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How to best promote my product? Comparing the effectiveness of sensory, functional and symbolic advertising content in food marketing

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Abstract

Purpose – Advertising is one of the most important components of food marketing. However, there is uncertainty over the optimal means of convincing consumers to buy a product. The purpose of this paper is to examine the effectiveness of advertising content comprising text (sensory, functional and symbolic messages) and pictures (product image) on food product evaluation.

Design/methodology/approach – Two online experiments investigating strawberry advertisements were performed. Study 1 incorporated only text, whereas study 2 investigated combinations of text and pictures. Analyses of variance were conducted to determine any significant differences among the three texts (sensory, functional and symbolic) and among the combinations of text and pictures.

Findings – Study 1 revealed no significant differences. All three texts were well received, which shows the relevance of all the product benefits – sensory, functional and symbolic – for food products. In contrast, study 2 identified significant differences. The data analysis indicated that advertising effectiveness increases with the complementarity of the text and picture. Notably, the combination of the product picture and symbolic text was scored the highest for effectiveness.

Originality/value – The findings provide new insights into advertising design that food firms can use to enhance consumer product evaluations in terms of expected taste, perceived experience and quality, overall attitude and purchase intention. Further, the results contribute to the research stream of food product benefits by highlighting the relevance of sensory, functional and symbolic design elements.

Keywords Food marketing, Product design, Food products, Advertising effectiveness, Product evaluation, Advertising design

Paper type Research paper

Introduction

Advertising is one of the most important means of appealing to consumers (Sethuraman *et al.*, 2011) and providing product information (Nelson, 1974; Koetz *et al.*, 2017). In marketing practice, there is often uncertainty concerning whether advertising is used most effectively (Aaker and Carman, 1982; Tellis, 2003). Additionally, in the marketing literature, the effectiveness of advertising is a popular topic (e.g. Frazer *et al.*, 2002; Gallagher *et al.*, 2001; MacKenzie *et al.*, 1986; Petty *et al.*, 1983; Woodside, 2016), particularly in the field of food products (e.g. Kareklas *et al.*, 2014; Parker, 2003; Schifferstein *et al.*, 2013; Theocharous, 2015; van Kleef *et al.*, 2005; Vlachvei *et al.*, 2009; Zandstra *et al.*, 2017). One key recurring question in advertising design relates to the content of ads. The content forms associations with the product (Lane, 2000) and is thus essential for the evaluation of the product. By establishing effective advertising messages, firms may improve the perceptional and attitudinal components of product perception (Olney *et al.*, 1991) and may elicit actual purchase behaviours (Resnik and Stern, 1977). Nonetheless, what kind of advertising messages are most effective in the context of food products?

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The objective of this paper is to examine the influence of advertising content (in terms of sensory, functional and symbolic advertising designs) on food product evaluation (in terms of gustatory perception, product experience, product quality, attitude towards the product and purchase intention). For this purpose, two exploratory studies are performed to analyse the differences among the three conditions. In line with McQuarrie and Mick (1999) and Pieters and Wedel (2004), this paper considers text and pictures as the two key advertising elements to examine. The first study considers only advertising text. However, because a picture in an advertisement can change consumer perceptions (Edell and Staelin, 1983; Wang, 2013), a second study investigates the combination of three different advertising texts with a picture of the product, which in this paper is strawberries. Using this exploratory approach, this study examines how the two advertising elements are best assembled to achieve the strongest effect. The paper is organised as follows. First, it provides the theoretical background addressing advertising design in food marketing that leads to the research question. The subsequent section presents the methodology for both studies by providing information on the research design, measures, procedure and stimulus material, which is developed based on two preliminary studies. Then, the findings of study 1 and study 2 are presented. Finally, the paper presents the discussion of the results, followed by the conclusion, implications, limitations and future research suggestions.

Theoretical background

Recent elaborations in the field of product design suggest that people essentially value a product's appearance based on three different design dimensions. In detail, these design dimensions are perceived aesthetics, functionality and symbolism (Brunner *et al.*, 2016; Candi, 2007; Homburg *et al.*, 2015; Ulrich, 2011). Aesthetics relates to the perceived beauty of a product and the general hedonic pleasure that a consumer receives from its sensory attributes (Desmet and Hekkert, 2007). Functionality indicates the perceived utilitarian value of a product's design (Bloch, 2011). Symbolism captures all aspects of the meanings, messages and associations that the design of a product transfers to the consumer (Kumar and Noble, 2016). With regard to food products, all of these dimensions are essential in a consumer's product perception and product choice, as recent research showed (Grunert *et al.*, 2000). First, appearance is very important for the holistic evaluation of a food product (Imram, 1999). Accordingly, Michel *et al.* (2014) showed that the perception of a food product's beauty and attractiveness can be a relevant factor for food product evaluation. Second, the functional aspects of food are considered to be very important from a consumer perspective and have been the focus of several past studies. For instance, van Kleef *et al.* (2005) provided insights into the impact of functional food benefits on consumers' food evaluations. Moreover, Siró *et al.* (2008) wrote a review paper on functional foods that highlighted the impacts of functional benefits on food product perception. Finally, symbolic benefits are significant for food product evaluation as well (Zandstra *et al.*, 2017). For instance, Robinson and Higgs (2012) showed that social information about how much a popular group likes a specific orange juice influences consumers' expectation of whether they will like that orange juice. Moreover, Magnier *et al.* (2016) demonstrated that food packaging that is associated with sustainability leads to higher perceived product quality. Additionally, in her overview paper on the decisive factors for food product evaluations, Jaeger (2006) identified symbolic aspects, such as branding and social issues.

In the literature, sources of the product evaluation process are typically divided further into intrinsic and extrinsic product factors. Intrinsic factors are inextricably linked to the product, including specific sensory attributes such as the colour or texture of a food product. Conversely, extrinsic factors include all context influences that are somehow related to the product, such as the packaging, point of sale and all other sources of information provided by advertising (Krishna *et al.*, 2017; Mueller and Szolnoki, 2010; Piqueras-Fiszman and Spence, 2015).

As previously mentioned, advertisement is a powerful tool to influence consumer perceptions of a product in general. Accordingly, previous research in this area has investigated different relationships between advertising design and subsequent product evaluation (e.g. Boerman *et al.*, 2017; Chang and Yen, 2013; Friedman *et al.*, 1976; Wilkinson *et al.*, 1975). Among others, one important factor in advertisement is the content design. In particular, the wording of an advertisement, either written or spoken, affects the generated frame in which the product is perceived (Decrop, 2007). Correspondingly, in their research on transformational advertisement appeals, Naylor *et al.* (2008) found evidence regarding the influence of advertising messages on hedonic, functional and symbolic product benefits. For food products, hedonic and aesthetic benefits are mainly based on the sensory attributes of the product (Schifferstein, 2015). Moreover, utilitarian and functional benefits predominantly emerge from the nutrients and ingredients of the food (Siró *et al.*, 2008). However, further contextual information about a food's origin and methods of manufacturing are the main drivers of symbolic benefits (Troye and Supphellen, 2012).

Based on the seminal framework of food acceptance by Cardello (1994) and the model of food information processing by Cardello and Wright (2010), contextual factors such as advertisement messages are also highly relevant for consumers' food perceptions. In accordance, recent findings have further emphasised the importance of contextual aspects for food product evaluation. For example, Schifferstein *et al.* (2013) found differences in consumers' food perceptions among the various stages of user-product interaction, such as choosing a product on a supermarket shelf and unpacking the product at home. Moreover, research from Piqueras-Fiszman *et al.* (2012) and Velasco *et al.* (2013) provided evidence for contextual and environmental effects on perceived taste. Piqueras-Fiszman *et al.* (2012) demonstrated that the colour of the plate that a food is served on influences the taste perception, such as the sweetness of the food. Similarly, Velasco *et al.* (2013) showed the contextual effects on perceived taste by varying the atmosphere in terms of multisensory attributes. Amid this background of contextual effects and with regard to food advertisements, Jaeger and MacFie (2000) showed, based on the means-end conceptualization of the components of advertising strategy (MECCAS) framework, how different contents of health-related advertisements can influence consumer perception and behaviour. Furthermore, Kareklas *et al.* (2014) found positive effects of specific advertisement claims on organic food perception. However, because research on the relationship between advertising design and food product evaluation is still scarce, there remains a need to focus on investigating the general effectiveness of different advertising content designs (e.g. sensory, functional and symbolic product information) on food product evaluation (Jaeger and MacFie, 2001; Wyer *et al.*, 2008). Based on these remarks and the aforementioned three-dimensional model of product design, the general research question of this paper is postulated as follows:

RQ. Do significant differences exist between sensory, functional and symbolic advertising designs with regard to food product evaluation?

Methodology

Research design

To explore the research question, quantitative data analysis was chosen for the present studies. The findings are based on two online studies carried out in Germany. The studies investigate two different scenarios with regard to advertising design. The first study considers only advertising text with sensory, functional and symbolic messages and tests for differences in food product evaluation. The second study considers the combinations of the three advertising texts with a product picture (here, an image of strawberries) and again checks for differences in food product evaluation. This approach is used to identify

how the two advertising elements (i.e. text and pictures) are best arranged to achieve the greatest possible effectiveness. Before the research question was investigated, two preliminary studies were conducted to establish the stimulus material for the main studies. Therefore, an association task based on the MECCAS model and a subsequent manipulation check were used to develop the three advertising texts (i.e. sensory, functional and symbolic).

Measures

For the two main studies, the same questionnaire was applied (differing only with regard to the stimulus material). The questionnaire assessed the variables gustatory perception, product experience, product quality, attitude and purchase intention because they have been identified as relevant key factors in the context of food product evaluation (e.g. Paul and Rana, 2012; Raghunathan *et al.*, 2006; Spence and Piqueras-Fiszman, 2014). To measure gustatory perception, the sensory perception item set established by Haase and Wiedmann (2018) was applied. The measurement of product experience relied on the original scale of Brakus *et al.* (2009), and product quality was measured via the scale of Low and Lamb (2000). The measurement of the other two outcome variables was based on single-item scales. To capture the attitude towards the product, the statement "I have a positive attitude towards the product" from Burton *et al.* (1998) was used. Purchase intention was measured by the item "I intend to buy the product in the future" according to Esch *et al.* (2006). All items were specified to the product context of strawberries. Finally, they were rated using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), except for product quality, which was assessed using an eleven-point semantic differential (e.g. 1 = insufficient, 11 = excellent). To increase the quality of the main studies, five independent subjects checked and confirmed the final questionnaire with regard to its readability, comprehensibility and length (Hunt *et al.*, 1982).

Procedure

For data collection, the questionnaire for study 1 and study 2 was sent out via an online link by marketing students in exchange for course credit. The structure of the questionnaire was as follows. The first section included introductory questions regarding, for example, the participants' familiarity and involvement with strawberries. Next, by random selection, either one of the three advertising texts (study 1) or a combination of one of the three advertising texts and the product picture (study 2) was shown. Subsequently, the second and main section included inquiries about the given test variables. Based on the advertisement shown, subjects evaluated the described product (i.e. the strawberries) with regard to their gustatory perception, perceived product experience, product quality, attitude towards the product and purchase intention. Finally, the third section contained social demographics (e.g. age and gender).

Data analysis

All analyses were conducted with the software SPSS 24.0. For the selection of the stimulus material and the description of sample characteristics, the frequencies and means of the participants' responses were computed. For the investigation of possible differences and/or similarities across the three advertising texts, the measurement models were first checked for validity and reliability based on a series of confirmatory factor analyses. In this regard, several quality criteria (i.e. factor loadings, average variance extracted (AVE) and Cronbach's α) were used for the evaluation. Then, analyses of variance (ANOVAs) were conducted to determine the significant differences between the three groups.

Stimulus material

To develop and select the stimulus material, two preliminary studies were conducted, one for the text generation and another for the manipulation check. First, to investigate the effectiveness of different advertising contents with regard to consumer product evaluation, three different advertising texts appealing to the consumer in a sensory, functional or symbolic way were developed. Therefore, our approach followed the established MECCAS paradigm for creating text advertisements. Using the MECCAS model, the elements of the means-end chain for the product of interest are collected and translated into strategic MECCAS elements in terms of message elements with consumer benefits. These elements provide a framework for communicating important product characteristics in a targeted manner (Reynolds and Whitlark, 1995). Accordingly, for text generation, 40 marketing students who were recruited in exchange for course credit completed a word association task. A sample primarily consisting of students was chosen to obtain a balanced set of data with regard to age, education and other demographic characteristics (Agrawal *et al.*, 2011; Dawar and Parker, 1994). The students were asked to provide as many positive attributes of strawberries as they could think of. In total, 301 associations were received (e.g. sweet, rich in vitamins and natural). Next, the respective attributes were assigned to the sensory, functional or symbolic category by two independent researchers. With frequency analyses for each category, the attributes that were most frequently associated with strawberries were selected and thus included in the advertising texts. In detail, 15 attributes (five per text) were specifically implemented. Each text consisted of a catchy heading and a slogan touting strawberries in a sensory, functional or symbolic way. The sensory text emphasised the good taste, juiciness, sweet aroma, fruity scent and intense red colour of the strawberries. The functional text highlighted the quality and excellence, the value for the money, and the richness in nutrients and vitamins. The symbolic text created a context around the strawberries by describing them as an organic food product and emphasised the sustainable and local cultivation, naturalness, and fresh harvest from the farmer. A second preliminary study conducted with 36 marketing students tested for the successful manipulation of the three advertising texts. The participants were randomly assigned to one of the three text conditions. After exposure to the advertisement, they were asked to rate the degree to which the shown advertisement delivered sensory, functional and symbolic value. The measures were assessed using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree). A mean comparison was applied to check for the intended effect of each text. The results revealed satisfactory values. The sensory, functional and symbolic perceptions of the promoted strawberries were the strongest when the respective text was read.

The three texts were used for both study 1 and study 2. In addition, for study 2, a picture of the product was combined with the three texts (see Figure 1). The picture showed strawberries as they can also be found in the supermarket display. As a result, the stimuli used are more realistic, increasing the practical relevance of this study.

Results

Study 1

The first study tests for significant differences between the three advertising texts with regard to food product evaluation. Marketing students recruited the respondents in exchange for course credit. In total, 157 respondents participated in the study (see Table I). The ages ranged from 17 to 61 years with an average age of 29.34 years. The gender distribution was nearly equal (47.1 per cent female, 52.2 per cent male).

First, the measurement models were checked by means of different quality criteria (Henseler *et al.*, 2009). The results revealed satisfactory values for all factors. The factor loadings ranged from 0.676 to 0.928, thus exceeding the critical limit of 0.5 (Bagozzi and Yi, 1988). Moreover, the

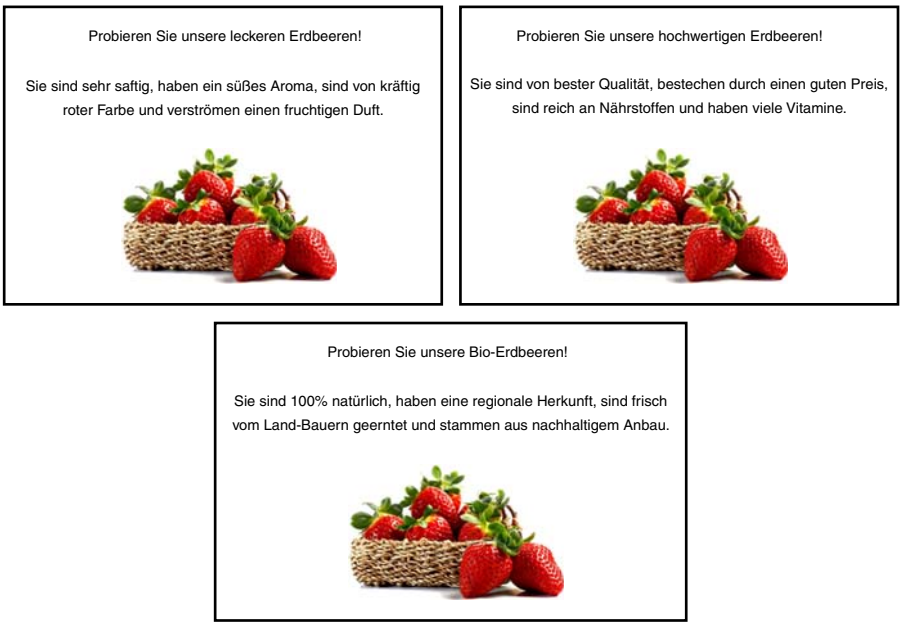

Figure 1.
Advertisement with sensory (top left), functional (top right) and symbolic (bottom) text

Variable	Characteristics	*n*	%
Age	17–20 years	48	30.6
	21–30 years	68	43.3
	31–61 years	41	26.1
Gender	Female	74	47.1
	Male	82	52.2
	No answer	1	0.6
Marital status	Single	120	76.4
	Married	28	17.8
	Divorced	7	4.5
	Widowed	2	1.3
Education	Pupil	2	1.3
	Junior high school diploma	12	7.6
	Senior high school diploma	87	55.4
	University degree	56	35.7
Occupation	Scholar	2	1.3
	Trainee	1	0.6
	Student	97	61.8
	Full-time employee	48	30.6
	Part-time employee	5	3.2
	Retired	2	1.3
	Unemployed	2	1.3
Income	Very low income (< €1,000)	29	18.5
	Low income (€1,000–€2,000)	26	16.6
	Middle income (€2,000–€3,000)	26	16.6
	High income (€3,000–€4,000)	19	12.1
	Very high income (> €4,000)	32	20.4
	No answer	25	15.9
Total sample size		157	100.0

Table I.
Demographic profile of the sample (study 1)

AVE surpassed the limit of 50 per cent, showing a minimum value of 52.4 per cent (Fornell and Larcker, 1981). Finally, Cronbach's α values ranged from 0.695 to 0.881, which is above the limit of 0.5 (Nunnally, 1967). Subsequently, one-way ANOVAs were conducted to check the research question. For this purpose, advertising content was the independent variable, and the five factors representing food product evaluation mentioned above were the dependent variables. The results are reported in Table II. The data analysis shows that the participants do not significantly differ in their product evaluation ($p > 0.1$). Thus, the product itself has been well evaluated for each text since it has a mean value above 8.4 for product quality and mean values primarily above 4 for the other constructs.

Study 2

The use of a picture in an advertisement can alter consumer perception (Edell and Staelin, 1983; Wang, 2013). Thus, a second study was conducted to analyse the combinations of the three advertising texts with a picture of the product. Similar to study 1, marketing students recruited the respondents in exchange for course credit. In total, the sample consisted of 165 respondents (see Table III). The participants' ages ranged from 16 to 79 years, with an average age of 27.18 years. With regard to gender, 46.1 per cent were female, and 53.3 per cent were male.

The results of the factor analyses showed satisfactory values for all variables. The factor loadings were between 0.641 and 0.943, and the AVE values were between 0.54 and 0.727. Finally, the minimum Cronbach's α was 0.716, indicating reliability for all factors. Thus, as the measurement models are valid and reliable, the research question can be tested in the following. The results of the one-way ANOVAs are presented in Table IV. In this case, the data analysis revealed significant differences between the different groups in all variables. In detail, advertising content (i.e. sensory, functional or symbolic) has a significant impact on gustatory perception (F (2, 162) = 4.956, $p \leqslant 0.05$), product experience (F (2, 162) = 2.863, $p \leqslant 0.1$), product quality (F (2, 162) = 3.329, $p \leqslant 0.05$), attitude towards the product (F (2, 162) = 3.232, $p \leqslant 0.05$) and purchase intention (F (2, 162) = 2.488, $p \leqslant 0.1$). To identify significant differences between single groups, Scheffé *post hoc* tests were conducted. For all five factors, the results indicated significant differences between the sensory and symbolic advertising text. In addition, for gustatory perception, the perception of the strawberries also significantly differed between the sensory and functional text. With regard to the magnitude of the measures, both the functional and symbolic groups showed greater values than the sensory group ($M_{\text{sensory}} = 3.878$ vs $M_{\text{functional}} = 4.257$, $p \leqslant 0.05$; $M_{\text{sensory}} = 3.878$ vs $M_{\text{symbolic}} = 4.240$, $p \leqslant 0.05$). Furthermore, participants with symbolic text also rated the product experience significantly higher than those with sensory text ($M_{\text{sensory}} = 2.667$ vs $M_{\text{symbolic}} = 3.068$, $p \leqslant 0.1$). The same applied for product quality ($M_{\text{sensory}} = 8.519$, $M_{\text{symbolic}} = 9.224$, $p \leqslant 0.05$), attitude towards the product ($M_{\text{sensory}} = 3.722$ vs $M_{\text{symbolic}} = 4.145$, $p \leqslant 0.1$) and purchase intention ($M_{\text{sensory}} = 3.722$ vs $M_{\text{symbolic}} = 4.091$, $p \leqslant 0.1$).

Table II.
Results of the one-way ANOVAs testing the effects of advertising content (sensory, functional and symbolic) on food product evaluation (study 1)

Dependent variables	Means (SD) Sensory (n = 51)	Functional (n = 54)	Symbolic (n = 52)	F	p
Gustatory perception	4.129 (0.942)	4.252 (0.692)	4.208 (0.731)	0.318	0.728
Product experience	2.995 (0.846)	2.982 (0.934)	2.928 (0.903)	0.082	0.922
Product quality	8.726 (1.591)	8.469 (1.699)	8.968 (1.350)	1.363	0.259
Attitude	4.137 (0.980)	4.074 (0.908)	4.096 (0.891)	0.062	0.939
Purchase intention	4.039 (1.095)	4.037 (1.027)	4.096 (0.891)	0.058	0.944

Variable	Characteristics	*n*	%
Age	16–20 years	61	37.0
	21–30 years	69	41.8
	31–79 years	35	21.2
Gender	Female	76	46.1
	Male	88	53.3
	No answer	1	0.6
Marital status	Single	138	83.6
	Married	21	12.7
	Divorced	5	3.0
	Widowed	1	0.6
Education	Pupil	6	3.6
	Junior high school diploma	15	9.1
	Senior high school diploma	98	59.4
	University degree	45	27.3
	No degree	1	0.6
Occupation	Scholar	7	4.2
	Trainee	3	1.8
	Student	102	61.8
	Full-time employee	40	24.2
	Part-time employee	4	2.4
	Retired	5	3.0
	Unemployed	2	1.2
	Housewife/househusband	2	1.2
Income	Very low income (< €1,000)	38	23.0
	Low income (€1,000–€2,000)	23	13.9
	Middle income (€2,000–€3,000)	25	15.2
	High income (€3,000–€4,000)	21	12.7
	Very high income (> €4,000)	31	18.8
	No answer	27	16.4
Total sample size		165	100.0

Table III. Demographic profile of the sample (study 2)

Dependent variables	Means (SD) Sensory ($n = 54$)	Functional ($n = 56$)	Symbolic ($n = 55$)	F	p
Gustatory perception	3.878 (0.870)[a, b]	4.257 (0.649)[b]	4.240 (0.586)[a]	4.956	0.008
Product experience	2.667 (0.920)[c]	2.839 (0.892)	3.068 (0.823)[c]	2.863	0.060
Product quality	8.519 (1.500)[d]	8.708 (1.647)	9.224 (1.267)[d]	3.329	0.038
Attitude	3.722 (1.071)[e]	4.036 (0.808)	4.145 (0.803)[e]	3.232	0.042
Purchase intention	3.722 (0.940)[f]	3.929 (0.871)	4.091 (0.776)[f]	2.488	0.086

Notes: Same letters (a, b, c, d, e, f) indicate significantly different means for that dependent variable based on Scheffé *post hoc* tests. For gustatory perception and product quality, the differences are significant at the $p < 0.05$ level (a: $p = 0.031$; b: $p = 0.022$; d: $p = 0.048$). For product experience, attitude and purchase intention, the differences are significant at the $p < 0.1$ level (c: $p = 0.061$; e: $p = 0.052$; f: $p = 0.087$)

Table IV. Results of the one-way ANOVAs testing the effects of advertising content (sensory, functional and symbolic) on food product evaluation (study 2)

Discussion and conclusions

Discussion of the results

The two presented studies provide new insights into the effectiveness of advertising design for food products. Study 1, which focussed on advertising text, shows that the perception of the strawberries was not significantly different regardless of whether the sensory, functional or symbolic advertising messages were provided. However, in terms of the descriptive statistics, in all three text conditions, the test persons were convinced about the product.

Regarding product experience, the mean evaluation of the strawberries was in the middle range. For the other four outcome variables (gustatory perception, product quality, attitude and purchase intention), the means were all clearly in the field of agreement. Hence, it appears that all three product design dimensions (sensory, functional or symbolic) are important in the context of food products and that it makes no crucial difference which type of product benefits in particular are emphasised. Hence, no single dimension comes to the foreground. This finding applies to the case when only text is considered.

However, because a picture in an advertisement can change the consumer's perception, a further study that included a product picture next to the three text conditions was performed. In contrast to study 1, study 2 showed significant differences between the groups. In combination with the picture, the sensory and symbolic texts now produced significantly different product evaluations for all five outcome variables. In the case of gustatory perception, the analysis even found an additional significant difference between the sensory and functional text. In terms of the descriptive statistics, it was generally evident that the sensory text scored worse than both the functional and symbolic text. Except for gustatory perception (in which the functional text performed slightly better than the symbolic text), the symbolic text consistently led to the best product evaluation. Hence, when a picture is added, it makes a notable difference concerning which product design dimension the accompanying text appeals to. The picture itself already provides information about the product and thus partially forms the consumer's perception (Steenkamp, 1990). In the present case of the food product, the picture particularly appeals to the sensory dimension because it directly displays sensory attributes (e.g. red colour and firm shape) or indicates them (e.g. fruity scent and fresh taste). The sensory advertising text only confirms the impressions evoked by the picture, which makes it less informative from a consumer perspective and consequently less effective. Thus, an effect of mutual enhancement was not found. Concerning the functional dimension, the picture provides only a partial idea of the features (e.g. of quality but not of nutritional values). This result explains why functional advertising text performs better. Referring to the symbolic dimension, the picture provides no information about the symbolic product benefits (e.g. organic farming). Consequently, symbolic advertising text works best. These findings are also in line with assumptions from former literature. Jaeger and MacFie (2001) stated that advertising texts and images may provide different information, which nevertheless should fit together and thus further strengthen each other in order to have a stronger positive influence on the consumer. This effect is grounded in consumers' tendency to reduce uncertainty in their buying decisions. Consumers generally prefer decision-making situations where they can feel certain about the expected value of the decision outcome. Relevant decision information can therefore help to reduce uncertainties with regard to the expected product benefits (Dodds *et al.*, 1991; Urbany *et al.*, 1989).

Conclusion

The aim of this paper was to determine whether there are significant differences among sensory, functional and symbolic advertising designs with regard to food product evaluation. When considering text as the only advertising element (study 1), the findings show no significant differences among the three groups. Because the product evaluation was generally positive, all three product design dimensions were found to be important in the case of food products. When a picture of the product was added to the advertisement (study 2), however, significant differences were found among the three text conditions. More precisely, the data analysis indicated that the effectiveness of the advertisement increases with the complementarity of the two advertising elements, the text and the picture. Accordingly, alongside the primarily sensory picture, the symbolic text providing the most new information led to the best evaluation of the food product, whereas sensory text that

was redundant to the picture scored the worst. To conclude, an intelligent combination of a picture and text is essential to optimise the effectiveness of food product ads. In marketing practice, a visual impression of the product is frequently present. Therefore, the findings emphasise the importance for marketers to be aware of the messages that non-textual cues transfer to the consumer. Based on this knowledge, it is possible for marketers to use advertising text effectively to provide consumers with additional information about product benefits. In addition, pictorial information is much easier to process than textual information. Hence, the integration of a product picture is a valuable means of efficiently communicating further relevant information about the product that may be crucial to the consumer decision process. Through this approach, firms can improve consumer perception in terms of the expected taste, the perceived product experience and quality and the overall attitude towards the product. Finally, consumers will likely show much stronger intentions to purchase the product, which ultimately contributes to market success.

Theoretical implications

This research contributes in several ways to the existing literature. The results show that for food products, all of the three investigated product design dimensions (i.e. sensory, functional and symbolic) are of high relevance in consumers' decision process. Therefore, the findings emphasise the importance of considering the three product design dimensions when analysing product value perception in the context of food products (e.g. Homburg *et al.*, 2015). Furthermore, this paper adds new insights to existing research on food advertisements (e.g. Kareklas *et al.*, 2014; Parker, 2003; Schifferstein *et al.*, 2013; Theocharous, 2015; van Kleef *et al.*, 2005; Vlachvei *et al.*, 2009; Zandstra *et al.*, 2017). In particular, the findings extend the current literature on the use of texts and images in advertisements (e.g. Jaeger and MacFie, 2000; McQuarrie and Mick, 1999; Pieters and Wedel, 2004) by taking into account the interaction between these two elements. The results indicate that when only text is included in the advertisement, there is no difference in product evaluation depending on the product design dimension emphasised by the advertisement. When a product picture is added, however, there actually is a significant difference in product evaluation depending on which product design dimension the accompanying text appeals to. Thus, the findings also relate to consumers' value perceptions under uncertainty (Dodds *et al.*, 1991; Urbany *et al.*, 1989). The more relevant the information is provided by the two different advertising elements (text and image), the more effective the influence on product evaluation is. When the product benefits indicated by the picture are confirmed only by text, such an advertisement as a whole is less effective than an advertisement with complementary elements. In contrast to the possible considerations in the field of (multi)sensory marketing, there is no effect of mutual enhancement in the current context (Lwin *et al.*, 2010). Instead, the reduction in uncertainty seems to be the main driver in this case.

Managerial implications

The results provide some interesting managerial implications. First, as the product evaluations for all three texts (without picture) were rated equally high, it appears to be primarily important to communicate product benefits in some way. For food products, sensory, functional and symbolic product benefits are all important. Thus, firms must generally highlight product benefits so that consumers can feel confident about making an intelligent decision in the marketplace in favour of the product (Resnik and Stern, 1977). In the context of strawberries, it appears to make no crucial difference whether sensory, functional or symbolic product benefits are especially emphasised when the advertisement consists solely of text. Furthermore, when food firms want to use more elements than just text in advertising – for example, a product picture – the information given in the text needs

to be carefully selected. Advertisements are most effective when the advertising elements differ in the information they provide; the text should provide additional positive information that goes beyond the product presentation of the picture. In fact, more information on the different product benefits reduces consumers' uncertainty, improves their product evaluations and encourages them to make a decision in favour of the product (Dodds *et al.*, 1991; Urbany *et al.*, 1989). In summary, for the effective application of food product ads, the two elements of text and pictures may be combined in a complementary rather than mutually enhancing way.

Limitations and future research

This paper has study limitations that provide interesting possibilities for future research. First, the paper focussed on the food industry and used strawberries as the specific product studied. Therefore, it would be insightful to examine the relationships for other food products and sectors. Moreover, the paper considered text and pictures as key advertising elements. Notably, other advertising elements (e.g. brand logos) can also have a crucial influence on consumer perception. Hence, subsequent studies may analyse the effectiveness of further combinations with diverse advertising elements to extend the knowledge regarding powerful advertising design. In addition, the picture used in the second study was a simple photo of the product. Examining the effectiveness of other picture types (e.g. enhanced by different cues or showing a situation with happy people eating the product or a friendly farmer in the fields) *per se* and in combination with the different advertising texts may be an interesting research opportunity for future studies. When investigating the perception of pictures in more detail, the subconscious mind comes to the foreground. In contrast to the processing of text, which often involves significant mental effort, the processing of pictures is primarily automated and unconscious (Mueller *et al.*, 2010). As a consequence, in addition to direct measures, future studies could also incorporate indirect measures to capture the consumer's unconscious perception (e.g. reaction time measurement and electroencephalography) and hence to gain an even better understanding of the processing of advertisements. Finally, the data analysis was limited to group comparisons using one-way ANOVAs. To examine the effect of advertising design on product evaluation, the application of other statistical analysis methods (e.g. structural equation modelling to investigate causal relationships between the attitude towards the advertisement and product-related outcomes) may provide further interesting results.

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