

Others Bought It Too: The Relevance of Knowing Purchase Levels

Introduction

A recent phenomenon in retail marketing has been the development of ‘daily deal’ websites offering products for sale for a limited time, usually only a day, and at heavily discounted rates. The format often involves an advertisement located on high volume daily-visited sites like e-newspapers and social media sites, enabling daily exposure of new offers to potential shoppers and allowing the shopper to click through to the purchase site. A key distinction of ‘daily deal’ sites from similar sites like online vouchers and online auctions is the deal size (Byers, Mitzenmacher, Potamias, & Zervas, 2011) – the number of items available or sold – being displayed. The focus of this paper is to see whether being told how many people have already purchased the item influences a shopper’s choice.

The use of deal size information is similar to the underlying motivation of having ‘top seller’ lists. Where an expert opinion is unavailable, shoppers sometimes use a proxy for expertise and rely upon peer choice to guide them in their own choice (Parsons & Thompson, 2009). We expect this is likely to be mediated however by the concept of bandwagon/snob effects (Becker, 1991; Corneo & Jeanne, 1997; Leibenstein, 1950) – those who wish to conform (bandwagon) and those who do not wish to conform (snob). Therefore, when examining the influence of revealing deal size on daily deal choice, we also consider the type of shopper in terms of desire to conform.

Literature

Unsurprisingly, given the relative newness of the phenomenon, there is little empirical study of daily deal websites. Those studies that exist tend to look at either the differences (or similarities) between daily deal websites and other platforms like voucher and auction sites (Jia & Wu, 2012), or pricing/incentive mechanisms used (Edelman, Jaffe, & Kominers, 2010; Ye, Wang, Aperjis, Huberman, & Sandholm, 2011). While voucher sites offer similar discounts to daily deals, the latter offer products directly to the shopper, are only available for 24 hours, and are often limited to a single purchase.

The other distinction noted with daily deal sites is that they reveal how many of the item for sale have been purchased at the time of viewing – the amount sold version of the deal size (Byers et al., 2011). This is comparable, but not the same, as two other mechanisms used in marketing where an expert opinion is not available. The first is the ‘top seller’ list (Parsons & Thompson, 2009), such as a bookstore providing the Top 10 fiction list for that week, which has been shown to moderately increase sales for the average book (Sorenson, 2007). Online, an app sold through Apple’s App Store gains the ability to charge a \$4.50 premium if it is ranked in the Top 100, compared to an unranked app (Carare, 2012). The ‘number purchased’ on the daily deal site could presumably attract a similar acceptance effect, if shoppers were seeking reassurance that the product was a good buy. The second mechanism is the urgency of action required by being told “only X left, buy now”. This limited availability has been found to promote purchase decisions through intensifying the desire to acquire a product (Aggarwal & Vaidyanathan, 2003; Byun & Sternquist, 2012; Ong, 1999) through the use of such semantic cues (Byun & Sternquist, 2012; Jung & Kellaris, 2004). While the daily deal site does not normally reveal how many are left, one of the underlying principles of this approach is the same concept of saying that “others have bought this, you should too”. The urgency implied in the daily deal site is not that the stock will run out, but that the time will

expire. The deal size notion is predicated on the premise that desire is heightened if others are purchasing the product, which is the issue we turn to next.

The snob and bandwagon effects (Leibenstein, 1950) stem from the concern of shoppers about who else has purchased the product or service (Becker, 1991). Snobs, who have a high need for uniqueness, and bandwagoners, who wish to conform, tend to have a similar underlying motivation (Dubois & Duquesne, 1993; Husic & Cicic, 2009) – just at opposite ends of the scale. For example, as a means of enhancing self-concept, people may purchase to conform to a social group (bandwagoners), or to isolate themselves (snobs). A good appealing to a snob is often sold in small quantities so as to maintain reputational value, with mass production for bandwagon goods (Corneo & Jeanne, 1997). Brewer (1991) refers to these effects as optimal distinctiveness theory, where two types of social needs are found; the need for conformity and the need for uniqueness.

The important point regarding these effects from the perspective of examining daily deal websites is that the demand for a product is likely to increase as the result of previous purchases (Leibenstein, 1950) for those with a need for conformity, and decrease for those who need to be unique (Snyder & Fromkin, 1980). In the music sector, for example, it has been found that higher vote counts appear to stimulate music download (Salganik, Dodds, & Watts, 2006), with a similar finding for online books (Huang & Chen, 2006). We also know that in the hospitality sector the popular and well-known restaurants are in higher demand (Becker, 1991), and in a very similar approach as daily deals, when view counts are made available to potential viewers of online videos they influence the decision to view (Fu & Sim, 2011). This all seems to be because of the bandwagon heuristic (Chaiken, 1987). When studying this heuristic in the online shopping context, the metric of purchase count seems to reflect the social endorsement of the product (Sundar, Oeldorf-Hirsch, & Xu, 2008). There is even an argument that online shoppers appear to trust this metric more than their firsthand knowledge of the product (Metzger, Flanagin, & Medders, 2010). The snob effect, on the other hand, brings about an avoidance of similarity (Kastanakis & Balabanis, 2012), making shoppers value a product less when more consumers own it (Amaldoss & Jian, 2005) – signalling a decrease in value to snobs.

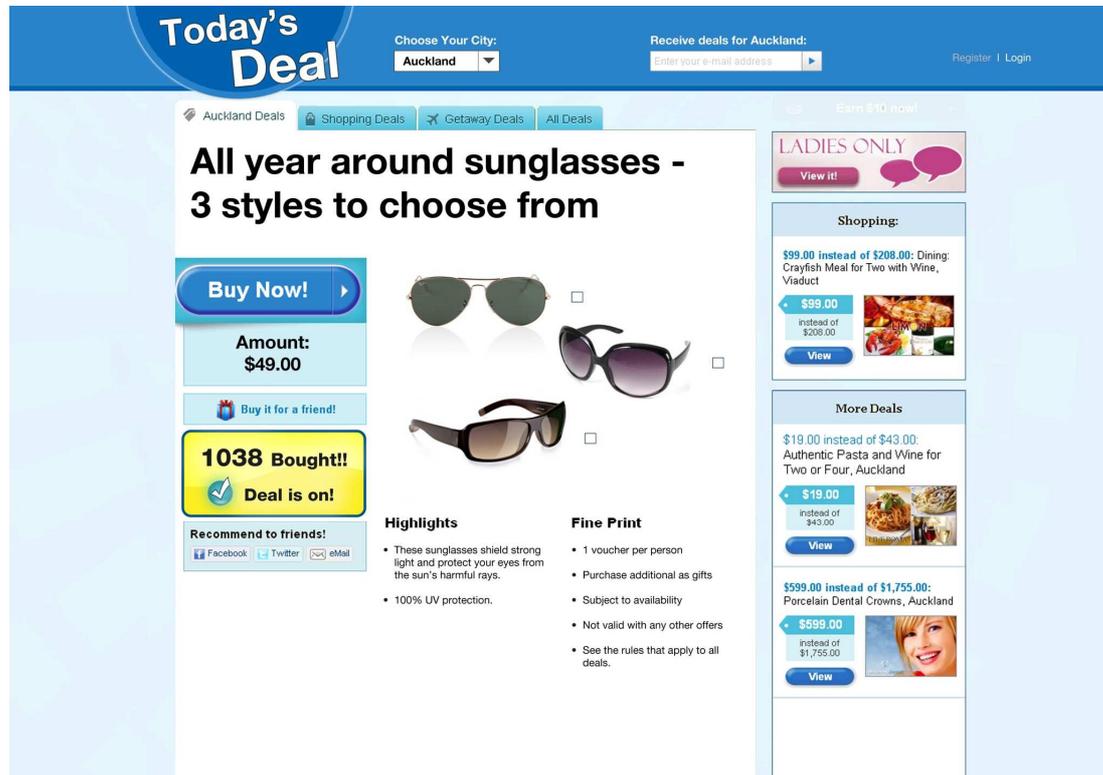
Our premise then is that if a daily deal website advertises a product that few people have purchased, this will be more appealing to those with a need for uniqueness (snobs), and if it advertises a product that many people have purchased, this will be more appealing to conformists (bandwagoners).

Methodology

This study examines shoppers' buying behaviour when exposed to a high, low or no number of previous purchases on a daily deal website, and whether this behaviour is different when the shopper is influenced by the snob or bandwagon effect. An experiment was created whereby shoppers were exposed to the same daily deal website, offering the same product, with only the number of purchases manipulated – high, low, or no information. A student sample was used, with the product – sunglasses – chosen as something commonly purchased by this group. A manipulation check was conducted with a handful of students to ensure that the high purchase level (1038) and low purchase level (14) were considered appropriate. The price (NZ\$49) was also checked and considered a reasonable price for the product and a level appropriate for the student to consider purchasing, and that the product itself was acceptable. All recognised the site as a daily-deal-type website. A total of 219 students were randomly

divided into three equal groups of 73 and assigned to one of the three treatments – high, low or no information on purchase numbers. As the website was a facsimile, each respondent was asked to rate how likely they were to purchase the item on a seven-point scale anchored by 1 = *Not at all likely to buy* to 7 = *Definitely buy it*, rather than make an actual purchase. The ‘high’ version of the website page is shown in Figure 1.

Figure 1: Daily Deal Website: High Purchase Level Version



Post-experiment, the shoppers were measured on their need-for-uniqueness, using a nine-item scale developed by Tian, Beardon, and Hunter (2001). Cronbach's alpha was 0.91 for the scale. The nine items were then aggregated, and those on one half of the scale are designated snobs (need uniqueness) and the other half bandwagoners (need conformity). In total there were 104 bandwagoners and 115 snobs from the sample. Analysis of Variance was employed to analyse the data, using SPSS v20 for Mac. Thus the hypotheses being examined were:

H_{1a}. The lower the amount purchased by others, the more likely that snobs would purchase.

H_{1b}. The higher the amount purchased by others, the more likely that bandwagoners would purchase.

H_{1c}. Where no information on amount purchased by others is given, there will be no difference in purchase likelihood between snobs and bandwagoners.

Findings

Before looking at the need for conformity as a determinant of choice, we looked at the overall purchase intention across the three cases. The low number version had a mean purchase likelihood of 4.00 (Std. Dev. = 1.95), the high version a mean of 3.68 (Std. Dev. = 1.95), and the no information version a mean of 3.49 (Std. Dev. = 1.83). There was no significant difference between groups at $\alpha=0.05$ ($F=1.31$, $p=0.27$). This is not surprising given the

roughly equal split between snobs and bandwagoners that we found in the sample, assuming they cancel each other out.

The Analysis of Variance results are shown in Table 1. Recall that knowledge of the amount purchased by others was expected to result in different behaviour between snobs and bandwagoners, with snobs expected to prefer the low number bought version and bandwagoners expected to prefer the high number bought version.

Table 1: Snobs versus Bandwagoners
Analysis of Variance for Each of the Three Conditions

Condition 1 – Low (14) Previous Purchases					
	N	Mean	Std. Dev.	F	Sig.
Bandwagoners	38	3.76	2.10		
Snobs	35	4.26	1.77		
Between Groups				1.17	0.28
Condition 2 – High (1038) Previous Purchases					
	N	Mean	Std.Dev.	F	Sig.
Bandwagoners	34	3.82	2.20		
Snobs	39	3.56	1.73		
Between Groups				0.32	0.57
Condition 3 – No Information on Previous Purchases					
	N	Mean	Std.Dev.	F	Sig.
Bandwagoners	32	3.41	1.80		
Snobs	41	3.56	1.89		
Between Groups				0.13	0.72

Condition three, where there was no information provided, was expected to result in no difference in purchase behaviour between snobs and bandwagoners. Clearly, condition three generated the expected results, but conditions one and two were wholly unexpected. This information is a key point of difference for daily deal websites but appears to make no difference between those who should be affected. Returning to the first set of findings, it is likely that it was not a case of the two need for uniqueness groups cancelling each other out. In fact, it seems that there was generally no impact by having any information regarding previous purchases. We considered the possibility that respondents who were somewhat neutral in their need for uniqueness might be diluting any differences, so we also tried splitting the groups into snobs, bandwagoners, and neutrals, based on the scale, based on the mean plus/minus one standard deviation, and based on a quartile split. While, as in Table 1, the general direction of the means was as expected, there was no case where there was a significant difference found. We also checked if something had gone wrong regarding the acceptability of the product post the pre-test (e.g. everyone hated it), but found that there was a good range (1 through 7) of responses with a mean of 3.73 (Std. Dev. = 1.92) on the seven-point purchase scale.

Discussion and Conclusion

There was a high reliability score for the scale used to determine need for uniqueness – whether a person was a snob or a bandwagoner – and we clearly identified people as belonging to one or other group. There was also a clear appreciation for the product offered, with a range of purchase intentions from definitely would buy to definitely would not buy, implying the price was also acceptable for those who liked the product. The website itself was a reasonable facsimile of the typical daily deal websites available, and the manipulation

checks showed that the shoppers both noticed the purchase information and considered the conditions to be accurate.

Despite creating conditions similar to studies where information on how many others have purchased has influenced choices based on the need for uniqueness, we found there to be no difference between snobs, bandwagoners, or even neutrals, when the prior purchase level was low, high, or not revealed. Why might this be?

We suspect that it is because of the other aspect of daily deals that differentiates them from other online marketing. We have investigated the aspect of providing information on how many others have purchased, but the other aspect is the urgency factor. As we mentioned earlier, limited availability has been found to promote purchase decisions through intensifying the desire to acquire a product (Aggarwal & Vaidyanathan, 2003; Byun & Sternquist, 2012; Ong, 1999). The semantic cue in this case is not how many are left, but that there is a time limit on the offer (24 hours). It may even be that the time limit enhances the snob factor for snobs – only those who buy today will be able to have the product. For bandwagoners, it could be that the time limit panics them – they don't want to miss out. If both of these conditions are occurring, then of course we would see the result obtained – a cancelling out of the snob effect and the bandwagon effect as both want to buy but for different reasons. We may have inadvertently accentuated this by creating an experiment artefact through an even more heightened urgency because the respondents in our experiment did not even have 24 hours to make their decision.

Further research would be useful to first see if these results are replicated with other products – particularly services. Second, it would be worthwhile introducing a measure of the urgency effect, and seeing if this indeed moderates the need for uniqueness effect. While we do not see it as a limitation for this particular product, it would also be useful to extend the study to other shopper groups to see if other demographic characteristics enhance the need for uniqueness effect. While student samples are often criticised, in this case the product was well-suited to this particular demographic, but the development of a need for uniqueness may be more long term.

Nevertheless, it seems from this study that daily deals have a different place in the market when we consider the need for uniqueness. The use of the purchase information by daily deals to entice shoppers to purchase does not appear to have any discernible effect, whether the shopper has a need for uniqueness or conformity. It may be that the other distinctive feature of daily deals – the urgency aspect – overrides the marketing relevance of purchase information.

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