Exposé

Investigation of the effects of scent marketing containing country-of-origin information on product evaluations

Submitted by
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Abstract

Background: Previous research has demonstrated the influence of ambient scents on consumer purchasing decision and product evaluation. The significant impact of the country of origin effect on product perception was also proved. However, there is no research on the intersection of these two topics.

Purpose: This study investigates the influence of the scent marketing in combination with the country of origin information on the product evaluation by the consumer.

Method: The foundation of this study is an experiment. The effects of using ambient scents, containing COO information, in the product evaluation process were tested in order to investigate their influence on the perception of the product.

Main findings: It was elaborated that the mere presence of ambient scent enhanced product evaluation. Moreover, the nature of the smell had considerable impact as well. Thus, consumers’ overall liking of the product was higher for the smell, representing the COO associated with high-quality production.

Keywords: sensory marketing, olfaction, COO effect, processing fluency
Introduction

Background

With the development of new technologies and rapid product innovation, consumer behavior cannot be addressed by purely utilitarian approaches – new experiential perspective should be applied. Contemporary consumers prefer particular products and brands not because of their greater utilities (Zajonc & Markus, 1982). They search for novelty, emotions, imagery, and fun (Holbrook & Hirschman, 1982; Rodrigues, Hultén, & Brito, 2011; Schmitt, 1999). As stated by Holbrook and Hirschman (1982), consumption nowadays can be described as a process directed toward the hedonic pursuit of pleasure.

Consumers want to be involved and create their own experiences through consumption, so the emotional and irrational aspects involved in the purchasing process should be emphasized (Prahalad & Ramaswamy, 2000; Schmitt, 1999). Experience of the purchase and emotional connection with the brand can be created by appealing to human mind and senses (Hirschman & Holbrook, 1982; Hultén, 2011). All five human senses affect consumer behavior by influencing our emotions, memories, preferences and choices (Krishna, 2010).

Despite the fact that Kotler recognized the importance of “atmospherics”¹ as a marketing tool already in 1973 (Kotler, 1973), the real sensory marketing boom started several years ago (Bradford & Desrochers, 2010). Nowadays consumers are overloaded with information and not responding to the traditional marketing tools. In order to stand out of the crowd companies seek for new approaches. Sensory marketing is a good solution, as it can be applied to create subconscious triggers appealing to human senses, and thus engaging consumers in a more efficient way (in comparison to the traditional explicit marketing tools) (Krishna, 2012). Even though markets and retailers start to apply sensory marketing, there is still limited academic research investigating its effects on consumer behavior (Krishna, 2010; Peck & Childers, 2008).

Having in mind that sense of smell is considered to have the power to strongly influence consumers, due to its direct connection to emotional seat (Bradford & Desrochers, 2010; Herz, 2002; Lindstrom, 2005) and memory center of the brain (Buck, 2005; Krishna, Lwin, & Morrin, 2010), I decided to limit my research to the scent marketing, notably ambient scents. The effects of the olfaction cues on the consumer behavior was under the focus of researchers since the mid 1990s (Herrmann, Zidansek, Sprott, & Spangenberg, 2012). Influence of olfactory stimuli on affect (Bosmans, 2006; Krishna, 2012), cognition (Bone & Jantrania, 1992), memory (Krishna et al., 2010), shopping behavior (Chebat & Michon, 2003; Gulas & Bloch, 1995) and product

¹ “Atmospherics is the effort to design buying environments to produce specific emotional effects in the buyer that enhance his purchase probability” (Kotler, 1973 p.50)
evaluation (Riker, Morales, & Nowlis, 2005; Spangenberg, Crowley, & Henderson, 1996) were demonstrated.

Ambient scents can be considered affective cues that guide consumers’ subsequent product evaluation (Bosmans, 2006) by evoking emotions and memories (Riker et al., 2005).

Another cue, that has a considerable influence on consumer’s decision-making process is the country of origin (COO) information (Bilkey & Nes, 1982; Veale, 2006). There has been a considerable research on COO effects and their impact on purchasing decisions since 1960s. All studies indicate that COO information has an impact on product quality perceptions, overall evaluation of a product and the likelihood of purchasing the product (Bolliger, 2011; Veale, 2006). Several studies empirically provide empirical evidence of the cognitive nature of COO information cue processing (Bolliger, 2011; Sauer, Young, & Unnava, 1991; Verlegh & Steenkamp, 1999) stating that consumers make rational decisions by using COO cues.

**Problem Statement**

New trends on the market revealed the drawbacks of considering just the cognitive factors when analyzing consumer behavior without taking sphere of affect into consideration. However, as truly remarked by Holbrook and Hirschman (1982), the explanation of consumer behavior cannot be reduced to a narrow simple model, neither behaviorist nor psychoanalytic, ethological or anthropomorphic, cognitive or motivational. That is why it is important for marketers to take into consideration both problem-directed and experiential components.

I found no studies exploring the consumers’ evaluation of the products by addressing both affective (sensorial perception) and cognitive (COO information) cues. Moreover, the review of previous research revealed the contradictions concerning the effects of ambient scent on product evaluation.

**Purpose/ Research Question**

Addressing the research gap identified in the literature, I aim to investigate if the information about the country of origin transmitted to the consumer by the means of scent marketing can alter product evaluations. To answer the purpose of my thesis, the following research questions will be examined:

- Will the mere presence of pleasant ambient scent improve the evaluation of the product by consumers?
- Will the nature of the scent (associations with high/low quality country of origin) influence consumers’ appraisal of the product?
Theoretical background

In this study I intend to investigate the effect of the ambient “country” scent on consumers with the help of psychological paradigms and theories. Most of the research on the influence of scent marketing is based on the stimulus-organism-response (SOR) paradigm, proposed by Mehrabian and Russell in 1974 (Russell & Pratt, 1980; Spangenberg et al., 1996; Turley & Milliman, 2000). However, the empirical results of previous research on scents influence do not confirm theoretical hypothesis: controlled experiments in most cases show null effects than significant effects (Bone & Ellen, 1999). That is why to address the discrepancies in the previous research on olfactory effects I would analyze one the most recently suggested theory – metacognitive construct of processing fluency (Herrmann et al., 2012; Schwarz, 2004). Moreover, I will review the research explaining the occurrence of COO effects as well as the function of odor receptors, aiming to explicate the importance and efficiency of olfactory cues. The theoretical framework will be concluded by the formulation of the hypotheses:

**H1:** Presence of ambient scent improves the evaluation of the product. That means that subjects in experimental groups (regardless the COO and treatment) will appraise the product higher than subjects in the control group.

**H2:** “Smell of France” will make the product more desired for subjects than the “smell of China”. So, subjects in “high-quality” experimental group will increase the expected quality evaluation for the watch and will show higher desirability to purchase the product, than subjects in “low quality” group.

**H3:** Evaluation of the product will be different within experimental groups depending on the treatment (feel or think). When subjects will be primed to associate the ambient smell with the country of origin, the COO effect will be higher comparing to the treatment when no indications will be given.

Definitions

**Ambient scent:** “Scent that is not emanating from a particular object but is present in the environment and affects perceptions of the store and the products presented.” (Spangenberg et al., 1996)

**Country of origin effect:** “Any influence, positive or negative, that the country of manufacture might have on the consumer’s choice processes or subsequent behavior.” (Elliott & Cameron, 1994).

**Sensory marketing:** “Marketing that engages the consumers' senses and affects their perception, judgment and behavior.” (Krishna, 2012).
Limitations

The research is limited to the examination of the effects of the smell of two countries, representing the stereotypic high and low quality production (China and France). The “smell of the country” was validated by 20 respondents, randomly picked on the territory of the University of Kassel.

Moreover, the perception of the “smell of the country” can be quite subjective and people might not associate the ambient smell and the country of origin.

The experiment conducted in the study took place in Kassel, Germany. The respondents were mainly students of the University of Kassel, between 18 and 28 years old.
Review of Literature

My literature review is divided in two main topics, the intersection of which I am trying to explore in my study: sensory marketing and COO effects. Each topic also has subdivisions.

### Olfaction and Sensory marketing

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<thead>
<tr>
<th>Topic</th>
<th>Title</th>
<th>Author</th>
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<tr>
<td>Influence of ambient odors on consumer behavior</td>
<td>Scents in the marketplace: Explaining a fraction of olfaction.</td>
<td>Bone, P. F., &amp; Ellen, P. S.</td>
<td><em>Journal of Retailing</em>, 75(304), 243–262.</td>
<td>The article presents the review of 22 studies of retailing relevant olfaction research. Studies are discussed along 3 major dimensions: presence of scent, scent pleasantness and scent congruity. <strong>Main finding</strong> states that olfaction effects are hardly predictable and most of the empirical results are not significant. New theories (accessibility and availability) are proposed to increase the reliability of capturing olfactory effects.</td>
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<tr>
<td>Influence of ambient odors on consumer behavior</td>
<td>The Use of Scents to Influence Consumers: The Sense of Using Scents to Make Cents.</td>
<td>Bradford, K. D., &amp; Desrochers, D. M.</td>
<td><em>Journal of Business Ethics</em>, 90(S2), 141–153.</td>
<td>Main purpose of the article is to reveal the ethical issues, connected with the use of scent marketing, as the sense of smell is not controlled by the consumers. Overview of possible applications of scent in marketing is given and the distinction between marketer scent, product scent and ambient scent is made (with pointing to the ethical issues arousing from the usage of covert objective ambient scents).</td>
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<td>Influence of ambient odors on consumer behavior</td>
<td>Theoretical background.</td>
<td>Chebat, J.-C., &amp; Michon, R.</td>
<td><em>Journal of Business Research</em>, 56(7), 529–539.</td>
<td>The article discusses the effect of ambient scents on enhancing shoppers’ perceptions by employing 2 models: derived from environmental psychology and based on cognitive theory of emotions. <strong>Major finding:</strong> second theory (emotional) better explains the effect of ambient scents.</td>
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<td>Influence of ambient odors on consumer behavior</td>
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<td>Gulas, C. S., &amp;</td>
<td><em>Journal of</em></td>
<td>Model describing the effects of ambient scents on</td>
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<td>Influence of ambient odors on consumer behavior</td>
<td>The Power of Simplicity: Processing Fluency and the Effects of Olfactory Cues on Retail Sales.</td>
<td>Herrmann, A., Zidansek, M., Sprott, D. E., &amp; Spangenberg, E. R. (2012).</td>
<td>Journal of Retailing. Article in press</td>
<td>The article provides theoretical explanation to the effects of ambient scents on consumers in the light of processing fluency theory (olfactory stimuli that are easier to process will be more successful in terms of marketing outcomes). The effect of scent complexity on cognitive processing as well as consumers buying behavior is examined through the field and laboratory study. <strong>Main finding</strong>: scents with fewer components (more simple) have bigger impact on the consumers in comparison with multiple-element scents: greater retail sales increased cognitive processing and more favorable shopping behavior was observed in simple scent conditions.</td>
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| Influence of ambient odors on consumer behavior | There’s Something in the Air: Effects of Congruent or Incongruent Ambient Odor on Consumer Decision Making. | Mitchell, D. J., Kahn, B. E., & Knasko, S. C. (1995). | Journal of Consumer Research, 22(2), 229–238. | The main focus of the article is the influence of the degree of congruency of odor on consumer decision making process. Effects of congruent and incongruent scents on changes in memory process were examined. **Main findings** consist in the fact that consumers in congruent odor conditions comparing to the incongruent environment: - spend more time on information acquisition - process data more holistically - rely more on personal experience (attitudes, memories) - spend choices evenly among the products presented These results may be explained by the fact that congruent odor stimulate
| Influence of ambient odors on consumer behavior | A theoretical investigation into the potential applications of olfactory cues to the marketing of new products. | Shiu, E., Walker, D., & Cheng, C. (2006). *Innovative Marketing, 2*(4), 44–53. | This article presents the investigation of whether ambient scents can increase the adoption for new products among consumers. Literature on the effects of scents on human behavior is reviewed. The contribution of this article is possible managerial applications of olfactory cues. |
| Influence of ambient odors on consumer behavior | Improving the Store Environment: Do Olfactory Cues Affect Evaluations and Behaviors? | Spangenberg, E. R., Crowley, A. E., & Henderson, P. W. (1996). *Journal of Marketing, 60*(2), 67–80. | The article dwells upon the effects of inoffensive (providing positive or neutral affective response) ambient scents on the store, product evaluation as well as shopping behavior of consumers. Authors aimed at finding if the impact varies depending on the affect nature and the intensity of the scent. The article includes a review of previous research on environmental psychology and olfaction in marketing and an experiment. Results of the experiment prove more positive evaluations of the store and merchandise in the scented environment. It was also found that customers perceive to spend less time in scented shops. Finally, the importance of the presence of the scent was found regardless its specificity. |
| Affect and cognition | Influence of affective and cognitive judgments on autonomic parameters during inhalation of pleasant and unpleasant odors in humans. | Bensafi, M., Rouby, C., Farget, V., Bertrand, B., Vigouroux, M., & Holley, a. (2002). *Neuroscience Letters, 319*(3), 162–166. | The article dwells upon the connection between the emotional and olfactory processing. Two theories of what is primary emotion or cognition are presented. The main finding consists in the fact that consumers categorize scents according to their pleasantness without realizing it (involuntary). |
| Affect and cognition | Affective and cognitive factors in preferences. | Zajonc, R., & Markus, H. (1982). *Journal of Consumer Research, 9*(2), 123–131. | Traditional (preferences are consequences of greater utilities of products) and alternative (focus on the affective factors) view on the nature of preferences is presented in the article. Main findings: It is stated |
that preference judgments can be independent of cognition and changed over time (with more experience) while utilities of the product remain unchanged. It is possible to change preferences based on cognition, but very hard for those based on the affect. Analysis of the exposure effect.

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<td>This article aims at providing empirical evidence of the effects of the scents on product evaluation by examining their appropriateness. The results of the study show consumer preference for products with congruent smells.</td>
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<td>The main focus of this article is the use of scents to enhance consumers’ experience of products, especially for normally non-scented products. The main result is that odors did not influence subjects’ liking of the products.</td>
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<td>Review of the research on the effects of the environment (“Atmospherics”) on costumers’ buying behavior.</td>
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<td>The article presents the explanation of consumer behavior by using situational variables (links between the situation/objects, person and behavior: SOR paradigm).</td>
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<td>This article examines the fluency effects on affective judgment, particularly how semantic primes can enhance perceptual fluency and consequently increase the product liking.</td>
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<td>The article explores the influence of perceptual fluency on affective judgments.</td>
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<td>The article aims at presenting the concept of multi-sensory brand-experience based on the theories of branding, experiences, value creation and the human senses.</td>
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Main findings: Sensorial strategies should be applied as long-term strategies in order to differentiate and distinguish the brand (suggestions for all 5 senses are given).

<table>
<thead>
<tr>
<th>Sensory marketing</th>
<th>An integrative review of sensory marketing: Engaging the senses to affect perception, judgment and behavior.</th>
<th>Krishna, A. (2012).</th>
<th>Journal of Consumer Psychology, 22(3), 332–351.</th>
<th>This article presents the review of the studies on the sensory marketing (all the five senses).</th>
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### COO effects

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<tr>
<td>COO and product evaluation</td>
<td>Consumer perception of product quality and the country-of-origin effect.</td>
<td>Elliott, G., &amp; Cameron, R. (1994).</td>
<td>Journal of International Marketing, 2(2), 49–62.</td>
<td>The article provides the investigation on the importance of COO information comparing to other product attributes as well as its relevance as a quality cue. The study of the COO effect across product categories is also presented. The results of the study: COO effect has important</td>
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## COO and product evaluation

**Consumer ethnocentrism and attitudes toward domestic and foreign products.**


The article investigates link between ethnocentrism and consumers’ preferences toward foreign products (when no domestic alternative exist). It was found that ethnocentrism is significantly related to the foreign product evaluation (preference for products from culturally similar countries). So, in some cases it is better not to stress the COO.

## Cognitive aspect

**The CoO-ELM model: A theoretical framework for the cognitive processes underlying country of origin-effects.**


The article investigates the application of Elaboration Likelihood Model to explain and predict the cognitive processes underlying COO effect. Several cognitive approaches are integrated in one model that provides a useful insight of how COO information is used by consumers.

## Cognitive aspect

**Effects of country-of-origin and product-attribute information on product evaluation: an information processing perspective.**


This article aims at investigating the cognitive processes underlying the COO effects. **Main findings:** COO not only influences product evaluations, but makes consumers explore other attributes of the products (COO stimulates an interest in the product). Results are explained by the cognitive elaboration theory.

## Cognitive, affective and normative aspects

**A review and meta-analysis of country-of-origin research.**


Review of previous research on COO effects. **Main finding:** COO has greater impact on perceived quality than on consumer purchase intentions.
Methodology

In this research the combination of qualitative and quantitative methods and deductive approach were used. This method and approach correspond to the goals I set and research questions I intend to explore. Basing on the theoretical concepts, I formulated hypotheses (see Theoretical background), which were later tested in the experiment. Data, collected by the means of the experiment, was analyzed to find statistically significant relationships between variables (independent variable – “smell of the country”, dependent variable – “product evaluation”).

However, using a quantitative method performing experiments has some limitations in the sense that there have been some events out of my control that might have affected the results of the experiment (additional scents…).

Before conducting the main study it was necessary to identify the “smell of the country” and validate it. For this purpose, sample of 20 subjects was used. They were asked to associate the smell and the country and to pretest olfactory stimuli to identify their pleasantness, familiarity, congruity and intensity (rating the smell on 7-point scales).

The foundation of my study was controlled between-subject experiment, which took place on the territory of Kassel University campus. This experimental design facilitates familiarity with the experiment for subjects and minimizes confusion that may arise.

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<th>Smell of China</th>
<th>Smell of France</th>
<th>No special smell</th>
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<td>Treatment group</td>
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<td>“think”</td>
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<td>“feel”</td>
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<tr>
<td>Control group</td>
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A convenience sample of 150 subjects was randomly assigned to five independent groups: four experimental and one control group. The control group was not exposed to the ambient scent. Four experimental groups were assigned to two odor sessions – “smell of China” (jasmine) and “smell of France” (lavender). Two treatments were run in each odor session. In the first treatment (“think ”) subjects were directed to pay attention to the ambient scent, whereas in the second treatment (“feel”) no emphasis on the ambient scent was made.

Subjects were asked to evaluate a product (a toy for children). Subjects rated these products on the following 7-point scales: bad/good, unpleasant/pleasant, unfavorable/favorable, low quality/high quality, unattractive/attractive, and poor value/good value (Spangenberg et al., 1996).
Chapter outline

1. **Introduction**

1.1. Background
1.2. Problem discussion
1.3. Purpose
1.4. Research questions
1.5. Definitions
1.6. Limitations

2. **Theoretical background**

2.1. Choice of the theory
2.2. Scent marketing
   2.2.1. Functioning of olfaction system
   2.2.2. Processing fluency theory
      2.2.2.1. Processing fluency in marketing
      2.2.2.2. Olfaction and processing fluency
   2.2.3. Ambient scents in marketing
2.3. COO effects
   2.3.1. Cognitive nature
      2.3.1.1. Halo effect
      2.3.1.2. Summary-construct effect
      2.3.1.3. Product attribute effect
      2.3.1.4. Default-heuristic effect
   2.3.2. COO as an extrinsic cue for product quality
2.4. Hypotheses

3. **Methodology**

3.1. Research approach
3.2. Data collection’
   3.2.1. Pre-test (“smell of the country”)
   3.2.2. Experiment
3.2.2.1. Design of the experiment
3.2.2.2. Pilot experiment
3.2.2.3. Main study
3.2.3. Questionnaire design

3.3. Validity and reliability of the study
3.3.1. Internal validity
3.3.2. Eternal validity

3.4. Data analysis

4. **Empirical findings**

4.1. Results of the pre-test
4.1.1. Pleasantness, congruity, familiarity and intensity of the smell

4.2. Results of the experiment
4.2.1. Mean values
4.2.2. Relationship between variables

5. **Analysis and discussion of the results**

5.1. Analysis of the experiment
5.2. Hypothesis testing

6. **Future research**

7. **Conclusion and managerial implications**

8. **Bibliography**

9. **Appendices**
# Plan of Work

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## Submission of 3 research proposals
- August 1-7, September 8-14, October 15-21

## Starting the Thesis
- October 22-28

## Topic approval by tutors
- November 29-4

## Literature review
- November 5-11

## Defining the research purpose, outlining hypothesis
- November 12-18

## Research proposal (expose)
- November 19-25

## Abstract
- November 26-31

## Summary of the literature
- December 1-7

## Formulation of hypotheses
- December 8-14

## Outline of the thesis
- December 15-21

## Experiment
- December 22-28

## Design of the experiment
- January 29-4

## Identification of the smell of the country
- January 5-11

## Preparation of all necessary equipment/stimulus/
subjects recruitment/questionnaire design
- January 12-18

## Pre-test (validation of the smell of the country)
- January 19-25

## Pilot experiment
- January 26-31

## Main experiment
- February 1-7

## Writing process
- February 8-14

## Introduction/Background
- February 15-21

## Theoretical framework
- February 22-28

## Empirical part
- March 1-7

## Conclusion
- March 8-14

## Intermediate report
- March 15-21

## Submission of the report
- March 22-28

## Preparation of the presentation
- March 29-4

## Experiment data analysis
- April 1-7

## Analysis of the results
- April 8-14

## Elaboration of possible implications
- April 15-21

## Finalisation
- April 22-28

## Finalization and revision
- May 1-7

## Proofreading
- May 8-14

## Preparation of the final presentation
- May 15-21

## Final presentation of the thesis
- May 22-28
Bibliography


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