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# The Role of Typeface in Packaging Design

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#### Introduction

The choice of typeface<sup>1</sup> and font for product packaging is undoubtedly an important, if frequently underrated, topic in applied consumer research. Indeed, given its importance and ubiquity (both on product packaging and elsewhere), it is surprising that there has not been more research on

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<sup>&</sup>lt;sup>1</sup>At the outset, it is important to clarify the difference between typeface and font (Brownlee, 2014). Nowadays these terms are, in many cases, used interchangeably. To illustrate the difference, whilst Tw Cen MT 14pt in italics would be a different font from Tw Cen MT 10pt without italics, Tw Cen MT is a different typeface than Times New Roman. According to Brownlee, in the old days of analogue printing, the metal blocks that followed the same design principles (e.g., Tw Cen MT) were considered the typeface while fonts, on the other hand, indicated the specific sub-blocks of a given typeface (i.e., bold, italics, underline, upper and lower case, different sizes).

the design of typeface over the years (McCarthy & Mothersbaugh, 2002; Velasco, Hyndman, & Spence, 2018). Moreover, the available research has not necessarily considered typeface specifically in the context of packaging design (Karnal, Machiels, Orth, & Mai, 2016). This is an important omission because space comes at a premium on product packaging, especially given all of the information that legally needs to be presented there (i.e., the name of the product and the list and quantity of ingredients for food products, say). Given that one does not want the packaging to look too cluttered this, then, effectively constrains the size of the typeface that can be used. As we see later, this also raises questions as to the kinds of typeface that should be used to present specific information. Considering the impact that the choice of typeface can have in facilitating (or not) reading/comprehension (e.g., according to Mackey & Metz, 2009), manufacturers may sometimes also make the mandatory information on packaging harder to read than perhaps it needs to be.

Note that any text appearing on product packaging will either incorporate an off-the-shelf typeface or else a custom-designed one in order to communicate key information about the product or brand (Hutton, 1987). However, beyond any factual information that is conveyed by the text found on product packaging, the very visual characteristics of the typeface itself (what early researchers referred to as the 'feeling value' or 'atmosphere' of lines/typeface; e.g., Berliner, 1920; Poffenberger & Barrows, 1924) can also connote, communicate, and/or reinforce a specific meaning to whoever happens to see/read it (Bringhurst, 2004; Garfield, 2011; Henderson, Giese, & Cote, 2004; Hyndman, 2015).<sup>2</sup> Blanchard (1980, 1998), amongst many others, distinguish here between any meaning that is 'denoted' by the typeface (literally what is meant by the words) and the 'connoted' meaning. The latter refers to the more implicit meaning carried by the choice of typeface/font. Just take the early examples of brand typeface shown in Fig. 4.1 and consider the associations that they bring to mind. Poffenberger and Franken (1923, p. 312), at least, were convinced that: 'In the case of "Disston" and

<sup>&</sup>lt;sup>2</sup>One can think of this as an aspect of semiotics (cf. Nöth, 2001). Interestingly, neuropsychological research by Barton et al. (2010) suggests that the processing of the meaning and style/script of the text may actually rely on activity in different cerebral hemispheres.



**Fig. 4.1** A selection of early commodity typefaces from Poffenberger and Franken (1923). Reprinted from Poffenberger, A. T., & Franken, R. B., 'A study of the appropriateness of type faces', *Journal of Applied Psychology, 7*(4), 312–329, 1923, APA publisher

"Speed-grits" the type very clearly carries something of the atmosphere of the commodity' (the commodities in this case were saws and hand sanders, respectively).

In the best-case scenario, a brand may even become intimately linked to a specific recognizable typeface. In fact, sometimes a particular typeface becomes synonymous with a brand, as has arguably happened with the Spencerian Script that has been used for the Coca-Cola logo on bottles and cans over the last century. It can be argued that, in such cases, the properties of the typeface are likely to be congruent with the properties of the product in terms of their shape-symbolic meaning (or associations; see Velasco, Hyndman, et al., 2018). That is, the low-level physical features of typefaces (e.g., the curvature, see Fig. 4.2, for a series of typeface characteristics) can set specific expectations in the mind of the viewer. According to Velasco, Woods, Hyndman, and Spence (2015), the roundness of the typeface on a soft drink can or bottle, such as in Spencerian Script, can be taken (rightly or wrongly) to signal the presence of a sweet-tasting drink. It has been argued that such expectancy effects operate at a level that, in many cases, may be functionally subliminal (see Spence, 2012, for a review; see also Durgee & O'Connor, 1996). What is also relevant to note here is that the widespread trend of copycat marketing/design (e.g., see Kulesza, Szypowska, & Dolinski, 2014; Spence, 2012; Van Horen &

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Angular with contrast⁴ / curvilinear" with contrast	Angular with minimal contrast / curvilinear with minimal contrast	Square terminals" / Pointed terminals / Round terminals	٠	Small x-height" serif / Regular x-height serif	Small x-height sans serif / Large x-height sans serif		Low contrast sans serif / high contrast sans serif	Low contrast serif / High contrast serif	Condensed width™ / regular width / extended width	Regular weight" / Semi bold weight / Bold weight	Low contrast (sans serif) / moderate contrast (casual script*) / High contrast (serif)	ursive	Condensed serif	ANG	Double-storey™ sans serif / Single-storey™ sans serif	Double-storey serif / Single-storey serif	Width Width x-height x-height
Angular with conti	Angular with minii	Square terminals	Serif" / Sans serif	Small x-height <sup>⊌</sup> se	Small x-height sar	Roman"i / Italicviii	Low contrast sans	Low contrast serif	Condensed width	Regular weight* /	Low contrast (san	Cursive <sup>vii</sup> vs non cursive	Fat face*** serif / Condensed serif	Regular / Oblique***	Double-storey** sa	Double-storey seri	With Widt

Fig. 4.2 Some typeface features that designers work with (see also Kahn & Lenk, 1998; Sanocki & Dyson, 2012). The shading at the bottom highlights different widths of typeface, differing x-heights, and the contrast between thick and thin strokes. Reprinted with permission from International Journal of Gastronomy and Food Science, 11, Velasco, C., Hyndman, S., and Spence, C., The role of typeface curvilinearity on taste expectations and perception, 63-74, Copyright (2018), with permission from Elsevier

Pieters, 2012a, 2012b) is likely to ensure that a successful brand leader's approach to the choice, or design, of typeface may well be mimicked, more or less closely, by its competitors. However, what becomes iconic is not necessarily the roundness, symmetry, or bold font of the brand name or logo but rather the combination of features that come together as more of a gestalt impression (Wagemans, 2015) or unique identity.

This chapter covers typeface research as it relates to packaging design. In particular, the focus is on the ease with which different typefaces are processed (this is what is known as processing fluency; Reber, Winkielman, & Schwartz, 1998) as well as their ability to prime certain specific associations. We discuss the role of typeface in the design of product packaging—where typeface is but one aspect of the total product offering. We also review some of the techniques that have been used over the years in order to assess the specific meaning of typeface. We argue that the choice of typeface constitutes a crucial aspect of packaging design, one that plays a key role in conveying information about a brand and, as such, should not be ignored.

## The Processing Fluency of Different Typeface

A critical aspect of typeface design that relates to the ease with which written information can be processed, but also to the meaning and/or particular inferences that consumers develop, is how easy or difficult it is to read.<sup>3</sup> In this case, processing fluency depends not only on the particular typeface used but also on the viewer's familiarity with it and on what is written (e.g., how long the words are and how easy they are to pronounce, e.g., Song & Schwarz, 2009).

Enhancing the ease of processing (or processing fluency) normally exerts a positive effect on consumers' evaluations of objects<sup>4</sup> (Dreisbach & Fischer, 2011; Gump, 2001; Huang, Li, Wu, & Lin, 2018; Reber

<sup>&</sup>lt;sup>3</sup>One way in which to make text more difficult to read is simply to vary the typeface/font on a letter-by-letter basis (Sanocki, 1987). This, though, is not recommended unless one happens to be composing a ransom note.

<sup>&</sup>lt;sup>4</sup>Though note that a 'positive effect' is not always the healthiest. For example, Gomez, Werle, and Corneille (2017) reported a study in which they found that nutrition information that is easier to

et al., 1998; Song & Schwarz, 2008; Winkielman et al., 2003). For instance, the evidence suggests that it leads to positive affective reactions (see LaBroo, Dhar, & Schwarz, 2008; Reber, Schwarz, & Winkielman, 2004; Winkielman & Cacioppo, 2001, for some examples). Here, though, it is worth noting that there are situations in which a company or brand may actually wish to make it harder for their consumers to process the text (e.g., Mead & Hardesty, 2018; cf. Pocheptsova, Labroo, & Dhar, 2010). This is because that difficulty may, in turn, convey associations that are appropriate for the product experience in question. Specifically, a typeface that is harder to read is sometimes deliberately used in order to help convey the notion that the product itself is more complex/special (e.g., see also Alter, 2013, on the benefits of disfluency, such as the prompting of careful and deep information processing) or perhaps more innovative (Cho & Schwarz, 2006). For example, Song and Schwarz (2008, 2010) have demonstrated that text that is harder to read is associated with a better quality/more expensive wine. On the other hand, Huang and Kwong (2016) provide evidence for the idea that lower typeface legibility leads to increased perceived variety in a menu or catalogue (which is something that might appeal to variety-seeking consumers), relative to typeface that is more legible. That said, designers and marketers also need to bear in mind that a customer's mood/emotion may, though, be lowered by exposure to typeface that they have difficulty reading (Gump, 2001).5 This strategy might also prove difficult if marketing to those consumers with special needs (e.g., the elderly, those with low vision; Feely, Rubin, Ekstrom, & Perera, 2005).

The consistency between the implicit (or 'connoted') meaning of a given typeface (e.g., light vs. heavy) and the word that is 'dressed' in such a typeface (e.g., ant vs. elephant) can influence the fluency with which the word is processed too (see Walker, 2008, for a review; see also Walker, 2016). This, of course, also raises the question of the extent to which typeface/product name, typeface/product type, and typeface/product

process (vs. more difficult to process) leads to higher purchase intentions not only for healthy but also for unhealthy foods.

<sup>&</sup>lt;sup>5</sup>Warde (1930) captured this almost a century ago when he said that 'The type which, through any arbitrarily warping of design or excess of "colour", gets in the way of the mental picture to be conveyed, is a bad type'.

category consistency may influence processing fluency. As we see below, the research that has been published to date provides evidence for the idea that brand/typeface consistency can indeed influence product perception and choice (e.g., Doyle & Bottomley, 2004, 2006).

In summary, therefore, depending on the aims of the packaging designer, and the moment of consumer-product interaction that is being targeted, fluency or disfluency may be the more appropriate objective. For example, it has been suggested recently that persuasive health messages would do well to aim for fluent design properties. In particular, Okuhara, Ishikawa, Okada, Kato, and Kiuchi (2017) reviewed 40 research articles on different kinds of processing fluency (related to typefaces but also to other design elements such as the kind of language used, the amount of information provided, etc.). In terms of typefaces and fonts, they indicated that most studies point to the idea that an easy to process font enhances comprehension and positive affect (see also Guenther, 2012; Mosteller, Donthu, & Eroglu, 2014).

### On the Multiple Meanings of Typeface

In one of the earliest studies of its kind, Poffenberger and Barrows (1924) assessed the 'feeling value' of lines in a group of 500 participants (see Warde, 1956, for an early essay on typefaces). The lines in this particular study were presented on cards and the participants had to select the line that best fitted a given feeling (e.g., merry, sad, furious). The results revealed that different feelings were judged as being most appropriate for different kinds of curved lines. So, for example, 'Sad' was associated with a slow descending curve, 'Quiet' was associated with a slow horizontal curve, 'Lazy' with a slow descending curve, and 'Merry' with a medium rising curve. Around the same time, a number of other researchers published studies that came to very similar conclusions (e.g., see Lundholm, 1921; see also Bar & Neta, 2006, for more recent research on curvature preference). Whilst this research, at least as far as it was originally conceived, was not necessarily specific to typefaces, we would argue that it already suggests that lines, independent of whether they compose letters in specific typefaces or not, convey affective meaning.

In fact, it has long been asserted that typefaces are associated with feelings (or atmospheres, Kastl & Child, 1968; Morrison, 1986). For instance, according to early research by Poffenberger and Franken (1923, p. 312), 'The belief is fairly general that heavy faced type carry with them the atmosphere or feeling of solidity and strength, and that the thin faced type suggest fineness and delicacy'. Meanwhile, according to the opening lines of an early paper by Davis and Smith (1933, p. 712), 'In working with type faces in practical advertising one will frequently come upon assertions such as: bold type expresses cheapness, italic types express femininity, or that Bodoni type expresses modernness, and the like, evidently without any proof except the impression made upon the asserter by the characteristic of the type'. With this in mind, what should the packaging designer wishing to select a specific typeface to connote a certain value or meaning be looking for exactly?

There is a long, if surprisingly sparse, literature on the psychological associations with different typefaces (e.g., see Berliner, 1920; Davis & Smith, 1933; Poffenberger & Franken, 1923; Schiller, 1935; Tannenbaum, Jacobson, & Norris, 1964).6 In what is perhaps the earliest study to have been conducted in this area, Berliner (1920) had his participants rank a selection of 18 handwritten typefaces in terms of their appropriateness for a selection of four different products (fish, pork and beans, pancake flour, and orange marmalade). The results revealed a correlation between the respondents' responses, thus arguing that particular typefaces are indeed associated with specific 'atmospheres'. Meanwhile, Poffenberger and Franken (1923) used what they described as 29 rather common advertising 'faces' and measured their appropriateness for both abstract qualities and actual commodities (e.g., cheapness, automobiles, dignity, building material, economy, luxury, jewellery, strength, and perfume). The results revealed some degree of consistency in the rankings obtained across participants. That is, the patterns of responses obtained were distinctly non-random. See also Davis and Smith (1933), for another

<sup>&</sup>lt;sup>6</sup>Note that much of the early literature on the design of typeface was focused primarily on issues of legibility (e.g., Burt, Cooper, & Martin, 1955), rather than on the assessment of connotative meaning.

<sup>&</sup>lt;sup>7</sup>The participants in Berliner's (1920) study were instructed to arrange the 18 typefaces in order, in terms of their suitability for expressing the 'atmosphere' of the product.

example assessing the appropriateness of typefaces for different kinds of advertising/products.

Initial research also suggested that there are typefaces that, as any other objects, connote specific, perhaps more implicit, meanings. Tannenbaum et al. (1964) investigated the connotations of specific typefaces. In their study, 3 groups of 25 participants, each varying in terms of their level of knowledge of typefaces (pro, semi-pro, and amateur) evaluated 16 displays of 4 typefaces (serif—Bodoni, Garamond—and sans-serif— Spartan, Kabel—, all presented in upper vs. lower case and in regular vs. italics forms) on a series of semantic differential scales (scales anchored with polar adjectives, e.g., good-bad, beautiful-ugly, strong-weak, angular-rounded, etc.). Of the 25 such scales, the authors were able to identify 5 common underlying dimensions of connotative meaning, namely evaluation (e.g., pleasant-unpleasant), potency (e.g., strongweak), activity (e.g., fast-slow), complexity (e.g., simple-complex), and a physical dimension (e.g., round-angular), on which to map the different families of typeface. That said, though, evaluation, potency, and activity accounted for most of the variation in the data (consistent with previous research on dimensions of meaning, see Osgood, Suci, & Tannenbaum, 1957; see also Rowe, 1982).

Tannenbaum et al. (1964) analysed the role of participant group (pro, semi-pro, amateur), typeface family (Bodoni, Garamond, Spartan, Kabel), case (upper, lower), and inclination (regular, italics) on the dimensions of evaluation, potency, and activity. Multiple findings emerged, including the observation that as far as the evaluation dimension was concerned, the pros judged the typefaces more positively than did the amateurs and semi-pros. Moreover, Garamond typeface was evaluated more positively than the others. Spartan and Bodoni appeared to be the most potent of the typefaces tested. Similarly, upper case and regular typeface led to more potent judgements than lower case and italics, respectively. Finally, in terms of the activity dimension, Kabel was the least active, whilst italics led to higher activity than regular. All-in-all, this research tried to capture the underlying meaning of different fonts. Such results therefore provide a systematic approach for a brand/packaging designer wanting to promote a desirable image through their choice of typeface.

Given the long history of research on the topic of typeface associations, one might also wonder whether typeface associations stay the same over the decades or whether instead their meaning changes as the years go by. It can certainly be argued that several of the typefaces shown in Fig. 4.1 look decidedly dated to twenty-first-century eyes, thus hinting, or so we would like to argue here, at the changing associations, of specific typefaces.

More recently, a growing number of researchers have been studying typeface in the context of both psychology and marketing (e.g., Childers & Jass, 2002; Schroll, et al., 2018; Tantillo, Lorenzo-Aiss, & Mathisen, 1995; Van Rompay & Pruyn, 2011; Velasco, Hyndman, et al., 2018). For example, Henderson et al. (2004) conducted a study designed to identify key typeface design dimensions as well as key impressions derived from specific typefaces. Whilst they considered the dimensions of meaning discussed in earlier research (e.g., potency, evaluation, and activity), they decided to approach the topic somewhat differently. First, they identified and gathered design characteristics and corresponding representatypefaces (e.g., balanced/unbalanced, curved/angular, serif/ sans-serif). Second, they had graphic designers and advertisers rate the representative typefaces in terms of the different design characteristics. Third, they identified relevant impressions for firms (e.g., innovative, honest, attractive), and finally, they had consumers evaluate the typefaces on the different scales representing the impressions.

By means of factor analyses, Henderson and her colleagues (2004) indicated that typeface design attributes could be grouped into six factors: Elaborate, harmony, natural, flourish, weight, and compressed. Moreover, they suggested that the different impressions could be simplified down to four factors, namely pleasing/displeasing, engaging/boring, reassuring/unsettling, and prominent/subtle. Finally, they also assessed how the different design dimensions would influence the impression dimensions. For example, natural had the largest impact on pleasing/displeasing, natural and elaborate on engaging/boring, harmony and elaborated on reassuring/unsettling, and natural on prominent/subtle.

Building on the aforementioned attributes, Grohmann, Giese, and Parkman (2013) subsequently went on to study the extent to which they influence people's evaluations of brand personality (including excitement, sincerity, sophistication, competence, and ruggedness dimensions).

The results of the latter study revealed, for instance, that when a brand uses fonts that are rated high in terms of harmony, natural, and flourish, they also appear to be more exciting, sincere, sophisticated, rugged, and competent, whilst those brands that are rated higher in weight appear more rugged and competent (see also see also Brumberger, 2004). Meanwhile, Grohmann (2016) assessed the possibility of communicating gender by means of typeface design across four experiments where the results indicated that script typefaces (e.g., Rage Italic, Scheherazade) led to higher perceived brand femininity relative to display typefaces (Impact, Stencil Set) which enhanced the perception of a brand as being masculine. There are also examples in the marketplace of products targeting different genders deliberately by means of the use of different typefaces. For example, think of the typefaces used by brands such as for Gillette razors for men versus women (see their Venus brand).

Importantly, though, this research has not only focused on connotations but also suggested that typefaces can influence a range of consumer processes. So, for example, Doyle and Bottomley (2004) studied the role of typeface/brand congruency on brand choice. In their study, they provided evidence to suggest that brands presented in an appropriate typeface, that is, one that feels more appropriate for a given brand (e.g., ice cream in Snowdrift typeface) versus less appropriate (e.g., ice cream in Arial), are chosen more frequently. In that sense, not only are there typefaces and fonts that may convey the meaning of a given product better but they can also influence the way in which consumers make decisions. Notably, Doyle and Bottomley (2009, 2010) assessed typeface appropriateness based on the dimensions of connotative meaning. But, most relevant here, Doyle and Bottomley (2009) suggest that people's perception of the meaning (e.g., evaluation, activity, potency) of an object's name (e.g., surnames, products, services) can be influenced by the associations evoked by the typeface that goes along with it. Research by Doyle and Bottomley (2011) has also studied the separable effects of typeface and the symbolism associated with the phonetic properties of the letters of brand names. Their results suggested that, potentially, the visual—that is, the way brand

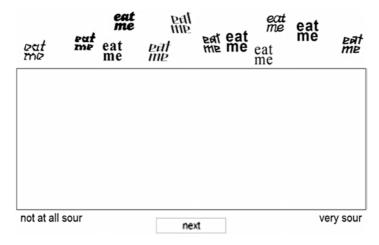
<sup>&</sup>lt;sup>8</sup> It is perhaps a remaining question though, whether the associations between typeface and gender are internalized by consumers as a function of some regularities in the market place.

names look, or typeface—may potentially be more significant in conveying a given message or meaning relative to the sound symbolic nature of the brand's name.

Other research, meanwhile, has highlighted how specific 'exotypes' (i.e., typefaces that are influenced by foreign calligraphy) are sometimes used by food and beverage brands in order to communicate the notion that the product itself has exotic origins (see Celhay, Boysselle, & Cohen, 2015). In particular, Celhay et al. tested the connotations triggered by six different exotypes (a Latin typeface that resembles a non-Latin one) with more than 1700 participants. Their results revealed that exotypes in product packaging can provide an effective means of communicating specific product origin or culture (e.g., Arabic conveyed by means of 'Arab Dances' typeface).

## A Case of Research on Typefaces: The Taste of Typeface

Previous research on the connotative meaning, or associations, of typeface typically had participants simply rate a range of typefaces in terms of various semantic differential scales. One can think of the box-scale as used in our own research on typeface (Velasco, Woods, Hyndman, et al., 2015; Velasco, Woods, Wan, et al., 2018) as a modern version of this approach. We have been using the latter approach increasingly frequently in order to assess the strength of any association between typeface (or other design features) and concepts/descriptors (see Fig. 4.3). This approach to measuring the associations of typefaces, as well as their connotative meaning, has a key advantage over other rating procedures. That is, there is no need for individual scales for each stimulus but instead all stimuli appear on the same trial relative to one dimension, thus facilitating the speed with which the participant can respond. This, in turn, allows the researcher to test a much larger number of typefaces in a much shorter space of time, thus potentially providing quick inputs for the design process of multisensory packaging.



**Fig. 4.3** The box-scale used in Velasco et al.'s (2015, CC BY) study to assess any crossmodal associations between typeface design and basic taste properties (e.g., sweet, sour, salty, and bitter). Participants drag the items shown at the top of the screen into the relevant position in the box. This approach, which can easily be conducted online, has the advantage that multiple typeface design solutions can be assessed rapidly in accordance with the strength of their association with the particular brand/product attributes that happen to be of interest to the designer/researcher

For example, in our own research, we have investigated the crossmodal associations (i.e., associations between features across the senses) that people hold between typeface features and specific product tastes (see Velasco et al., 2015). This is built on a large body of prior research showing the crossmodal correspondences that exist between gustatory taste attributes (e.g., bitter, sweet, sour, and salty) and shape properties such as roundness and angularity (Velasco, Woods, Petit, Cheok, & Spence, 2016). In particular, a number of studies have demonstrated that people typically associate rounder shapes, and hence one might imagine rounder typeface, with those products having a sweeter taste, while associating shapes that are more angular with bitter, salty, sour tastes instead. Asymmetry also appears to be a salient shape attribute. Turoman, Velasco, Chen, Huang, and Spence (2018), for instance, conducted a study showing that people typically associate asymmetrical (as compared to symmetrical) shapes with sourness, that is, with products having a sour or

acidic taste. Importantly, beyond merely associating tastes with typeface, our latest research has also shown that the taste expectations that are set by 'tasty' typeface can, under certain conditions at least, influence the rated taste of a food—in our case, the rated sweetness/sourness of a lemon/lime-flavoured jelly bean (see Velasco, Hyndman, et al., 2018).

Support for the notion that rounder typeface is associated with sweetness comes from a study involving typeface in packaging reported by Velasco, Salgado-Montejo, Marmolejo-Ramos, and Spence (2014). When a range of angular and rounded typefaces were created (see Fig. 4.3), and participants associated them with a specific taste, it was the rounder typefaces that primed a sweeter-tasting product (see also Velasco et al., 2015).9 Hence, one natural follow-up question concerns whether similar shape-taste associations in typeface would also be documented in other languages, or in places, such as China, where a very different script is used (cf. Pan & Schmitt, 1996). However, the results of our latest research suggest that indeed they are (see Velasco et al., 2018b). In the latter study, rounded or angular Western scripts were shown to English-speaking participants in the UK and to Spanish speakers in Colombia. Intriguingly, no matter where the consumers came from, and no matter the language tested, rounded typefaces were associated with sweetness, and sweet-tasting products, as expected.

Do such results imply, then, that the typeface shape-taste correspondence is universal? Here it is worth noting that the majority of the contemporary research that has been designed to assess the connotative meaning of typeface has tended to focus on testing WEIRDos (i.e., Western, Educated, Industrialized, Rich, and Democratic, students, primarily North American undergraduates studying psychology; Henrich, Heine, & Norenzayan, 2010). Indeed, in one study conducted in a remote population—the Himba tribe of Kaokoland in Northern Namibia (a group without any written language or supermarkets—though, it should be said, reasonably often the subject of psychologists' research), the bitterness in a dark chocolate was associated more strongly with a rounder shape while the sweeter taste of milk chocolate was associated

<sup>&</sup>lt;sup>9</sup>Notice here how essentially the same results were observed no matter whether the text was presented in isolation or when it was presented on the front of a drinking vessel.

with a more angular shape instead (see Bremner et al., 2013). That is, the angularity-taste mapping was *reversed* from that repeatedly seen in Western participants when it comes to sweetness detection (see also Liang et al., 2016).<sup>10</sup>

In summary, since the early days of typeface research, it has been suggested that typefaces convey meaning over and above the semantic meaning of the words they 'dress'. That is, their connotative value/meaning is often just as important as what the text actually denotes. Moreover, the evidence suggests that, whilst typefaces do not act independently of the other design elements, or of the context (e.g., product type or category) in which they appear, they can nevertheless influence consumer perceptions and decisions.

#### **Conclusions**

While typeface design does not really get a mention in Hine's (1995) book The Total Package, nor in many other more academic volumes on packaging (e.g., Stern, 1981), it is undoubtedly an important component of multisensory packaging design. The main reason for this is that text is a ubiquitous feature of product packaging and where there is text there is typeface. And while it is certainly true that the kind of typeface that a brand uses might provide nothing more than another cue in a packaging design (e.g., sometimes typefaces have characteristic colours, which can influence feelings; e.g., Lee & Pai, 2012) that already contains multiple distinct attributes, it can nevertheless still be used strategically (Yiannas, 2015). Indeed, the characteristics of the typeface are undoubtedly relevant not only when it comes to communicating/understanding written information (Juni & Gross, 2008; Song & Schwarz, 2010), but also as far as setting (or modifying) specific product and brand expectations and associations are concerned (Childers & Jass, 2002; Grohmann et al., 2013). And, perhaps more surprising still, in some cases, the choice of

<sup>&</sup>lt;sup>10</sup> That said, in future research, it will be important to replicate and extend this result in the same/ other remote groups in order to assess the robustness and extent of this apparent cross-cultural difference.

typeface has even been shown to influence the consumer's product *experience* too (see Velasco, Hyndman, et al., 2018).

At a more philosophical/fundamental level, one might want to know whether the human response to specific attributes of typeface/font is innate, or learnt through experience (see Colarelli & Dettmann, 2003; Henderson et al., 2004). While there is unlikely to be a simple answer to this question, it is worth noting that if one starts from the early literature on the affective/feeling value of lines (Lundholm, 1921; Poffenberger & Barrows, 1924) it is perhaps more natural to side with the idea that, at least some responses (e.g., affect) may be common across people (though see Bremner et al., 2013). Note here that the common responses are not necessarily to typefaces themselves but to characteristics of lines and shapes more generally. However, given the just-mentioned case of iconic typeface and the ubiquity of copycat marketing strategies, it is easy to see how there are likely to be regularities out there in the marketplace that people might be able to pick up on through experience (Van Horen & Pieters, 2012a, 2012b).

Another topic that will be of interest for future research concerns the interaction between typeface and other aspects of label design. Think, for example, of everything from the logo (e.g., Salgado-Montejo, Velasco, Olier, Alvarado, & Spence, 2014) through to any frame that may surround the brand logo (Fajardo, Zhang, & Tsiros, 2016). Could one convey taste, or complexity, through shading the (e.g., filled) typeface colour? Given that colours also convey affective feeling/emotion (see Palmer, Schloss, & Sammartino, 2013), one could potentially combine colour with typeface to influence legibility (Ko, 2017) and furthermore deliver a congruent connotative meaning (see Schiller, 1935, for early research on the combined impact of colour and typeface in advertising; see also Jain & Pasricha, 2017; Karnal et al., 2016). As a final note, we would like to highlight the fact that there are multiple typefaces available now and many more being created all the time (Garfield, 2011). Given the apparent increasing interest in the role of typefaces in packaging, and more broadly marketing, it seems as in the years ahead there will be a growing acknowledgement of their importance when it comes to communicating and priming specific impressions.

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