Approach and avoidance motivations in online auctions

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Abstract: This study examines, in an experimental setting, influencers of consumer bidding behaviour. We suggest that potential bidders are faced with two conflicting goals, i.e., approach and avoidance motives, and these conflicting motives may influence online bidding behaviour. Responses of 130 (n = 130) subjects to a total of 1300 auctions (ten auctions per subject) indicate that starting bid and current bid amounts influenced the approach motive.
Consequently, subjects gravitated towards items with low starting bid and low current bids. Furthermore, the results suggest that high priced items and negative sellers’ reputation led to an avoidance motive, and subjects were less likely to bid on such items.

**Keywords:** online auctions; consumer decision making; bidding behaviour; approach and avoidance motivations; internet marketing; advertising.


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### 1 Introduction

Given the growing popularity of online auctions and the many fundamental ways in which it differs from the traditional retail landscape, it is not surprising that academic researchers have started paying attention to consumer behaviour in online auctions. Unlike traditional retailing, in auctions, prices are not fixed and in most instances the sellers are unknown. This introduces uncertainty to the consumption environment. Several studies, (cf. Bajari and Hortacsu, 2000; Dholakia and Soltysinski, 2001; Dholakia *et al.*, 2002; Gilkeson and Reynolds, 2003; Massad and Tucker, 2000; Sivadas *et al.*, 2005b; Wilcox, 2000), have thus focused on various aspects of consumers’ willingness to
bid in this newer ‘retail’ environment. While, the auction literature is quite rich, much of that work has centred on experienced professional bidders bidding in high-stake auctions (cf. Wilcox, 2000 for a detailed discussion).

The factors studied in the online consumer-to-consumer auction setting concentrated on various influencers of the bidding decision, ranging from the impact of expertise (or lack thereof) on bidding patterns, influence of seller ratings, and sniping strategies. We extend extant research by testing for and providing an approach and avoidance motives explanation for bidding behaviour (cf. Ariely and Simonson 2003).

Furthermore, the bulk of prior consumer-to-consumer auction studies have relied on the observational method to understand and explain consumer bidding. Typically, data is downloaded from consumer-to-consumer auction sites such as www.eBay.com for a few select product categories, and based on ‘observable’ variables that can be downloaded (such as number of bidders, bid price, seller ratings, and buyer ratings), inferences are made about consumer bidding motivations.

While observational data has many benefits, including the ability to monitor ‘behaviour’ in real time, it constrains researchers to variables that can be observed and the behaviour has to be inferred. Moreover, research based only on observational data that occurred in a natural setting may lead to erroneous interpretation of the results (e.g., illusory correlation Gilovich, 1991). The additional use of controlled experiments in addition to the observational method allows us to learn much more about the phenomenon (Kardes, 1996). Thus, an additional objective was to replicate and extend results previously obtained from observational data in an experimental setting. Use of a controlled lab environment allows us to control for exogenous variables and examine variables that may impact bidding. We first discuss the online auction environment in some detail.

2 Conceptual background and hypotheses

Online Auctions have become popular because they reduce participation costs by eliminating the need for sellers and buyers to collect at one (physical) place, and because global reach and transaction automation has dramatically lowered transaction costs and enabled trading of small-value items. The ability to use search engines to sort through the wide variety of items offered for sale and the opportunity to research items easily (buyers do not have to make on-the-spot decisions because auctions can run over several days) have made online auctions a popular phenomenon attracting many people who might not otherwise have participated in auctions (Sivadas et al., 2005b). A vast array of both used and new items in a wide range of categories (eBay divides items into 27 000 categories) such as antiques and art, books, clothing, computers, collectibles, consumer electronics, hardware supplies, farm equipment, real estate, and automobiles are traded in online auctions. Lucking-Reiley (2000) identified 142 auction sites and found that collectibles accounted for 60% of items auctioned online. Items that are auctioned range in price from as low as a few dollars to many thousands of dollars. While collectibles once accounted for the majority of items auctioned online, today categories such as automobiles, consumer electronics, computers, and books are more dominant.
eBay, the largest online auction site, has nearly 80 million users who have bid, bought, or listed items within the preceding 12 months. On any given day, there are more than 16 million items in 27,000 categories listed for sale on eBay and listings and bidders continue to grow from quarter to quarter. While eBay originally began and predominantly operates as a consumer-consumer site, it now also hosts about 573,000 (252,000 US) stores worldwide (business-to-consumer sites). These are typically small retailers who turn to eBay to expand their customer base by making their wares available to this large geographically diverse group of potential customers.

According to market researcher Nielsen Inc., online auction sites are very 'sticky' with Nielsen net-ratings indicating that eBay is one of the sites at which consumers spend the most amount of time. In online auctions, consumers have to narrow their choice from several million listings that are available to them; eBay has about 16 million listings at any given time. Dholakia and Bagozzi (2001) suggest that the choices made in narrowing listings is in part a hierarchical process where consumers move from the listing category to a consideration set and then to individual items that are listed. This choice may also be determined during the navigation process rather than formed prior to the start of the decision process (Dholakia et al., 2002). And given the large number of listings, consumers may use heuristics to pay greater attention to some of the items and ignore others (Beach, 1993; Dholakia et al., 2002).

That most participants in online auctions are novices is borne out by prior academic research. Unlike ‘high-stake auctions’ (Wilcox, 2000) with professional bidders who are highly motivated, better informed, and have a high financial stake (Wilcox, 2000, p.365), participants in online auctions are non-professional bidders in much lower-stake auctions, and operate in an environment with limited information (Sivadas et al., 2005b). This can lead to consumers finding internet auctions ‘mystifying’ because “prices are unpredictable, consumers and suppliers are strangers…” (Herschlag and Zwick, 2000, p.4). In addition, fear of fraud appears to be a concern in these auctions (Sivadas et al., 2005a).

### 2.1 The psychology of bidding

The overview of online auction discussed above suggests that in consumer online bidding environment, auction participants are faced with two conflicting goals or motives (cf. Ariely and Simonson, 2003). The first goal is to acquire the desired product at the least price (i.e., get a good value). This would be considered approach motivation. However, the auction participants must deal with the risk and uncertainty of transacting in an online environment, and the participants may fear being taken advantage of. This is considered avoidance motivation. These two motivations are diametrically opposite and may be manifest in their bidding behaviour (i.e., bid because of good value and not bid to avoid high risk). Thus, a person’s willingness to bid or not bid in an online auction may be influenced by their perception of good value and perceived risk. Furthermore, the perception of good value and perceived risk may be influenced by the bidding situations that can act as a signal to the potential bidder. The potential bidder may interpret the signal as suggesting a good value or high risk, and may bid or not bid based on their interpretation of the signal.
2.2 Approach motivation

One bidding situation that may signal good value and influence approach motivation is the amount of first bid. Gilkeson and Reynolds (2003) examined the effects of starting bid on subject’s bidding behaviour and offered a possible explanation for this phenomenon. They suggest that people have a reference price in mind when they make a buying decision. In terms of an online auction, the reference is compared against the starting bid. If the starting bid is too high and is in the latitude of rejection (Sherif and Hovland, 1961), they will find the item as not acceptable, and will not bid on that item. In other words, the auction participants may perceive that this item is not a good value. Thus, hypothesis 1a is stated as:

**H1a** The smaller the amount of the starting bid, the more likely auction participants will be to bid on an item.

The second online auction specification that may influence a person’s approach motivation is the amount of current bid. Ariely and Simonson (2003) suggest that people make value assessment of items in an online auction. They are looking for ‘bargains’. Given that price is intrinsic in the assessment of value, the amount of current bid is negatively correlated with their perception of what is a good ‘bargain’. The low current price may signal to the potential bidder that they may have the opportunity to obtain the object for a lower price. Thus, Hypothesis 1b is stated as:

**H1b** The smaller the amount of the current bid, the more likely auction participants will be to bid on an item.

2.3 Avoidance motivation

In addition to approach motivation, auction participants are faced with an avoidance motivation. Given that online auctions are ‘mystifying’ because ‘prices are unpredictable’, consumers and suppliers are strangers, and fraud is prevalent, there is an inherent risk in participating in a consumer auction situation (Herschlag and Zwick, 2000). The risk can be heightened by the high price of the auctioned item, small number of current bids, low seller’s reputation, lack of bidder’s experience with online auctions, and bidder’s low self-perception of expertise. These variables may influence the risk felt by the auction participants.

To test the effects of these variables on the avoidance motivation, we must first demonstrate the existence of felt risk in an online auction. Furthermore, we can show that the experimental situation was realistic by replicating an established finding of gender and bidding behaviour.

While women are purported to enjoy most shopping experiences more than men, men show a greater preference for online shopping (Alreck and Settle, 2002). Slyke et al. (2002) also found that men are more likely to find and purchase products online. Advertising industry trade publication Adweek reports a Nielsen Netratings study that suggest that men tend to spend more time on eBay than women (Adweek, 1999). Women have also been found to be more risk-averse than men (Garbarino and Strahilevitz, 2002).
A meta-analysis of more than 150 studies encompassing a variety of contexts and behaviours conducted by Byrnes et al. (1999) found that on the whole men are more willing than women to take risks. Weber et al. (2002) also found that in most cases women were more risk-averse than men. This risk aversion may translate to online auctions, and suggests that men were more likely to bid online than women. Thus, the avoidance motivation may be stronger in women than men. Therefore, Hypothesis 2 is stated as:

**H2** Females are less likely to bid on online items than males.

Given the uncertain environment of an online auction, participants are looking for signals that may suggest to them that a given auction is riskier then another. The avoidance motivation will induce the potential bidders to avoid the riskier auction and influence their bidding behaviour.

The items up for bid and variability of prices therein can also signal the riskiness of an auction, and influence a person’s willingness to bid. Given that the person wants a product in a product category, there may be a wide variability of items in that product category. For example, if a person is looking to purchase a putter, the person may have the option to bid on a variety of putters ranging from $14.95 to $5,000. The $14.95 item and the $5,000 item both represent financial risk to that person (Jacoby and Kaplan, 1972). However, the higher priced item represents a higher risk, and may trigger an avoidance motivation. That person may avoid and not bid on the expensive item. Thus Hypothesis 3a is posited as:

**H3a** Consumers are less likely to bid on high-priced as opposed to low-priced items within a product category.

Another bidding situation that may influence a person’s perception of risk and thus influence their willingness to bid/not bid is the number of current bids. Dholakia and Soltysinski (2001) provide evidence of the novice-like behaviour of online auction bidders by noting the “herd behavior bias of bidders who tend to gravitate towards auction listings with one or more existing bids” while ignoring other even more favourable listings. They speculate that the existing number of bidders may be used as a heuristic by many bidders because this information is ‘readily accessible’ and could be seen as indicative of the merit of the listing and/or trustworthiness of the seller. Furthermore, potential bidders may infer that the listed item is legitimate because if many people bid on that particular item, they all cannot be wrong and thus, it must be genuine. These inferences may have an abnormally strong influence on the choice to bid or not bid because people view their inferences as more diagnostic than other information (Kardes et al., 1994). These explanations suggest that the smaller numbers of bids increases the auction participants’ avoidance motivation. Thus, Hypothesis 3b is stated as:

**H3b** The smaller the number of current bids, the less likely auction participants will be to bid on an item.

The third bidding situation that may influence a person’s perception of risk and promote the avoidance motivation is the rating of the seller, i.e., seller reputation. In consumer online auctions, past participants may evaluate the seller. This evaluation is the electronic
version of a word-of-mouth. Research in word-of-mouth suggests that consumers place great weight on this type of information because it is more diagnostic, especially if the word-of-mouth is negative (Herr et al., 1991). Consequently, an avoidance motivation will be prompted if the seller evaluation is negative or low, and potential bidders may avoid and not bid on that item. Thus, Hypothesis 3c is stated as:

**H3c**  The lower the seller reputation, the more unlikely auction participants will be to bid on an item.

In addition to bidding situations, personal factors may influence the perceived riskiness of an online auction, and promote an avoidance motivation in participants. We have previously discussed one personal factor namely gender. Two other personal factor variables are bidders’ experience and expertise.

The auctions literature has given mixed signals on the effects of experience and expertise on consumer bidding behaviour. Some scholars such as Kagel (1995) and Rustrom (1998) suggest that participants improve their performance in auctions as they gain more experience, but even with experience participants do make “systematic bidding errors” (Andreoni and Miller, 1995; Wilcox, 2000). Wilcox (2000), in a study using observational data, found that “more experienced bidders are more likely than less experienced bidders to follow Nash equilibrium bidding strategies” and place single as opposed to multiple bids on items. He found that more experienced auction participants were more likely to place their bids in the final moments of the auction and this tendency became more pronounced when the items that were being auctioned were ‘common value’ as opposed to ‘private value’ items. Common value items are those for which the value of the item would not vary dramatically across individuals (e.g., one would expect most respondents would estimate the dollar value of an easily available ‘new’ book similar to one another) but the value of a rare book would vary dramatically across individuals (private value item).

The auction literature also suggests that novices pay a greater price premium but this premium comes down with experience (Hayes et al., 1995). However, Bajari and Hortacsu (2003) do not find any evidence that auction revenues are influenced by bidder experience.

While the results are mixed, generally, the literature suggests that less experienced participants are less comfortable with the auction environment and its nuances. Therefore, we posit that less experienced participants, and those seeing themselves as novices in the auction environment will, be less willing to bid for items. Furthermore, Lim and Kim (1992) suggest that the level of experience influenced confidence in consumers’ judgments. Consequently, the less confidence in judgment novices have may lead to an increase in avoidance motivation and thus, a less likelihood of bidding online. Therefore, we posit that:

**H4a**  The less the bidder’s past experience with online auctions, the less the likelihood of bidding.

**H4b**  The less the perceived expertise of the bidder, the less the likelihood of bidding.
3 Method

One hundred and thirty \((n = 130)\) undergraduate marketing students at a southern public university were recruited to participate in an experiment. Student sample was deemed appropriate for this study to test our theory. College students are consumers of and participants in online auctions. To get a better understanding of the issues and to ascertain appropriateness of student samples, we conducted depth interviews prior to launching the study.

In the experiment, each subject was first given a detailed description on how to bid in online auctions. The instructions were culled from that provided at eBay’s website. eBay provides these guidelines as educational material for those new to auctions.

Subjects were then asked to read the description of ten auctions one at a time. In these auctions one of two products was being sold, either (a) a three-volume series of J.R.R. Tolkien’s Lord of the Rings or (b) a rare collector edition of an autographed Stephen King novel. (The Lord of the Rings represented a low-priced product while the Stephen King book represented a high-priced product.) The ten auctions were randomised for each participant to ensure order effect was not an issue.

The auction format and item descriptions were created using actual eBay auctions as a reference. We simulated the eBay auction setting. Since subjects were asked to review the auction items at a single point in time, the setting used was static and not dynamic. For each auction, subjects were presented with the starting bid, number of bids, date and time the auction started, date and time the auction would end, number of bidders, the rating of the seller, the item description, and other information typical of such auctions.

Thus, in addition to book type/price several variables were manipulated including current bid, time left, number of bids, seller experience, and first bid. These variables were manipulated by assigning different values to these variables, such as high, moderate, and low seller ratings. Exhibit 1 lists the ranges for the auction information that were manipulated and depicts one of the bids evaluated by the subjects.

The subjects were instructed to read the description of the first auction and then answer three questions related to that auction. Subjects were not given the opportunity to search for external information on the items they were evaluating. Then the subjects did likewise for the remaining nine auctions. The 130 subjects were asked to bid on ten books each (six low priced and four high priced). Thus, we had 1300 bids for ten treatments or 130 bids per treatment. Statistical power was not an issue. The three questions that the subjects had to answer for each of the ten auctions were:

1. Would they bid on this auction?
2. If they were to bid, how much would the starting bid be?
3. How much would the maximum bid be?

Demographic information, information on subjects’ auction expertise, and interest in the two specific products that were auctioned were also measured (see Exhibit 2).

Additionally, prior to the start of the experiment, subjects were told that they would win $100 if they outperformed other respondents. (This was to ensure that subjects took this experiment seriously.) Subjects were debriefed at the end of the study and a raffle was drawn to award two prizes of $100 each. The debriefing session also indicated that subjects had no problems with the experimental task and instructions given to them.
4 Results

Table 1 reports the distribution of responses across the 1300 auctions as evaluated by the 130 respondents on the hypothesised dimensions.

<table>
<thead>
<tr>
<th>Bidding by starting bid</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>82 (63.1%)</td>
<td>48 (36.9%)</td>
</tr>
<tr>
<td>$1</td>
<td>58 (44.7%)</td>
<td>72 (55.3%)</td>
</tr>
<tr>
<td>$7</td>
<td>211 (54.1%)</td>
<td>179 (45.9%)</td>
</tr>
<tr>
<td>$12</td>
<td>61 (46.9%)</td>
<td>69 (53.1%)</td>
</tr>
<tr>
<td>$15</td>
<td>32 (24.6%)</td>
<td>98 (75.4%)</td>
</tr>
<tr>
<td>$20</td>
<td>44 (33.8%)</td>
<td>86 (66.2%)</td>
</tr>
<tr>
<td>$500</td>
<td>34 (26.2%)</td>
<td>96 (73.8%)</td>
</tr>
<tr>
<td>$750</td>
<td>21 (16.2%)</td>
<td>109 (83.8%)</td>
</tr>
<tr>
<td>Total</td>
<td>543 (41.8%)</td>
<td>757 (58.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidding by current bid amount</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>82 (63.1%)</td>
<td>48 (36.9%)</td>
</tr>
<tr>
<td>$7</td>
<td>98 (75.4%)</td>
<td>32 (24.6%)</td>
</tr>
<tr>
<td>$10</td>
<td>80 (61.5%)</td>
<td>50 (38.5%)</td>
</tr>
<tr>
<td>$15</td>
<td>32 (24.6%)</td>
<td>98 (75.4%)</td>
</tr>
<tr>
<td>$16</td>
<td>58 (44.6%)</td>
<td>72 (55.4%)</td>
</tr>
<tr>
<td>$17</td>
<td>61 (47.0%)</td>
<td>69 (53.0%)</td>
</tr>
<tr>
<td>$20</td>
<td>33 (25.4%)</td>
<td>97 (74.6%)</td>
</tr>
<tr>
<td>$710</td>
<td>34 (26.1%)</td>
<td>96 (73.9%)</td>
</tr>
<tr>
<td>$750</td>
<td>21 (16.2%)</td>
<td>109 (83.8%)</td>
</tr>
<tr>
<td>$900</td>
<td>44 (33.8%)</td>
<td>86 (66.2%)</td>
</tr>
<tr>
<td>Total</td>
<td>543 (41.8%)</td>
<td>757 (58.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidding by gender</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>311 (49.4%)</td>
<td>319 (50.6%)</td>
</tr>
<tr>
<td>Females</td>
<td>232 (34.6%)</td>
<td>438 (65.4%)</td>
</tr>
<tr>
<td>Total</td>
<td>543 (41.8%)</td>
<td>757 (58.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidding by price/product</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>High priced</td>
<td>182 (34.9%)</td>
<td>339 (65.1%)</td>
</tr>
<tr>
<td>Low priced</td>
<td>361 (46.3%)</td>
<td>418 (53.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>543 (41.8%)</td>
<td>757 (58.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidding by number of bids</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>82 (63.1%)</td>
<td>48 (36.9%)</td>
</tr>
<tr>
<td>1</td>
<td>212 (40.1%)</td>
<td>308 (59.9%)</td>
</tr>
<tr>
<td>7</td>
<td>44 (33.8%)</td>
<td>86 (66.2%)</td>
</tr>
<tr>
<td>15</td>
<td>80 (61.5%)</td>
<td>50 (38.5%)</td>
</tr>
</tbody>
</table>
Approach and avoidance motivations in online auctions

Table 1  Summary statistics for 1300 auctions evaluated by N = 130 subjects (continued)

<table>
<thead>
<tr>
<th>Bidding by sellers reputation</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>145 (27.9%)</td>
<td>375 (72.1%)</td>
</tr>
<tr>
<td>Moderate</td>
<td>176 (45.1%)</td>
<td>214 (54.9%)</td>
</tr>
<tr>
<td>High</td>
<td>222 (56.9%)</td>
<td>168 (43.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>543 (41.8%)</td>
<td>757 (58.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidding by experience</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>No experience</td>
<td>317 (40.1%)</td>
<td>463 (59.4%)</td>
</tr>
<tr>
<td>Experienced</td>
<td>226 (43.5%)</td>
<td>294 (56.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>543 (41.8%)</td>
<td>757 (58.2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bidding by expertise</th>
<th>Yes/Bid</th>
<th>No/Not bid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novice</td>
<td>292 (39.5%)</td>
<td>448 (60.5%)</td>
</tr>
<tr>
<td>Average</td>
<td>213 (44.4%)</td>
<td>267 (55.6%)</td>
</tr>
<tr>
<td>Expert</td>
<td>14 (46.7%)</td>
<td>16 (53.3%)</td>
</tr>
<tr>
<td>Total</td>
<td>519 (41.5%)</td>
<td>731 (58.5%)</td>
</tr>
</tbody>
</table>

Hypothesis 1 proposes two bidding situations that may promote an approach motivation and induce participants to bid in an online auction. The amount of first bid (H1a) and the amount of current bid (H1b) are hypothesised to have an effect on subjects’ willingness to bid. To test Hypotheses 1a and 1b, bid or not bid was used as a dependent variable and the amount of first bid and amount of current bid represented the independent variables. The results of the logistic regression analysis supported Hypothesis 1a and Hypothesis 1b. The overall model was significant ($X^2_{(2)} = 76.35, p = .000$). The Wald value was 9.23 and 15.09 for current bid and first bid, respectively, and they were significant at the .002 level. Furthermore, the regression coefficients were both negative, indicating that the lower the amount of first bid and amount of current bid the more likely the subjects were to bid on an item.

Hypothesis 2 predicts that gender will influence the subject’s willingness to bid in an online auction. The results of this hypothesis will give credence to the authenticity of the experimental conditions. Because females tend to be more risk averse they should be less likely to bid online compared to males. The cross-tabulation indicated that of the 670 auctions in which females had the option to participate, 232 online bids were made (35%), and of the 630 auctions males had the option to participate, 311 bids were placed (49%). To test whether there was a significant difference in these proportions, a chi-square was calculated. The chi-square result was $X^2_{(1)} = 29.00, p < .001$. The results support Hypothesis 2 that females are less likely to bid online compared to males. Furthermore, a test was conducted to determine if the gender result was due to an inherent bias in the objects being auctioned. The chi-square test revealed that there were no significant gender-based differences in the subjects’ terms of interest for the two specific products being auctioned.
Hypothesis 3 posits that three auction conditions will influence the avoidance motivation, and impact bidding behaviour. The three variables are the price of the item, number of current bids, and seller reputation (i.e., posted evaluation of the seller by past participants). Because high priced goods represent greater risk, subjects should be less likely to bid on higher priced items than lower priced items (H3a). The smaller the number of current bids (H3b) and the lower the seller reputation rating (H3c) signal the riskiness of the auction, and prompt the subjects to not bid on that item. The results of the logistic regression analysis supported Hypotheses 3a and 3c but not Hypothesis 3b. The overall model was significant ($X^2_{(3)} = 58.74, p = .000$). The Wald value was 11.19 and 21.44 for price of the item and seller experience, respectively, and they were significant at the .001 level. Furthermore, the regression coefficient was negative for price, indicating that subjects tended to not bid on high priced items. The regression coefficient was positive for seller reputation, indicating that subjects avoided auctions where posted evaluations of sellers were negative. For H3b (the number of bids), the results were contrary to our hypothesis. The Wald value was 12.06 and significant at .001. However, the regression coefficient was negative. This suggests that subjects avoided auctions that had large numbers of bidders.

Hypothesis 4 predicted that past experience and perceived expertise will influence subjects’ willingness to bid online. We hypothesised that subjects with limited experience or those who have not participated in an online auction in the past will be less likely to participate. Furthermore, if subjects view themselves as low in expertise, they should be less willing to bid online. The results did not support the hypothesis. The overall model was not significant ($X^2_{(2)} = 3.19, p = .20$). The Wald value was 1.08 ($p = .30$) and 2.19 ($p = .14$) for past experience and perceived expertise, respectively. The results suggest that subjects that have never participated in an online auction are just as likely to bid online as those subjects that have participated in the past. Furthermore, whether subjects viewed themselves as an expert, average, or novice had no effect on their willingness to bid online.

5 Discussion and conclusions

The purpose of this study was to examine bidding behaviour in consumer-to-consumer auctions. We believe that potential bidders are faced with two conflicting goals. The first is to obtain the desired item at the lowest price (i.e., approach motivation). Thus, the potential bidder constructs a value assessment (Ariely and Simonson, 2003) of the item available in an online auction. The second motivation is to reduce risk inherent in an online bidding environment (i.e., avoidance motivation). We suggest that these goals may influence a person’s choice to bid or not bid on an item. This framework is consistent with the regulatory focus theory (Higgins, 1998). Regulatory focus theory relates to a motivational mindset (i.e., prevention focus versus promotion focus) reflecting the reason for a behaviour. Thus, approach motivation can be viewed as a promotion focus, and avoidance motivation as prevention focus.

Using the approach and avoidance motivation framework, we identified two online auction variables (i.e., the amount of starting bid and the amount of current bid) that may have prompted the approach motivation. Similar to past studies, we found that subjects gravitated towards the auctions with low starting bids and low current bids. This may be due to the person’s perception of value assessment.
We also found that the level of risk led to the avoidance motivation. High priced items and negative evaluation of the seller (i.e., seller reputation) signal the riskiness of the auction, and prompted an avoidance motivation. Consequently, subjects avoided these auctions and influenced their bidding behaviour.

These results seem to support our motivational framework of consumer-to-consumer auctions bidding behaviour. This parsimonious framework can be used to understand why certain aspects of an online auction have the ability to influence bidding behaviour. Thus, this motivational framework is an important step in future research, and explaining past results of online bidding behaviour.

Although our framework was able to explain consumers’ bidding behaviour, one result was contrary and contradicts past studies. The result centres on the ‘herd mentality’ phenomenon. One consistent and significant finding in past research of online bidding is the “tendency to gravitate toward, and bid for auction listings with one or more existing bids, ignoring comparable or even more attractive unbid-for listings available at the same time” (Dholakia et al., 2002; Dholakia and Soltysinski, 2001). We hypothesised that the ‘herd mentality’ was a signal for the riskiness of the auction and that subjects will avoid auctions that have small number of bidders. The results were contrary to our hypothesis. In fact, the results indicate an opposite of a ‘herd mentality’. We found that subjects exhibited an approach motivation towards items that had fewer bidders.

Our result was puzzling given the robust finding of ‘herd mentality’ of past research. Thus, we conducted a post-hoc test. Dholakia et al. (2002) and Dholakia and Soltysinski (2001) suggest that the price of an item may moderate the herd behaviour bias. We investigated the effects of item price on herd behaviour bias by running a logistic regression on low priced items and high priced items separately. The number of bids was the independent variable and the decision to bid or not bid was the dependent variable. We did not find the moderating effect, and did not support the findings of previous research. Both regression coefficients were negative and significant at the .001 level. Thus, our negative ‘herd mentality’ result cannot be explained by the moderating variable.

So, why are our results contradictory to past research? Though we did not formally test for this, we suspect that the bargain-hunting ambience of online auctions may have played a role. Under the experimental scenario, the number of current bids may not have had any impact on reducing risk. People do not always form inferences (Lim et al., 1988), and in this instance, the subjects may not have formed inferences about the legitimacy of the item. What may have occurred is that they were forming a value assessment. As Ariely and Simonson (2003, p.116) suggested “the degree to which an item is seen as a ‘bargain’ is negatively correlated with perceived competitive intensity….”. This suggests that the greater the number of bidders, the heavier the competitive intensity and thus, less attractive the item is to the potential bidder. Thus, the results of our study indicate that herd behaviour bias may be dependent on the decision context. When consumers view the auction as a potential gain (i.e., focus on getting the best bargain), the number of current bids may influence consumers to not bid on the item because they may think that they will not be able to get a ‘bargain’. On the other hand, if the consumer focuses on the potential loss (i.e., high risk), then a herd behaviour bias may be exhibited. Thus, future research should focus on getting a better understanding of herd behaviour bias by investigating whether the decision context has an effect on bidding behaviour. Furthermore, it would be important to understand when and why individuals view online auctions as a potential gain or potential loss.
In addition to disconfirming the herd bias behaviour, our results do not support the hypotheses that experience and expertise affect willingness to bid on an item. It is possible that we introduced a confound into the experiment by giving people instructions on how to bid on auctions. Another possible explanation is that experience and expertise is only one dimension of online bidding (i.e., process). This type of expertise may not influence a person’s decision to bid or not bid. It may, however, influence which online auction site (e.g., eBay or golfclubexchange) they utilise. Product knowledge, which was not measured, may influence a person’s decision to bid or not bid because he/she will be able to make a better value assessment. Thus, future research should focus on different types of expertise (i.e., process and product) and their impact in an online auction environment.

We also found that females were less willing to bid on items compared to males. This finding is similar to other studies that found that females are less likely to purchase products online. Thus, the gender difference of online shopping also applies to online auctions. Future research could also examine the impact of other personal factors that may influence bidding such as risk aversion, and susceptibility to the influence of others.

What we have reported here is an experimental study where we have been successful in replicating previous researchers’ results. However, we also found contradictory results. This suggests that our understanding of bidding behaviour in online auctions is limited. What is needed is an overall model that takes into account online bidding situations, bidder characteristics, and the interaction of these variables. Such a model may be based on the bidder’s motive to obtain a ‘bargain’ and reduce risk. By gaining a better understanding of these two motives and how bidders deal with these two motives, we will have a clearer picture of online bidding behaviour.

Secondly, to get a better understanding of online bidding behaviour, a broader view of online auctions is needed. Most of the studies have focused on bidding behaviour. What is missing is the stage before the bidding. To get a better understanding of online bidder behaviour, research should start with the bidder choice of online auction site. Given the popularity of online auctions, consumers have to choose from many auction sites, and for organisations such as eBay and golfclubexchange, this decision is critical to their business success.

As this study indicates, we are far from understanding consumer behaviour in an online auction environment. We need a better understanding because the task and context of an online auction is dramatically different from traditional consumer purchase decisions, and the findings may not generalise to the online auction environment. Furthermore, given the current success and future potential of online auctions, understanding the behaviour in this context will become more important for organisations to compete in this market. Thus, future research is required to explore online auction behaviour using lab and/or field experiments.

References


Notes
1 EBay.com
2 Nielsen-netratings.com

Appendix

Exhibit 1a  Auction conditions

Currently  amount of current high bid presented to subject; range for the Tolkien book was $7–$20; $710 to $900 for King

1st bid  range was $1 to $15 for Tolkien; $19.99 to $750 for King

# of bids  range was 1 to 30 for Tolkien; 0 to 51 for King

Exhibit 1b  Sample auction subjects viewed

Auction 3

Currently $15.00  First bid $15.00
Quantity 1  Number of bids 1
Time left 9 days 4 hours  Location: Lexington, KY
Started Sept-16-02 16:16:47 CST  Country: USA
Ends Sept 26-02 16:16:47 CST
Seller soccermom1 (0) (Rating)
**Item description**

This auction is for a NEW * UNREAD * three – volume edition of J.R.R. TOLKIEN’s classic series, THE LORD OF THE RINGS * paperback (approx 8” × 6”), published by Houghton Mifflin * this set comes in a case w/ images of the film and is still in factory sealed plastic * msrp $35.00 = tax ! Be sure to check out my other auctions, if you win I will combine the s/h! I GLADLY ACCEPT BILLPOINT, PAYPAL, AND MONEY ORDERS!

Seller ratings: Overall profile makeup

0 positives. 0 are from unique users and count towards the final rating
0 neutrals
0 negatives. 0 are from unique users and count towards the final rating.

1 Would you like to bid on this auction?
   ______ Yes
   ______ No, thanks

2 If Yes, how much would your starting bid be? $________

3 What is the maximum amount you would like to bid for this auction? $________

**Exhibit 2 Demographic questionnaire**

Please answer the following questions by marking the response that best describes your expertise with online auctions:

1 Have you ever participated in online (internet) auctions?
   ______ yes
   ______ no (please skip to question 4)

2 If yes, please list the online auctions in which you participated (list websites or company name):
   1.
   2.
   3.

3 How often would you say you have participated in online auctions:
   ______ once
   ______ less often than 5 times
   ______ more often than 5 times
   ______ on a regular basis
   ______ just can’t stay away
4 How would you rate your skills as a buyer/seller in online auctions:
   ______ novice
   _____ average
   _____ expert

5 How much do you spend on books (excluding textbooks) in an average year?
   ______ do not buy any
   ______ less than $50
   ______ between $50 and $99
   ______ $100–$249
   ______ $250–$500
   ______ more than $500 on books per year

6 Have you purchased anything from internet websites during the past three months?
   ______ yes
   ______ no

7 If no, have you ever purchased anything over the internet?
   ______ yes
   ______ no

8 Have you ever read a Stephen King Book
   ______ yes
   ______ no

9 Have you ever read Lord of the Rings?
   ______ yes
   ______ no

10 Your age ____________

11 Your gender ____________