AARHUS UNIVERSITY

Coversheet

This is the accepted manuscript (post-print version) of the article.

Contentwise, the accepted manuscript version is identical to the final published version, but there may be differences in typography and layout.

How to cite this publication

Please cite the final published version:

Chrysochou, P., & Festila, A. (2019). A Content Analysis of Organic Product Package Designs. *Journal of Consumer Marketing*, 36(4), 441-448. <https://doi.org/10.1108/JCM-06-2018-2720>

Publication metadata

Title:	A Content Analysis of Organic Product Package Designs
Author(s):	Chrysochou, P., & Festila, A.
Journal:	<i>Journal of Consumer Marketing</i>
DOI/Link:	10.1108/JCM-06-2018-2720
Document version:	Accepted manuscript (post-print)

General Rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

If the document is published under a Creative Commons license, this applies instead of the general rights.

A Content Analysis of Organic Product Package Designs

Polymeros Chrysochou ^{a, b} and Alexandra Festila ^a

^a MAPP Centre, Department of Management, Aarhus University, Denmark

*^b Ehrenberg-Bass Institute for Marketing Science, School of Marketing, University of South
Australia*

* Corresponding author

Email address: polyc@mgmt.au.dk ; Tel: +45 2797 5243

Acknowledgements: The authors wish to thank Diana Todorova and Aleksandra Georgieva for their assistance in the coding.

A Content Analysis of Organic Product Package Designs

Structured Abstract

Purpose – Do the package designs of organic products differ from those of conventional products, and which package design elements are used more systematically in organic products? In this paper, we address this question by exploring the package design elements of organic products. Our proposition is that in addition to package design elements that explicitly communicate and position a product as organic (i.e., organic labels and claims), other package design elements that implicitly convey an organic image are used.

Design/methodology/approach - We conduct a content analysis of the package designs from new product launches in four product categories (butter, cereals, fruit juice and milk) and across four markets (Austria, Denmark, Sweden and Switzerland).

Findings - Our results show that the package designs of organic products differ from those of conventional products based on the presence of more paper material, white and green colours, and images displaying nature.

Research implications – Our findings support the notion that in addition to organic labels and claims, package design elements that implicitly communicate values associated with organic products, such as environmental friendliness and sustainability, are used.

Originality/value –This study is among the few to explore package design elements for organic products. Understanding how the package designs of organic products are constructed can support managerial decisions on the use of the package as a means to better communicate and position organic products.

Keywords: organic products; package design; content analysis; organic label

1. Introduction

The market for organic products has shown impressive growth, accounting for 80 billion US dollars in 2014 from 15.2 billion in 1999 (Willer and Lernoud, 2016). Once considered a niche market, in some countries, its size indicates that this is no longer the case. For example, among the European countries with the highest share of organic retail sales are Denmark (7.6%), Austria (6.5%), Sweden (6.0%), and Switzerland (7.1%) (Willer and Lernoud, 2016). In addition to the increasing consumer demand for organic products, this growth is also the result of the adoption of mainstream marketing strategies, such as distribution through large retail chains and direct competition with conventional products (i.e., the placement of organic products with conventional products). Another important factor in the market's growth is the adoption of communication and positioning strategies, especially those that facilitate purchases at the point of sale. Such a strategy includes the package design, which has been shown to play an essential role in communicating brand values (Underwood and Klein, 2002, Underwood, 2003, Limon et al., 2009) and fighting through the in-store visual clutter (Clement, 2007). Therefore, the careful design of organic products' packages can contribute to the further development of the market.

The most common strategy used in package design that communicates and positions a product as organic embraces the use of organic labels and claims. Organic labels and claims certify that a product is organic but at the same time communicate in an explicit manner that the product is organic. The majority of the literature has noted the importance of these elements in influencing consumers' response, such as purchase behaviour (Ngobo, 2011, Marian et al., 2014, van Doorn and Verhoef, 2011), brand perceptions (Bauer et al., 2012), and taste perceptions (Lee et al., 2013). However, other package elements can also be used to

communicate and position a product as organic, especially those that implicitly convey values that organic products are associated with, such as environmental friendliness and sustainability. For example, the use of green colours can promote the communication of such values (Seo and Scammon, 2017), whereas the use of plastic material could potentially cause such communication to backfire. However, little is known about whether the package designs of organic products differ from those of conventional products, and, if so, which elements are more prevalent in organic products.

Drawing on the above, our study aims to explore the package design elements of organic products. We address this by conducting a content analysis of the package designs from new product launches in four product categories (butter, cereals, fruit juice and milk) and across four markets (Austria, Denmark, Sweden and Switzerland). Our objective is to investigate whether the use of package design elements for organic products differs compared to conventional products. We further investigate how organic product package designs are constructed by examining which package design elements are prominent in organic products.

2. Theoretical background

Package designs convey brand meaning (Orth and Malkewitz, 2008) and elicit various forms of consumer responses (Bloch, 1995). Package design research more often revolves around the elements that a package is composed of by taking an atomistic perspective (Silayoi and Speece, 2007, Rettie and Brewer, 2000, Underwood, 2003). According to this approach, when a package design element becomes salient to consumers, it can affect product evaluations and consumer responses (Bloch, 1995, Orth and Malkewitz, 2008). Another stream of research examines packaging from a holistic perspective (Orth and Malkewitz, 2008) based on theories of Gestalt psychology. According to this approach, consumers' first impression of a package

is awakened by its holistic appearance, meaning that the response is derived from the blending of all the elements of a package, in contrast to when these elements are presented in isolation. Our study builds on the former approach, and we study package design from an atomistic perspective.

A common classification scheme of package design elements is the distinction between verbal (e.g., product information, positioning claims) and visual elements (e.g., graphics, colour, shape) (Silayoi and Speece, 2007, Rettie and Brewer, 2000). Verbal elements either manifest through written language (i.e., specific claims) or through a well-established system of symbols (i.e., front-of-pack labels) and act as explicit communication tools of brand-related values. Visual elements are those usually printed on the package. They offer visual identity of the product (e.g., colours, imagery, typeface) and communicate brand values in a more implicit manner (Orth and Malkewitz, 2008). In addition, they can be powerful by attracting consumer attention and influencing consumer perceptions (Underwood, 2003, Silayoi and Speece, 2004). For fast-moving consumer goods, the role of visual elements is essential, since consumers follow low involvement decision-making processes by reducing their search effort and thus relying more on visual cues (Silayoi and Speece, 2007).

In the case of organic products, the distinction between verbal and visual package design elements is relevant because both types can be used as tools to communicate and position a product as organic. Early research primarily focused on the role of verbal elements (i.e., organic claims and labels) in influencing consumer responses, such as perceptions (Lee et al., 2013), purchase intentions (Bauer et al., 2012) and repeat purchase behaviours (Marian et al., 2014). Nevertheless, the impact of verbal elements varies based on the brand equity of the

product, with organic labels having a higher impact on products with low brand equity (Larceneux et al., 2012).

With regard to the role of visual elements in consumer responses to organic products, less is known. Among the few studies using visual elements is a recent study by Magnier and Schoormans (2015), which showed that when the packaging design is congruent in the use of visual and verbal sustainability claims, the consumer responses for environmentally conscious consumers were more positive. Nevertheless, there is lack of knowledge regarding which are those visual elements that have the power to implicitly communicate that a product is organic. Our objective is to investigate whether the use of package design elements for organic products differs compared to conventional products. We further investigate how organic product package designs are constructed by examining which package design elements are prominent for organic products. In the systematic use of package design elements, our findings offer support to managers in their decisions regarding the selection of such elements for organic products.

2.1. Package design elements

Below, we provide an overview of package design elements and their relation to organic product package design. More specifically, we focus on product information as part of the verbal package design elements and on colour, imagery and material as part of the visual package design elements. These four elements have been the primary focus in earlier studies on consumer responses to package design elements (Liao et al., 2015, Silayoi and Speece, 2007).

Product information: Product information includes all relevant information found on a package, such as the brand name, manufacturer, price, nutrition facts, usage instructions, ingredients, country of origin, and food labels. In general, product information assists consumers in making informed choices (Silayoi and Speece, 2007). In the case of organic products, the product information consists of organic claims and the associated certification labels. These elements communicate that the product is organic and have been the primary focus in previous research (Lee et al., 2013, Bauer et al., 2012, Marian et al., 2014, Van Doorn and Verhoef, 2015).

Colour: Colour is an important source of package differentiation (Ampuero and Vila, 2006). Among its roles, colour grabs consumer attention (Klimchuk and Krasovec, 2012), elicits emotion (Liao et al., 2015), and conveys brand values and associations (Kauppinen-Räsänen and Luomala, 2010). For example, colours can convey gender (e.g., pink vs. blue) and quality (e.g., black conveys luxury) (Klimchuk and Krasovec, 2012) or even health perceptions about a product (Karnal et al., 2016). Since organic products are positioned as environmentally friendly and sustainable (Schleenbecker and Hamm, 2013) as well as premium (Marian et al., 2014), the choice of colours used in package design should include those that convey such values (e.g., green and white to convey naturalness and sustainability).

Imagery: Imagery includes all the illustrative and photographic elements on the package (Klimchuk and Krasovec, 2012). Its vividness makes it an effective design tool (Underwood et al., 2001) that influences product evaluations and consumer responses (Underwood and Klein, 2002). For example, imagery has a greater effect influencing evaluations about a product than other elements (Chrysochou and Grunert, 2014), and it also influences consumers' emotional responses (Liao et al., 2015). Following a similar argument as above,

the choice of imagery should include those images that convey that an organic product package design is environmentally friendly and sustainable (e.g., depictions of nature).

Material: Package material is the type of material that a package is made of, such as paperboard, metal, plastic, and glass. Klimchuk and Krasovec (2012) suggest that the choice of package material depends on several factors, such as the type of product, transportation conditions, storage and protection requirements, target audience, and cost. The choice of material further depends on what values it is associated with. For example, paper is considered more environmentally friendly compared to plastic (Van Dam, 1996). Therefore, the choice of package material for organic products should be based on whether such materials enhance the values that the products aim to convey (i.e., environmental friendliness, premiumness).

3. Methodology

3.1. Data

We extracted pictures of food product packages from the Mintel Global New Product Database (www.gnpd.com). Mintel records new product launches in consumer-packaged goods markets and registers them together with pictures of their packages, which made it ideal for the purpose of our research. We included four product categories (milk, butter, fruit juice and cereals) across four countries (Denmark, Sweden, Austria and Switzerland) that were registered in the database between 2008 and 2012. Given the relatively small size of the organic market, our choice of product categories, markets and time period was designed to establish sufficient variation between organic and conventional products. We further aimed to examine a number of packages that would not exceed our research resources. With these

conditions and constraints in mind, our selection of product categories was based on having a sufficient market share of organic products (Willer and Lernoud, 2016). Similarly, our choice of markets was based on a sufficiently high development of the organic food sector (Willer and Lernoud, 2016). Finally, we considered the period adequate to minimize random errors and ensure the external validity of our findings.

3.2. Analytical procedure

We conducted a content analysis of each product. This method has proven to be useful in consumer research (Kassarjian, 1977, Kolbe and Burnett, 1991), including applications in the area of package design (Elliott, 2008). We developed a coding scheme sheet that we used for data entry purposes. The scheme covered the following domains: a) visual package design elements (material, colour, imagery) and b) organic product verbal package design elements (organic label, organic claim). Table 1 presents the package design elements that we included in the scheme together with the descriptions and the coded answers, and Figure 1 presents an example of a product and how it was coded.

Table 1 and Figure 1 here.

Two researchers assisted with the content analysis of the products. We assigned each researcher to code two product categories independently. To ensure objectivity and reduce rater bias, we briefed and trained our two researchers on the coding scheme we developed (Kolbe and Burnett, 1991).

4. Results

In total, we identified 866 products in the database, out of which 138 (15.9%) were organic. The distribution between organic and conventional products differed both across product categories ($\chi^2(3) = 11.17$; $p = 0.011$) and across countries ($\chi^2(3) = 18.63$; $p < 0.001$) (see Table 2). The highest shares of organic food products were observed in the milk category (25.7%) and in Denmark (27.0%).

Table 2 here.

We first explored the distribution of package design elements for all products and their differences between organic and conventional products (see Table 3). In relation to package material, the majority of products consisted of paperboard (53.8%), followed by plastic (46.0%) and paper (11.1%). Compared to conventional products, organic products consisted more of paper (18.1% vs. 9.8%) and less of paperboard (44.2% vs. 55.6%) and plastic (37.7% vs. 47.5%) material. In relation to colour, the majority of products were white (38.1%), followed by blue (13.3%), green (12.5%), yellow (12.0%) and red (8.9%). Differences were observed between organic and conventional products, with organic products having more white (48.6% vs. 36.1%) and green (17.4% vs. 11.5%) and less yellow (5.1% vs. 13.3%) and red (2.2% vs. 9.8%) colours. In relation to imagery, 93.6% of the products used an image on the package, and 25.4% of them had an image presenting nature. There was no difference in the use of imagery between organic and conventional products, but for organic products, the presence of nature in the image was more prevalent (39.1% vs. 22.8%).

Table 3 here.

For the subset of organic products, we explored differences in general package design elements across product categories (see Table 4). In the case of package material, butter

products consisted of more paper (63.2%), cereals of more plastic (60.3%) and fruit juice and milk of more paperboard (44.1% and 81.5%, respectively). In the case of colour, white was the dominant colour for all product categories. With regard to other colours, blue was used more often in butter (26.3%) and milk products (29.6%), green in juice products (29.4%), and yellow in cereals (10.3%). Finally, we found significant differences in the use of imagery, with cereals having more images on their package (98.3%), while the presence of nature appeared more often in milk products (74.1%).

Table 4 here.

We further explored the use of organic product package elements and differences across product categories (see Table 5). An organic label was present in a majority of the products (94.2%), with 67.4% carrying a national organic label and 42.8% the European organic label. In relation to the position of the label, a national label appeared more often on the front of the product (72.0%) and less often on the back of the product (59.1%). Conversely, the European label appeared more often on the back of the product (64.4%) and less often on the front of the product (49.2%). An organic claim was present on 84.8% of the products. Across product categories, we only found differences in the use of organic national labels, which was higher in the case of butter (89.5%) and milk (88.9%).

Table 5 here.

5. Discussion

The results of the content analysis reveal that the package design elements of organic products differ from those of conventional products. More specifically, compared to the packaging of conventional products, the packaging of organic products consists of more paper and less

plastic or paperboard material. For organic products, white and green are used more often, while yellow and red are used less often than for conventional products. Finally, images of nature appear more often in organic products. These elements have the power to implicitly communicate and enhance the positioning of a product as organic, since they are associated with values of environmental friendliness and sustainability. Therefore, our study provides support to the argument that marketing managers systematically use package design elements, in addition to those that explicitly communicate product information, to communicate and position a product as organic.

The use of package design elements that explicitly communicate a product as organic (i.e., organic labels and claims) reveals further interesting insights. The majority of the products carried a national organic label, whereas the European organic label was used less often. The national organic label was used more often in butter and milk products and less in cereals and juice. These product category-related differences could be the result of dairy products consisting of more national brands, whereas cereals and juice have more imported brands. The national label was used more frequently on the front of the product, with the EU label on the back of the product. The use of an organic claim was less frequent but still used by the majority of the products. It is important to note that 5.1% of the organic products carried an organic claim without the use of an organic label. Considering that organic labels act as certification tools (Janssen and Hamm, 2012), this result indicates that there are products in the market that claim to be organic without including a label that certifies that it is.

6. Conclusions

Our study contributes to the growing body of literature on the role of package design as a communication tool (Underwood et al., 2001, van Rompay and Veltkamp, 2014, Westerman

et al., 2013). In the case of organic products, the use of package design elements goes beyond those that explicitly communicate and certify that a product is organic (i.e., organic labels and claims). Package design elements that implicitly communicate and position a product as organic are also used, such as imagery of nature, green colours and paper material. These package design elements help promote values that organic products are associated with, such as environmental friendliness and sustainability.

These findings identify managerial efforts to use package designs as a tool to communicate and position a product as organic, and the choice of elements is primarily based on what is considered prototypical of the category (i.e., the degree to which an object is representative of a certain category (Veryzer and Hutchison, 1998)). In the case of organic products, a prototypical packaging design is one that possesses the most commonly encountered elements, such as green colour or an image of nature. The reason behind the choice of such prototypical elements is that such stimuli are processed more fluently, rapidly and efficiently than other stimuli by using less cognitive effort (Winkielman et al., 2006), and they are a stronger predictor of consumer preferences (Hekkert et al., 2003), especially in time-constrained and low involvement situations, such as shopping for food in-store.

The research findings suggest a number of managerial and public policy implications. The use of implicit package design elements as a way to convey that a product is organic is a strategy already employed by marketing managers. According to the preference for prototypes theory (Whitfield and Slatter, 1979), such typical elements will result in greater market success, as consumers will more rapidly recognize a product as organic. Of course, our study only identifies the use of such elements in the package designs of organic products and does not measure their power in influencing consumer perceptions. However, the literature suggests

that package elements can trigger specific implicit associations and have the power to convey specific product values (Karnal et al., 2016, Warlop et al., 2005).

Furthermore, from a public policy perspective, products that use such implicit package elements may mislead consumers. For example, green can enhance consumers' perceptions of the brand's environmental impact, but can also lead to consumers' misperceptions of the brand's environmental impact if green is used for brands that are not environmentally superior (Seo and Scammon, 2017). In such cases, certain policy measures should be proposed to prevent consumers from being misled. Finally, our findings further point to a number of methodological considerations. Studies aiming to measure the impact of organic labels and claims in mock-up or real product packages (e.g., through a choice experiment) should account for the interactions resulting from other package elements that we find to be highly associated with organic products (e.g., green colour). If such interactions are ignored, the internal validity of those studies might be compromised. This also suggests another interesting direction for future research regarding whether such interactions exist and whether earlier research findings have been affected by such unobserved interactions.

7. Limitations and Future Research

Our study has limitations, some of which point to avenues for future research. Our approach to the analysis of package design lies on an atomistic perspective. However, the interaction of these elements and their totality (Gestalt effect) might also play an important role in shaping the final image (Orth and Malkewitz, 2008), and this could be the focus of future research. Our unit of analysis is the product packaging, and we do not weight for market size or other market-related factors (e.g., availability, distribution). Although it could be a possible avenue for future research, we believe that such weighting would not be beneficial for the purpose of

this study for two reasons. First, our premise is that the managerial decisions behind the design of each product are of equal weight. Second, our data consist of new product launches that have not yet developed any established sales; thus, it is not possible to weigh factors that are not known. However, future research could investigate whether the presence of prototypical package design elements contributes to an organic product's market success and if so, which elements have the greatest impact. In addition, another aspect worthy of future investigation is whether the package design elements that we identify as more prominent are strongly associated by consumers with organic products and whether those that implicitly communicate an organic image could potentially mislead them. Finally, our study findings should only be interpreted in the context of the markets and product categories we analysed. We thus consider the need for additional studies of this nature that incorporate other product categories, markets and time periods, which would allow researchers to provide a complete picture of the use of package design elements in organic products.

References

- Ampuero, O. & Vila, N. 2006. Consumer perceptions of product packaging. *Journal of Consumer Marketing*, 23, 100-112.
- Bauer, H. H., Heinrich, D. & Schäfer, D. B. 2012. The effects of organic labels on global, local, and private brands: More hype than substance? *Journal of Business Research*, 66, 1035–1043.
- Bloch, P. J. 1995. Seeking the ideal form. Product design and consumer response. *Journal of Marketing Theory and Practice*, 59, 16-30.
- Chrysochou, P. & Grunert, K. G. 2014. Health-related ad information and health motivation effects on product evaluations. *Journal of Business Research*, 67, 1209-1217.
- Clement, J. 2007. Visual influence on in-store buying decisions: an eye-track experiment on the visual influence of packaging design. *Journal of Marketing Management*, 23, 917-928.
- Elliott, C. 2008. Marketing fun foods: A profile and analysis of supermarket food messages targeted at children. *Canadian Public Policy / Analyse de Politiques*, 34, 259-273.
- Hekkert, P., Snelders, D. & Wieringen, P. 2003. Most advanced, yet acceptable. Typicality and novelty as joint predictors of aesthetic preference in industrial design. *British Journal of Psychology*, 94, 111-124.
- Janssen, M. & Hamm, U. 2012. Product labelling in the market for organic food. Consumer preferences and willingness-to-pay for different organic certification logos. *Food Quality and Preference*, 25, 9-22.
- Karnal, N., Machiels, C. J. A., Orth, U. R. & Mai, R. 2016. Healthy by design, but only when in focus: Communicating non-verbal health cues through symbolic meaning in packaging. *Food Quality and Preference*, 52, 106-119.
- Kassarjian, H. H. 1977. Content analysis in consumer research. *Journal of Consumer Research*, 4, 8-18.
- Kauppinen-Räsänen, H. & Luomala, H. T. 2010. Exploring consumers' product-specific colour meanings. *Qualitative Market Research: An International Journal*, 13, 287-308.
- Klimchuk, M. R. & Krasovec, S. A. 2012. *Packaging Design: Successful Product Branding from Concept to Shelf*, New Jersey, John Wiley & Sons.
- Kolbe, R. H. & Burnett, M. S. 1991. Content-analysis research: An examination of applications with directives for improving research reliability and objectivity. *Journal of Consumer Research*, 18, 243-250.
- Larceneux, F., Benoit-Moreau, F. & Renaudin, V. 2012. Why Might Organic Labels Fail to Influence Consumer Choices? Marginal Labelling and Brand Equity Effects. *Journal of Consumer Policy*, 35, 85-104.
- Lee, W.-C. J., Shimizu, M., Kniffin, K. M. & Wansink, B. 2013. You taste what you see: Do organic labels bias taste perceptions? *Food Quality and Preference*, 29, 33-39.

- Liao, L. X., Corsi, A. M., Chrysochou, P. & Lockshin, L. 2015. Emotional responses towards food packaging: A joint application of self-report and physiological measures of emotion. *Food Quality and Preference*, 42, 48-55.
- Limon, Y., Kahle, L. R. & Orth, U. R. 2009. Package design as a communications vehicle in cross-cultural values shopping. *Journal of International Marketing*, 17, 30-57.
- Magnier, L. & Schoormans, J. 2015. Consumer reactions to sustainable packaging: The interplay of visual appearance, verbal claim and environmental concern. *Journal of Environmental Psychology*, 44, 53-62.
- Marian, L., Chrysochou, P., Krystallis, A. & Thøgersen, J. 2014. The role of price as a product attribute in the organic food context: An exploration based on actual purchase data. *Food Quality and Preference*, 37, 52-60.
- Ngobo, P. V. 2011. What Drives Household Choice of Organic Products in Grocery Stores? *Journal of Retailing*, 87, 90-100.
- Orth, U. R. & Malkewitz, K. 2008. Holistic package design and consumer brand impressions. *Journal of Marketing*, 72, 64-81.
- Rettie, R. & Brewer, C. 2000. The verbal and visual components of package design. *Journal of Product and Brand Management*, 9, 56-70.
- Schleenbecker, R. & Hamm, U. 2013. Consumers' perception of organic product characteristics. A review. *Appetite*, 71, 420-429.
- Seo, J. Y. & Scammon, D. L. 2017. Do green packages lead to misperceptions? The influence of package colors on consumers' perceptions of brands with environmental claims. *Marketing Letters*, 28, 357-369.
- Silayoi, P. & Speece, M. 2004. Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. *British food journal*, 106, 607-628.
- Silayoi, P. & Speece, M. 2007. The importance of packaging attributes: A conjoint analysis approach. *European Journal of Marketing*, 41, 1495-1517.
- Underwood, R. L. 2003. The communicative power of product packaging: Creating brand identity via lived and mediated experience. *Journal of Marketing Theory and Practice*, 11, 62-76.
- Underwood, R. L. & Klein, N. M. 2002. Packaging as brand communication: Effects of product pictures on consumer responses to the package and brand. *Journal of Marketing Theory and Practice*, 10, 58-68.
- Underwood, R. L., Klein, N. M. & Burke, R. R. 2001. Packaging communication: Attentional effects of product imagery. *Journal of Product & Brand Management*, 10, 403-422.
- Van Dam, Y. K. 1996. Environmental assessment of packaging: The consumer point of view. *Environmental management*, 20, 607-614.
- Van Doorn, J. & Verhoef, P. C. 2011. Willingness to pay for organic products: Differences between virtue and vice foods. *International Journal of Research in Marketing*, 28, 167-180.
- Van Doorn, J. & Verhoef, P. C. 2015. Drivers of and Barriers to Organic Purchase Behavior. *Journal of Retailing*, 91, 436-450.

- Van Rompay, T. J. L. & Veltkamp, M. 2014. Product Packaging Metaphors: Effects of Ambiguity and Explanatory Information on Consumer Appreciation and Brand Perception. *Psychology & Marketing*, 31, 404-415.
- Veryzer, R. W. & Hutchison, J. W. 1998. The influence of unity and prototypicality on aesthetic responses to new product designs. *Journal of Consumer Research*, 24, 374-393.
- Warlop, L., Ratneshwar, S. & Van Osselaer, S. M. J. 2005. Distinctive brand cues and memory for product consumption experiences. *International Journal of Research in Marketing*, 22, 27-44.
- Westerman, S. J., Sutherland, E. J., Gardner, P. H., Baig, N., Critchley, C., Hickey, C., Mehigan, S., Solway, A. & Zervos, Z. 2013. The design of consumer packaging: Effects of manipulations of shape, orientation, and alignment of graphical forms on consumers' assessments. *Food Quality and Preference*, 27, 8-17.
- Whitfield, T. W. & Slatter, P. E. 1979. The effects of categorization and prototypicality on aesthetic choice in a furniture selection task. *British Journal of Psychology*, 70, 65-75.
- Willer, H. & Lernoud, J. 2016. The World of Organic Agriculture. Statistics and Emerging Trends 2016. Bonn: Research Institute of Organic Agriculture (FiBL), Frick, and IFOAM - Organics International.
- Winkielman, P., Halberstadt, J., Fazendeiro, T. & Catty, S. 2006. Prototypes are attractive because they are easy on the mind. *Psychological Science*, 17, 799-806.

List of Tables

Table 1 Coding scheme of packaging design elements.

Definition / Coding	
<i>Visual Packaging Design Elements</i>	
Material	What is the product material? (Paperboard; Paper; Plastic)
Colour	Which colours cover the most space on the product? (White; Blue; Green; Yellow; Red)
Imagery	Is there an image present on the product? (Yes; No)
Imagery of Nature	If an image is present, does it depict nature (Explanation: An image of nature is an image that shows a landscape, any type of plant that is not part of the composition of the final product, or an animal that does not classify as a character)? (Yes; No)
<i>Organic Product Verbal Packaging Design Elements</i>	
Organic Product	Is the product organic? (Yes; No)
Presence of Organic Label	Is there an organic label on the product? (Yes, No)
Origin of Organic Label	If there is an organic label, what is its origin? (National; European)*
Organic Label Position	Where is the label/s positioned on the product? (Front of product; Back/Side of product)
Presence of Organic Claim	Is there a claim, other than the label, on the product indicating that it is organic? (Yes; No)

* Products carrying a label other than national or European were not coded.

Table 2 Number of products across product categories and markets and the share of conventional and organic products.

	Total	Conventional		Organic	
	N	N	%	N	%
Product Category			$\chi^2(3) = 11.17; p = .011$		
Butter	122	103	84.4	19	15.6
Cereals	352	294	83.5	58	16.5
Juice	287	253	88.2	34	11.8
Milk	105	78	74.3	27	25.7
Market			$\chi^2(3) = 18.63; p < .001$		
Austria	388	339	87.4	49	12.6
Denmark	159	116	73.0	43	27.0
Sweden	185	160	86.5	25	13.5
Switzerland	134	113	84.3	21	15.7
Total	866	728	84.1	138	15.9

Table 3 Visual packaging design elements and differences between organic and conventional products for all products.

Visual Packaging Design Element	Total (%)	Conventional (%)	Organic (%)	χ^2 *	<i>p</i>
<i>Material</i>					
Paperboard	53.8	55.6	44.2	6.10	.014
Plastic	46.0	47.5	37.7	4.53	.033
Paper	11.1	9.8	18.1	8.23	.004
<i>Colour</i>					
White	38.1	36.1	48.6	7.59	.006
Blue	13.3	13.7	10.9	0.83	.363
Green	12.5	11.5	17.4	3.64	.056
Yellow	12.0	13.3	5.1	7.48	.006
Red	8.9	9.8	2.2	8.53	.003
<i>Imagery</i>					
Presence of an image	93.6	94.1	91.3	1.52	.218
Presence of nature	25.4	22.8	39.1	16.32	<.001

* Inference test between conventional and organic products.

Table 4 Visual packaging design elements for organic products and differences across product categories.

Visual Packaging Design Element	Total (%)	Product Category*				χ^2	<i>p</i>
		BT	CR	JU	ML		
<i>Material</i>							
Paperboard	44.2	15.8	36.2	44.1	81.5	22.94	<.001
Plastic	37.7	26.3	60.3	23.5	14.8	22.64	<.001
Paper	18.1	63.2	22.4	0.0	0.0	40.20	<.001
<i>Colour</i>							
White	48.6	36.8	50.0	41.2	63.0	4.08	.253
Blue	10.9	26.3	1.7	2.9	29.6	21.70	<.001
Green	17.4	5.3	15.5	29.4	14.8	5.63	.131
Yellow	5.1	5.3	10.3	0.0	0.0	6.61	.085
Red	2.2	0.0	3.4	2.9	0.0	1.56	.669
<i>Imagery</i>							
Presence of an image	91.3	78.9	98.3	91.2	85.2	8.48	.037
Presence of nature	25.4	42.1	27.6	29.4	74.1	18.51	<.001

* Product abbreviations: BT: Butter; CR: Cereals; JU: Fruit Juice; ML: Milk

Table 5 Organic product verbal packaging design elements and differences across product categories.

Organic Product Verbal Packaging Design Element	Total (%)	Product Category*					
		BT	CR	JU	ML	χ^2	p
<i>Organic Label</i>							
Presence	94.2	94.7	94.8	94.1	92.6	0.180	.981
National	67.4	89.5	60.3	50.0	88.9	15.884	<.001
EU label	42.8	31.6	44.8	44.1	44.4	1.129	.770
<i>Organic Label Position</i>							
National on Front of Package	72.0	64.7	85.7	58.8	66.7	5.522	.137
National on Back/Side of Package	59.1	64.7	48.6	52.9	75.0	4.604	.203
EU on Front of Package	49.2	50.0	61.5	40.0	33.3	3.302	.347
EU on Back/Side of Package	64.4	66.7	50.0	73.3	83.3	4.764	.190
<i>Organic Claim</i>							
Present	84.8	89.5	82.8	82.4	88.9	1.017	.797

* Product abbreviations: BT: Butter; CR: Cereals; JU: Fruit Juice; ML: Milk

Product: Milk
Country: Denmark

Visual Packaging Design Elements

Material: Paperboard

Colour: Blue

Imagery: Yes

Nature: Yes

Organic Product Verbal Packaging Design Elements

Organic Product: Yes

Presence of Organic Label: Yes

Origin of Organic Label: National and EU

Organic Label Position: National on front of product;
 EU on side of product

Presence of Organic Claim: Yes

Figure 1: Example of stimuli and coding