>
<td>3.23</td>
<td>0.63</td>
<td>.72</td>
<td>.48</td>
<td>.52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I would feel reassured</td>
<td>2.89</td>
<td>0.95</td>
<td>.77</td>
<td>.40</td>
<td>.60</td>
</tr>
<tr>
<td>Social benefits</td>
<td>0.85</td>
<td>More friendly shopping site</td>
<td>3.89</td>
<td>0.81</td>
<td>.82</td>
<td>.32</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social aspects to enjoy</td>
<td>3.38</td>
<td>1.02</td>
<td>.70</td>
<td>.51</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interested in me</td>
<td>3.46</td>
<td>0.97</td>
<td>.83</td>
<td>.32</td>
<td>.68</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Less impersonal*</td>
<td>3.46</td>
<td>0.96</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional benefits</td>
<td>0.86</td>
<td>Find best prices or special deals</td>
<td>3.27</td>
<td>0.99</td>
<td>.78</td>
<td>.39</td>
<td>.61</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Find more quickly</td>
<td>3.52</td>
<td>0.91</td>
<td>.86</td>
<td>.27</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Help to define my needs</td>
<td>3.43</td>
<td>0.88</td>
<td>.82</td>
<td>.33</td>
<td>.67</td>
</tr>
<tr>
<td>Patronage expectation</td>
<td>0.90</td>
<td>Make a purchase</td>
<td>3.28</td>
<td>0.61</td>
<td>.82</td>
<td>.33</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Choose the website for a visit</td>
<td>3.55</td>
<td>0.72</td>
<td>.87</td>
<td>.25</td>
<td>.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recommend the website</td>
<td>3.55</td>
<td>0.73</td>
<td>.91</td>
<td>.18</td>
<td>.82</td>
</tr>
<tr>
<td>Offline preference</td>
<td>0.73</td>
<td>Like help with books</td>
<td>2.40</td>
<td>0.99</td>
<td>.71</td>
<td>.49</td>
<td>.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prefer to shop without help</td>
<td>3.68</td>
<td>0.93</td>
<td>.70</td>
<td>.52</td>
<td>.48</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Find out things by myself</td>
<td>3.71</td>
<td>0.91</td>
<td>.66</td>
<td>.57</td>
<td>.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Like help with travel insurance*</td>
<td>3.40</td>
<td>1.02</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

λ=standardised factor loading; reliability=(Σλ)²/((Σλ)²+Σ variance); * removed

FIGURE 2
AMENDED STRUCTURAL MODEL: EXTRA PATH FROM SOCIAL BENEFITS TO PATRONAGE EXPECTATIONS.
TABLE 3
FIT INDICES FOR CFA AND STRUCTURAL MODEL
(GUIDELINES FOR GOOD FIT GIVEN IN FIRST LINE)

<table>
<thead>
<tr>
<th></th>
<th>Satorra-Bentler Scaled Chi-Square</th>
<th>RMSEA .05</th>
<th>CFI .95</th>
<th>NNFI .90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confirmatory model</td>
<td>581.59 (p&lt;0.01)</td>
<td>0.047 (p =0.92)</td>
<td>.99</td>
<td>.99</td>
</tr>
<tr>
<td>Structural model</td>
<td>635.77 (p&lt;0.01)</td>
<td>0.053 (p=0.14)</td>
<td>.99</td>
<td>.99</td>
</tr>
<tr>
<td>Added path: social to patronage expectations</td>
<td>512.91 (p&lt;0.01)</td>
<td>0.046 (p=0.93)</td>
<td>.99</td>
<td>.99</td>
</tr>
</tbody>
</table>

RMSEA=Root Mean Square Error of Approximation; CFI=Comparative Fit Index; NNFI=Non-Normed Fit Index

Chi-Square for the difference in models=122.86; df =1 (p<0.01)

extends Yin and Gwinner (2003) to include the recognition of social benefits in online services and retailing in addition to confidence and special treatment benefits.

Second, this study proposes a theoretically derived model of the relationships between offline preferences, customer perceptions of social and functional relational benefits and trust building and patronage expectations. The model is a good fit to the data and all hypothesised paths are statistically significant suggesting the viability of this model (see table 3). Offline preferences are reflected in online perceptions, the stronger the preferences for salesperson help offline, then the stronger the perception of possible relational benefits from an OSA. The impact of perceptions of functional benefits on patronage expectations is wholly mediated by trust/confidence (see figure 2). The inference is that interaction with an OSA could facilitate the customer information seeking and purchasing task and that this builds customer confidence in the service, reassuring them about buying from the site and supporting the formation of trust. The strength of the relationships found in this study indicates a more modest role for social benefits in trust building than the role of functional benefits. The implication is that a design of OSA interaction that concentrates on task help that customers find useful is most likely to facilitate the formation of trust. Social benefits have a less strong direct effect on trust but play a strong part in building perceptions of functional benefits, so have an indirect effect as well.

Perceptions of trust fully mediate any effects of functional benefits on patronage expectations but not social benefits. The strongest effect on patronage expectations is the extra path from social benefit perceptions. An explanation for this may be found in Beatty et al. (1996) that the formation of friendship in itself is a driver of repeat patronage. The relationship strength suggests that many online customers miss the social and interpersonal aspects of shopping and do not believe present interfaces meet their needs. They judge an OSA has the potential to improve their experience in this regard. Another possibility is the attraction of the novelty value of an OSA. Potential customers may find the website friendly and appealing but not associate this with anything but increased pleasure in visiting the website. Either way, this attraction acts, at least in part, independently of feelings of trust.

A further contribution is evidence that offline preferences for salesperson assistance are associated with preferences for the presence and particular types of help that could be given by an OSA. Well-learned offline routines carry over into the online environment, that is, many customers will try to apply their offline expectations, prejudices and strategies for shopping to the online shopping task. Recognising and facilitating these can help alleviate difficulties with the use of retail websites and encourage website patronage.

Nonetheless, caution is advised in OSA use on retail websites for social relationship building. Whilst the relationships in figure 2 suggest considerable potential for relationship benefits to add to customer trust and interest in the site, the means for the individual items (table 2) indicate that participants were only moderately positive about present OSA capabilities. The 6% of participants choosing not to have an online assistant provide additional insights. The OSA purpose must be clear to the user and the interactions planned around making the shopping task easier rather than to attract customer attention. Currently the optimum role for an OSA is probably to enhance relationships by providing advice and help to the customer with less emphasis on social features unless there is substantial technological development to support the less predictable aspects of social interaction.

Further, this study confirms that social rules and social expectations are easily engendered, raising concerns that OSA interaction could be used to exploit social mechanisms. Shoppers might be persuaded that it is safe and financially prudent to make purchases or to omit the search for more concrete cues to trustworthiness. Even with the best intentions, there is a fine line between helping people overcome inaccurate risk perceptions and reducing risk perceptions too far.

The major limitation of this study is that respondents did not interact with the proposed OSA. Therefore, perceptions are of the potential for relational benefits offered by an OSA, not the reality. However, at this stage of OSA development, we feel this is defensible as we, amongst others, have already noted the capacity for disappointment or annoyance when onscreen characters do not live up to their promise. This was an experimental study using just two examples of online retailing, albeit popular and reflecting the credence-searchgoods continuum. OSA presence may be more or less welcome on other types of retail website. Further, the respondents in this study were mostly from the UK or Northern America. Thus, further research is needed to test the model and clarify the potential for OSA presence on other types of retail website and with customers from other countries.
REFERENCES


