

SCIENTIFIC LANGUAGE IN SKIN-CARE ADVERTISING: PERSUADING THROUGH OPACITY

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ABSTRACT. *Persuasion in advertising generally refers to the advertisers' ability to modify the (potential) consumers' behaviour and move them finally to purchase the product. This paper analyses the persuasive function of scientific language in English advertising, an under-investigated area of research. It specifically explores how scientific language is used both in cosmetics leaflets and beauty firms' websites. It examines the reasons for the displacement of such specialised terminology and the relevance of different scientific or scientific-related terms in the attainment of persuasion. The study has demonstrated that advertisers draw on traditional assumptions commonly held about science to present skin-care products as scientific. The work classifies the various uses of the specific terms employed and suggests that, contrary to what might be expected, the combination of the conceptual complexity and the Greco-Latin etymology of most of these terms is a guarantee of significant persuasion to the layperson.*

KEY WORDS. *Persuasion, advertising, scientific language, pragmatics.*

RESUMEN. *La persuasión publicitaria se entiende como la habilidad del publicista para modificar la conducta del consumidor y lograr que adquiera el producto ofertado. Este artículo investiga la función persuasiva del lenguaje científico en la publicidad escrita en inglés, una parcela poco explorada. Nuestro trabajo analiza el lenguaje científico en los prospectos cosméticos y las páginas web de las marcas de belleza, profundizando en las razones del desplazamiento de dicha terminología, así como el alcance para persuadir. El estudio demuestra que los publicistas se basan en creencias populares sobre la ciencia con el fin de presentar los productos de belleza como científicos. El trabajo ofrece una clasificación de los términos científicos que se usan en este tipo de publicidad y sugiere que, contrariamente a lo que pudiera esperarse, combinar la complejidad conceptual y el origen greco-latino de la mayoría de estos términos garantiza la persuasión en personas no especialistas en ciencia.*

PALABRAS CLAVE. *Persuasión, publicidad, lenguaje científico, pragmática.*

1. INTRODUCTION

Based on examples taken from cosmetics leaflets and from beauty firms' websites, where products are described in detail, the present paper was designed to evaluate the effect of using scientific language in skin-care advertising. In spite of the wide interest that the language of advertising has aroused in the last decades (see section 2.2 for references), the literature has given scant attention to the use it makes of scientific language. Campanario *et al.* (2001), Diaz Rojo (2002), Medina Cambrón *et al.* (2007) or Santamaría Pérez (2011) represent some exceptions in the relationship between science and skin-care advertising in Spain; however, their research concerns differ from ours in very important respects, as they focus on the validity of the scientific claims made in this particular type of advertising (Campanario *et al.* 2001; Santamaría Pérez 2011) or on the sociological value of science (Diaz Rojo 2002; Medina Cambrón *et al.* 2007).

Our choice of perspective advocates an alternative approach, more in tune with the aim of advertising and which, therefore, can yield results leading to a better apprehension of its linguistic dimension. Initially not a component of advertising, scientific language is perceived here as a shift in expression, which makes it all the more appealing, at the same time that it reveals itself as especially suitable to the advertising of skin-care products. It is precisely the treatment of scientific language and its adequacy to advertising's aim, persuasion, which we seek to assess in this work.

To accomplish this task the paper is structured as follows. Section two introduces the methodological approach, delineating the definition of specialised language and the characteristics that define it. When specialised language abandons its domain and is no longer addressed to the scientific community but to the general public, its use becomes awkward and can only be justified if a new intention is being sought. It is our contention that the reasons for this terminological displacement into the context of advertising can only be accounted for within the framework of persuasion.

After Tanaka's (1999[1994]) concept of 'covert communication', which rests upon Sperber and Wilson's Relevance Theory (1995[1986]), we try to give a principled description of how and why advertisers couch their persuasive claims in scientific language. This strategy is particularly useful in the case of skin-care products due to two main reasons: firstly, their market has become highly competitive as a consequence of the vast range of similar products that appear each day. Secondly, consumers are ready to pay quite an expensive price for cosmetics intended to stave off signs of ageing. Thus, the use of scientific language in skin-care products seeks to draw inferences about high-quality, efficiency, elaborated formulae, sophisticated processes, reliability, etc.

We initiate section three, the lengthiest one, discussing the awareness raising persuasive strategies directed to potential consumers of beauty products. Our next step is to put forward a three-fold classification of scientific language in the context under analysis, ranging from vocabulary that invokes science as a source of credibility to the use of terms that reflect the social impact of science to the morphological characteristics of scientific terms, rich in Greco-Latin prefixes. This last part of the organisation deserves

special attention, since in English, a non-Latinate language, some of the terms used are likely to appear even more opaque to the common person. Yet advertisers venture to use them at the risk of unintelligibility. Our analysis will try to prove that, paradoxically, their opacity for the non-informed receiver guarantees significant persuasive effects.

Finally, we offer some concluding remarks.

2. METHODOLOGICAL APPROACH

This section sets out our approach to the analysis of the data, consisting of examples of scientific language in the advertising of skin-care products. These examples have been drawn both from cosmetics leaflets and cosmetics web sites for women's skin-care products; for this reason throughout this work, we systematically consider the consumer to be female.

We will start addressing the question of what scientific language is, to move next to the relation that it bears to skin-care advertising. But to understand the use of specialised terminology in an alien domain such as advertising involves considerations about persuasive communication.

2.1. *Scientific language*

Scientific language is an instantiation of specialised language, which, in a broad sense, can be defined as "communication among specialists". Its specificity is reflected on a number of distinctive features that have been the focus of attention in several studies (Barras 1978: 28-36; Cabré 1999: 46-47; Alcaraz 2000: 61-72; Fuertes Olivera 2007: 206-207) and could be summarised as: a) brevity, in a conscious attempt to do away with distortions in the information conveyed; b) accuracy, the very nature of scientific topics tends to avoid both semantic and conceptual ambiguity; and c) objectivity, impartiality supported by evidence.

But as has been observed (Pérez-Llantada 2012: 58), brevity and accuracy in scientific discourse involve the use of highly lexicalised terms. While these terms contribute to accuracy and truthfulness in reporting disciplinary knowledge, they simultaneously fulfil a gate-keeping function in discourse. In other words, being only accessible to peer-colleagues in the discipline, these terms are not part of the lexical repertoire of the non-specialists. They hence restrict the scope of the readership.

Right now we are faced with a paradox: scientific language is meant only for specialists, but only a very low percentage of the addressees of skin-care advertising are specialists, the vast majority is made of by the general public or lay readers. This opens up some interesting questions: what relationship does scientific language bear to skin-care advertising? Why should advertisers be interested in addressing general consumers through specialised discourse? Is communication effective under these circumstances?

Finding a satisfactory answer to these issues requires some attention to the type of communication represented by advertising.

2.2. *Advertising communication*

In the last decades many investigators have turned their interest to the study of the language of printed advertising in English, among them Crystal and Davy (1983), Vestergaard and Schrøder (1985), Goddard (1998), Hermeren (1999) Tanaka (1999[1994]), Cook (2001[1992]) and, more recently, Dahl (2007), MacRury (2009) and Kalame (2012). Despite the fact that some of these analyses explicitly recognise the role played by information in advertising (Crystal and Davy 1983: 222; Goddard 1998: 7) or make concessions to other functions, such as amusing, worrying or warning (Cook 2001[1992]: 10; MacRury 2009: 4-6), all of them admit that the ultimate aim of commercial advertising is persuading. An advertisement is launched into the market with the intention to sell the goods it is promoting. Thus persuasion is understood as the intention to influence or modify a potential consumer's choice in order to make her buy a specific product and increase a certain corporation's profits.

This persuasive function is ultimately responsible for making advertising a highly elaborate and very attractive type of discourse (López Eire 2004; Madrid Cánovas 2007). The concept of elaboration, however, cannot be mistaken for the classical art of ornament, but rather should be taken as an approach to the expressive power of language (Madrid Cánovas 2000; Robles Ávila 2004).

In this regard, it is fair to mention that such a distinctive feature has eventually given way to certain social attitudes of rejection, where advertising, let alone advertisers themselves, is looked upon as unreliable, manipulative or even deceptive. We do not wish to pursue this line of thought, which probably arises from misunderstanding of and a biased attitude towards persuasive language. On the contrary, we aim at examining the intelligent use of persuasive strategies available to "communicators, who fearing distrust on the part of the audience, emphasise the coherence or consistency of the information conveyed with beliefs previously held by the audience" (Taillard 2004: 261). Specifically, this paper will explore the use of scientific language as a persuasive strategy in skin-care products.

Our next step is to provide a framework that enables us to explain how advertisers persuade their audience.

2.3. *Persuasive communication*

In a broad sense it can be argued that Pragmatics is concerned with elements that lie outside the realm of grammar, that is, with contextual information and the audience's inferential abilities. Inferences bridge the gap between what we say when uttering a sentence and what that sentence actually means. Since its beginnings, research in pragmatics has revolved around traditional theories as the speech act theory, the theory of conversational implicature and Brown and Levinson's (1987) politeness theory. But dissatisfaction with various aspects of these classical approaches has given way to competing proposals such as Sperber and Wilson's (1995[1986]) Relevance Theory, Wierzbicka's (2003) Natural Semantics Metalanguage or Leech's (2007) Grand Politeness Theory (see Chen (2010) for a thorough, updated revision of these issues).

From Sperber and Wilson's viewpoint (1995[1986]), communicative behaviour must be deliberate and involves two types of intention: a) the informative intention or the intention to make manifest or more manifest to the audience a set of assumptions (Sperber and Wilson (1995[1986]: 58); and b) the communicative intention, that is, to make it mutually manifest to audience and communicator that the communicator has this informative intention (Sperber and Wilson 1995[1986]: 61).

As known, Sperber and Wilson's principle of relevance revolves around two central ideas. First, they put forward the notion of contextual effect (Sperber and Wilson 1995[1986]: 158), which makes relevance a matter of degree, since the greater the contextual effects of a newly presented item of information, the more relevant it is. This is linked to the second central idea, namely, processing effort. The human parser is guided by a principle of economy in such a way that the most relevant interpretation should be the most easily retrievable. Simultaneously, if a given interpretation requires extra processing effort, the reward will come up in the form of more contextual effects.

Based on Sperber and Wilson's theory, Tanaka (1999[1994]) has developed the concept of 'covert communication', defined as "a case of communication where the intention of the speaker is to alter the cognitive environment of the hearer, i.e. to make a set of assumptions more manifest to her, without making this intention mutually manifest" (Tanaka 1999[1994]: 41). Contrary to what happened in ostensive communication, the addresser does not aspire to make his informative intention mutually manifest to himself and the receiver; that is to say, the sender of the message "does not publicise his informative intention" (Tanaka (1999[1994]): 41).

The main idea behind the concept of covert communication is that despite the low degree of reliability shown by the addressee on the addresser (a situation that easily compares with the relationship held between consumer-advertiser), they engage on a successful communicative act. This is rendered possible thanks to cooperation not so much at the social level as at the cognitive one. Madrid Cánovas (2005: 40-41) argues that advertisers appeal to specific stimuli in order to catch the target group's attention (i.e. *captatio* in traditional rhetorical terms) and that, once this is achieved, cognitive cooperation has started operating.

As an important side effect, the receiver takes more responsibility in deriving the sender's meaning than in ostensive communication, because the addressers rely more often on implicatures than on explicatures in such a way that they cannot be blamed to back the assumptions derived from them.

The remainder of this paper is devoted to the study of examples of skin-care advertising with the help of the methodological tools so far specified.

3. SCIENTIFIC LANGUAGE IN SKIN-CARE ADVERTISING: ANALYSIS OF EXAMPLES

At the heart of persuasion is the ability to adapt a message to the feelings, needs and values of an audience. Even though skin-care products are part of most women's daily routines in personal care, advertisers create some needs that the audience would

certainly like to meet. The claim that comes along with skin-care products is that they are needed not only to help women look more beautiful, but rather to maintain their skin's natural properties. Therefore advertisers play with the audience's emotions so as to make them aware of the dangers around their skin, engaging in a war-like process of attack and defence reflected in the vocabulary, more specifically, in the exploitation of the metaphorical value of phraseological units (Diez Arroyo 2009).

Initially, the reader is taken off-guard, just as our skin, whose vulnerability is shown by means of terms related to loss or attacks. Let's examine our own examples to illustrate this point:

- (1) a. Sharp temperature changes, environmental pollution and stress make our skin lose its optimum level of moisturisation. Dehydrated skin loses its glow and is more sensitive to attacks from the outside. <*Glacier Essence*, Sensilis. Leaflet>
- b. Anti-oxidants and more help protect skin from environmental damage and visible signs of premature aging. <*Vérité*, Estée Lauder. Web site>
- c. Provides optimum protection against free radical damage triggered by the effects of sun, pollution and other environmental assaults. <*First Defense*, Elizabeth Arden. Leaflet>
- d. All day, your skin is assaulted by stresses from the environment, including air pollution and the sun's aging rays. <*Advanced Night Repair*, Estée Lauder. Web site>
- e. A luxurious rich cream-type texture that applies smoothly to instantly replenish moisture to skin that needs intensive care due to environmental strain and stress and is prone to dryness. <*Sensai*, Kanebo. Leaflet>

The attackers are all the more dangerous as they appear in the shape of stress, sun, pollution, UV rays, etc. (1d), that is to say, elements we live together with. Linguistically, this translates into the use of the verb 'to lose' (1a) with complements such as 'moisturisation' or 'glow' or into the adjective 'environmental' giving way to new collocations with 'damage' (1b), 'assault' (1c), or 'strain' and 'stress' (1e).

The second stage of the persuading process tries to move the recipient of the message to action. Since the acquisition of the advertised skin-care product will help repel the metaphorical attack, the response may continue under bellicose terms as in (2a) with the verb 'to combat', in (2b) with the noun 'fight' or in (2c) with the noun 'defence':

- (2) a. An ideal compensating skin care product to combat the harmful effects of external stress factors, this cream is very rich in Shea Butter which has soothing properties. <*Restorative Facial Cream*, Sisley. Leaflet>
- b. A luxurious restorative beauty treatment cream formulated with a complex of vitamins to intensively nourish, energize, and fortify skin in its fight against environmental stress and the visible signs of aging. <*The Skincare Multi-Energizing Cream*, Shiseido. Web site>

- c. La Prairie's extended family of moisturizers is your skin's best defence against climate change, air travel, and hormonal shifts all that create dryness. <La Prairie. Web site>

At other times, less aggressively, the skin-care product is presented as capable of re-establishing our skin's former state, making use of such synonyms as 'restore(ing)' (3a,b), 'replenish' (3c), 'regain' and 'regenerate' (3d):

- (3) a. To restore its [skin's] youth and vitality, Clarins has developed an intensive rehydrating skin care product. By recreating the skin's ideal "climate" and hydration, HydraQuench Intensive Serum restores comfort, softness and a youthful radiance. <*HydraQuench Intensive Serum*, Clarins. Leaflet>
- b. A powerful restoring treatment that addresses visible signs of aging while protecting skin's resilience now and into the future. A SHISEIDO skincare original technology formulated with the innovative Form Support Veil, effectively corrects and helps prevent the appearance of lines and sagging around the delicate eye and lip areas. <*Future Solution LX Eye and Lip Contour Regenerating Cream*, Shiseido. Web site>
- c. A luxurious rich cream-type texture that applies smoothly to instantly replenish moisture to skin that needs intensive care due to environmental strain and stress and is prone to dryness. <*Sensai*, Kanebo. Leaflet>
- d. The skin regains its original vital strength. Radiantly serene, toned, smoothed and regenerated, it has never been so beautiful. <*Sublimage*, Chanel. Leaflet>

Other quite common terms in this kind of advertising, as 'protect' and 'help' in (4a) or 'reduce' (4b), refer to actions associated with responses to attacks:

- (4) a. Drenching your skin with moisture and protecting it from damage around the clock, they [our products] help diminish signs of aging skin and invigorate its resilience and radiance. <La Prairie. Web site>
- b. This powerful wrinkle lifting/firming serum dramatically reduces the appearance of lines and wrinkles with exceptional speed. <*Perfectionist [CP+R]Wrinkle Lifting/Firming Serum*, Estée Lauder. Web site>

But this two-stage (attack/defence) persuasive technique in skin-care products becomes all the more effective when it seeks the alliance of science. The use of scientific language in a non-scientific domain like advertising tries to persuade the addressee making her trigger scientific implications which are bent on benefiting the product. To achieve that objective, advertisers seek to take advantage of the social consideration of science.

A classical theme for writers, social scientists and scientists themselves since the Industrial Revolution, the relationship between scientific expertise and the 'general

public' is currently a matter of attention and social concern (Ashmore *et al.* 1995; Irwin and Wynne 1996; Campanario *et al.* 2001; Medina Cambrón *et al.* 2007; Santamaría Pérez 2011). Traditional beliefs on the issue of 'public understanding of science' include (Irwin and Wynne 1996: 6): a) there is public ignorance on matters of science and technology; b) science is an important force for human improvement and it offers a uniquely privileged view of the everyday world; c) science is unproblematically 'scientific', therefore it represents the only valid way of apprehending nature.

We argue that in the case of skin-care advertising, advertisers do reinforce these traditional assumptions through the different use of scientific language. First of all, science is invoked to gain credibility. Advertisers emphasise that the solution offered, i.e. the product, is the best possible one because their methods are backed by scientific proof, as can be seen in (5):

- (5) a. Thanks to the groundbreaking research of scientists at Estée Lauder, we've created a daily moisturiser with some of the most advanced protection technology. <*Day Wear Plus*, Estée Lauder. Leaflet>
- b. Created by a team of dermatological scientists and cosmetic chemists, this revolutionary new formula alters the chain reaction that can result in skin that looks prematurely aged and helps restart skin's vitality. [...] Clinical tests showed that subjects with moderate and severe sun damage exhibited significant improvement in their appearance. <*Allergan*, Elizabeth Arden. Leaflet>
- c. It took Méthode Jeanne Piaubert Laboratories five years of research to formulate the anti-ageing skincare line designed to fight skin ageing while preserving its youth capital. <*Skin Saver Age*, Jeanne Piaubert. Leaflet>
- d. [...] Vichy Laboratories have created a new generation of original and complementary treatment masks that are immediately and spectacularly effective. <*Hydra-Smoothing Mask*, Vichy. Leaflet>

Therefore, the skin-care product is immediately raised to the scientific category because it has been 'created' (5a,b,d), 'formulated' (5b,c) by 'scientists' (5a), 'a team of dermatological scientists' (5b) or 'cosmetic chemists' (5b) in 'laboratories' (5c,d). It is the result of '(groundbreaking) research' (5a,c) and 'clinical tests' (5b) support its effectiveness.

In the second place, advertisers have taken advantage of the social impact of science. The traditional assumptions held by society that we made explicit above are not incompatible with the fact that, in the last decades, the relationship between science and society has become more fluent. The media, in its role as disseminator of culture, has contributed to what is known as "science literacy" (Lewestein 1995: 358), making common people aware of the existence of certain scientific terminology, in particular, medical, bio-medical and bio-chemical lexical units. Advertisers craftily place these specialised terms in their advertisements:

- (6) a. The 5-part test showed how well an antioxidant will protect skin from premature cell death, changes in cell membranes, cytoplasm, mitochondria and damage to DNA. <*Allergan*, Elizabeth Arden. Leaflet>
- b. A treatment mask enriched with a liposome collagen complex which provides an intensive “hydrating bath” for the skin and visibly smoothes the facial features. <*Hydra-Smoothing Mask*, Vichy. Leaflet>
- c. The blend brings together eight ultra potent anti-oxidants [...] and an exclusive supercharged combination of Vitamins C and E. <*Day Wear Plus*, Estée Lauder. Leaflet>
- d. Wheat proteins add a tightening effect to smooth the skin’s surface. Vitamins E and B-5, well-known for their abilities to fight free radicals, help to retard the aging process as well as retaining water molecules. Vitamin F (Essential Fatty Acids) in extracts of Sesame and Shea Butter contributes to intercellular strength and reinforces the skin’s natural barrier. <*Intensive Skin Care for the Eyes and Lips*, Sisley. Leaflet>
- e. Dior research is now targeting the “heart” of the skin: stem cells. The global anti-ageing action of *Capture Totale* is strengthened and the skin’s youth functions are reactivated. <*Capture Totale*, Christian Dior. Web site>
- f. Amino Acids strengthen skin’s collagen fibers for enhanced firmness and resilience. <*Revitalizing Cream*, Shiseido. Web site>

Lay people are familiar with such scientific names as ‘cells’ (6a), ‘(liposome) collagen’ (6b,f), different ‘vitamins’ (6c,d), ‘anti-oxidants’ (6c), ‘free radicals’ and ‘molecules’ (6d), or even ‘DNA’ and ‘cytoplasm’ as in (6a), ‘stem cells’ (6e) or ‘amino acids’ (6f), etc. Note that we are neither arguing that these scientific concepts be rightfully used in skin care products, nor that all consumers can grasp them. Rather our emphasis is on the fact that the media has made these concepts accessible to the general public and, hence, advertisers use them with a persuasive function. Consumers are led to think that these scientific names are going to enhance the product’s performance because they are the result of scientific knowledge and the latest technology.

The third point we want to make leads us to the importance of Greek and Latin terminology in scientific language. As in many other fields of science, medical and biomedical terminology is frequently based on classical Greek and Latin. Some of the reasons why this should be so obey standardisation and internationalisation criteria: terminology should be stable and transparent in order to guarantee communication among specialists.

The major influence of Greek and Latin scientific terminology in the English lexicon dates back to the Renaissance period (Džuganová 2002: 226). Moreover, the English Renaissance lexicon tried to create different stylistic nuances, emphasising the difference between the layman and the specialist. This is illustrated in such pairs as: body-corporal (from Latin *corpus* ‘body’); death–mortal (from Latin *mors* ‘death’); eye-ocular (from Latin *oculus* ‘eye’); hand–manual (from Latin *manus* “hand”) or mind–mental (from Latin

mens “mind”) (Dávidová 2011: 21 and references there), where the Germanic noun has a general meaning and its Latin adjective counterpart a scholarly use. Similarly, in the Renaissance period the terms of Greek-Latin origin were used to name diseases which had the relation to Germanic expressions for certain organs, e.g. kidney-nephritis or lung-pneumonia, a tendency that continues in present English medical terminology.

This paper argues that the separate use of Germanic and Latinate words in English, which in certain respects runs parallel to the gap between lay people and specialists, is essential to understand the implications that the use of scientific language has in skin-care advertising. Employing Greco-Latin scientific terminology in advertising texts creates an aura of mystery, and even in some cases a degree of unintelligibility, difficult to attain in any other way. The processing difficulty is rewarded in the form of contextual effects, in such a way that the mystique that surrounds science is transferred to the advertised product, triggering implicatures about the high quality of the cosmetics, its beneficial effects for the consumer’s skin, its wonders for beauty, etc.

We present several pieces of data in order to see how this works, starting with the most transparent examples and moving progressively to the most complex ones.

A common prefix is bio-, from Greek *bios*, life, which in scientific usage means “organic life”. It appears in English terms as ‘biography’, ‘biology’ or ‘biochemistry’ where it is easy to trace the meaning of the classical affix to yield, respectively, “the life story of a person written by someone else”, “the study of the natural processes of living things” and “the scientific study of the chemistry of living things”. Now let us consider the examples below:

- (7) a. [...] while a bio-stimulating agent of melanin encourages the natural tanning process. <*Dior Bronze*, Christian Dior. Leaflet>
- b. Extend the look of youth with newly re-formulated *Advanced Super Revitalizing Cream*. Patent-pending Bio-Revitalizing Complex reinforces skin’s elastic fibers, the key to promoting skin’s resilience and firmness. <*Advanced Super Revitalizing Cream*, Shiseido. Web site>
- c. Pure extract of plankton exclusive and patented. This active ingredient from thermal springs, purified and concentrated through biotechnology, has the unique property to help stimulate or soothe the activity of skin cells. Rebalanced, the cells achieve their optimal biological functioning. <*Biosensitive*, Biotherm. Leaflet>
- d. Extracted from the heart of the rare and resilient Lancôme Rose using an exclusive, state-of-the-art biotechnological process, these native cells are proven to extend their own exceptional properties to enhance skin’s regenerative potential. <*Absolue L’Extrait*, Lancôme. Web site>

In (7), this prefix appears modifying such words as ‘stimulating’ (7a), ‘revitalising’ (7b), ‘technology’ (7c) or ‘technological’ (7d). Mark that additionally in (7c) the beauty firm itself, *Biotherm*, is made up of this prefix, being the advertised product,

Biosensitive, a further example of this. Although in all of these cases the element bio- plus the modified base will broadly contribute to the perception of a product good for our skin's condition, the actual meaning of the resulting forms in (7a) or (7b), or even the names of the trade marks *Biotherm* or *Biosensitive*, are not straightforward. They are more a matter of degree, in other words, different consumers will draw different implicatures in agreement with their tastes, beliefs, etc.

Another popular Greek prefix phyto-, "of a plant", shows itself in (8a) modifying the term 'vitalising'. In (8b) it is preceded by 'alpha', a usual prefix in medicine, but at the same time a modifier denoting "the first of a series of items or categories":

- (8) a. [...] contains Phyto-Vitalising Factor, an exclusive Shiseido ingredient which helps retexturise skin and encourages new softness and radiance. <*Skincare Night Essential Moisturiser*, Shiseido. Web site>
 b. This original and personalised response is based on an active ingredient developed and patented by our researchers, Alpha-phytodormin. <*Skin Saver*, Jeanne Piaubert. Leaflet>

Our next excerpts contain interesting names based on Latin and Greek:

- (9) a. Our exclusive Chronolux™ Technology helps skin optimize its natural repair processes to reduce the look of the fine lines and wrinkles that can appear first around your eyes. <*Advanced Night Repair Serum*, Estée Lauder. Web site>
 b. Founded in 1997, SkinCeuticals develops innovative dermatology products designed to combat the signs of aging and help prevent serious skin conditions. Dedicated to improving skin health, SkinCeuticals is committed to providing quality products backed by science. <SkinCeuticals. Web site>

Firstly, in (9a) we find a technology devised by the firm Estée Lauder, 'chronolux' trademark, a blend of Greek *chrono* meaning "time" and the Latin word *lux*, denoting "light". It seems appropriate to the explanation that follows, inviting the consumer to retrieve implicatures about a technology that will help your skin keep radiant throughout time.

(9b) presents *SkinCeuticals*, a transformation of the noun 'pharmaceuticals', of Greco-Latin origin, related to medicinal drugs or to their preparation and use. As explained in the accompanying text, the firm links itself to science in its methodology and the quality of its output.

The texts below are more elaborate:

- (10) a. Exclusive optic technology helps brighten and balance skintone. <*Day Wear Plus*, Estée Lauder. Leaflet>
 b. To safeguard the youthful look of your eyes, *No Age Essentiel Yeux* utilizes Optitelomerase, a worldwide breakthrough by the Christian Dior Laboratories. It has the power to protect telomerase, a key enzyme that

ensures the life expectancy of the cells. It is combined, within the Dior Ageproof Complex, with two powerful, targeted anti oxidants to effectively address the factors involved in premature skin aging. <No Age Essentiel Yeux, Christian Dior. Leaflet>

Example (10a) includes the adjective ‘optic’, related to the eyes or vision, modifying the noun ‘technology’, which gives the whole sentence a highly scientific halo. Its variety, the prefix *opti-*, appears in (10b) added to the specialised noun ‘telomerase’. Since the layperson would find this concept opaque, a rephrasing is available to inform the reader that this has to do with “an enzyme that ensures the life expectancy of the cells”. Later on in the text, we come across the expression ‘anti oxidants’, the prefix ‘anti’ (against) and ‘oxidants’ or oxidizing agents, substances that bring about oxidation by being reduced. Obviously, the accumulation of scientific terminology and the relative difficulty of the text involve processing effort, an effort rewarded by contextual effects that create an impression favourable to the product, enhancing its good qualities for the potential consumer’s skin.

But the effect exerted by scientific terms derived from Greek and Latin in skin-care advertising also connects with and justifies our purpose in this work, namely, to show how nearly unintelligible language for the lay people fulfils a very important and effective persuasive function. Advertisers, taking the comparison far, behave in a similar way to doctors who eventually adopt Latin medical terminology as an instrument of opaque communication with their patients. This latter issue has been studied by Marečková *et al.* (2002: 582), who argue that

The doctor speaks an incomprehensible language and, through a reversed logical process, the impression may arise that if somebody uses an incomprehensible terminology, she or he is a good doctor. We might designate this phenomenon as the mystery of the foreign-language medical communications at the doctor versus patient or professional versus layman level.

The mystery referred to by these authors finds a rational explanation within the methodological framework adopted in the present paper. Advertisers have planned these texts taking into the account the traditional assumptions about science held by common people. The consumers reading the cosmetics leaflets or the cosmetics firms’ web sites (in a parallel way to patients listening to their doctors) operate under the belief that science is beyond their full understanding, even possibly, that there is no need for them to apprehend the whole depth of the claims been made. I hasten to point out a very important difference holding in the doctor-patient power relationship, to borrow Fairclough’s (1992) words, which does not exist between advertiser-consumer, ruled rather, as already argued, by distrust. However, the adoption of scientific language as a persuasive strategy allows advertisers to overcome this feeling of distrust and gain the consumer’s approval. Thus semantic and conceptual opacity become a guarantee of abundant contextual effects about the high quality and reliability of the product.

The following examples may help us understand better the obscurantism of the scientific terminology as well as their persuasive function:

- (11) a. Developed with advanced Shiseido technology and ingredients including Super Bio Hyaluronic Acid N for intense moisture and Hydroxyproline to promote collagen production. <*Benefiance WrinkleResist24 Intensive Eye Contour Cream*, Shiseido. Web site>

The semantic complexity of this text goes in *crescendo*: the transparent modifiers ‘super’ and ‘bio’ are followed by the compound noun ‘hyaluronic acid’, which can be regarded as familiar to the lay audience but of unknown meaning. Yet the final part of the text introduces the highly specialised word ‘hydroxyproline’. Under close inspection, one could see that the complex prefix hydroxy- relates to water (‘hydro’) and oxygen (‘oxy’), but the modified noun ‘proline’ is highly specialized and opaque. The length of the words, due to the chained prefixes, together with their unclear meaning, would be rather off-putting to the layperson. The high concentration of chemical names in this text seeks to provoke in the consumer the perception of a sophisticated product, elaborated with the latest scientific technology, which will be beneficial for her skin, etc.

A similar reasoning can be applied to:

- (12) a. Ultra gentle, all-in-one treatment delivers the instant, skin-renewing benefits of both Micro-Dermabrasion and a 30% glycolic acid peel. Instantly smoothes rough, dry patches with our exclusive MicroSphere Refinishing System. Includes concentrated levels of Salicylic Acid and Glucosamine. <*Perfectionist*, Estée Lauder. Web site>

The prefix micro-, very small, is used twice to modify, first, the noun ‘dermabrasion’, based on the Latin item *dermis* (‘skin’) and the noun ‘abrasion’, also from Latin, meaning “the process of scraping or wearing something away”. Secondly, the nominal element ‘microsphere’ denotes “a microscopic hollow sphere”. In the next lines the reader comes across familiar scientific names, such the chemical compounds ‘glycolic acid’ and ‘salicylic acid’. More abstract to the layperson is ‘glucosamine’, a term used in Biochemistry to denote a crystalline compound which occurs in connective tissue.

It is the task of scientists to assess the contribution of these elements to the achievement of the desired results, but the intricate processing rewards the consumer with contextual effects about sophistication, highly scientific processes, carefully thought up formulae, thorough investigation, etc. Poor understanding is ascribed to a great level of specialisation.

We would like to finish the analysis of our data with two examples where the specialised language becomes completely opaque to the general reader:

- (13) a. This powerful, anti-aging cream is especially rich, containing a new marine extract which stimulates the synthesis of glycoaminoglycans for highly effective hydration, improving skin tone and resilience. <*Intensive Skin Care for the Eyes and Lips*, Sisley. Leaflet>

- b. PREVAGE anti-aging treatment contains 0.5% Idebenone (hydroxydecyl ubiquinone) <Prevage, Elizabeth Arden. Leaflet>

Both extracts contain fairly long words whose structure is so unfathomable to the lay reader as the functional groups responsible for chemical reactions. But when compared, (13a) reveals a more open nature than (13b) thanks to the explanation introduced after the comma, where the addressee learns about the usefulness of the incomprehensible term ‘glycoaminoglycanes’, that is, ameliorating skin appearance and elasticity. (13b) nicely illustrates the level of complexity that can be achieved by scientific language in the texts examined in this paper. The expansion on the word ‘idebenone’, in brackets, turns out to be even more opaque than the original term itself, because it consists of two five-syllable elements of inextricable meaning in what seems a supreme effort to confirm the scientific essence of the product.

4. CONCLUDING REMARKS

This paper has analysed the relevance of scientific language as a persuasive strategy in the advertising of skin-care products. Although this specialised language is strange to the domain of advertising, its choice seems appropriate for various reasons. In the first place, its unexpectedness takes the consumer by surprise. This, in turn, helps advertisers to observe one of the basic rules guiding their job: the effort to differentiate some products from others in a market that has become highly competitive. Once established, the connection between skin-care products and science is not far-fetched if we consider that the beauty product results from mixing certain components, in different proportions, determined by a formula, and whose practical purpose is to improve the user’s skin condition. Moreover, couching their claims in scientific language helps advertisers to overcome the social feeling of distrust advertising is often faced with. Generally, common people entertain positive thoughts about science and scientists themselves, which will be automatically inherited by the goods being promoted under such scientific perspective.

We have argued that the persuasive function of scientific language in skin-care advertising rests on three key aspects: to use science as a source of credibility, to benefit from the social impact of science thanks mainly to the media in its role as scientific knowledge disseminator and, finally, to take advantage of the opacity of specialised terms for the layperson. Paradoxically enough, the conceptual complexity, added to the semantic complexity inherent in a vocabulary derived, to a large extent, from Greek and Latin, does not prove detrimental to persuasive communication. In fact, according to the theoretical approach adopted, the demands of extra processing effort are amply rewarded with contextual effects. Such contextual effects will rebound to the benefit of the consumers’ perception of the product and, in the end, will make women more willing to pay a good amount of money for a promised better look!

NOTE

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REFERENCES

- Alcaraz, E. 2000. *El Inglés Profesional y Académico*. Madrid: Alianza Editorial.
- Ashmore, M., G. Myers and J. Potter. 1995. "Discourse, rhetoric and reflexivity". *Handbook of Science and Technology Studies*. Eds. S. Jasanoff, G. Markle, J. Petersen and T. Pinch. Thousand Oaks: Sage. 321-342.
- Barras, R. 1978. *Scientists Must Write. A Guide to Better Writing for Scientists, Engineers and Students*. London: Chapman and Hall.
- Brown, P. and S. Levinson. 1987. *Politeness*. Cambridge: Cambridge University Press.
- Cabré, M. T. 1999. *Terminology. Theory, Methods and Applications*. Amsterdam: John Benjamins.
- Campanario, J. M., A. Moya and J. C. Otero. 2001. "Invocaciones y usos inadecuados de la ciencia en la publicidad". *Enseñanza de las Ciencias* 19, 1: 45-56.
- Chen, R. 2010. "Pragmatics between East and West: Similar or different?" *Pragmatics across Languages and Cultures*. Ed. A. Trosborg. Berlin: Walter de Gruyter. 167-188.
- Cook, G. 2001 (1992). *The Discourse of Advertising*. London: Routledge.
- Crystal, D. and D. Davy. 1983. *Investigating English Style*. Harlow: Longman.
- Dahl, G. 2007. *Advertising for Dummies*. Indianapolis: Wiley Publishing.
- Dávidová, E. 2011. *Analysis of English Medical Terminology from the Field of Digestive System*. Unpublished Bachelor Thesis. Masaryk University, Brno. [Internet document available at [http://is.muni.cz/th/104783/pedf_b/Bachelor thesis AJ .txt](http://is.muni.cz/th/104783/pedf_b/Bachelor%20thesis%20AJ.txt)]
- Díaz Rojo, J. A. 2002. "La belleza es salud. La medicalización lingüística de la publicidad de los cosméticos". *Contextos* 19-20 (37-40): 109-121.
- Diez Arroyo, M. 2009. "Phraseological units: persuasion and translation". *Revista Alicantina de Estudios Ingleses. Special Issue on Current Trends in Persuasive Discourse* 22: 45-62.
- Džuganová, B. 2002. "A Brief Outline of the Development of Medical English". *Bratislav Lek Listy* 103 (6): 223-227. [Internet document available at <http://www.bmj.sk/2002/10306-07>]
- Fairclough, N. 1992. *Discourse and Social Change*. Cambridge: Polity Press.
- Fuertes Olivera, P. 2007. "El lenguaje de la ciencia y la tecnología". *Las Lenguas Profesionales y Académicas*. Eds. E. Alcaraz Varó, J. Mateo Martínez and F. Yus Ramos. Barcelona: Ariel. 205-217.
- Goddard, A. 1998. *The Language of Advertising. Written Texts*. London: Routledge.
- Hermeren, L. 1999. *English for Sale: A Study of the Language of Advertising*. Lund: Lund University Press.

- Irwin, A. and B. Wynne, eds. 1996. *Misunderstanding Science? The Public Reconstruction of Science and Technology*. Eds. A. Irwin and B. Wynne. Cambridge: Cambridge University Press.
- Irwin, A. and B. Wynne. 1996. "Introduction". *Misunderstanding Science? The Public Reconstruction of Science and Technology*. Eds. A. Irwin and B. Wynne. Cambridge: Cambridge University Press. 1-17.
- Kalame, R. 2012. *Advertising: Using Words as Tools for Selling*. Riga: Lulu Enterprises.
- Leech, G. 2007. "Politeness: Is there an East-West divide?" *Journal of Politeness Research* 3 (2): 167-206.
- Lewestein, B. 1995. "Science and the media". *Handbook of Science and Technology Studies*. Eds. S. Jasanoff, G. Markle, J. Petersen and T. Pinch. Thousand Oaks: Sage. 343-360.
- López Eire, A. 2004. "Retórica y publicidad en la era de la globalización". *Logo, Revista de Retórica y Teoría de la Comunicación* 4 (6): 95-121.
- MacRury, I. 2009. *Advertising*. New York: Routledge.
- Madrid Cánovas, S. 2000. "Palabra e imagen. Problemas semióticos del texto publicitario". *Revista de Investigación Lingüística* 1 (3): 113-155.
- Madrid Cánovas, S. 2005. *Semiótica del Discurso Publicitario. Del Signo a la Imagen*. Murcia: Servicio de Publicaciones de la Universidad de Murcia.
- Madrid Cánovas, S. 2007. *Los Signos Errantes. Estrategias de la Publicidad Gráfica Española 1950-2000*. Murcia: Edit.um.
- Marečková, E., S. František and C. Ladislav. 2002. "Latin as the Language of Medical Terminology: Some Remarks on its Role and Prospects". *Swiss Medical Weekly* 132: 581-587. [Internet document available at <http://www.smw.ch/docs/archive/200x/2002/41/smw-10027.html>]
- Medina Cambrón, A., C. Sorbías Morales and S. Ballano Macías. 2007. "La publicidad y sus complejas relaciones con el discurso científico". *Questiones Publicitarias* 12 (1): 77-90.
- Pérez-Llantada, C. 2012. *Scientific Discourse and the Rhetoric of Globalization. The Impact of Culture and Language*. London: Continuum.
- Robles Ávila, S. 2004. *Realce y Apelación en el Lenguaje de la Publicidad*. Madrid: Arco Libros.
- Santamaría Pérez, I. 2011. "El discurso (pseudo)científico en el lenguaje publicitario español". *Español Actual* 95: 85-112.
- Sperber, D. and D. Wilson. 1995 (1986). *Relevance: Communication and Cognition*. Oxford: Blackwell.
- Taillard, M.-O. 2004. "Adaptive persuasion". *UCL Working Papers in Linguistics* 16: 247-263.
- Tanaka, K. 1999 (1994). *Advertising Language. A Pragmatic Approach to Advertisements in Britain and Japan*. London: Routledge.
- Vestergaard, T. and K. Schrøder. 1985. *The Language of Advertising*. Oxford: Blackwell.

Wierzbicka, A. 2003. *Cross-Cultural Pragmatics: The Semantics of Human Interaction*.
Berlin: Mouton de Gruyter.

COSMETICS FIRMS' WEB SITES:

Christian Dior <http://www.dior.com/>

Estée Lauder <http://www.esteelauder.co.uk/>

La Prairie http://www.laprairie.com/lp/en_uk/main.html

Lancôme <http://www.lancome.co.uk/>

Shiseido <http://www.shiseido.co.uk/>

SkinCeuticals <http://www.skinceuticals.co.uk/>

