Translating smells into colors: a proposal for improve the perception of perfume packaging design

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**Citation**

Translating smells into colors: a proposal for improve the perception of perfume packaging design.

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Abstract

The present paper is an exploratory research within packaging design for perfumes. It discusses about the possibility of enhancing the experience of the user by associating the visual language with the smells. It is common sense in the design field the importance of user experience. Designers from different areas have been discussing a way of enhance it. One of the approaches which appear in this scenario is the term (multi)sensorial. It is believed in the contribution of this approach for the packaging design. It is interest of the authors the use of color as a language in design able to enhance the communication, and consequently, the experience. The authors investigate the relationship that the colors can establish with the smells. They start from the assumption that it is possible to establish an association between the senses of vision and smell. They believe that, once synchronized, visual and olfactory stimuli may increase the perception of a perfume. Therefore the paper explores and discusses the visual and olfactory senses and their meanings. Moreover, it is proposed an intersemeiotic translation between these senses.

Keywords
Color; Perfume; Semiotic; Packaging; Design

Introduction

Every day, from the moment we wake up to the moment we go sleep we are subjected to multitude of signs. Signs that vary in degree of complexity and with which we are more or less accustomed to. In the need to survive and communicate we have created over centuries our own codes, as well as our interpretation systems code. As basis for the socializing, these codes are present in the different fields of knowledge in society, including the design. The design for their ability to mediate interfaces essentially deals with the construction of signs. Given the interdisciplinary which is inherent to this field, it is inevitable the use of different languages in order to represent those signs. In times of globalization, where the profusion of signs is increasing, designers face the challenge of using such signs effectively. Therefore, the study of semiotics applied to the design is required.

In the field of graphic design the work is primarily based on the visual language, the message is shown by the use of colors, shapes and typography. Designers use the visual language to reinforce or even translate a verbal language (spoken and written). However, some areas of work require the designer the ability to relate visual language
to other non-verbal languages, such as sound, gustatory, tactile and olfactory. It is what is called design hybrid systems (Braida, Abad, & Bridge, 2009), systems that use more than one language. However, for this use of different languages be consonant, designers must know how to deal with the equivalence of meanings between signs from different natures. Intersemiotic translation is the name that Jakobson give to this process, which consists "in the interpretation of verbal signs through systems of non-verbal sign" (1969).

So as to analyze and translate those different languages, Lucia Santaella (2005) presents the concept of matrix of language, which consists in the main systems we have developed to communicate to each other. She would say that there are three matrices of language which are possible of classification and translation; they are: verbal, visual and sound. In fact, these are the languages that we have been prioritized over the years. Therefore, these three languages are those we can see being exploited in design projects. In a scenario where digital media is becoming increasingly important, there is no way to escape the need of relating such matrices of language, since the senses of sight and hearing are essential. However, what about other areas that involve other senses, such as smell and taste? In the packagings of foods and fragrant products such senses become relevant, they are influential in the decision of consumption. In this sense, considering that the design "is used to shape perceptions of how objects should be understood" (Sudjic, 2010, p.51), in the case of packaging, the designer should understand the meaning of its content in order to make a more efficient communication.

Therefore, through this paper we intend to discuss packaging design for perfumes and to stimulate the discussion about the possibility of translation of olfactory signs into visual signs. The perfumery segment is growing around the world. In the year of 2010, it was around 400 the amount of perfumes launched worldwide, while a decade before were launched 80 labels (Aschar, 2010). It is also known that the first contact with a perfume is through its packaging. Being the fragrance an aspect of choice at the time of purchase, the designer should better understand the olfactory signs so as to be able to translate them into the visual language. Among the different elements of visual language, we chosen here to deal with colors in their ability to represent the smells. We argue that colors must be in synchrony to the smells. In doing so, we can anticipate, through a visual stimulus, the sensation elicited by the olfactory stimulus. It would be a kind of cross-modal experience (Macpherson, 2011). Some research in the field of neuroscience have led us to conclude that even non-synthetic people have predisposition to cross-modal associations (Demattè et al., 2006; Domino, 2009; Persson, 2011; Ramachandran & Hubbard, 2001). This is, they can also have a multisensory perception.

We know that synesthetic people have the ability to have one sense stimulated from another sense. For example, while visually stimulated by a grapheme some synesthetic people can see specific colors. In these people, "the cross-modality experience occurs involuntarily", it happens what Domino calls as "true synesthesia" (Domino, 2009, p.599). According to Sean Day, president of American Synesthesia Association, there are sixty types of synesthesia. Those related to the senses of smell and vision are not the most representative. The synesthesia smells-colors corresponds only to 0.11% and the synesthesia vision-smells corresponds to 2.47%. These two kind of "true synesthesia" have low representativeness in the society. However, we will also consider in this paper the synesthesia (as argued by some investigators) as a phenomenon which is "basically an associative process, a way of think analogically, and therefore not a special ability, but potentially avaiable to everyone" (Domino, 2009, p.599). Considering the possibility of an associative process, we decided to explore the association between the senses, using the verbal language as mediator. Regarding the
possibility of intersemiotic translation, there is no literature that provides a concrete association between smells and colors. Nevertheless, research in the field of psychology have been performed both in the cosmetics segment (Kim, 2009; Miloctic, 2006) and drinks (Gilbert et al., 1996; Morean, 2011; Morrot et al., 2001) in order to identify such associations. These research prove that colors do influence the perception of an odor.

In order to support the proposal of this paper we will use the semiotics of Charles Sanders Peirce, which considers the construction of meaning as something dynamic and continuous. The meanings attributed to objects and the phenomena are not fixed, but subject to changes over the life course, i.e., they are as changeable as the society itself. It is an idea that comes from meeting with ephemerality and liquidity that characterize the present times (Bauman, 2008). We will use the concepts of Peirce's semiotics by the reading of Lucia Santaella (2005), Winfried Nöth (2008) and Julio and Plaza (1987). We will also term the concepts of matrix of language presented by Santaella (2005), as well as intersemiotic translation concepts introduced by Roman Jakobson (1996) and developed by Plaza (1987). We will analyze the perfume as a sign, detailing it into the three phenomenological categories proposed by Peirce (firstness, secondness and thirdness). In these categories we will identify the role of color in the attribution of meaning to the perfume. Finally, we will discourse about the intersemiotic translation as a medium to establish association between smells and colors.

The perfume as a sign

According to Peirce, sign is “something which stands to somebody for something in some respect or capacity” (“Peirce, 1931, 2.228” as cited in ECO, 1990). In this case, we understand that the perfume is a sign which attempts to represent an idea, a concept of a scent. We must say that when referring to a perfume in this paper we meant to the fragrant liquid inside a packaging. However, its origin comes from the fragrant smoke of incense burned in rituals of ancient times in a way of communicating with the gods (Osmoz, 2013). The word perfume comes from the Latin per fumum (through the smoke). Despite the fact of the perfume in its origin being related to religiosity, today the functions of a perfume has stretched to the purpose of cleaning, hygiene and well-being. In other words, their meanings were also expanded. We can even say that given its ability to evoke sensations perfume is also used as a sign in order to communicate something about the personality of who uses it.

The sign perfume analyzed from the phenomenological categories of Peirce can be divided into a (first)sign or representamen (firstness), an object (secondness) and an interpretant (thirdness), according to the scheme shown in Chart 1. According to Peirce, the representamen, "is all that under a certain aspect or measure, is for someone rather than something. It addresses somebody, that is, creates in the mind of that person, an equivalent sign, or perhaps a more developed sign" ("CP, 2228" as cited in Nöth, 2008, p. 65). The object is how this sign materializes and relates to the world. After all, "the sign does not occur in a vacuum. It is rooted in a vast world relations with other signs, with everything very widely call reality" (Santaella, 2005, p.45). Finally, the interpretant is the effect that such object causes in the mind of one who interprets it. That is, the perception that the user will have when smell the perfumes.
Chart 1. The three categories of a sign.

The representamen would be the perfume in its first quality, free of judgment of value. Based on this thought we propose that this level of the sign corresponds to the perfume itself, the smell. In other words, it would be the combination of odors from natural and synthetic materials in their capability to evoke sensations. The object of the sign would be the smell under the marketplace standards. Secondness is the category of laws and conventions. In this sense, we could say that the object is how this perfume is presented to the user. A perfume can vary according to the base (solid or liquid), the concentration (parfum, eau de parfum, cologne, etc.) and to the packaging that contains it. Finally the interpretant (or rather the interpretants) would be the meanings and values attributed to the perfume. This process of semiosis that occurs in the thirdness is unlimited since the perception of a perfume will be subject to different environmental influences. Perfume is a volatile product which reacts with the environment, climatic variations (warm climates, cold, wet and dry) and different skin types of different users (dry, oily and mixed). In addition, the different consumers intentions when using a perfume will contribute to the definition of some conventions about the certain smells. It is common for companies to define the concept of a perfume and assign it some attributes, such as joviality, sensuality and femininity.

**The smell: representamen of the perfume**

Each one of the categories proposed by Peirce can be classified in three other subcategories. In other words, the representamen, the object and the interpretant will also have the three levels: firstness, secondness and thirdness. In the case of representamen even being in the firstness of the sign, we can find three subcategories (Chart 2). They are: qualisign (firstness), sinsign (secondness) and legisign (thirdness).

Chart 2. The three subcategories of the representamen.
The smell, or the perfume itself, is a mixture of odors from raw vegetables, such as flowers, fruits, woods, etc., and raw materials of animal origin, extracted from secretions and odors from animals like deer musk (musk), the civet-cat (Civette), the castoreum and the Sperm whale (amber gris). We could classify these raw materials in their natural state as qualsigns. Afterall, they present possibilities of uses and do not have the interference of the perfumery industry yet.

However, the perfume, in the way we know and consume, is the result of a process with human interference in different ways. The raw material is converted into extracts which can be obtained and used differently. In this case, we have the smell in its sinsign aspect, where it acquires a singularity according to the decisions taken on a given raw material. What we call the smell of perfume is obtained by extraction process, which may vary according to the type of raw material and company resources. Furthermore, nowadays the industries have been reproducing in the laboratory odors found in nature. Currently, there are about 1,000 natural extracts and synthetic 3,000 (Aschar, 2001, p. 61). Finally, the smell identified in a perfume is a combination of extracts which may have different structures (Table 1), concentration and intensities (Table 2). The perfumer (nose) will be the person in charge of organizing the smells so as to make unique perfumes.

<table>
<thead>
<tr>
<th>Olfactory Pyramid</th>
<th>Classification</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Top notes" /></td>
<td><strong>Top notes</strong></td>
<td>Citrus, green, aldehyde, fruity, ozonic and minty.</td>
</tr>
<tr>
<td><img src="image" alt="Middle notes" /></td>
<td><strong>Middle notes</strong></td>
<td>Floral, fruity, spices and aromatic leaves.</td>
</tr>
<tr>
<td><img src="image" alt="Bottom notes" /></td>
<td><strong>Bottom notes</strong></td>
<td>Woody, musk, powdery, oriental, sweet, amber, animal, leather.</td>
</tr>
</tbody>
</table>

Table 1. Structure of a perfume. Source: Silva, 2012, p. 27.
<table>
<thead>
<tr>
<th>Classification of the perfume</th>
<th>Percentage of extract used in the perfume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parfum</td>
<td>15% - 35%</td>
</tr>
<tr>
<td>Eau de Parfum or Parfum de Toilette</td>
<td>10% - 18%</td>
</tr>
<tr>
<td>Eau de Toilette</td>
<td>5% - 10%</td>
</tr>
<tr>
<td>Eau de Cologne</td>
<td>3% - 5%</td>
</tr>
<tr>
<td>Splash or Deo Cologne</td>
<td>Up to 3%</td>
</tr>
</tbody>
</table>

Table 2. Concentration and intensity of a perfume. Source: Ashcar, 2008, p.10.

Besides the above ratings, the perfumery industry has created the olfactory family nomenclature so as to arrange such quantity of extracts and possibilities of smells. These terms have also to do with the sinsign level. The olfactory families will vary according to the company. In the Osmoz digital magazine, edited by the company Firmenich, we can find a classification commonly used by the companies. The main olfactory groups are: citrus, floral, aromatic, woody, oriental and chypre (Osmoz, 2014). They can be subdivided into subfamilies such as floriental, which is a combination of the floral and oriental families. We can also have combinations such as woody floral, chypre floral, among others.

The third subcategory of the representamen, the legisign, could be addressed to the attempt to verbalize the sensations evoked by smell. We say attempt because identifying and classifying odors is not a very simple task. The olfactory perception is something that varies from individual to individual. Furthermore, it is known that humans have difficulty in constructing images of odors and verbalize them (Wolfe et al. 2012, p.416). Even among perfumers we can have divergence of perceptions. The perfumery industry, though, has invested in building a vocabulary to facilitate identification and discrimination of odors (Zarzo and Stanton, 2009; Donna, 2009). The employment of qualities and attributes to describe each one of the olfactory families is already a market practice adopted by almost all fragrance companies. In the Table 3 we present the descriptions of some of them.

<table>
<thead>
<tr>
<th>Olfactory Families</th>
<th>Definitions/Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oriental (Men)</td>
<td>Refreshed by aromatic or citrus facets, oriental compositions draw their richness and sophistication from precious substances such as amber, resin, tobacco, spices, exotic woods and animal notes.</td>
</tr>
<tr>
<td>Oriental (Women)</td>
<td>Orientals -- also known as 'amber' fragrances - stand out because of their unique blend of warmth and sensuality. They draw their richness from heady substances like musk, vanilla and precious woods, often associated with exotic floral and spicy scents.</td>
</tr>
<tr>
<td>Citrus (Men)</td>
<td>This family includes all perfumes mainly composed of citrus notes such as bergamot, lemon, orange, tangerine and grapefruit. These fragrances are characterized by their freshness and lightness. The first Eaux de Cologne belong to this category. The masculine character comes from the frequently strong presence of aromatic and spicy notes.</td>
</tr>
</tbody>
</table>
These perfumes, with their woody middle note, are **warm and opulent** when based on sandalwood or patchouli. Cedar and vetiver make them dryer. These **warm, dry and elegant** masculine accords often contain a dash of citrus or aromatic notes.

| Woody |
|-------|---|


**The packaging and the use of colors: the object of the sign perfume**

Packaging is an artifact inseparable to the perfume. Its function is not just limited to the function of protection and transportation. The packaging of a perfume must communicates the attributes of the fragrance. We argue that it should visually evoke the same sensations promoted by the smells. Packagings have the potential of assigning value to a perfume, to distinguish it from the others, to make it unique. Therefore we can classify them as objects of the sign. In other words, classify them in the second phenomenological category established by Peirce. Packagings belong to the category of conventions.

In a project of packaging the main elements used to communicate messages are the colors, shapes and textures. We have observed, however, that the colors has been the most used element to create differentiation among the perfumes. Whether due to the high cost that one has to produce a packaging with a unique format. Whether due to the need to maintain the unity of perfumes under the same brand family. In any case, what is observed is the recurrent use of packagings with the same shape but in different colors. Some of the major perfumery companies in Brazil uses this feature. We can observe these uses in the line *Humor* from *Natura* (Figure 1) and in line *Floratta* from *O Boticário* (Figure 2).

![Fig 1. Three different perfumes from Natura Humor Collection, 20/10/2013. Photograph by Natura.](image-url)
Given the importance of the colors in the definition of a perfume, we will analyze in this paper the packaging regarding the use of them. We will take the colors as the object of the perfume. We can define the color as a phenomenon. It is a physical, chemical and psychological phenomenon that depends on a source of light, a surface in which this light can focus and, finally, a person who can sense it by the vision. Such as in representamen, in the level of object we can also find three subcategories. The firstness through the icon, the secondness through the index and the thirdness through the symbol (Chart 3).

![Chart 3](chart3.png)

Chart 3. The three subcategories of the object.

The sunlight, with its potential to generate the color could be classified in the firstness category. The ability of the sunlight to generate the sensation and perception of the colors (physical phenomenon) was discovered by Isaac Newton in the seventeenth century (Silveira, 2011). When it focus on an object the sunlight can be reflected in whole or in part. It depends on the chemical composition of the object. If reflected completely, we can see the white color, and if is partly reflected, we can see a color resulted by the combination of reflected spectrum. Once reflected on a surface, felt and perceived by someone, we enter at the other levels of the object, the secondness and the thirdness.

We can attribute to the secondness the reaction of the sunlight with a given surface (physical-chemical phenomenon). In this category, aspects of physical and chemical composition of the object will influence the outcome of the color. Results may vary in hues (colors) and in its nuances (clear, dark, saturated and unsaturated). Regarding the color applied to the packaging, the choice of substrates (glass, plastic, paper), the type of printing (offset, silkscreen, lithography), and therefore the use of inks (translucent viscous, opaque, etc.) will affect the outcome of the color. It can also be
affected by the varnishes applied over it (dull, shiny, holographic). Soon the different possibilities of obtaining color from the reaction of light under different substrates will influence the sensation and perception of the receiver.

Although there are surfaces in which the light can focus and reveal a color, the phenomenon will be not completed without the presence of man and his sense of vision. Captured through the eyes, the stimulus caused by the reflected light is processed by the organism and decoded into visual information. Human vision, which scholars have attributed the term trichromatic vision (able to identify wavelengths near the red, green and blue) detects in the first moment if the color in question is green, yellow, pink, red, etc.. At this level of detection we only have the sensation of the color, which we assign to the category of secondness. From the moment that information is interpreted by the brain (perception) is that we enter at a level of thirdness, where there is an attempt to assign meaning to the object of the sign.

After long years of building a theory for the colors (Silveira, 2011), we can now use them as a visual language. There is a nomenclature for this phenomenon, we can distinguish it in hue, saturation and brightness (HSB), we can classify it into warm and cold colors, analogous and complementary colors. We also have different systems available on the marketplace to deal with color: RGB, CMYK, the Munsell scale, pantone, just to name a few. All of this repertoire brings to the designers a series of possibilities to design a packaging for a perfume. We know that certain colors are more vibrant than others, and some of them when combined produce contrasting harmonies. Anyway, this level of potential uses of the colors we identify as firstness, the colors in its iconic aspect. Since the colors are arranged and applied to the packaging, we have them on its secondness, in its indicial aspect. These colors will be detected and perceived by the consumer, that based on his experience, will interpret such colors in a very particular way. In this third level, the color takes a symbol aspect. Each color will have one or more symbols, after all the interpreters of the object are infinite. Each person will take advantage of information of his/her culture to assign meanings to it. It is known that the same color can have different meanings in different cultures. Nevertheless, there is an attempt to assign meanings to colors (Goethe, 2013; Kandinsky, 2000; Farina, 1986). As the smells, colors are also related to adjectives and qualities.

In an attempt to identify a possible association between colors and symbolic qualities a survey was conducted in 2013 with 65 students. It was held in the subject "Colors in design", in the first year of design undergraduate course at Infnet Institute (Rio de Janeiro/Brazil). We obtained some results that indicate recurrence in assigning certain colors to certain feelings and qualities. For each word presented to the student, he/she should indicate up to three colors that in his/her opinion the best represented it. For some words we did not get a strong consensus (dynamism, daring, life), but for others (joy, strength, anger, sensuality, wisdom and comfort), we can observe the trend of a symbolic construction, ultimate goal of the sign (Table 4).

<table>
<thead>
<tr>
<th>Color</th>
<th>Joy</th>
<th>Strength</th>
<th>Anger</th>
<th>Sensuality</th>
<th>Wisdom</th>
<th>Comfort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>40%</td>
<td>3%</td>
<td>0%</td>
<td>3%</td>
<td>11%</td>
<td>7%</td>
</tr>
<tr>
<td>Blue</td>
<td>12%</td>
<td>10%</td>
<td>0%</td>
<td>1%</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Red</td>
<td>10%</td>
<td>29%</td>
<td>40%</td>
<td>38%</td>
<td>2%</td>
<td>0%</td>
</tr>
<tr>
<td>Green</td>
<td>7%</td>
<td>3%</td>
<td>1%</td>
<td>0%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>Purple</td>
<td>1%</td>
<td>5%</td>
<td>15%</td>
<td>17%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Orange</td>
<td>24%</td>
<td>5%</td>
<td>3%</td>
<td>0%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Pink</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>17%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>
Table 4. Results of the survey applied to the students of "Color in Design" subject.

<table>
<thead>
<tr>
<th>Color</th>
<th>3%</th>
<th>3%</th>
<th>1%</th>
<th>8%</th>
<th>25%</th>
<th>21%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>0%</td>
<td>3%</td>
<td>6%</td>
<td>0%</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Grey</td>
<td>0%</td>
<td>11%</td>
<td>10%</td>
<td>1%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Brown</td>
<td>0%</td>
<td>28%</td>
<td>25%</td>
<td>15%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>Others (non specified)</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
</tr>
</tbody>
</table>

An intersemiotic translation proposal

Language and thought are inseparable, according to Santaella (2005). Our relationship with the world is an eternal cognitive process. There is no way to communicate without thinking and interpret signs. According to Peirce, "the interpretation itself is experience. ("CP 7.527" as cited in IBRI, 1992, p.4). Santaella adds that "Peirce postulated that all thinking occurs in signs. There is no thought without signs" (Santaella, 2005, p.55). The communication, in turn, gives through our senses. They are the "devices for interaction with the external world which are designed to receive information necessary to survival" (Santaella, 2005, p.73). Julio Plaza will say that there are not "departmentalized senses, but synesthesias as interrelationship of all the senses" (1987, p.46). The author hold that is the interrelationship of the senses that will guarantee us the understanding of the reality. He says that "the very thought is intersemiotic and this quality is realized in the languages and their hybridization." (Plaza, 1987, p .30).

On the interrelationship between the senses, Santaella proposes the use of matrices of language. The author will say, however, that the only possible matrices will be the visual, verbal and sound. About the sense we propose to translate, the smell, the author will say that this is not a language. The smell and taste "only operate as quasi-languages, restricted to the level of qualsign and sinsign, without reaching the level of legisign, ie, of the abstract laws that govern individuals" (Santaella, 2005, p.75). She adds that different from visual and sound, there is not a grammar of the smell. We would only have the ability to recall the feeling caused by these senses. Santaella says that despite the hybridization of the senses there is a hierarchy that has to do with its complexity as a language. According to the author, we would have the vision as more complex and influential in our communication followed by hearing, touch, smell and, finally, taste. Despite she does not define a matrix for olfactory language we still believe it is possible such equivalence with the visual language.

Even though the smell is not structured in a language such as vision and hearing, it does not mean that is impossible to do it. The lack of words to define a smell maybe is due to the fact that we have deprecated the use of this sense in relation to the others. Neuroscientists say:

"It is theorized that increased olfactory capacity enable our 200-million-year-old predecessors to hunt at night, giving them the evolutionary edge they needed to develop further and eventually evolve our current brains, which, ironically along the way, traded off olfactory advantages for vision" (Wolfe et al., 2012, p. 407).

Indeed the smell has some quirks that make difficult their systematization. There is "no fixed code for odor perception; rather, our personal experience with an odor determines how it will be processed by the olfactory system, even at very early levels" ("Wilson et al., 2004" as cited in Wolfe et al., 2012, p. 405). However, recent studies suggest that the ability to identify odors is something that can be trained. "The ability to detect an
odorant also can be manipulated by experience" (Wolfe et al. 2012, p. 414). Moreover, if we consider that thought is the basis of language, when perceiving the smells we are coming to build a code. Plaza will say that "perceiving is already selecting and categorizing the real, extracting information of interest in a given time for any purpose" (1987, p.46).

From the analysis of the smells and the colors we found that in both process of semiosis does exist an attempt to verbalize perceptions. The feelings captured by the smells and the colors are usually translated into adjectives and attributes. We can say that these both non-verbal language can be translated into the *matrix of verbal language* (Santaella, 2005). We believe, thus, that one of the ways to establish associations between smells and colors is to identify which visual and olfactory stimulus produce the same meaning in the mind of people. We can do this by identifying the smells and the colors associated to the same attribute (Chart 8). For example, with regard to the attribute of sensuality, it is mentioned to express the sensations which are elicited by the oriental fragrance and by the red color (Chart 9). Therefore, it can be a positive combination to be used in a perfume. Actually, we can find this combination in the perfume named as **Cerruti 1881** (Figure 3). Obviously, it is not the only possible combination, oriental fragrances may elicit other feelings that can be associated to other colors. However, the purpose of this paper is to bring to discussion the importance of the synergy among the stimuli. To sum up, we propose that once crossing these verbal metaphors associated to the different senses (visual and olfactory), we can establish a positive relationship between them. Consequently empower the communication.

![Chart 4. Proposal of a intersemiotic translation.](image-url)
**Chart 5. Example of a intersemiotic translation.**

**Fig 3.** Example of use of the color red associated to the fragrance. Source: Osmoz, 2014.

**Conclusion**

Since we live in an environment of complexity and interdisciplinary, there is no way think the development of the field of design without accepting the influence of different research areas. Although it is still incipient (specially in Brazil), it is growing the number of research publications in the field of sensory design. Furthermore, we can identify in some universities in the world in the field of research of (multi)sensory design. The *University of Oxford* in England, has group of research in experimental psychology (Crossmodal Research Lab.) led by Professor Charles Spence. This group, among other things, investigates synesthetic correspondences in packaging designs. The British *Central Saint Martins College of Art and Design* investigate the multisensory design in the field of textile design and fashion. Dr Jenny Tillotson leads the research in this field and have been presented the topic at conferences since 2005. The North
American institution Parsons The New School for Design has a core of interdisciplinary research. In 2010, they organized the symposium Headspace: On the Scent Design. Therefore, we believe that the proposal of a intersemiotic translation is both possible and urgent. We consider that this proposal will contribute to innovation in the field of packaging. An innovation in terms of visual language. After all, we assume that a visual language in synchrony with the smell will enhance the reception of the message you want to convey. In this way, not only the purpose of communication is achieved but the experience of consumption is improved.

References


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