

# The Effect of Displaying Products in Their Usage Context

## - A Field Experimental Investigation -

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### <Abstract>

The widespread use of self-service concepts in retailing has resulted in increased attention to the design of retail environments and to stimuli operating at the point of sale. One such merchandising technique, the "bundled presentation", i.e., related products are presented in close proximity to each other, is widely used by retailers but has rarely been investigated by academic consumer researchers. This study presents the results of a field experiment into the effects of presenting products in their usage context. Customers' attitudes towards the same product displayed in different ways are compared with each other. The results show that related products, i.e., products that are used together, should be presented in a coordinated display. Furthermore, the bundled presentation enhanced consumers' attitudes of the product when they saw it first in a bundled presentation and then evaluated it in front of a traditional presentation.

Key Words: Bundled Presentation, Traditional Presentation, Displaying Products, Usage Context, Customers' Attitude, Retailing, Experimental Investigation

## Introduction

As a result of the widespread use of self-service concepts in retailing, increased attention has been given to the deliberate design of retail environments to guide, inform and influence shoppers. Furthermore, retailers have also realized that consumers often have hedonic motives for shopping, i.e., not only do they go shopping to

make purchases, but also because they enjoy the act of shopping. Many consumers look for memorable experiences when shopping. In addition to the acquisition of products, they expect hedonic fulfillment through entertainment and sensory stimulation (Babin et al. 1994; Holbrook and Hirschman 1982). As a result, retailers have responded by creating experience-oriented shopping environments and product presentations. In fact, brick-and-mortar retailers use

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entertaining retail environments as a strategy for differentiating themselves from virtual stores on the Internet (Burke 1997).

In order to create memorable shopping experiences, retailers use a variety of emotion-inducing stimuli such as music, photographs, lighting, colors and scents (for an overview of these atmospheric variables see Turley and Milliman 2000). Also, specific experience-oriented shop design and visual merchandising concepts have been developed. Among these is the *store-within-a-store concept*, in which uniquely designed boutique shops are placed within a department store (Stocker 1988), which can be used to target specific market segments (Rosenbloom 1981). Another popular technique is *theming*, which originates from the idea of theme parks and involves an elaborate shop design that tries to “transport” the consumer to a different time or place (Ebster and Guist 2005).

One visual merchandising technique widely used by retailers but rarely investigated by academic consumer researchers is the *bundled presentation*. This merchandising technique was introduced into the academic literature by Groeppel (1993) and is also referred to as “coordinated display” (McGoldrick 2002).

In a bundled presentation, related products, i.e., products used together, are

presented in close proximity to each other. Additional props and decorations are used to place the products in the context they are used and to stimulate consumers’ imagination. For example, in a bundled presentation, groceries, wine, bread, plates, cutlery and glasses could all be arranged in a picnic basket, surrounded by grass and flowers. In this case, this visual merchandising technique would be used to create a “picnic experience” and to suggest products needed for this type of activity. In a laboratory experiment using photographs, Groeppel (1993) found that consumers preferred bundled presentations over traditional presentations, i.e., unrelated products grouped together, e.g., plates on one shelf, glasses on another shelf. Furthermore, she found that the bundled presentation led to a better functional evaluation of the product and consumers indicated higher willingness to make purchases in the store.

Interestingly, apart from a related research conducted by the authors (Ebster, Wagner & Bumberger 2007), to our knowledge, no further studies on bundled presentations have been reported in the international marketing literature. However, retailers worldwide use bundled presentations on an everyday basis, relying more on intuition than hard scientific facts.

The aim of the present study is to test

the effectiveness of the bundled presentation in a field experiment. Specifically, since retailers use bundled presentations as an experience-oriented merchandising technique, the goal is to find out the extent to which this visual merchandising technique influences consumers' attitudes towards displayed products. Furthermore, we investigate whether the presumed effect of a bundled presentation on product evaluation only works when the product is part of a coordinated display, or if the effect is also present when a consumer sees a product displayed traditionally on a shelf *after* having seen it in a bundled presentation. This is of considerable relevance to retailers as consumers rarely take products from a coordinated display (e.g., in a shopping window or a cordoned-off part of the store) but only see the product in its usage context, and then take it from a shelf when purchasing it.

## HYPOTHESES

The bundled presentation was shown to have a positive effect on functional product evaluation in a laboratory experiment (Groepel 1993) and in some respects this research may be regarded as a replication study, however, in a real setting and with

additional hypotheses under analysis. According to the Mehrabian-Russel model of people's responses to environments (Mehrabian and Russell 1974), which has received considerable empirical support (e.g., McGoldrick and Pieros 1998), environmental stimuli can lead to affective responses.

Environmental psychologists have also found that a person's response to environmental stimuli tends to be based on the total configuration of stimuli rather than on individual stimuli (Holahan 1982; Gifford 1997). These findings also extend to consumer behavior. Specifically, consumers respond more positively to products and retail environments when the environmental cues are congruent (Bell et al. 1991; Mattila and Wirtz 2001; Ebster and Jandrisits 2003). Not only are the products displayed in a bundled presentation related, but the decorative props further enhance the unity of the bundled presentation. Furthermore, as the merchandise are related, customers are more likely to find what they need, reducing an important source of shoppers' irritation (d'Astous 2000). Therefore, we predict that the bundled presentation will have positive effects on product evaluations (e.g., Spies, Hesse and Loesch 1997). This hypothesized effect on attitudes is expressed in H1:

*H1: Consumers' attitudes towards a product displayed in a bundled presentation will be more favorable than towards a product displayed in a traditional presentation (i.e., when there is no thorough coordination between the displayed product and its environment).*

Consumers who previously saw the product in a bundled presentation should be able to recall it when it is presented in a traditional display on a shelf. They should be able to retrieve the information stored in their long term memory from their experience of the product in the coordinated display presentation (Meyers-Levy and Tybout 1989). As bundled presentations have a strong visual impact from combining related products with suitably decorative props, they will be processed by consumers as images. When stimuli are processed as images, they tend to be more easily retrievable as they involve dual coding, i.e., they are represented both as pictures and words in the memory. This provides for more associative links to facilitate retrieval (Childers and Houston 1984). Therefore, we hypothesized that product evaluation will not only be more favorable when the product is evaluated directly as part of the bundled presentation, but also when the consumer first sees the product in a bundled presentation and

subsequently on the shelf. This is expressed in hypothesis 2.

*H2: Consumers' attitudes towards a product displayed first in a bundled presentation and then in a traditional presentation will be more favorable than towards a product displayed only in a traditional presentation.*

In most retail stores where bundled presentations are used, consumers are not expected to remove the products from the coordinated display. Frequently the consumers see a product first in a bundled presentation (e.g., in a shopping window) and subsequently go to the shelves to acquire the product. For this reason, the above hypothesis seems to be of particular importance for retail practice.

Advertising researchers found that placing information originally contained in an advertisement on in-store displays or packages helps the consumer to access advertising memory traces by establishing a link between the information in the advertisement and the brand displayed in the store (Hutchinson and Moore 1984). If the consumer's memory of the advertisement is positive, this results in more favorable brand evaluation (Keller 1987). Visual depictions have also been shown to be effective as retrieval cues in advertising (Mitchell and Olson 1981). As

visual retrieval cues were found to assist consumers in accessing product related memories from advertisements, they should also be powerful in triggering memories of a product consumers have seen in a bundled presentation. Therefore, we hypothesized that a photograph of a product in a bundled presentation placed next to the product traditionally displayed on a shelf will be effective as a retrieval cue, thereby resulting in more favorable product evaluations.

*H3: Consumers' attitudes towards a product displayed first in a bundled presentation and then in a traditional presentation with visual retrieval cues will be more favorable than towards a product displayed first in a bundled presentation and then in a traditional presentation (without visual retrieval cues).*

## METHOD

In order to analyze the postulated hypotheses empirically, primary research was conducted in a field study. A convenience sample of 500 customers was selected. Participants were recruited on ten consecutive days during regular business hours while shopping in a large furniture store located in Vienna, Austria. They

were asked for their cooperation and did not receive any monetary compensation for participating in the experiment. A total of 74 percent of the participants were female, and 79 percent of the respondents were 40 years old or less, which is in accordance with the targeted population of this furniture store. Most of them (92 percent) belonged to a lower income group with a monthly net income of (far) below € 2000.

As customers entered the store, an experimenter approached them and, if they were willing to participate, assigned them randomly to one of four experimental conditions. After being exposed to the experimental stimuli, all participants were asked to fill out a questionnaire.

- In *experimental group 1* (EG1), participants were shown a sofa as part of a bundled presentation. The sofa was exhibited in a merchandising display of a fully furnished living room (cf. Figure 1a). The customers then evaluated the sofa while standing in front of the display.
- In *experimental group 2* (EG2), customers were shown the sofa in the bundled presentation. Afterwards the experimenter led them to another section of the store where the sofa was displayed together with other sofas (cf. Figure 1b). Standing here, participants then proceeded to

evaluate the sofa.

- In *experimental group 3* (EG3), the participants saw the sofa in the bundled presentation. Afterwards the experimenter led them to a section of the store where the sofa was displayed together with other sofas. This time, however, a retrieval cue (a photograph showing the sofa as part of the previously seen bundled presentation) was attached to the sofa. The participants then proceeded to evaluate the sofa.
- In the *control group* (CG), participants evaluated the sofa displayed together with other sofas (cf. Figure 1b) without having seen it in the bundled presentation.

The standardized questionnaire used for data collection was kept short in order to maximize participation in the study. It contained a semantic differential scale developed by Groeppel (1991) to measure

the consumers' attitudes towards the displayed sofa. This scale comprised the items: high quality-low quality, unique-common, superior-inferior, special-ordinary, expensive-cheap, fashionable unfashionable and fancy-plain. In addition, information on purchase intention and a few demographic details were collected (gender, age - 5 response categories, occupation - 7 response categories, income - 7 response categories). Non-response did not occur since all 500 participants fully cooperated in the study. A balanced experimental design was used and therefore there were 125 respondents in all four groups.

## RESULTS

First, the reliability of the attitude scale was determined by following conventional procedures as described e.g. by Fornell and



a) Bundled presentation of the sofa



b) Traditional presentation of the sofa

FIGURE 1 Traditional and bundled presentation of the sofa

Larcker (1981). A composite scale was formed which reflects the theoretically developed uni-dimensional construct. After purifying, four items were retained (high quality-low quality, superior-inferior, special-ordinary and fashionable- unfashionable). These four items still reflect the content of the construct but improve statistical measures; e.g. the minimum of the items to total correlations increased from 0.28 to 0.60. Moreover, exploratory factor analysis on them has resulted in a one factor solution. Factor loadings are all high and the percentage of variance explained is about 50 percent. In addition, Cronbach's reliability coefficient  $\alpha$  for this scale is 0.64. Consequently, these results are found to be satisfactory.

Next, the mean attitudes towards the sofa and their standard errors per experimental condition were calculated. The results are shown in the four bottom rows (columns two and three) of Table 1. The higher values represent more favorable attitudes. The results are face valid since the attitudes are least favorable (i.e., smallest) amongst the shoppers who were only exposed to the traditional presentation (CG). The next group comprised those who evaluated the sofa in front of the coordinated display (EG1). Respondents, who saw the sofa twice (EG2, EG3), i.e., first in the

bundled product presentation and then in the traditional presentation, rated it best. When compared to EG1, this might be due to the mere exposure-effect discussed in the literature (Zajonc 1968). When designing the experiment, this effect was intentionally taken into account since it reflects the typical situation customers are exposed to when shopping. It is, however, very unlikely that respondents had seen the sofa *before* taking part in the experiment because the display had only been introduced to the store prior to this marketing research project and the shop is very spacious so that shoppers do not usually return to the places they have already visited. Contrary to our expectations, the visual retrieval cue did not positively impact the attitudes of respondents (EG3 in comparison to EG2).

The analysis of the postulated hypotheses was performed by comparing the results between the groups. In order to get a first insight, Table 1 further displays the differences between the relevant groups with respect to the attitudes towards the sofa (last three rows, column five of Table 1).

Analysis of variance was then employed to check whether these differences were statistically significant. Consumers' attitude towards the product was taken as the dependent variable, and the respective experimental groups constituted the

independent variable. Levene statistic on homogeneity of variance confirms that ANOVA may be applied to the data set at hand (row six, Table 1). Furthermore, as can be seen from Table 1 (row four), the effect of the experimental condition is highly significant.

Investigations into the postulated hypotheses were carried out by looking at the post-hoc-tests (in view of the recommendation provided by Tabachnik and Fidell (2007, p. 133), Tukey's HSD-test was used). Therefore, from a statistical point of view H1 yields marginally significant results and H2 yields significant results (bottom rows, column six in Table 1). While the potential occurrence of a mere exposure-effect might bias the results for H2, the

difference between EG2 and CG is so pronounced that this influence seems to be negligible. Therefore the statistical analysis has confirmed that customers' attitudes towards a product displayed in a bundled presentation are more favorable than towards a product displayed in a traditional presentation (H1). Moreover, bundled presentations also favorably influence the recall of the bundled product (H2).

Exploratory analysis indicates that products evaluated positively are more likely to be purchased: the correlation coefficient between attitudes and purchase intentions is found to be equal to 0.45 which is significant at the 1% level. A more detailed analysis of this relationship has been deferred to future research.

TABLE 1: Analysis of variance

Dependent variable: Attitude towards the sofa					
source of variation	sum of squares	degrees of freedom	F-ratio	p-level	
experimental condition	237.6	3	7.96	<0.01	
error	4938.0	496			
Levene Statistic on homogeneity of variances			0.54	0.65	
Experimental condition	Attitude towards the sofa		Post-hoc-test (Tukey HSD)		
	mean	standard error	analyzed hypothesis	difference of means	p-level
EG1	11.96	0.29	H1: EG1 vs. CG	0.90	0.10
EG2	12.97	0.27	H2: EG2 vs. CG	1.90	<0.01
EG3	12.34	0.28	H3: EG3 vs. EG2	-0.63	0.40
CG	11.06	0.30			



## DISCUSSION

This study investigated the impact of a special form of merchandising technique, i.e. the bundled product presentation, on attitudes towards the product displayed. Although this technique is frequently used in practice, academic research on this issue is sparse. By deriving three hypotheses from the literature and conducting an experimental field study, we have shown that bundled product presentations resulted in better attitudes towards the product when evaluated immediately. Furthermore, there is a memory effect in the sense that attitudes measured later on also compared favorably with attitudes from customers not exposed to the coordinated display. These two findings are supported by statistical analysis. However, the analysis did not support the third hypothesis investigated since it could not be confirmed that memory effects could be improved by additionally providing a visual cue when evaluating the product at a later stage.. Because of the very short time span, i.e., less than five minutes between the consumers' initial exposure to the product in the coordinated display and their subsequent evaluation of it, visual retrieval cues may simply not have been

necessary to jog consumers' memories when assessing the sofa.

The results are of *managerial relevance* with respect to visual merchandising and experience-oriented store design. They indicate that coordinated displays, as used by a growing numbers of retailers, have a considerable effect on the way consumers evaluate a retailer's merchandise and constitute an important tool in experience-oriented marketing. Because of the positive impact of bundled presentations on product-related attitudes, we recommend increasing the use of bundled product presentations in favor of traditional bulk merchandising. Products should either be displayed together with or in close proximity to related goods and props and decorations should be used to emphasize the context in which the products can be used together. A critical issue in this regard might be the decision of which products to display together. In addition to customer surveys and focus groups, retailers might be advised to use shopping basket analysis, e.g. by means of scanner data, to identify products commonly bought together as these could indicate products to include in a coordinated display. Since bundled product presentations have been shown to positively influence product evaluations, even when consumers see the product

later on the shelf in a traditional presentation, the results also apply to window displays and similar visual merchandising tools separated from the actual point of purchase.

An obvious *limitation* of this study is the use of convenience sampling. As the design employed in this study was already quite demanding and time consuming, this restricted the use of more sophisticated sampling plans for pragmatic reasons. The sample size, however, appears to be sufficient. This should also warrant non-systematic influences of other potential impact factors to be insignificant. In order to make the results more generalizable, it would be necessary to extend the current analysis to other types of furniture, outlets, store types (e.g. clothes) and targeted customers. This study focused on a younger population with a low income.

Another source of error in this study might stem from the accompanying persons. Although care was taken to concentrate on a single participant, it was not possible to completely exclude influences from accompanying partners or friends. The interviews were conducted by a single well-trained experimenter so that no interviewer bias was expected.

From a more conceptual point of view, the time between exposure to the bundled

product presentation and the subsequent evaluation (for experimental groups 2 and 3) should be increased. This applies in particular to group 3 as a memory cue was used. Since the theory we used deals with knowledge on long-term memory, the time lag between exposure and evaluation ought to be substantial. Once again, pragmatic reasons rendered lengthy durations of the experiment impossible since participants were only willing to cooperate for a short time. This deficiency, however, might be responsible for the lack of statistical support for hypothesis 3.

In spite of these limitations, the experiment reported in this paper provides evidence that presenting products in their usage context can improve attitudes towards this product. We hope that this study will inspire future research on visual merchandising in general and bundled product presentations in particular.

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