

Deciphering the message in the perfume bottle

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Humans hardly ever perceive odors in a neutral and objective manner as their perception comes loaded with attractive or repellent impressions emotionally dominating the brain's connection with the outside world. Although the sense of smell is rather undervalued and the natural body odor is stigmatized in the 'olfactory silence' of the modern de-odorized era, the still-growing multi-billion dollar perfume industry exploits the indescribability of odor, cultivating the myth of the magic allure of perfume. Considering the fact that in modern Western societies the majority of perfumes are created and commercialized for female consumers in search of a perfumed gender specific identity, the article discusses two emergent themes from a social semiotic perspective: the feminine perfume olfactory system and the consumers' preference patterns of perfume according to the cross sensory perception management of perfume packaging in the form of the perfume bottle.

KEYWORDS olfaction, perfume, cross-sensory perception, multimodality

"When people think pink, they think Arden."

Elizabeth Arden

In 'Sociology of the senses', Simmel (1997:119) observes the following about the lower sense of smell: 'By smelling something, we draw this impression or this radiating object more deeply into ourselves, into the centre of our being; [...] Smelling a person's body odour is the most intimate perception of them;' concluding that 'one can characterize the sense of smell as the dissociating sense'. Furthermore, as Classen et al (1994:2) point out 'The perception of smell, thus, consists not only of the sensation of the odours themselves, but of the experiences associated with them.'

The Oxford English Dictionary defines the word *perfume* in the following ways: 1. Fragrant liquid typically made from essential oils extracted from flowers and spices, used to give a pleasant smell to one's body, 2. Pleasant smell. To explain more clearly the denotation related to the

word *perfume* it is necessary to look up the words *smell*, *odor*, *scent* and *fragrance*; *smell*: 1. The faculty or power of perceiving odours or scents by means of the organs in the nose, 2. A quality in something that is perceived by the faculty of smell; an odour or scent, 3. An unpleasant odour; *odor*: 1. A distinctive smell, especially an unpleasant one, 2. A lingering quality or impression attaching to something; *scent*: 1. A distinctive smell, especially one that is pleasant, 2. Pleasant-smelling liquid worn on the skin; *perfume*, 3. A trail indicated by the characteristic smell of an animal and perceptible to hounds or other animals; *fragrance*: 1. A pleasant, sweet smell.

A close examination reveals that at the level of denotation, *smell* is the primary element of a semantic chain that connects all terms. On a second level, however, it acquires a negative connotation closely related to the term *odor*, on account of its relation to our bodily emissions. On the other hand, *scent* stands on the positive end, as a synonym to *perfume* and *fragrance*, and receives a totally positive denotation, enhancing the positive side of smell. The central bipolarity here lies between *odor* and *scent*, presented as distinctive, personal or from a specific source, with *odor* negatively attached to a subject whereas *scent* is positively perceived by another person. In this way, *odor* becomes a personal quality, the natural olfactory sign of an individual body. Meanwhile, *scent* resembles a trail to be followed by the receiver when a liquid is applied to one's skin. At the effect level, the bipolarity of olfactory conception is produced by *pleasant* vs. *unpleasant*, where pleasant is related to essential oils, flowers and spices and unpleasant to body odor.

In linguistic terms, *perfume* as a word cannot be connected directly with the sense of smell as they belong to a totally different set of the human sensorial system. In other words, smell belongs to the non-verbal and non-visual realm of stimuli related perceptions, it cannot be expressed neither orally nor visually as it's a chemical based system of connecting with the surrounding reality of the human nature.

The olfactory communication system of humans is based on the biological structure of the human body, more specifically the emission and reception of natural substances. When two human individuals, at the positions of the addresser and the addressee respectively, are engaged in an olfactory interaction, an olfactory message is sent and received, that of odour. The emission is a pure physiological reaction, largely uncontrolled by the sender, and thus culturally insignificant for lack of intentionality. At the level of the receiver, however, the message reveals an olfactory identity (individual and/or social), as well as psychological aspects of the sender, for example fear, fatigue or sexual availability. For Classen et al. (1994: 182):

Concern with body odour and with methods of suppressing it has existed in the West since antiquity. What is new in our era — the era of consumer capitalism — is the availability of ready-made, mass-produced products to deal with body odours and the advertising used to promote them.

The dominant concept related to olfactory communication in the western modern world is that of deodorance, the complete suppression of the natural emissions of the human body related to olfactory interaction and communication. Foul smells and stench are considered unpleasant and are related to manual labour and the lower classes. Thus, the olfactory image of the ideal society becomes totally deodorized, civilized and clean, free from the animalistic bodily connections of the past. As Classen et al. (1994: 176) states, the 'olfactory revolution' of the late 19th century marked the beginning of the era of deodorance while, at the same time, founded a perfume industry devoted to satisfying consumer needs for fragrance. Fragrance plays the role of a superficial and pleasurable mask of natural body odours. In this way it becomes the medium that creates a person's individual olfactory profile because the sensorial experience of smell covers a vast range of information related to the person in the exchange of olfactory stimuli. Consequently, the need for a socially controlled and properly designed olfactory profile led to the rise of the perfumers and the perfume industry. Thus, fragrance replaces odour as a 'pheromonal' mimesis in terms of sexual olfactory profiles to become the material from which a possible olfactory profile can be detected by the receiver as a message containing information about the sender, and vice versa. In this way, the choice of a certain perfume and its use for olfactory interaction aiming to transmit a desired olfactory profile constitutes an olfactory representation of the identity of the sender, the fragrant self.

The sociology of feminine perfume

Smell constitutes a social and historical phenomenon, not only a simple biological and physiological one; but odours, unlike colors, remain indescribable. Odours are employed by societies and enriched with cultural values in the interaction of the individual with the world. Consequently, smell can be identified also as a cultural phenomenon as aromatic substances serve a variety of purposes across cultures since the dawn of civilizations all around the world. Although smell has been devalued as a lower sense in modernity, in the pre-modern cultures odors were identified by Classen et al. (1994: 3) as 'intrinsic "essences", revelatory of the inner truth'. Their ability to escape and blend into olfactory wholes made smell threaten the impersonal paradigm of modernity combining radical interiority with boundary crossing and emotional involvement. However, during the 'olfactory revolution' of the nineteenth century, a term introduced by Corbin (1986), there has been a transposition of fragrance from religion and medicine to the realm of sentiment and sensuality. The sense of smell, as a cultural phenomenon, seems to create ethnic, class and gender boundaries, as olfactory codes underlie conscious thought. The importance of odor and olfactory codes can be observed in fragrance engineering and the commercialization of smell in the modern era.

This article discusses fragrance from a gender perspective and focuses on the multimo-

dality of perfume for women, which constitute the vast majority of perfume consumers. A socio-semiotic analysis of the gender-specific perfume sign should, then, be constituted via cultural research to document historically and culturally established signification related to feminine perfume; in other words the evolution of female olfactory practices in western societies.

For Classen et al. (1994: 92) 'The olfactory condition of the modern West is not a definitive model for the role of smell among all peoples at all times, but simply the result of certain very particular historical and cultural circumstances, a result as subject to continuing shifts and transmutations as odour itself'. Until the end of the eighteenth century, the same perfumes were used by men and women indistinctly. By the late nineteenth century, however, scents started to mark gender differences, with sweet floral blends being qualified as exclusively feminine, and sharper scents as exclusively masculine. According to Classen et al. (1994: 84)

Sweet, floral fragrances were considered feminine by nature because, according to the gender standards of the day, 'sweetness' and 'floweriness' were quintessentially feminine characteristics reflected upon stereotyped feminine olfactory profiles based on these projected connotations.

Perfume has been considered a woman's product in the twentieth century; therefore, the majority of perfumes are created for and target a female public. Classen et al. (1994: 189-190) established a chronology of the dominant elements of perfume advertising in the last half of the twentieth century that indicates an evolution of the types of olfactory profiles introduced with feminine traits of the perfume product. In decoding the perfume sign some important examples are analyzed. The series of perfumes depicted here reflect, partially, the evolution and the defining parameters of perfume creation and marketing, as well as constant semiotic elements that target to the feminine perfume consumer public.

Based on this gender classification scheme, the perfume industry created and promoted perfumes specifically for women to match the established olfactory standards, and others for the masculine types, respectively. Following the revolution of chemistry and the innovations of the rising perfume industry, the production of an increasingly broad range of scents in the 1890s marked the end of the mimesis of natural scents and the beginning of abstract compositions involving the blending of various fragrant ingredients. As Reinartz (2014:74) informs about French perfumer Paul Poiret (1879–1943): 'Poiret created perfumes in collaboration with the perfumer-glassmaker Maurice Schaller and the celebrated perfumer Henri Alméras to resemble the free and fluid lines of his fashion designs. Since then perfume design becomes central in the perfume industry strategies to establish aesthetic criteria related to gender-specific olfactory profiles for female users'. According to Kress (2010: 28)

Design rests on the possibility of choice - 'this could be chosen rather than that'.

That permits the description of style as the effect of a series of choices made in the design of the message.[...] Styles are subjected to social evaluations and these lead to a social ranking expressed as aesthetic judgment. Hence, socially, *aesthetics* can be seen as the politics of style.

Recent survey responses in a published research article (Grahl et al 2012: 551) verified also the importance of bottle design. The results demonstrated that although there wasn't significant difference in different residential areas and types of profession, the difference in preference between male and female consumers was important, a fact also confirmed by other research (Wang 2012: 2-3). Perfume packaging for Peterson McIntyre (2013: 292) sends a message: 'With words and pictures which convey luxury and desire they also produce glamorous and sensual meanings.' Shapes, colors, and words classify spicy and musky scents as masculine, sweet and flowery as feminine or fresh and citrusy as unisex. The visual and textual components of perfume conceptualize perceptions of smell related to semiotic gender differences of objects.

For Neuliep (2015: 286), the process of olfactory social interaction between individuals can be qualified as nonverbal communication and can provide information through smell about a person's ethnicity, gender, social class, and status. Cultures establish norms for acceptable and unacceptable scents linked to the human body. Thus, olfactory profiles transmit specific information about the wearer of the perfume, which corresponds to a certain social or/and gender type. Consequently, perfume as a whole comprises elements which constitute a representation of the self from its olfactory perception in conceptual terms of social classification.

For Kress (2010: 52) 'representation constantly remakes the resources for making meanings and, in the remade resources, shapes those who remake them. That is the effect of representation in the constant self making of the identity.' To acquire a fragrant olfactory profile the individual chooses from a vast range of available products. In this way, they enter the perfume world network as a consumer seeking for a perfume product to satisfy the need for a desired fragrant profile. Combined procedures are required for a perfume to reach the consumer; the perfume maker designs the perfume according to detected target groups of potential consumers, the perfume company manufactures and brands the product while the advertising company promotes and distributes it to perfume shops for the consumer public. The desirable olfactory profile should be identified via the material form of the perfume product, as an olfactory representation, thus it could be analyzed in semantic codes by examining the discourse of perfume, as perfume makers or perfume designers and perfume consumers, engage the material elements of fragrance production and perfume packaging as resources for a representation of an olfactory message.

The feminine perfume system

The term perfume refers not only to a collection of products, but to a system of communication, images, uses, social situations, and social behavior. If a woman buys a perfume item, she consumes it by wearing it, but at the same time she transforms a simple object of fashion into an olfactory interaction. This item constitutes the functional unit of a system of communication, transmits a situation, constitutes information, signifies, and becomes a real sign. All smells serve as signs among the members of a given society, but furthermore when needs for olfactory control are satisfied by production and consumption, perfume acquires the characteristics of an institution, as for Barthes (2008: 29) 'its function can no longer be dissociated from the sign of that function'.

Thus, if perfume is a system, its constituent units would not coincide with the products in current use in the economy, but those elements that produce a difference in signification. The perfume semantic units detected could be compared to each other to reveal that which signifies and thus, could be used to reconstruct systems, syntaxes (olfactory profiles), and styles (types) organized in codes. The perfume sign brings together different units (such as effect and substance), forming a composite unit with a single signification.

The significations connected to perfume and to the semiotic mechanisms related to this function could be investigated with the use of socio-semiotic theory and methodology. Gottdiener and Lagopoulos (1986: 8) indicate that: 'Conceptual stimuli in the environment play a more fundamental role as physical forms are assigned certain significations.' In this case the material objects, or physical objects, are perfumes which act as stimuli as every perfume is transformed, at the level of denotation, into a signified of its function. It also signifies on a second level, namely that of connotation.

The socio-semiotic approach is a materialist inquiry into the role of ideology related to olfaction in everyday life, that seeks to account for the articulation between semiotic and non-semiotic social processes in the ideological production and conception of fragrance for women. Thus, a socio-semiotic analysis at the level of signification of perfumes, involves identifying the role of connotative and denotative codes of mediation of perfume components. It consists of a series of combined aspects of study related to the decomposition of complex perfume signs according to the modes of attributing meaning, where *modes*, according to Kress (2010: 11), 'are the result of a social and historical shaping of materials chosen by a society for representation'.

Observational data should be considered for the description of olfactory material invested with signification that serve as gender specific perfume. Specific fragrance elements such as appearance and qualities therefore serve as vehicles of signification. To establish the codes the research used bibliography from various disciplines: sociology, psychology, cultural, consumer and medical studies in order to examine the discourse of perfume makers and consumers as

appearing in studies and surveys. At this point this task cannot be considered exhaustive as further research should be conducted as more aspects of the subject need to be brought to light.

It is safe to assume that the conception of perfume for the consumer is filtered through and finally shaped by a cultural grid which is composed of a set of semantic components that introduce a specific manner of approaching and apprehending fragrance for feminine perfume consumers.

In a scheme of the psychological effects of odours, *The Odor Effects Diagram* (Jellinek 1997: 114-125), two basic polarities are observed by Zarzo (2013: 464):

1. Erogenous (*animal, musk, vanilla and powdery*) vs. anti-erogenous (refreshing) *citrus, green, watery, and aldehydic*,
2. Narcotic (*floral, balsamic*) vs. stimulating (*herbaceous, mossy*)

A closer observation of *The Odor Effects Diagram* reveals the underlying olfactory perception of classified smells:

1. The erogenous effect is produced by alkaline components and the anti-erogenous effect is produced by acid components. Thus, at a chemical level, the basic bipolarity is *alkaline vs. acid*, opposed chemical elements that can't be combined directly.
2. The narcotic effect is produced by sweet components and the stimulating effect is produced by bitter components. Thus, it establishes the bipolarity between sweet vs. *bitter*, opposed semantic elements—which can't be combined directly—metaphorically related to another sense, that of taste. Sweet here is a semantic descriptor for floral or balsamic ingredients and bitter is a semantic descriptor of herbaceous or mossy ingredients.
3. The calming effect is produced by acid to sweet components
 - a) Acid to bitter: resinous, camphorae, minty, spicy
 - b) Acid to sweet: green, watery, fruity
4. The sultry effect is produced by alkaline to sweet components
 - a) Alkaline to sweet: urinous, fecal, honey-like
 - b) Alkaline to bitter: cheesy, fatty, rancid, dusty, burnt

The classification could be considered as empirical, observed through the variation of terms. Origins, taste effect, texture composition, chemical and natural elements are combined together in a scheme of codes that involves all human experience related to perfume fabrication. Consequently, the cross-sensorial and cultural nature of perfume is based on the cultural construction of perfume making practices that shape the olfactory experience by manipulating the stimulating components of the chemical composition.

For Zarzo & Stanton (2009: 234-236), the majority of feminine perfumes belong to the *floral*

category because they are considered to constitute an especially feminine olfactory profile. In their study *floral* was the more characteristic descriptor for feminine fragrance. The same study indicated that *erogenic*[*erogenous*], *sensual*[*calming*] and *warm*[*sultry*] are also regarded as feminine.

Thus, semantic codes are assigned to odour perception qualities of feminine perfume, as shown in Table 1.

Odour character descriptor	Odour Effect	Semantic codes
Alcaline	Erogenous	Sexual
Citrus	Non-erogenous	Sexual
Sweet	Narcotic	Stimulation
Honey-like	Sultry	Impression
Balsamic	Sultry	Impression
Fruity	Calming	Intensity
Green	Calming	Intensity
Watery	Calming	Intensity
Woody	Fresh	Intensity

Table 1. Relation between odour descriptors, odour effects and semantic codes

As a first approach, the organization of semantic elements related to odour characteristics for the feminine perfume user (underlined options) to acquire a desirable feminine olfactory profile could be summarized in this scheme of codes:

The feminine perfume code system

masculine vs. <u>feminine</u>	gender code
<i>non floral</i> vs. <u>floral</u>	feminine odour code
bitter vs. <u>sweet</u>	stimulation code
stimulating vs. <u>narcotic</u>	
not desirable vs. <u>desirable</u>	sexual code
non erogenous vs <u>erogenous</u>	
low vs. <u>high</u>	impression code
cool vs <u>sensual</u>	
high vs. <u>low</u>	intensity code
exalting vs. <u>calming</u>	

The *feminine odour code* is isomorphic to the overarching gender code. All codes are *sub-codes* of the *odour code*. The *feminine odour code* seems to be the core code in the structure of this code system. All remaining sub-codes (stimulation, sexual, impression, intensity) organize the gender-specific conception of perfume compositions in order to connote the feminine odour effect described as *floral*.

For Eco (1997: 352) the composition of the industrial made perfume entails a semiotic problem between the materials used and the olfactory effect: 'The real crux of the misunderstanding yet again lies in the immediate passage from the primary iconism of perception (that is, from the evidence that relations of likeness exist perceptually) to an established theory of similarity, in other words, of the creation of the effect of likeness.'

The perfume has an ability that yet remains to be described: evaporation of the liquid components, an aspect that constitutes its major advantage. In the process of becoming aerial the contained liquid liberates its connotation potential, vanishes in the air, penetrates the body by respiration and forms a 'magical personal cloud', an indescribable power of attraction, has an inconceivable potential. Perfume is a fragrant liquid substance constituted by a complex composition of odorants with different volatilities that evaporate gradually when applied to the skin. *Substantivity* or *tenacity* is the parameter that measures the lasting property of these types of materials.

An interesting aspect of the perfume art is the use of the musical term *notes* to describe the characteristics of a specific fragrance. The olfactory aspects of a perfume are typically described in musical metaphors because there are few words that specifically describe olfactory experience. Thus, the combination of ingredients in a perfume is called a *composition*, and it has three *notes* that unfold over time. The first note is called the *top note*, or *head note*, and it produces the immediate impression of the perfume. Top notes consist of small, light molecules with high volatility that evaporate quickly. *Middle notes* (also called *heart notes*) emerge just before the top notes have dissipated. Scents from this note class appear anywhere from 2 minutes to 1 hour after the application of perfume. *Base notes* appear while the middle notes are fading. Compounds of this class are often the fixatives used to hold and boost the strength of the lighter top and middle notes. Base notes are large, heavy molecules that evaporate slowly and are usually not perceived until 30 minutes after the application of the perfume. Diagram 1 describes the perfume composition by the substantivity of its components from base (high) to top (low).

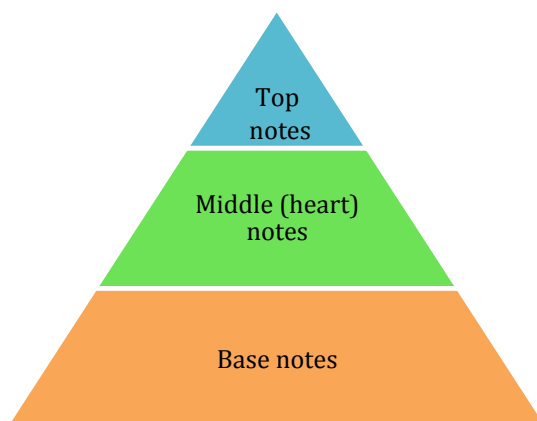


Diagram 1. Perfume notes substantivity scheme

Usually top notes are the 20-40%, middle notes the 40-80% and base notes the 10-25% of the chemical mixture. Thus, quantities and qualities of the chemical materials used determine the final olfactory effect. Zarzo (2013: 464) discusses the manufacturers' classification of perfumes by the effect in time produced when applied to human skin related to this property:

It is well known by perfumers that olfactory notes perceived as fresh tend to evaporate quickly, while the opposite applies to those most dissimilar to *fresh*. Actually, *fresh* and *green* are attributes commonly encountered in the description of top notes (*i.e.*, the ones that are perceived firstly when smelling a fragrance). *Light* refers to scents with high volatility, while *heavy*, *rich* or *tenacious* is applied to materials with high substantivity. Light fragrances are those perceived as non-sweet with a predominant fresh note that is often associated with citrus, greens or aldehydes. Conversely, the least volatile ingredients such as mosses and animal scents dominate in heavy perfumes.

Fragrance compositions are classified normally by the perfumers in fragrance groups. The association between fragrant material, fragrance groups, and their substantivity is presented in Table 2. The codified musical metaphors are organized in a semantic code, the *olfactory* code and they appear in the last column of Table 2.

Fragrant material	Fragrance group	Substantivity	Olfactory code
Orange essential oil, lemon essential oil, mandarin essential oil, grape fruit essential oil, bergamot essential oil	Citrus	Low	High
Decanal, undecanal, 2-methyl undecanal, dodecanal	Aldehydic	Low	High
Galbanum essential oil, cis-3-hexenol and its esters, coriander essential oil	Green	Low	High
Black currant absolute, Isoamyl acetate, Ethyl caproate, Ethyl butyrate	Fruit	Low	High
Phenylethyl alcohol and geraniol, methyl anthranilate and indole, beta ionone, benzyl salicylate and eugenol, anisic aldehyde or heliotropin	Floral	Medium	Middle
Tonka absolute, vanillin, ethylvanillin, ethylmaltol	Vanillic	High	Low
Ambergris, myrrh	Oriental	High	Low
Civet, synthetic musk, castoreum absolute	Animal	High	Low
Cedarwood essential oil, sandalwood essential oil, patchouli essential oil, vetiver essential oil, oakmoss absolute	Wood	High	Low

Table 2. Relation between fragrant materials¹, fragrance groups, substantivity & olfactory code.

Table 2 classifies perfumes regarding the *substantivity* variant of fragrant ingredients related to the perfumers' classification of chemical compositions in fragrant families. It indicates a well elaborated transposition between semiotic systems; as a time dependant chemical variant olfactory stimuli correlates with an also time dependant musical variant. Furthermore, the metaphorical attribution of musicality to fragrant experience constitutes a second effect level that relates the final result of perfumery art to the art of musical composition. In this way, it creates a cross-sensorial olfactory-acoustical experience, while at the same time projects perfume as musical creation and the perfumer as musical composer. Thus, musical melody can be perceived as a connotation of olfactory harmony.

In addition to this system, according to 'The Fragrance Wheel' (Edwards, 2017)² — a classificatory system created by Edwards in 1984 and updated yearly— perfumes are classified by the conceptualization of effects at a metaphorical level and organized in fragrance families by colour. Edwards uses a chromatic palette to visualize the different categories of fragrant compositions. Thus, a *chromatic* code is applied to describe the combination of certain elements of the perfume composition and at the same time establishes a system that can easily be visualized for perfumer or consumer use. The selection of the chromatic components is based on

the codified metaphorical meaning of color. For Marks (1978:98), there is a '[...] widespread, if not universal, perception of blue and green as cool colors, red and yellow as warm colors'. For example, warm colours are used for fragrances classified as *warm* and cold colours for *fresh* scents. Table 3 presents the relation between fragrant materials fragrance families, and colours, organized in the *chromatic code*. The Table includes chemical elements usually involved in feminine perfume compositions.

Fragrant material	Fragrance family	Chromatic code
orange essential oil, lemon essential oil, mandarin essential oil, grape fruit essential oil, bergamot essential oil	Citrus	Yellow
galbanum essential oil, cis-3-hexenol and its esters, coriander essential oil	Green	Light Green
Black currant absolute, isoamyl acetate, ethyl caproate, ethyl butyrate	Fruity	Orange
Methyl anthranilate and indole, beta ionone, anisic aldehyde or heliotropin	Floral	Pink
Phenylethyl alcohol and geraniol		Red
benzyl salicylate and eugenol		Crimson
Tonka absolute, vanillin, ethylvanillin, ethylmaltol, benzoid resinoid	Oriental	Fuchsia
Ambergris, labdanum absolute, myrrh, birch tree, cistus essential oil		Maroon
Civet, synthetic musk, castoreum absolute, birch tree essential oil		—
Cedarwood essential oil, sandalwood essential oil, patchouli essential oil, vetiver essential oil, oakmoss absolute	Woods	Light brown

Table 3. Relation between fragrant materials, fragrance families and chromatic code.

In this *chromatic code*, the chromatic element represents the perfume composition based on the olfactory effect conceptualized in the relation between the olfactory and the visual mode as a link between different semiotic systems. Thus, the combined elements of Tables 1, 2 and 3 describe the relation between fragrant material elements (non semiotic) and *olfactory*, *chromatic* elements (semiotic) for the *feminine odour code* (analyzed in the stimulation, sexual, impression and intensity sub-codes) is presented in Table 4.

Fragrant material	Olfactory code	Chromatic code	Stimulation code	Sexual code	Impression code	Intensity code
orange essential oil, lemon essential oil, mandarin essential oil, grape fruit essential oil, bergamot essential oil	High	Yellow	—	Non-erogenous	—	—
galbanum essential oil, cis-3-hexenol and its esters, coriander essential oil	High	Light green	—	—	—	calming
Black currant absolute, Isoamyl acetate, Ethyl caproate, Ethyl butyrate	High	Orange	—	—	—	calming
Decanal, Undecanal2-methyl, undecanal, dodecanal	High	—	—	—	—	—
Methyl anthranilate and indole, beta ionone, Anisic aldehyde or heliotropin	Middle	Pink	narcotic	—	—	—
Phenylethyl alcohol and geraniol	Middle	Red	narcotic	—	—	—
Benzyl salicylate and eugenol	Middle	Crimson	narcotic	—	—	—
Civet, synthetic musk, castoreum absolute	Base	Fuchsia	—	Erogenous	sensual	—
Ambergris, myrrh, Tonka absolute, vanillin, ethylvanillin, ethylmaltol	Base	Maroon	—	Erogenous	sensual	—
Cedarwood essential oil, sandalwood essential oil, patchouli essential oil, vetiver essential oil, oakmoss absolute	Base	Light brown	—	—	cool	—

Table 4. Relation between fragrant materials and olfactory/chromatic/feminine odour codes

The *feminine odour* code structure of codified olfactory qualities is organized by the *olfactory* code and codified in the *chromatic* code. Possible combinations can be materialized in perfumes classified as feminine with the combined use of these codes. To give a simple example, a perfume with galbanum essential oil, heliotropin and synthetic musk is a complete

composition with *high*, *middle* and *base* elements of the *olfactory* code and has an overall feminine odour profile (floral) qualified as calming, narcotic, erogenous and sensual. As for the *chromatic* code, it could probably be represented by light green or pink. The codes for this specific feminine odour profile are described in Table 5.

Fragrant material	Olfactory code	Chromatic code	Feminine odour code
galbanum essential oil	High	Light Green	calming
heliotropin	Middle	Pink	narcotic
synthetic musk,	Low	—	erogenous/sensual

Table 5. Relation of codes in a feminine odour profile.

The example given in Images 1 and 2 concerns the feminine perfume *Cabotine* by Grès, launched in 1990.



Image 1.
Cabotine perfume
bottle and package



Image 2.
Cabotine advertisement

The perfume bottle of *Cabotine* is transparent and has a rounded shape. It has a flower shaped cap of light green colour matching the *chromatic* code of the olfactory code's *high*, the top note of the perfume. The concept of this perfume —green floral— is based on the *feminine odour* and *olfactory* codes' relation to the *chromatic* code linked to the shape and cap design, a green flower as shown in the advertisement.

The decomposition of the feminine perfume sign system by the examination of the *feminine odour* code into its *olfactory* and *chromatic* semiotic elements reveals that feminine odour profile representation involves different semiotic systems combined into multimodal ensembles. This cross-sensorial effect of the multimodal representation is imprinted on the meaning of the perfume bottle. Thus, the perfume bottle from a mere vessel of the olfactory message becomes itself the message.

The message is the bottle

The development of perfume bottles since ancient times has its own history but it is in the last few hundred years that it is considered as essential to the perfume trade as the scents themselves. In the eighteenth century, with the rise of the modern perfume trade, customers themselves provided the small porcelain bottles to be filled with the scents mixed especially for them. In the late nineteenth century, for marketing purposes, manufacturers made package design central by adding symbolic value to products. Several artists were involved in designing perfume bottles and labels, often drawing their inspiration from the art styles of the day. Surface emblems of real gold and designs by famous artists guaranteed the quality and the luxury status of the fragrance. Jean-Paul Guerlain (Atlas and Mouniot: 1997) in the foreword to *Guerlain, Perfume Bottles since 1828*, states that ‘when most perfumers did not think of bottles as anything but a simple container, my ancestors quickly understood the subtle relationship that linked the bottle and its precious contents’. Thus, the bottle was established as a key element of the perfume, having the role of a medium for the transference of the fragrant-message, for enhancing the olfactory stimuli with visual and tactile elements necessary for the transmission of meaning. For François Coty (Reinarz 2014: 76): ‘Perfume needs to attract the eye as much as the nose’.

Primary packaging helps perfume brands convey the idea behind the product, thus the message behind the fragrance acquires a vital importance in perfumery. Perfume brands attempt to create meaningful, emotional relationships with their public to inspire consumer loyalty based on the memory potential and the limbic system of the consumer. Olfactory styling and perfume design aim to re-arrange the olfactory spectrum replacing natural odours by abstract compositions organized in multimodal ensembles. Women’s perfume marketing, in particular, often demonstrates a sexual relationship between product and consumer, the bottle and a woman, as seduction plays a key role in perfume packaging according to gender-specific ideas related to modern olfactory practices of the feminine public. In perfume packages, as Petersson Mac Intyre (2013: 296-297) observes, what is at work is a

[...] well-used strategy to approach customers as ‘types’, such as ‘the romantic’, ‘the classy-woman’, ‘the seductress’, ‘the sporty woman’ and ‘the sexy, mysterious woman’ or even the ‘unisex woman’ or the ‘masculine woman’, consumers are increasingly asked to cultivate such personality types within themselves and refine them differently on different occasions. ‘Types’ are now presented as personality traits which reside in each one of us and which can be brought out on occasion with the use of a particular fragrance.

The perfume as such is an invisible and aethereal substance that *senso strictu* cannot be

represented but metaphorically, through the abstractions and pseudo-iconic concepts that we have examined earlier. For marketing purposes, the only material components of the perfume that are susceptible to direct representation are its liquid form and its vessel, i.e. the bottle. Far more suggestively, however, than the colour codes associated with the former, the perfume's bottle assumes here a critical role as a multimodal ensemble that combines logo, decorative elements, shape, color hues, texture and transparency. The dominant function of the bottle for the branding of a perfume derives from this ability to offer a multi-sensorial effect and a cross-sensorial experience to the consumer.

The perfume bottle as a multimodal ensemble is comprised of the image mode (shape, color), linguistic mode (text) and haptic mode (texture, temperature). This multimodal design of the perfume-message translates the material components into semantic units of a complex sign which is, in effect, irrelevant to the actual olfactory experience. Thus, in this process the fragrance as olfactory sign passes from simple olfactive mode to a multimodal state. In other words, we are confronted with a *transduction*, in the way that Kress defines it (2010: 125):

When the rearticulation of meaning involves a change of mode, it necessarily entails a change in the entities of the mode. [...] The term *transduction* is used to signal this process of drawing/'dragging' meaning across from one mode to another.

Perfumes bottles are used as sign systems that connote a woman's sensuality, beauty, or desire, and the possibility to encounter an ideal self or lover through olfactory interaction. Thus, olfaction is isolated from its natural context by the use of semiotic manipulation of sensorial information aiming to encourage odor identification towards multi-sensorial ambiguous meanings in favor of perfume gender typing. For this reason the advertising techniques employed for perfumes acquire a cross-sensorial dimension through their image-based strategies. Visual images of the packaging material play a central role in perfume marketing, while the quasi-magical force of perfume establishes the myth of the perfume by transferring the indescribable power of odour to the bottle.

As the globalized perfume industry is unable to describe an ephemeral volatile impression of an ideal self, it visualizes an olfactory image in the shape of a bottle, a package of a colored chemical substance with, usually, floral scents that fulfils the modern woman's desire for desirability. The content is the message, more specifically that of SCENT, thus the bottle is the image to be semiotically consumed by the feminine public in search of luxurious olfactory experiences. The olfactory industry bases the marketing of perfumes on connotations such as magical, indescribable and irresistible. This represents a vacuum of denotation that works mainly on synaesthesia, playing off the demarked gender differences of western societies. In this way the 'perfumed sex', the odorless and artificial sex of the modern era, is compelled to purchase a mythical vessel which contains nothing but the imagined self, the sign of the myth that makes

no SENSE at all, as the, by far, 'animalistic' sense is stripped from its archetypal instincts and becomes an artificial memory of desire, a reminiscence of the senses, the fumes of the incense burnt to the brand-gods trapped in colored glass. Thus, the self is perfumed and bottled, shaped, typed and branded by names of illusion such as *Poison*, *Heat* or *Desire me* while the art of perfumery plays the music of 'olfactory silence' in the odorless myth of the lost sense.

Considering the fact that this is a first approach and understanding the need for a more focused and extensive socio-semiotic research on the perfume bottle, we will attempt the following presentation of some small case studies aiming to trace semiotic elements that could support our hypothesis about the feminine odour profile representation in the perfume bottle. The bibliography in this case is limited and we will focus only on certain aspects of the bottle, especially the shape and the colour of the vessel.

Although modern technology has made possible to design and manufacture complicated shaped bottles, there are a few standard choices for the designer. Images 3 and 4 present a range of familiar designs for perfume bottles.



Image 3. Rectangular bottle



Image 4. Set of perfume bottles

Considering the different combinations of size and shape for transparent glass perfume bottles, we proceed to examine bottle shape as the non-semiotic material element that could supply visual information for the content of the bottle. In their study, Hanson-Vaux et.al (2013: 164-165) confirmed that there is a cross-modal correspondence between odour effect descriptors and shapes. As they state, sweet smells are associated with round shapes, while bitter smells are linked to more angular shapes, based on smell and taste cross-modal relations. The pairing of *sweet/rounded* vs. *bitter/angular* could be the link between the cross-sensorial correspondence of odour effect for the shape of the perfume bottle. An interesting aspect discussed also is that sour odours, such as lemon, were described as 'significantly angular'. Furthermore, the study confirms that certain pictorial shapes linked to recognizable eatable objects— for example, the smell of strawberry combined to a strawberry shaped image— could be linked more easily than less propitious pairing between shape and smell. In this study, there is also evidence of a relation of angular shapes with intensity and round shapes with pleasantness.

Transparent glass bottles are the most common type of vessel for perfumes. Transparency produces for the viewer a focus shift to the content of the vessel. In the case of colourless liquids, attention is drawn to the shape and to the cap of the vessel. To examine transparency as a visual semiotic element better *Table 6* presents the possible composition and relation of semiotic codes for *Pleasures*, a feminine perfume by Estée Lauder, launched in 1995.

Chemical material	Musical code	Chromatic code	Feminine odour code
Galabanum essential oil	High	Light green	calming
Methyl anthranilate and indole	Middle	Pink	narcotic
Benzyl sacilicate and eugenol		Red	narcotic
Sandalwood essential oil, Patchouli essential oil	Low	Light brown	cool

Table 6. *Pleasures* by Estée Lauder, relation of musical, chromatic and feminine odour codes.

The probable shape for a sweet smelling flower feminine perfume is rounded and the featured colour could be green, pink or red according to the *chromatic* code of the composition. Light brown is unusual for feminine fragrances, thus excluded. *Image 5* presents the bottle and package box of the perfume and *Images 6* and *7*, two of its advertisements.



Image 5. *Pleasures* bottle



Image 6. *Pleasures*, advertisement No 1



Image 7. *Pleasures*, advertisement No 2

In this case, the feminine odour code is introduced by the rounded shape of the bottle and the pink package, as a link between the *feminine odour* code of the fragrance and its visual representation. The *olfactory* and *chromatic* codes' relation is present in the first advertisement with the strong presence of light green colour and of pink colour in the second advertisement and on the package. Thus, all visual elements present a calming, narcotic and non-erogenous feminine odour profile.

Angular shaped perfume bottles are common for masculine perfumes, designed to match their frequently bitter taste cross-sensorial perception. For women, however, angularity probably is linked to less feminine odour profiles, because of the lack of the *sweet/floral/feminine* connotation of rounded shapes; although angularity can be related to the intensity of the fragrance. Perfume bottle shape and colour are the means for an efficient representation of a given feminine odour profile. Thus, the perfume bottle becomes the main signifying resource for branding this feminine olfactory profile. Table 9 and Table 10 present the relation of codes for *Spring Flower* by Creed, launched in 1996 and *Jasmal*, also by Creed launched in 1959. Images 9 and 10 present the bottle of *Spring Flower* and *Jasmal*, by Creed launched in 1959.

Fragrant material	Olfactory code	Chromatic code	Feminine odour code
Ethyl butyrate	High	Orange	calming
Methyl anthranilate and indole Phenylethyl alcohol and geraniol	Middle	Pink Red	Narcotic narcotic
Ambergris, Synthetic musk	Low	Maroon Maroon	erogenous erogenous

Table 7. *Spring Flower* by Creed, relation of codes

Fragrant material	Olfactory code	Chromatic code	Feminine odour code
Galbanum essential Oil Bergamot essential oil	High	Light green Orange	calming
Methyl anthranilate and indole	Middle	Pink	Narcotic
Ambergris	Low	Maroon	erogenous

Table 8. *Jasral*, by Creed, relation of codes



Image 9. Bottle of *Spring Flower*



Image 10. Bottle of *Jasral*

By comparing made the elements of Tables 9 and 10, it transpires that the two compositions correspond to different feminine odour profiles. In the case of *Spring Flower* the bottle has a bright pink colour matching the strong floral character of the odour present in the *chromatic* code for the middle note of the *olfactory* code. In the case of *Jasral*, the less strong floral character relates to the transparency of the bottle, although it could have light green, orange or light pink elements corresponding to the *chromatic* code's relation to the notes of the *olfactory* code. Besides these differences, both perfume bottles have the same shape (rounded), size, cap and decorative elements, except the name of *Spring Flower* above the brand's logo on the surface of the bottle. This case indicates that overall design could be incorporated in such a way to the bottle so as to constitute the main brand element of the perfume product. Additionally, it suggests that there is a correspondence between: i) the *chromatic* code and the perfume bottle colour; in other words, between the chromatic representation of the perfume composition and the chromatic representation of the feminine odour profile on the perfume bottle. The *olfactory* code relates to the *feminine odour* code's narcotic and erogenous elements for a strong floral focused feminine odour profile.

To illustrate further the connotation potential of the shape and colour of the bottle we will apply the system on the perfume bottle of *Be Delicious* by DKNY, launched in the US and Canada, in 2004. Table 6 presents the probable perfume composition and its correspondence with the *olfactory*, *chromatic* and *feminine odour* code.

Fragrant material	Olfactory code	Chromatic code	Feminine odour code
Grapefruit essential oil Cis-3-hexenol Ethyl butyrate	High	Yellow Light green Orange	Non-erogenous calming calming
Phenylethyl alcohol and geraniol	Middle	Red	Narcotic
ambergris	Low	Maroon	erogenous

Table 9. Be Delicious, DKNY, relation of codes

The feminine odour profile is coded in the *chromatic* code by yellow, green, orange and red. In order to make the comparison, in Image 5 we can see the *Be Delicious* perfume bottle and in Image 6 the perfume's advertisement.



Image 5. Be Delicious perfume bottle



Image 6. Be Delicious advertisement

In this case study, a *sweet/rounded* cross-modal pairing could lead to *floral/rounded*, thus *feminine/rounded* pairings. Rounded shapes resembling eatable objects are often associated with sweet smells thus with feminine odour profiles, as discussed previously. As the probable colour according to the *chromatic* code could be yellow, light green, orange or red, there is a match on the perfume bottle colour to one of the components of the top note, light

green. Although green apples don't smell like flowers, in this perfume bottle concept the pseudo-iconicity is crucial for the transmission of green 'appleness' of the top note as freshness. Consequently the concept of the light green apple-shaped perfume bottle is dominant for the odour profile projected on it through the advertising campaign. The reflection of New York landmarks on the bottle cap in the advertisement reveals also the 'Big Apple' concept, as the brand DKNY, stands for Donna Karan, New York. Additionally, a young woman offering a delicious apple constitutes a strong connotation of the Biblical original sin, linked to the erogenous element of the *feminine odour* code. The branded perfume has the connotation potential to create cross-sensorial relations for a cross-modal representation aiming to conceptualize the 'deliciousness' of the apple or of the female wearer on the perfume bottle as a gender-specific New York odour profile trend to be followed. This case proves the centrality of the bottle shape and colour for the feminine odour type, where the *chromatic* code's relation to the *olfactory* code and the *feminine odour* code has a specific association to the perfume shape and colour. As the top note constitutes the first impression of the perfume composition, the *high* of the *olfactory* code creates the first connotation of the *feminine odour* code to be represented on the light green element of the *chromatic* code, while the middle note of the *olfactory* code is materialized in the rounded shape, creating a green-apple shaped perfume bottle as a message of a desirable delicious femininity.

In the cases discussed above, the chemical compositions were approximations to the real formulas, as information about them can only be accessed indirectly by critics about perfume compositions.³ Perfume formulas remain secret and under strict prohibition of publication. Real data could only be accessed under license of the perfume designer and brand. This research cannot be considered exhaustive as more detailed research needs to be conducted to establish the transduction of meaning from the fragrant composition to the perfume bottle as a multimodal ensemble. Transparency and bottle cap are, in our opinion, case studies that need to be studied separately, at first, and then combined with the rest of the system. Further research has to be conducted also for the linguistic and symbolic elements of the bottle considering their material form on bottle surface engravings. Decorative elements on the bottle are also a propitious subject to be classified and decoded. Finally, the overall design related to branding purposes which arranges all available resources for a branded feminine odour type should be taken into consideration.



Image 11. Perfume bottles classified by shape and colour.

The perfume bottle constitutes a meaningful arrangement of material components for the representation of a fragrant message based on cross-sensorial perception and composed by semiotic elements that conceptualize a feminine odour profile. The fragrant message is codified in the *feminine odour* code and transmitted by related semiotic codes from different semiotic systems, namely the *olfactory* and the *chromatic* code established by the perfume industry. Perfume bottle design requires the organization of material elements to engage the practical and conceptual dimensions of the content. They are vessels for a volatile liquid substance with prefigured substantivity and they must have a proper size for the right quantity and a bottle cap to avoid evaporation. Feminine perfume bottles come in rounded or angular shapes according to the relation between shape, the *olfactory* code and the *feminine odour* code. Shapes are combined with colours to match, as shown in the cases studies presented, to the *feminine odour*, *olfactory* and *chromatic* codes of the fragrant composition. They are combined with decorative elements in an aesthetic concept with linguistic or pictorial elements on the surface to brand the product. Feminine odour profiles with calming, narcotic and non erogenous effects to be used during the day would probably correspond to brighter colours and less rounded shapes. On the other hand narcotic, erogenous and sensual effects for parties and nightlife are probable to have darker colours and more rounded shapes (Image 11).

Consequently, the perfume bottle is to be identified by the female consumer as a package of a desirable odour profile to acquire. In this task, creativity and originality are employed to turn the connotation potential of a volatile scent impression into a representation of a feminine olfactory type on the vessel and the packaging material, although the standard codification of the perfume industry seems to organize the feminine perfume olfactory landscape. The conception of the feminine olfactory whole is invested on the bottle, as a tradable, visible and desirable material form with gender-specific elements. Advertising supports concepts related to the suggested feminine odour profile by promoting the fragrant product based on the image of bottle. The message in the bottle becomes the message on the bottle to reach finally the advertisement campaign where the message is the bottle.

NOTES

1. Information about fragrant material and fragrance groups from Buettner (2017: 1034)
2. Information about fragrance families and The Fragrance Wheel in <http://www.fragrancesoftwareworld.com/FragranceWheel>
3. Information about perfume notes for *Cabotine* by Grès, *Pleasures* by Estée Lauder, *Spring Flower* and *Jasmal* by Creed and *Be Delicious* by DKNY in <http://www.basenotes.net>

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