

THE HALO EFFECT IN THE PERFUMERY INDUSTRY: THE RELEVANCE OF THE 'NATURAL INGREDIENTS' CLAIM

ABSTRACT

Can consumer knowledge that a scent is 100% composed of natural ingredients influence sensory perception of the fragrance? In the present study, 112 participants were asked to test and evaluate a floral fragrance. Prior to the test and the evaluation of the scent, half of the consumers were informed of the 100% natural origin of its components, while the other half were not provided with that information, even though the individuals were exposed to exactly the same perfume made from totally natural essential vegetable oils. Results found that participants gave a higher mark to the scent when they had been informed that it was completely natural in origin. This study demonstrates that information proclaiming the natural origin of substances comprising a scent may change consumers' sensory perception of the fragrance. This finding is of great relevance for scent manufacturers and cosmetics companies, enabling them to manage such claims as tools to market their products.

KEY WORDS

Perfumes, Halo effect, Natural origin claim, Consumers' perception

1. Introduction

The cosmetic market includes, among others, the segments of perfumes and fragrances. According to Weber and De Villebonne (2002), when purchasing cosmetics, there are important competitive factors that affect consumer's choice. Factors that intervene in the purchase behavior process are the following: price, quality, packaging, advertising, promotion, local recognition, opinion toward particular firms or products and the knowledgeable salesperson. Nowadays, the "natural" selling point takes on great importance for consumers too, who are increasingly particular about not using chemical substances on the skin (Dickson-Spillmann et al., 2011). Product and brand managers of personal care, perfumery and cosmetic products are faced with decisions such as to diversify towards the natural cosmetics to speed the diffusion and increase the usage of their products, given that society is increasingly more aware and informed of the benefits of natural products. This

becomes more important when it has been suggested that fragrances are one of the major causes of allergic contact dermatitis from the use of cosmetics in adults and children (Rastogi et al., 1999). So industry needs to responsibly address concerns and ensure that scented products are safe for users, those inadvertently exposed and the environment (Bridges, 2002). According to Dimitrova et al. (2009), during the nineteenth century, chemicals were used to replace more expensive natural ingredients making the cosmetics more widely used. At present, the health aspect is changing this trend involving an increased interest in natural ingredients, with consumers worried about treating their bodies with care and respect. Thus, natural and organic products today constitute the major growth segment in the cosmetics industry, their sales registering an annual increase of 20% against 2% for cosmetics as a whole. France's rates of between 30% and 40% over the last two years make it the third major growth market in Europe, after Germany and the United Kingdom. In the cosmetics industry a natural product is understood to be one that is made up of natural substances of botanical, animal or mineral origin, including their mixtures. They must be safe for human health and can only be obtained and processed following physical, microbiological, or enzymatic methods. In the case of perfumery products no studies to date have analyzed the possible halo effect of the "natural" selling point in fragrance evaluation. The present investigation's objective is to analyze, by means of real tests, whether consumer knowledge to the effect that a scent is made up of 100% natural substances can influence individuals' sensory perception.

2. Conceptual framework

Research has indicated that, when buying scent, consumer purchase decision processes generally occur in low-involvement situations (Laurent & Kapferer, 1985). With this product type the risk that is customarily associated with purchase is low, and there is a strong drive of affective or hedonic activation (Hirschman & Holbrook, 1982). In perfumery, buying often takes place through impulse or through inertia. Limited cognitive involvement leads people to choose a perfume because of brand, price, advertising, attraction aroused by the celebrity it is associated with, information provided at the time by sales point staff, etc., but very often a lack of background knowledge about perfumes means that there is no deliberate process of evaluation and decision on the part of the consumer. Scarcely any information search takes place and little time is given over to choosing brand and product (Silayoi & Speece, 2004). Accordingly, consumers are liable to be affected by a phenomenon termed the halo effect. This happens when an individual's assessment of one particular characteristic of an item powerfully affects or slants their impressions of other attributes of the same item (Lee et al.,

2013). An illustration of this is provided when acquaintance with the positive and negative qualities of an individual affects, in an unconscious, unthought-out manner, whether or not this person is seen to be attractive in the eye of the beholder (e.g., Kniffin & Wilson, 2004). Following the original definition of Thorndike (1920), Leuthesser et al. (1995) considered the halo effect as a rater's failure to discriminate among conceptually distinct and potentially independent attributes, with the result that individual attribute ratings co-vary more than they otherwise would. The investigation of the halo effect has also received attention in marketing within the context of attitude theory. Bagozzi (1996) conducted a laboratory experiment to induce physiological arousal as a mechanism for influencing halo. The context for the study was attitudes toward blood donation. Using a spreading activation model of semantic memory to frame predictions, it was hypothesized and found that arousal produced a halo effect for positive beliefs, tended to reduce halo for negative beliefs, and eliminated halo (marginally) for all beliefs treated as an aggregate.

In the case of food products, some researches have shown the existence of a halo effect on several behavior variables of the “natural” and “organic” eye-catcher on food packages, including consumer perception of product quality, evaluation of a product as being more healthy, with lower risk for the organism, a feel good sensation, more positive attitude toward the product, or a stronger intention to buy (Abrams et al., 2010; Dickson-Spillmann et al., 2011; Lockie et al., 2004). Also, Roe, Levy, and Derby's (1999) study showed that a health label (e.g., high in calcium for yogurt) led consumers to consider a product to be better for their health and, therefore, to be more inclined to buy it. Further, the recent study carried out by researchers Lee et al. (2013) found that participants estimated foods with organic labels to be lower in calories than those without the organic label. And foods with the organic label elicited a higher willingness to pay and yielded better nutritional evaluations (e.g., tastes lower in fat, higher in fiber) than foods without the organic label.

In the specific case of perfumery products, though, no studies to date have analyzed the possible halo effect of the natural ingredients claim on consumers' sensory perception of fragrances. In the literature sensory perception is defined as a mental process that involves the interpretation of a series of sensations (capacity to capture modifications in the external and internal environment) (Worch et al., 2010). Researchers De la Fuente and Romo (2005), in a study published in *Nature Neuroscience* and carried out with macaques, show that sensory perceptions do not always correspond with reality but are the result of our expectations of

something. Perceptions, according to this research, arise from the combination, in different brain areas, of sensation, attention and expectation, and can be manipulated in line with the information presented to an individual. In the same regard, Raghurir (2010) finds that sensory perception of a cosmetic product can be easily distorted through stimuli presented by marketing experts that alter consumer expectations, since consumers very often “feel or experience what they *expect* to feel or experience”. Accordingly, sensory perception of a scent can be expected to become distorted by what consumers “expect” of the fragrance in line with the information they have been given as to whether the substances it is comprised of are or are not natural. Similarly, sensory perception of fragrance, through its effect on the consumer’s mood (Rétiveau et al., 2004), will have the capacity to impact an individual’s cognitive assessments of a product (Bone & Jantrania, 1992).

As previously mentioned, the aim of this study is to analyze whether knowledge possessed by the consumer to the effect that a scent is 100% natural, in the sense that it comes from nature and has been transformed through environmentally respectful procedures, exercises a halo effect on the evaluation of a fragrance. Specifically, we hypothesize that this information will positively influence sensory perception of the perfume, and induce a more favorable attitude toward it, accompanied by greater willingness to buy.

We thus establish the following hypotheses for our research:

H1: Consumer knowledge that the components of a perfume are 100% natural increases sensory perception of the fragrance.

H2: Consumer knowledge that the components of a perfume are 100% natural increases attitude toward the fragrance.

H3: Consumer knowledge that the components of a perfume are 100% natural increases willingness to buy the fragrance.

3. Method

The data for the present study come from an experiment performed with 112 students (53 male, 59 female). The participants’ ages ranged from 18 to 47 years old (M=22.45, SD=4.35). For the data collection a floral fragrance was used. Half of the total number of individuals in the sample were informed that the scent components were 100% natural, whilst the other half were not provided with this information, even when all the individuals were exposed to exactly the same kind of scent, which was made from essential vegetable oils of 100% natural

origin. Participants used paper strips to evaluate the different perfumes. After smelling the scent, participants were instructed to answer a series of questions in the form of a paper questionnaire. The questionnaire asked participants to evaluate their sensory perception of the fragrance, their attitude toward the perfume, and their willingness to buy it.

Development of the measurement scales for the variables studied is based on the review of the relevant literature, in order to ensure the validity of content. In first place, for measurement of sensory perception of fragrance, we found different measurement scales in the literature (see e.g. Ferdenzi et al., 2013). For this study a multi-item scale of twelve items was used, through which the different sensations evoked by the fragrance are captured. Response categories ranged from 1, not at all, to 10, very much. In second place, the attitude toward the fragrance was measured by means of a semantic differential scale, with scores ranging from 1 to 10, using the pair of bipolar items: I didn't like it at all/I liked it a lot (Kempf & Smith, 1998). Thirdly, consumer willingness to buy the fragrance was also measured via a semantic differential scale, with scores ranging from 1 to 10, using the pair of bipolar items: "I would be very unlikely to buy it"/ "I would be very likely to buy it" (Homer, 1990).

4. Results

As predicted, a series of within-participants ANOVAs revealed that information revealing the totally natural origin of the components of the fragrance did influence participants' evaluations of their sensory perception of the scent (see Table 1). The fact that participants possessed knowledge regarding the 100% natural origin of the components of the fragrance caused them to have a better sensory perception of it, over the twelve dimensions evaluated. So, in the group in which participants were informed that the scent components were of natural origin, the fragrance was evaluated as significantly more natural, healthful (produces well-being), agreeable, attractive, sensual, comfortable, pleasant, harmonious, relaxing, good mood inducing, as having more feel-good appeal and being more sense-stimulating, than in the group where participants were not provided with that information (control condition). In consequence, information to the effect that the components of a fragrance are of a 100% natural origin is demonstrated to have a consistent halo effect on the evaluation of sensory perception of that fragrance. Therefore, the first hypothesis is corroborated.

Table 1

Mean and standard deviation in sensory perception of perfume-related evaluations when information is provided concerning the 100% natural origin of the components of the scent, and when there is no information (i.e., control condition)

Dependent variable	Experimental Factor				
	Information 100% natural origin		Control		<i>F-value</i>
	M	SD	M	SD	
Natural	6.02	2.01	4.46	2.40	
Agreeable	6.07	1.94	4.91	2.56	7.27**
Feel-good appeal	5.80	1.97	4.68	2.41	7.31**
Good-mood inducing	5.93	1.92	4.43	2.27	14.21***
Attractive	5.43	1.87	3.73	2.15	19.84***
Sensual	4.98	2.07	3.02	2.07	25.18***
Comfortable	5.77	1.95	4.16	2.34	15.61***
Pleasant	5.55	1.96	3.68	2.27	21.83***
Harmonious	5.64	2.19	4.55	2.29	6.58*
Healthy (welfare inducing)	5.71	2.09	4.39	2.52	9.10**
Relaxing	5.66	2.09	4.18	2.69	10.59**
Sense-stimulating	5.89	1.87	4.77	2.19	8.48**

Notes. All items are measured on 10-point scales ranging from 1 (*not at all*) to 10 (*liked it very much*)

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 2

Mean and standard deviation in attitude toward product-related evaluations when information is provided concerning the 100% natural origin of the components of the scent, and when there is no information (i.e., control condition)

Dependent variable	Experimental Factor				
	Information 100% natural origin		Control		<i>F-value</i>
	M	SD	M	SD	
Attitude toward the perfume	5.50	2.04	4.21	2.42	

Notes. All items are measured on 10-point scales ranging from 1 (*didn't like it at all*) to 10 (*liked it very much*)

* $p < .05$; ** $p < .01$; *** $p < .001$

Meanwhile, information imparted proclaiming the 100% natural origin of the perfume components likewise showed a consistent halo effect in the evaluation of the scent in reference to the attitude demonstrated by participants toward the perfume (see Table 2). For the floral aroma tested in the experiment, the participants who had been exposed to the information concerning the totally natural origin of the scent showed a significantly more

favorable attitude toward the product than did their counterparts under the control condition. Thus, hypothesis 2 is corroborated.

Finally, the results of the ANOVA analysis also indicate that the information announcing the 100% natural origin of the perfume components, imparted to only half of the sample group, exerted a consistent halo effect on the evaluation of the perfume, when it came to the willingness shown by participants to buy the product (see Table 3). Therefore, hypothesis 3 is corroborated.

Table 3

Mean and standard deviation in purchase-intention-related evaluations when information is provided concerning the 100% natural origin of the components of the scent, and when there is no information (i.e., control condition)

Dependent variable	Experimental Factor				
	Information 100% natural origin		Control		<i>F-value</i>
	M	SD	M	SD	
Intention of purchase	4.63	2.34	3.20	2.35	10.37**

Notes. All items are measured on 10-point scales ranging from 1 (I would be very unlikely to buy it) to 10 (I would be very likely to buy it) * $p < .05$; ** $p < .01$; *** $p < .001$

5. Conclusions and Future research

The aim of the present study was to provide concrete and specific findings regarding the influence of information imparted announcing the completely natural origin of the components of a fragrance on consumer perceptions of the product, which has not to date been tested in the scientific literature. While the literature includes various works that have analyzed the halo effect of the organic label or the 100% natural origin of ingredients where food products are concerned (Abrams et al., 2010; Dickson-Spillmann et al., 2011; Lockie et al., 2004), until now no studies have analyzed this circumstance in relation to perfumery products. The results indicated that information announcing the 100% natural origin of perfume components exercises a halo effect on evaluations of the product. The study shows that this information influences consumers' sensory perception of the scent, as well as attitude toward it, and willingness to buy. This corroborates the findings of other studies with regard to food products, which indicated that the sensory perception and evaluation of a product can

be manipulated by the information provided to consumers (Lee et al., 2006; Wansink et al., 2005). Future research should also analyze the halo effect of the ‘natural origin’ claim for other odor categories in the market and for other cosmetic products. Likewise, it would be of interest to study whether there are differences in the consistency of the halo effect of “natural” claim on consumer evaluations between countries with different cultures.

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