Comparing Uni-sensory versus Multi-sensory Methods for Embodied Brand Knowledge Retrieval

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Abstract

This article contributes to the study of embodied brand knowledge retrieval. Embodied brand knowledge results from multi-sensory consumer brand experiences. Consumers store embodied brand knowledge on a non-conscious, modality-specific level and use metaphors for its expression. Retrieving embodied brand knowledge requires methods that (a) stimulate senses involved in brand experiences and (b) encourage metaphorical expression. This study empirically compares the value of a uni-sensory, visual method (Autodriving) versus a multi-sensory method (Multi-sensory sculpting) for embodied brand knowledge retrieval. The results support the theoretical assumption that Multi-sensory sculpting elicits more and more diverse embodied brand knowledge elements than Autodriving.

Keywords*: Embodied brand knowledge, retrieval, method comparison*

Track: *Product and Brand Management*

1. Introduction

This article applies an embodied cognition perspective to the study of brand knowledge retrieval. Embodied cognition theory highlights the bodily and contextual nature of consumer cognition and thereby "stands in sharp contrast to a long tradition of research that acknowledged contextual (and bodily) influences with some despair" (Schwarz, 2006, p.21 (text in parentheses added)). The application of an embodied cognition perspective implies that embodied brand knowledge is the result of both conscious and non-conscious, multi-sensory brand experiences. Consumers store embodied brand knowledge on a non-conscious, modality-specific level—that is, in the same format in which they sensorially experienced a brand (Barsalou, 1999; Damasio, 1994). Multi-sensory metaphors (i.e., verbal or non-verbal figurative expressions) allow consumers expressing embodied brand knowledge (Lakoff & Johnson, 1980).

Embodied brand knowledge retrieval requires methods that are (a) able to stimulate those senses that have been involved in original brand experiences and (b) allow consumers to express themselves metaphorically, that is, in a format that resembles their cognitive representations (cf. von Wallpach & Kreuzer, 2010, 2011). So far, only few brand knowledge retrieval methods are able to satisfy these requirements. Among these methods are Autodriving (e.g., Heisley & Levy, 1991), Zaltman's Metaphor Elicitation Technique (ZMET) (e.g., Zaltman, 1997), Collage technique (e.g., Belk, Geer, & Askegaard, 2003), and Multi-sensory sculpting (MSS) (von Wallpach & Kreuzer, 2010, 2011). Autodriving, ZMET, and Collage technique can be perceived as uni-sensory methods, since they focus on the direct stimulation of and metaphorical expression via one sense (vision), while neglecting or only verbally stimulating other senses. MSS is so far the only method that accounts for embodied brand knowledge's multi-sensory nature by directly stimulating multiple senses and providing consumers with means to express themselves via multi-sensory metaphors. From a theoretical point of view, MSS better fulfills the requirements for retrieving embodied brand knowledge than uni-sensory methods. However, empirical evidence for this assumption is so far missing.

This article contributes to extant research by empirically investigating the value of multi-sensory versus uni-sensory methods for embodied brand knowledge retrieval. The empirical study compares the breadth and depth of embodied brand knowledge elements elicited by a uni-sensory Autodriving study with the results of a Multi-sensory sculpting study. Both studies were conducted to elicit embodied consumer brand knowledge regarding an internationally operating Austrian luxury brand and relied on two comparable samples of 15 students. Our results indicate that MSS elicits slightly more and more diverse embodied brand knowledge elements than Autodriving. Additionally, MSS provides deeper insights into the multi-sensory origins of embodied brand knowledge. These insights are particularly relevant for managers how intend to understand their consumers' actual embodied brand knowledge to more purposefully design future brand experiences.

2. Embodied Brand Knowledge Theory

Cognitive approaches to branding define brands as knowledge in consumers' minds. This article applies an embodied cognition perspective to the study of brand knowledge. Embodied cognition theory challenges the classical, cognitivist assumptions branding theorists traditionally rely on (i.e., brand knowledge as abstract and stable associations in consumers' minds) (Aaker, 1991; Keller, 1993). This section outlines embodied cognition theory's major assumptions regarding the development, storage, and expression of brand knowledge and discusses resulting challenges for embodied brand knowledge retrieval.

2.1 Characteristics of embodied brand knowledge

Embodied brand knowledge is the result of experiences consumers have with brands. Experience involves direct, personal participation or observation and includes the apprehension of an object, thought, or emotion through senses and mind (http://www.thefreedictionary.com/ experience). Brand-related stimuli (i.e., tangible and intangible brand manifestations such as physical products, people, or activities) allow consumers to experience brands with multiple senses involving vision, smell, touch, taste, audition, motion, and emotion (Brakus, Schmitt, & Zarantonello, 2009). Consumers can experience brands consciously and non-consciously, via perception (e.g., actually driving a Porsche car) and introspection (e.g., mentally simulating the experience of driving a Porsche car) (e.g., Barsalou, 1999).

Brand experiences result in embodied brand knowledge, which is stored in the form of multi-sensory mental images in consumers' minds (Barsalou, 1999). Multiple modality-specific regions of the brain work in concert to non-consciously capture the multi-sensory brand-related information mental images contain (Barsalou, 1999; Damasio, 1994). Metaphors allow consumers to interpret and express complex, multi-sensory mental images in a way that approximates brand experience (Johnson, 2009; Zaltman, 1997). While verbal metaphors can express part of embodied brand knowledge (Marks, 1996), multi-sensory, brand-related information typically requires non-verbal, metaphoric expression (e.g., via pictures, movement, or sound) (cf. Davidson, 1979).

2.2 The challenge of retrieving embodied brand knowledge via uni-sensory versus multi-sensory methods

Methods for embodied brand knowledge retrieval need to account for the characteristics of embodied brand knowledge section 2.1 outlines. Retrieving embodied brand knowledge accordingly requires (a) activating non-conscious, multi-sensory mental images by stimulating the senses that were involved in original brand experiences and (b) giving consumers a chance to express themselves via multi-sensory (verbal and non-verbal) metaphors (cf. von Wallpach & Kreuzer, 2010, 2011). Only few projective brand knowledge retrieval methods are able to satisfy these requirements, namely Autodriving (e.g., Heisley & Levy, 1991; McCracken, 1988), Zaltman Metaphor Elicitation Technique (ZMET) (e.g., Zaltman, 1997), Collage technique (e.g., Belk et al., 2003), and Multi-sensory sculpting (MSS) (von Wallpach & Kreuzer, 2010, 2011).

A major distinction between these methods is their uni-sensory versus multi-sensory orientation. Autodriving, ZMET, and Collage technique can be subsumed under the term photoelicition techniques (Heisley & Levy, 1991). All three methods visually stimulate consumers by either asking them to collect their own pictures representing what the brand means to them, or providing them with pictures from which to choose. Consumers are then involved in a more or less extensive long interview (cf. McCracken, 1988) to verbally elicit mental images regarding the focal brand. Other senses besides vision are either not stimulated at all (Autodriving, Collage technique) or only verbally stimulated during the interview (ZMET). The activation of these senses therefore purely relies on the eventual occurrence of cross-modal perception (i.e., vision or verbal expression stimulate the mental simulation of brand-related mental images relying on other senses) (Stevenson, Boakes, & Prescott, 1998). MSS is the only method that provides consumers with multi-sensory stimuli to activate and express multi-sensory mental images via non-verbal metaphors. Additionally, consumers are asked to verbally explicate their non-verbal metaphors in a one-on-one interview.

The above theoretical discussion illustrates that MSS more holistically satisfies the requirements for embodied brand knowledge retrieval than uni-sensory methods. Accordingly, it can be assumed that MSS allows activating and eliciting more as well as more diverse embodied brand knowledge elements. Empirical proof for this assumption is so far missing. This article contributes to existing research by empirically studying this assumption.

3. An Empirical Comparison of a Uni-sensory versus a Multi-sensory Embodied Brand Knowledge Retrieval Method

The empirical part of this study gives a short introduction of Autodriving as a uni-sensory and MSS as a multi-sensory method for embodied brand knowledge retrieval. From the three uni-sensory methods, Autodriving was chosen since the data collection procedure is most comparable to MSS. Based on the criteria 'breadth' (number of embodied brand knowledge elements elicited) and 'depth' (different embodied brand knowledge elements elicited), we then compare the results of an Autodriving study with those of a MSS study. Both studies focused on eliciting embodied brand knowledge regarding the same internationally operating Austrian luxury brand and relied on two comparable Austrian student samples each including 15 respondents (Autodriving: age (22-35), gender (60% female; 40% male); MSS: age (25-42), gender (40% female; 60% male) (cf. Zaltman, 1997). We chose a between-subject design to avoid carry over effects resulting from participation in both sessions. Sections 3.1 and 3.2 give a detailed description of the empirical procedure guiding data collection and analysis in both studies.

3.1 Autodriving as a uni-sensory method for embodied brand knowledge retrieval

Autodriving is a visual photoelicitation technique (cf. Heisley & Levy, 1991; McCracken, 1988) that allows retrieving mental images via visual and verbal metaphors. Respondents are either provided with pictures or asked to collect their own pictures representing what the brand means to them (in the present study, the latter variant was chosen). Pictures then serve as visual "stimuli for projective interviewing" (Heisley & Levy, 1991, p.257) and support the verbal metaphorical expression of mental images. To gain insights into embodied brand knowledge, a minimum of two researchers independently analyze the data, focusing on verbal and visual metaphors (and eventual hints to other senses) as well as their underlying meanings. The results are then aggregated in a so-called embodied brand knowledge map that illustrates (a) the relations between the most frequent meanings verbal and visual metaphors express and (b) the senses that underlie the elicitation of these meanings (cf. von Wallpach & Kreuzer, 2010, 2011; Zaltman, 1997).

3.2 Multi-sensory sculpting as a multi-sensory method for embodied brand knowledge retrieval

MSS is a projective method that focuses on retrieving multi-sensory mental images via multiple non-verbal as well as verbal metaphors (cf. von Wallpach & Kreuzer, 2010, 2011). Respondents are stimulated with a toolkit containing various abstract construction materials that are able to stimulate various senses brand experiences involve (e.g., vision, smell, touch, taste, audition). Respondents are encouraged to select materials that represent what the brand means to them and to combine these materials into multi-sensory sculptures (i.e., non-verbal, metaphorical expressions of multi-sensory brand images). The sculptures then serve as "stimuli for projective interviewing" (Heisley & Levy, 1991, p.257). Researchers use non-

directive, grand-tour questions to encourage respondents to explicate their sculptures' meaning via verbal metaphors. Data analysis focuses on detecting different types of verbal and non-verbal metaphors (and related senses) as well as their underlying meanings to gain insights into embodied brand knowledge. The results are then aggregated in a so-called embodied brand knowledge map (description in section 3.1) (cf. von Wallpach & Kreuzer, 2010, 2011; Zaltman, 1997).

3.3 Empirical results

Figure 1 illustrates the breadth and depth of embodied brand knowledge elements (meanings) elicited via Autodriving and MSS respectively. The numbers and symbols next to each meaning indicate the number of mentions and the senses involved in its elicitation. To be included in the figure, a meaning had to be mentioned by at least one third of the respondents (cf. Zaltman, 1997).

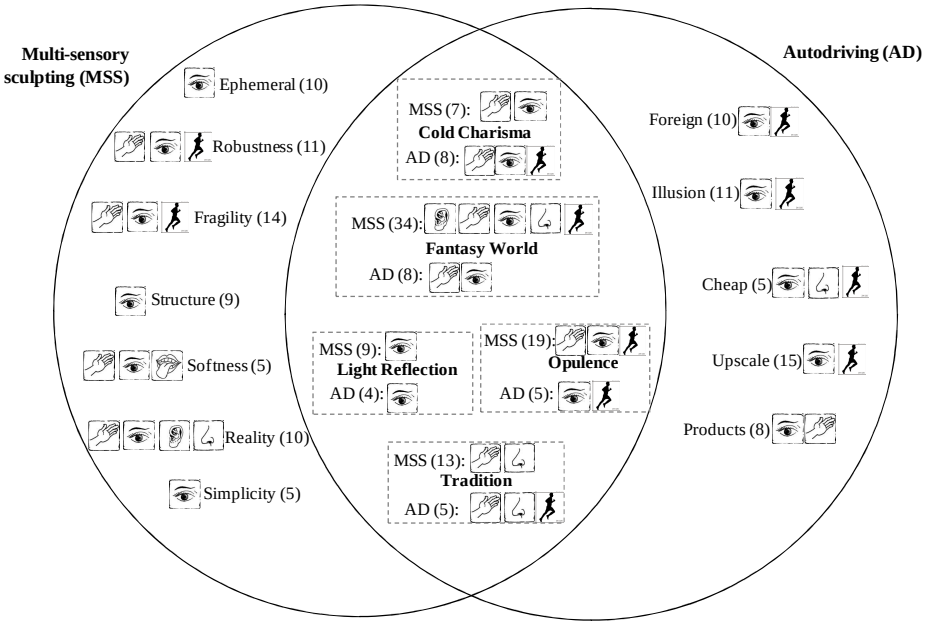

Figure 1: Embodied brand meanings elicited via MSS and Autodriving

Together, MSS and Autodriving reveal a total of 36 different brand meanings (the 17 most frequently mentioned meanings are depicted in Figure 1). On average, each respondent elicits 12 / 9 meanings via MSS / Autodriving respectively—multiple responses were possible. The two methods elicit 5 shared meanings ("fantasy world", "cold charisma", "light reflection", "tradition" and "opulence"). MSS elicits these shared brand meanings relatively more frequently than Autodriving. Additionally, MSS elicits 16 and Autodriving 15 meanings that are not shared. These results indicate that MSS elicits slightly more and more diverse embodied brand knowledge elements than Autodriving.

Our results also show that in the MSS task more diverse senses are involved in the elicitation of shared meanings than in the case of Autodriving. In describing, for example, the brand meaning "fantasy world", MSS respondents use a broad array of verbal metaphors like "dreams", "floating on clouds", "winter wonderland", "far-away world", or "fairy-tale". Verbal metaphors (e.g., "dreams are like movements, uncontrollable, quickly disappearing") allow MSS respondents to convey body movements relating to "fantasy world" (cf. Johnson, 2009). MSS respondents further support the meaning "fantasy world" via non-verbal metaphors (e.g., cotton, aluminum foil, moon and stars, glitter, crystals, and pearls) that

stimulate multiple senses (i.e., vision, touch, and smell). Respondents intensify the Fantasy World's impression via auditory stimuli (e.g., elf-like melody "Lilium" http://www.youtube.com/watch?v=ZgJxNO-8CpY). In the case of Autodriving, only vision and haptics are involved in the elicitation of the shared meaning "fantasy world".

A similar picture manifests itself regarding the elicitation of meanings that are not shared across methods. The predominant sense eliciting meanings in the Autodriving tasks is vision, followed by body movement. This might be due to the fact that Autodriving only directly stimulates vision while the stimulation of other senses can only occur via cross-modal perception (Stevenson et al., 1998). In the case of MSS more diverse senses and metaphors are involved in the elicitation and expression of brand meanings. Even though vision is also the most dominant sense eliciting meaning via MSS, touch, taste, smell, audition, and body movements are more pronounced compared to Autodriving. These results indicate that MSS allows gaining deeper insights in the multi-sensory origins of embodied brand knowledge, that is, the senses that were involved in original brand experiences.

Comparing the specific contents of meanings each method elicits, it becomes apparent that MSS respondents mention more symbolic meaning elements that relate to fantastic and creative brand-related mental images. Autodriving more frequently elicits brand meanings that relate to functional brand or product characteristics (as indicated by the meanings "products", "cheap" (product presentation), "foreign" (brand's target group) or "upscale" (high price and quality perceptions)).

4. Discussion

This paper contributes to existing research by empirically studying the value of uni-sensory versus multi-sensory methods for embodied brand knowledge retrieval. In order to retrieve embodied brand knowledge, a method needs to be able (a) to activate non-conscious, multi-sensory mental images by stimulating the senses that were involved in original brand experiences and (b) to give consumers a chance to express themselves via multi-sensory (verbal and non-verbal) metaphors (cf. von Wallpach & Kreuzer, 2010, 2011). Our literature review illustrates that theoretically MSS should satisfy these requirements better than various uni-sensory methods. The results of our empirical comparison of a uni-sensory Autodriving study with a MSS study support this assumption. MSS elicits slightly more as well as more diverse embodied brand knowledge elements than Autodriving. Additionally, MSS provides more in-depth insights into the multi-sensory origins of embodied brand knowledge.

In times of "experiential marketing" (Brakus et al., 2009; Schmitt, 1999) our findings have major implications for brand managers. Managers are increasingly encouraged to more purposefully design brand experiences that should ideally lead to certain desirable embodied brand knowledge elements. A useful starting point in pursuing this goal is gaining an in-depth understanding of embodied brand knowledge consumers have in mind as a result of past brand experiences. Our study illustrates that MSS provides managers with a more in-depth understanding of both actual consumer brand meanings as well as their multi-sensory origins than Autodriving.

While providing first insights into the value of uni-sensory versus multi-sensory methods for embodied brand knowledge retrieval, our study's major limitation is the comparison of MSS with only one uni-sensory method (Autodriving). Future research should focus on additionally comparing MSS with ZMET and Collage technique (ideally involving different brands and samples) to further prove MSS's value for embodied brand knowledge retrieval.

5. References

Aaker, D.A. (1991). *Managing brand equity: Capitalizing on the value of a brand name*. New York: The Free Press.

Barsalou, L.W. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences*, 22, 577-660.

Belk, R.W., Geer, G., & Askegaard, S. (2003). The fire of desire: A multisited inquiry into consumer passion. *Journal of Consumer Research,* 30, 326-351.

Brakus, J., Schmitt, B.H., & Zarantonello, L. (2009). Brand experience: What is it? How is it measured? Does it affect loyalty? *Journal of Marketing,* 73, 52-68.

Damasio, A.R. (1994). *Descartes' error: Emotion, reason and the human brain*. New York: G.P. Putnam's Sons.

Davidson, D. (1979). What metaphors mean. In S. Sacks (Ed.), *On metaphor*. Chicago: The University of Chicago Press.

Heisley, D., & Levy, S.J. (1991). Autodriving. A photoelicitation technique. *Journal of Consumer Research*, 18 (3), 257-272.

Johnson, M. (2009). *The meaning of the body. Aesthetics of human understanding*. Chicago: Univ. of Chicago Press.

Keller, K.L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57 (1), 1-22.

Lakoff, G., & Johnson, M (1980). *Metaphors we live by.* Chicago: Univ. of Chicago Press.

Marks, L.E. (1996). On perceptual metaphors. *Metaphor and Symbolic Activity*, 11(1), 39-66.

McCracken, G. (1988). *The long interview*. Newbury Park, CA: Sage.

Schmitt, B. (1999). Experiential marketing. *Journal of Marketing Management*, 15, 53-67.

Schwarz, N. (2006). Feelings, fit and funny effects: A situated cognition perspective. *Journal of Marketing Research,* 43, 20-23.

Stevenson, R.J., Boakes, R.A., & Prescott, J. (1998). Changes in odor sweetness resulting from implicit learning of a simultaneous odorsweetness association: An example of learned synesthesia. *Learning and Motivation*, 29, 113–132.

von Wallpach, S. & Kreuzer, M. (2010). Multi-sensory Sculpting (MSS): Eliciting Brand Knowledge via Three-dimensional Metaphors. *Proceedings of the KAMS Global Marketing Conference 2010*, Tokyo.

von Wallpach, S. & Kreuzer, M. (2011). Multi-sensory Sculpting (MSS): Eliciting Brand Knowledge via Three-dimensional Metaphors. *Proceedings of the Society of Consumer Psychology Conference 2011*, Atlanta.

Zaltman, G. (1997). Rethinking market research: Putting people back in. *Journal of Marketing Research*, 34, 424-437.