

# Iconographic-symbolic analysis model of Corporate Visual Identity (CVI): Application test on pharmaceutical companies in Spain

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## Abstract

This study presents a taxonomy to analyze the Corporate Visual Identity (CVI) through the theoretical construction of iconographic variables. The instrument was validated by an expert panel and a pilot test that examined the CVI of the 50 leading pharmaceutical companies in Spain. The instrument was organized by graphic elements: iconographic sign, linguistic sign, and plastic sign, and helped to catalog the symbolic components of CVI. In the Spanish case, due to its cultural and social context, pharmaceutical brands prefer typographies with no strokes, simple lines, capital letters, and round and medium strokes.

## Keywords

Corporate visual identity; graphic identity; health communication; image; branding

## Modelo iconográfico-simbólico de análisis de la identidad visual corporativa (IVC): prueba piloto en compañías farmacéuticas en España

### Resumen

Se propone una taxonomía para analizar la Identidad Visual Corporativa (IVC) a través de la construcción teórica de variables iconográficas. Se validó el instrumento mediante panel de expertos y prueba de pilotaje que examinó la IVC de las 50 empresas farmacéuticas mejor posicionadas de España. El instrumento fue organizado por elementos gráficos: signo iconográfico, signo lingüístico, y signo plástico, y ayudó a catalogar los componentes simbólicos de la IVC. En el caso español, debido a su contexto cultural y social, las marcas farmacéuticas prefieren tipografías sin retazos, líneas simples, mayúsculas, redondas y de trazo medio.

## Palabras clave

Identidad visual corporativa; identidad gráfica; comunicación de la salud; imagen; branding

## Introduction

In the last two decades, corporate identity has been studied and defined from many perspectives and epistemologies with little consensus on its scope and meanings (Alkibay, Ozdogan and Ermec, 2007). However, there is some agreement that corporate identity and image are fundamental to the differentiation and sustainability of organisations and their reputation, especially in a rapidly changing economic environment, where the number of organisations, products, and service offerings is rapidly increasing as a result of globalisation, transnationalism and the ubiquity of digital marketplaces.

Corporate identity is not only the external representation of an organisation but the set of characteristics that provide differentiation, stability and coherence. Costa (2009) defined corporate identity as a system of visual signs that seeks to distinguish and facilitate the recognition and remembrance of an organization from others, establishing sectorial differentiation, as well as associations of positive connotations and brand awareness. In this sense, this concept encompasses not only the image projected in the form of visual design and communication but also the strategies and culture of the organisation (Cornelissen et al., 2007).

Meanwhile, corporate image is a perceptual construction of an organisation by stakeholders that conditions how they think, relate, and act with it (Dacin and Brown, 2002). The association of the corporate image with group values and expectations for social identification is closely related to corporate identity (Balmer, 2001, 2008; Reinders and Bartels, 2017), which is conceived as the way the brand projects itself with its visual (CVI), behavioural and communicational elements (i.e. advertising, events, direct marketing) (Romeo Rodríguez, 2020). In Frascara's (2000) terms, corporate image is a cognitive task, pure step-by-step thinking, which simplifies complex insights in a knowledge economy.

Corporate Visual Identity (CVI) is defined as the symbolic and iconographic translation of corporate identity. The main elements of CVI are the corporate name, logo, colour palette, font type, and corporate tagline (van den Bosch, de Jong and Elving, 2016). The CVI is generally applied on platforms such as infrastructure, printed materials, advertising, website, social media, corporate clothing, vehicles, and packaging (van Riel and Balmer, 1997), which seeks to standardise the iconographic-visual representation of the entity to gain greater awareness, recognition and visibility from corporate stakeholders (Bolhuis, de Jong and

van den Bosch, 2018) and gain consumer familiarity with the products or services that the brand offers (Melewar and Saunders, 1998; Balmer and Gray, 2000).

In recent years, with the expansion of technology and the emergence of new design trends, many brands have considered the need to relaunch their image profiles through restyling or refreshing strategies that focus solely on modifying the visual aspect of the brand, i.e., its appearance, without delving into changes that require philosophical-business modifications such as the components of the organisational philosophy (Kononenko, 2021).

The presence of organisations in the digital ecosystem and the diversity of channels (e.g., web, social networks, apps) requires that the CVIs adapt to different sizes and resources to offer the user the best browsing experience. Consequently, "responsive and adaptive branding" reaches the most concise forms, eliminating certain elements while the iconic essence remains identifiable with integrity (Meinel & von Thienen, 2016).

## Objectives and Research Question (RQ)

The main objective of this study is to construct, validate and apply an iconographic-symbolic analysis model of Corporate Visual Identity (CVI), examining iconographically the visual identities of the 50 pharmaceutical companies operating in Spain with the best positions in the MERCOR ranking. In this sense, it is a two-way research: the first is to systematise the dimensions and variables of the CVI through an analysis instrument, and the second is to apply the analysis sheet to a sample to determine its usefulness and academic and professional possibilities.

In this regard, the main research question (RQ1) arises: Is it possible to systematize a taxonomy of analysis of Corporate Visual Identity based on theoretical dimensions and indicators? From this initial question, the following subsidiary research questions are structured:

RQ2: Do pharmaceutical brands have common aspects in their iconographic and linguistic signs?

RQ3: Are pharmaceutical companies betting on uniformity with the health sector regarding the plastic sign and chromaticism?

## Theoretical basis: Elements of the Corporate Visual Identity (CVI)

### Iconographic sign

Logos are a fundamental part of the visual identity of brands and companies. They should evoke recognition, affection, and meaning and reflect the

REALITY LEVEL	DEFINITION OF CATEGORY	TYPLOGIES ASSIGNED
HYPER-REALISTIC	It includes all images that, in their attempt to represent the object's properties, cross the boundary of the two-dimensional realm.	<b>The object is visualised through a frame that isolates it (like a product in a shop window), sculptures or holograms.</b>
REALISTIC	All those images that seek to reproduce the referent with a high level of detail within the limitations of the two-dimensional plane.	<b>Photography (either in colour or black and white) and realistic illustrations.</b>
FIGURATIVE NO REALISTIC	Two-dimensional images that alter one or more of the sensible or spatial relationships.	<b>Unrealistic illustrations and silhouettes.</b>
SCHEMATIC	Two-dimensional images that do not include any sensible properties, but there is some relationship criterion, however arbitrary.	<b>Drawings, logos, and symbols.</b>
NON-FIGURATIVE	Two-dimensional images in which all sensible or relational properties are abstracted.	<b>Illustration tending toward pure abstraction.</b>

Table I: Iconicity levels. Source: Own elaboration based on Montes Vozmediano and Vizcaino Laorga (2015).

organisation they represent. It should also elicit positive reactions and have the same meaning in all the people and contexts in which it is presented (Erjansola et al., 2021).

Visual language is constituted as a specific code that allows the correct transmission and understanding of graphic messages (Acaso, 2006) in which different sign systems are interrelated: iconic, plastic and linguistic (Montes Vozmediano and Vizcaino Laorga, 2015). While the iconic sign is the visual iconic-symbolic representation, whose signifier maintains a relationship of analogy with its referent, thus allowing us to recognise some objects present in the real world through this similarity of configuration; the referent, which is the object reflected, is not a particular element but an identifying feature. This phenomenon of allusion covers both the graphic and the linguistic sign (Joly, 2009).

From the concept of iconic modelling of reality, the three functions that represent the relationship between images and their objects of reference appear: representational function - the intention is for the object represented to resemble the real model as closely as possible; symbolic function - images have a double referent, figurative and symbolic; and conventional function - the image as a sign, there is no relationship between the referent and its visual representation (Villafañe, 2006, 2011).

Furthermore, to measure the degree of iconicity of an iconic sign, its isomorphism has to be measured, i.e. the similarity in form between an image and its referent. Montes Vozmediano and Vizcaino Laorga (2015) propose the following taxonomy of the iconicity scale (Table I: Iconicity levels)

### *Linguistic sign*

Today a person can be exposed to the influence of more than 3,000 brands due to the thousands of advertising impacts received every day. This saturation of messages underlies the importance of brand identity and brand image, one of the fundamental parts of an organisation's branding, marketing, and communication strategy (Hontanilla Pizarro, 2020).

Typography, even though it is not considered one of the elements with the most significant impact and immediacy in the visual reaction of consumers, can make a certain brand be perceived in one way or another. One person perceives a typography in a different way than another because the perceptual process that takes place is different for each one of them considering their personal characteristics, age, gender, socio-economic level... (Hontanilla Pizarro, 2020). A number of aspects that influence visual perception from a cognitive perspective and play a very important role in typography preference are: predisposition, ambiguity, familiarity, frequency, significance, context, search, activation, synergy and memory (Dember, 1990).

With the use of different typographic resources, different reactions can be obtained in the compositions, from dynamism, highlighted letters, to new meanings and attraction. These include changes in the baseline, twists and turns, superimpositions or transparencies, cuts and fragmentations of the characters, distortions, digital filters such as blurring, counterforms - which are composed of the space described or contained by the strokes of the form - and substitutions (Martínez, 2014).



Figure 1. Corporate symbols of the top 50 pharmaceutical companies ranked in the 2020 MERCO Healthcare General Ranking. Note: The brands are those appearing on each company's website as of 11 January 2022.

of entities that are strong and instantly recognisable. Consumers unconsciously have a series of knowledge that determines their behaviour beyond what they can consciously express. In this regard, chromatic meanings and their ability to influence the thoughts, feelings and behaviour of consumers, determine their importance in the field of communication, branding, and marketing (Ore Vilchez, Ccama Gutiérrez and Armada Pacheco, 2022).

Llorente, García and Soria (2017), found that the form of colour that is most prevalent in an image has the greatest impact on people's minds. They consider that colours form an active part of our environment and the connotations associated with them are used by experts in different modalities of persuasive communication.

### Materials and method

This research is quantitative in nature, exploratory-descriptive in scope and employs inductive logic (Casula, Rangarajan and Shields, 2021), whereby general conclusions are drawn from particular facts or observations (Casula, Rangarajan and Shields, 2021) (Hernández-Sampieri, Fernández-Collado and Baptista Lucio, 2014; Verma, 2019). In order to achieve the objectives, the technique of non-participant observation will be used, in which the researcher acts impartially and independently of the phenomenon under study in order to provide maximum objectivity and veracity to the data based on the theoretical constructs (Cooper, Lewis and Urquhart, 2004; Handley, Bunn, Lynch and Goodman, 2020).

### Procedure

The contrast of the emerging data is carried out by methodological triangulation, starting with the construction of an analysis sheet based on theoretical variables and their subsequent validation by expert panel. In a second stage, non-participant observation and the analysis of iconographic-symbolic content is carried out by coding the dimensions and variables. This type of contrast of theoretical foundations and iconographic-symbolic praxis will allow us to obtain a sufficient context for the phenomena studied (Calvo-Rubio and Ufarte-Ruiz, 2020), through interpretative practices (Denzin and Lincoln, 2017).

For the initial theoretical construction of the instrument, a review of the scientific and academic literature on the graphic variables of Corporate Visual Identity (CVI) was carried out. To this end, an initial search was carried out in international reference databases (Web of Science and Scopus). Once the theoretical elements of the CVI were determined, they were organised into five dimen-

### Plastic sign

Plastic signs are those non-representational elements of the image. Two types are distinguished: the specific signs of the visual message, such as the framing, which are the components that are part of the visual structure of the message, and the non-specific plastic signs of the visual message, such as colour, lines and shapes, spatiality, among others, which are factors present in our perception of the environment and, therefore, refer directly to the perceptual experience (Montes Vozmediano y Vizcaíno Laorga, 2015).

### Chromaticism

Colour is probably the first element we perceptually register when we first see something (Ambrose and Harris, 2006) and supports the establishment

Company name	Pharmaceutical portfolio	Company name	Pharmaceutical portfolio	Company name	Pharmaceutical portfolio
Gilead	Antivirals	Ipsen	Oncology	Medtronic	Medical devices
Novo Nordisk	Endocrinology	Biogen	Neurology	Ordesa	Nutrition
Amgen	Serious diseases	Alcon	Ophthalmology	Lundbeck	Neurology
Baxter	Nephrology	UCB	Neurology		
Grifols	Hematology	Nestlé	Nutrition		

Table II: Specialized portfolio pharmaceutical companies:

sions: generic variables, iconographic sign, linguistic sign, plastic sign and chromaticism. The first draft of the analysis sheet was designed and sent by e-mail to a panel of 15 experts (5 academics and 10 CVI design professionals).

Once the experts had responded to the survey, validating the variables for the analysis of this study, the data obtained were processed statistically. Firstly, the arithmetic mean was obtained ( $\bar{X}$ ) representing the break-even point of the distribution. As the expert questionnaire had a Likert scale from 1 to 5 for all the questions of each variable, the mean would result in a minimum value of 2.5, so that any indicator obtaining more than this number would be considered to have sufficient weight to be included in the final instrument. All the variables in the survey obtained a mean of more than 2.5, with the total mean ( $\bar{X}$ ) of 4.28.

In relation to the reliability of the instrument, Cronbach's alpha coefficient ( $\alpha$ ) was used, obtaining a result of 0.91, which is considered highly reliable and homogeneous (Tavakol and Dennick, 2011). With regard to the level of inter-expert agreement, the Fleiss Kappa ( $k$ ) concordance measure was used, giving a result of 0.72, a concordance between good and excellent (Tavakol and Dennick, 2011).

Once the analysis instrument was validated, it was applied to the sample through manual coding, carried out between 12 January and 22 April 2022, by a single coder with knowledge of all the dimensions and variables of the CVI included in the taxonomy of analysis.

### Sample

According to the Registry of Pharmaceutical Laboratories of the Spanish Medicines Agency of the Spanish Government, by 2022, 262 companies are registered as manufacturing and importing pharmaceutical products in Spain (AEMPS, 2022). However, many of these registered industries do not have their own trademark (e.g., ge-

neric products) or, alternatively, market the products through third parties.

The purposive sample was taken from the Spanish Corporate Reputation Monitor (MERCOS<sup>1</sup>), which, through a series of surveys of healthcare stakeholders (including patients, doctors, associations and hospital and pharmaceutical company managers), carries out an annual ranking of 100 companies in the sector. From this ranking, the first 50 companies are chosen as a sample (Figure 1), representing half of the total population ( $n=100$ ) and almost a quarter of the study universe ( $n=262$ ).

In this sense, the sample is made up of 12 American, 9 Spanish, 6 German, 4 French, 4 Italian, 4 Swiss, 4 Japanese, 2 Danish, 2 Belgian, 2 English and 1 Israeli companies, all with headquarters or branches in Spain. Of the total, 37 companies have a diverse portfolio, while the remaining 13 are specialised (Table II):

### Instrument and method of analysis

Theoretical variables were defined from the literature reviewed, with categories that are grouped together for reasons of similarity - these variables will be related to the iconic, linguistic and plastic sign. The taxonomy consisted of five dimensions, made up of a total of 29 variables (Table III):

### Results

The analysis of the sample shows that the visual elements of pharmaceutical companies aim to be simple and effective, although there are exceptions of elements that are complex. There are no substantial differences between the Corporate Visual Identity constructions of Spanish and foreign pharmaceutical companies, nor are there significant differences between companies with different portfolios and those with specialised portfolios.

1. Available at: <https://www.merco.info/es/monitor-reputacion-sanitaria-empresas-farmaceuticas>

DIMENSION	VARIABLES	CATEGORIES	DESCRIPTION
GENERIC	Source		Country of origin of the company
	Portfolio	<b>Diverse / Specific</b>	Scope of application of the goods or services of the brand
	Visual identity format	<b>Imagotype / Logo symbol or isologotype / Logotype / Symbol or isotype (Anagram / Initial / Signature / Monogram / Pictogram / Acronym)</b>	Appearance or visual form that brand names have, the different visual formats, in which they can be represented.
	Typology	<b>Descriptive / Contractions / Patronymic / Symbolic / Toponymic</b>	Focused on the name itself of the brands. It studies the origin and reference of the name, answering the question of how the name of the company has been formed: whether it is the name of the founder, or a combination of several words.
	Layout of the elements	<b>Sign below and text above / Sign above and text below / Sign right and text left / Sign left and text right / Sign in the middle of the text / Sign only / Text only / Text inside the sign</b>	Visual order of the composition as a whole, from the analysis of the arrangement of the elements that form it.
	Spatial dimension	<b>1 Dimension / 2 Dimensions / 3 Dimensions</b>	Spatial dimension presented by the different designs of the identities on the surface of the plane.
ICONOGRAPHIC SYMBOL	Degree of iconicity	<b>Schematic / Non-realistic figurative / Non-figurative / Realistic</b>	Degree of resemblance or similarity of graphic representations to reality
	Graphic allusion	<b>Other / Product or service (Medication, Health, Pharmaceutical) / No graphic allusion</b>	Measures the degree to which the symbol of an organisation's visual identity is able to allude to any aspect related to the sector.

Table III: Theoretical constructs-based analysis instrument. Part 1

### Generic dimension

The most recurrent visual identity format in the sample studied was the imagotype (n=30), followed by the isologotype (n=10) and the logotype (n=10). However, there were significant differences in the layout of the elements, as 46% of the sample studied had a sign on the left and text on the right, while 24% had only text in their visual construction. The most recurrent typology is the patronymic (n=17), which together with the patronymic/contractions (n=3), represents 40% of the sample, followed by contractions (n=10) (Figure 2). Although most of the visual constructions are based on simplicity, the study of the graphic origin shows that they are generational companies with a long tradition.

### Iconographic symbol

The majority (n=32) of the CVI symbols studied have no graphic allusion, although those that do (n=18) are mostly related to pharmacy, chemistry or health (Figure 3). In relation to the level of

iconicity, 52% of the sample is non-figurative, 26% schematic, 20% Non-realistic figurative, and only one case (Lundbeck) is realistic, with the representation of a star of the sky (Figure 4).

### Linguistic Sign

Regarding the number of words in the main text, 82% of the sample (n=41) had only one word, while 8 had 2, and only one had three words in the main text (Bristol Myers Squibb). Regarding family typology, representation of the typograph, and character size, the results were as follows (Table IV).

In terms of additional text, only 3 companies (6%) have opted for descriptive or exploratory texts and 8 (16%) for slogans accompanying the symbol. Of these 11 additional texts, the majority (n=8) are small, while 2 are medium and only one case (Italfarmaco) has the additional text large.

Regarding the Character style of the main text, according to shaft inclination most brands prefer round (n=42), followed by italic (n=8). According to thickness, the preference is for Bold (n=38), while

Number of words in the main text		<b>0 / 1 / 2 / 3 or more</b>	Number of words that make up the main text of the visual identity	
Family typology typography		<b>Decorative or fantasy / Egyptian / Handwriting / Handwriting / Incised / Roman / Palo Seco</b>	Type of typeface family to which the main text of the composition belongs, according to its morphological characteristics.	
LINGUISTIC SIGN	Representation of the typographic character		<b>Capitals / Uppercase / Lowercase / Upper and lowercase / Small Capitals</b> Manifestations that characters can take based on their morphological characteristics of size and shape. Applies to main and additional text.	
	Additional text		<b>Existing (Slogan / Descriptive or explanatory text) / Non-existent</b> It takes into account the existence or non-existence of an additional text, which accompanies the main text in the composition. This can be a slogan or personal claim.	
	Character size (main text)		<b>Large / Medium / Small</b> Scalable size that the characters of the main text typography can have.	
	Character size (additional text)		<b>Large / Medium / Small</b> Scalable size that the characters of the additional text typography can have.	
	Character style (main text) Depending on thickness Depending on the axle structure	Depending on the inclination of the axis	<b>Italic / Round</b>	Typefaces that can take the characters of the main text according to 3 fundamental parameters: axis, width, and structure.
		<b>Bold / Light / Regular</b>		
		<b>Condensed / Balanced / Expanded</b>		
	Justification resources Tracking Kerning	Space between words	<b>Balanced / Scarce / Exaggerated / No 2 or more words</b>	Methods that were applied to the main text to adjust the spacing of the composition.
		<b>Positive / Negative / None</b>		
		<b>Existing / Non-existing</b>		
	Line spacing		<b>Balanced / Scarce / Excessive</b>	Space between two lines of text.
	Text alignment		<b>Right Aligned / Left Aligned / Centred / Justified</b>	Text alignment in the layout.
	Additional typographic elements		<b>Existing (Number / Punctuation and miscellaneous characters / Diacritical marks) / Non-existing</b>	Existence or non-existence of additional elements in the composition.
Additional typographic resources		<b>Existing (Alteration of character structure / Typographic architectures / Change of baseline / Counterform / Twists and turns / Other / Overlays / Substitution / Transparencies /) / Non-existent</b>	Presence in the composition of different techniques that enhance the qualities of typography adding dynamism and value to the whole.	
Textual allusion		<b>Health / Product or service / Pharmaceutical sector / Safety / No verbal allusion</b>	Presence of sectoral support words in the IVC	
Text language		<b>German / Spanish / French / English / Portuguese / (Insert another language)</b>	Language in which the text is written in the composition	

Table III: Theoretical constructs-based analysis instrument. Part 2.

PLASTIC SIGN	Type of line (Existing / Non-existing)	According to its shape	<b>Curves / Lines</b>	Types of lines that may be present in the composition.
		According to its disposition	<b>Horizontal / Oblique / Vertical</b>	
	Graphic sign (Existing / Non-existing)	Type of shapes	<b>Abstract / Basic Shapes</b> (Circle / Cross / Square / Arrow / Triangle) / <b>Figurative</b> (Artificial / Natural / Verbal)	Types of shapes and forms that may be present in the composition.
		Type of figures	<b>Calligraphic / Geometric / Organic</b>	
CHROMATISM	Typology of chromatic colours (Hue)	Depending on the shade	<b>Primary</b> (Insert Colours) / <b>Secondary</b> (Insert Colours) / <b>Tertiary</b> (Insert Colours)	Types of chromatic and special colours in composition.
		According to saturation Depending on the brightness	<b>Muted colours / Vivid colours</b>	
			<b>Light colours / Intermediate colours / Dark colours</b>	
	Chromatic resources	Other colour combinations	<b>Analogue / Complementary / Contrast / Neutrals</b>	Chromatic combinations or adjustments present in the composition to create contrast.
		Chromatic adjustments	<b>Range Harmony</b> (Warm / Cool) / <b>Mono-chrome Harmony</b>	
	Number of colours		<b>1 colour</b> (Monochrome) / <b>2 colours</b> (Dyad) / <b>3 colours</b> (Triad) / <b>4 or more colours</b>	Total number of colours present in the composition.
	Combination of colours		<b>Only achromatic / Only chromatic / Both achromatic and chromatic</b>	Combinations of colours that can occur in the composition.
	Achromatic colours		<b>White / Greyscale / Black</b>	Presence of colours that are not part of the colour spectrum.
Colour location		<b>Graphic elements / Background and graphic elements</b>	The place in the composition where the colour is present.	

Table III: Theoretical constructs-based analysis instrument. Part 3.

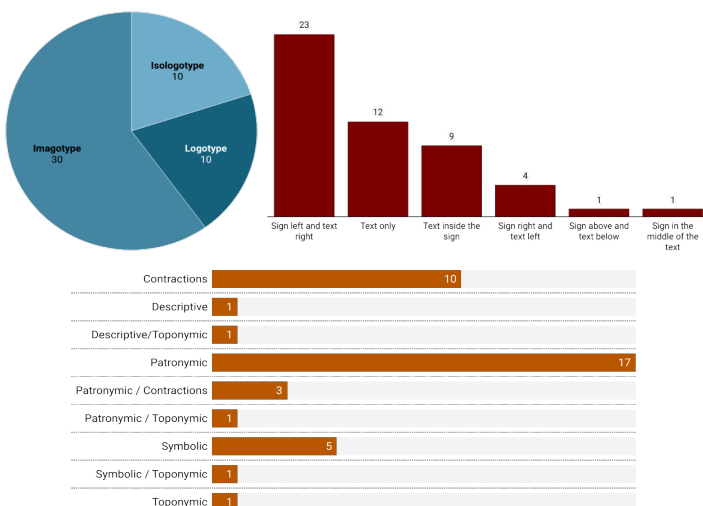


Figure 2. Categories of generic IVC elements in the sample.

the remaining 12 cases are distributed between regular and thin. Depending on the shaft structure, most cases opt for balanced (n=33), followed by condensed (n=11) (Figure 4).

In terms of justification resources, there is only one case (Astra Zeneca) with negative tracking, and 4 brands with existing kerning (Pfizer, Amgen, Chiesi, and Lundbeck). Regarding the space between words, 35 brands opted for the simplicity of no 2 or more words, 12 balanced, 2 exaggerated (Ferrer, and Fresenius Kabi), and only one scarce (Nestlé).

With respect to line spacing, 36 companies (72%) choose not 2 or more lines, 8 (16%) choose balanced, 4 choose excessive (Esteve, Angelini Pharma, Fresenius Kabi, and Otsuka), and only 2 cases are scarce (Kern Pharma, and Ipsen).

About text alignment, 36 companies prefer not to align the text, while 9 align it to the left, 4 jus-



FAMILY TIPOLOGY (FONTS)	n	CHARACTER SIZE	n
Palo Seco	38	Large	18
Decorative or fantasy	5	Medium	19
<b>Incised</b>	3	Small	13
Handwriting	2		
Roman	2		
Representation	<b>n</b>		
UPPERCASE	21		
Upper and Lowercase	19		
lowercase	10		

Table IV. Family tipology, representation of the typograph














SYMBOL	REPRESENTATION	SYMBOL	REPRESENTATION
	DNA coil		Mortar
	DNA coil		Diagram
	Pill		Lab Flask
	Balance		Apis Bull
	Hexagon as a symbol in chemistry		Ingelheim Palace
	Cross		Gilead Tree Leaf
	Cross		

Figure 3. Some symbols of the sample with graphic allusions

tify the alignment (Esteve, Ipsen, Italfarmaco, and Nestlé), and only one centers it (Kern Pharma).

With reference to the indicators additional typographic elements, and additional typographic resources, there are exceptional cases in which they are present, which is why they are not statistically representative of the totality of the sample under study. With regard to textual allusion, the majority also chooses not to make any verbal allusion, except for 9 cases, whose allusions are to health or the pharmaceutical sector (Figure 5).

Logically, the language of the linguistic sign depends directly on the country of origin of the brand, correlated to the fact that most of the naming in the sample are patronymic (see Figure 2).

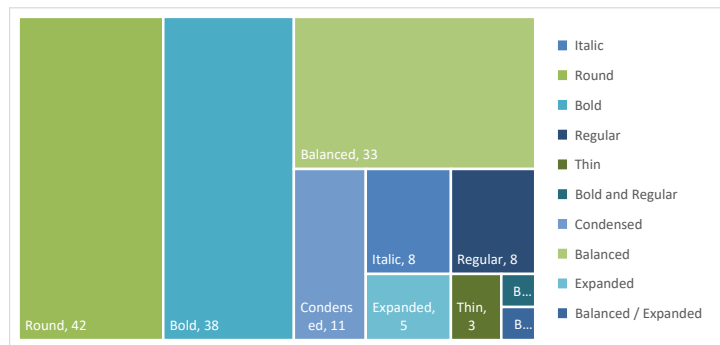


Figure 4. Character style (main text)

*Plastic sign*

In 19 cases of the sample, no lines were evident in the composition. Of the remaining cases (n=31), the lines and curves are almost equally distributed, although in terms of arrangement, the vast majority (n=19) are vertical (10) or oblique (9) (Figure 6).

As far as the graphic sign is concerned, half of the sample (n=25) had no shapes of any kind, while in the remaining half (n=11) opted for basic shapes (circles, squares, rectangles, hexagons), while in 11 cases there were also natural and artificial figurative shapes. In only 3 cases abstract shapes were used (Otsuka, Astellas, and Ferrer).

As for types of figures, 39 brands (78%) did not use any figures, although in the cases that did use figures, the majority (n=10) were geometric figures. Only one company (Menarini) opted for a calligraphic figure in its logo-symbol.

*Chromatism*

Most of the symbolic constructions of the CVI of

		 Inspired by patients. Driven by science.
		 SHARING EXPERTISE
		

Figure 5. Brands with textual allusion

Spanish pharmaceutical companies studied use primary (n=18) and tertiary (n=10) colours, while the combination of primary and tertiary colours (n=5) -mainly blue and green- and of primary, secondary and tertiary colours (n=4) -mainly black, blue and green- are the most frequently repeated (Figure 7).

As can be seen in Figure 5, blue is the dominant colour in most cases (n=27), followed by green

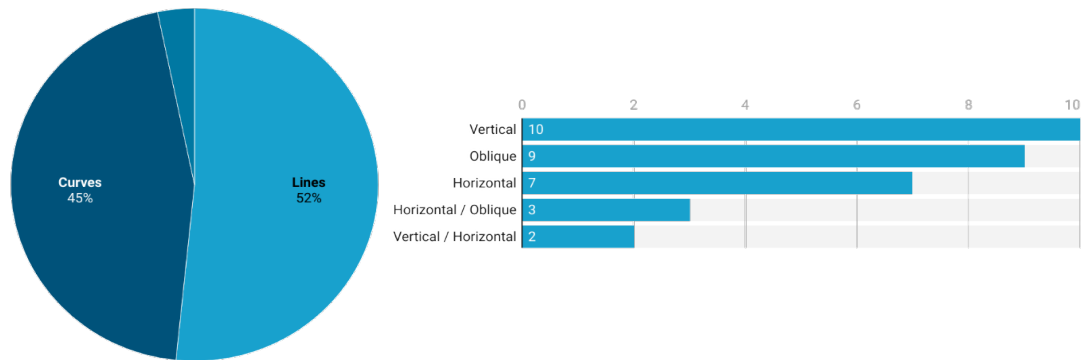


Figure 6. Type of line

(n=9), and red (n=6). Although it is logical that the prevailing colours would be blue and green, which are very common in companies in the health sector. Red appears in pharmaceutical companies of different types (diverse portfolio, nutrition, medical devices), with no significant differences by production sector.

In relation to saturation, only 5 cases have muted colours in their composition (Otsuka, Astellas, Menarini, Abbvie, and MSD). With regard to brightness, intermediate colours account for 39 cases, while dark colours account for the remaining (n=11).

Regarding the category chromatic resources / other colour combinations, 14 visual brands show analogue colours, while one only by contrast (Novartis), and one complementary (Astra Zeneca). Regarding chromatic adjustments, 12 show range harmony, 2 monochrome harmony (Pfizer and Janssen) and 2 harmony by contrast (Novartis and Astra Zeneca).

In terms of the number of colours, more than half of the sample (n=26) is monochromatic, while dyads represent 13 cases. Blue and green colours stand out, as well as the combination of both with black, mixing two shades of blue or green with different degrees of luminosity. The presence of whites, blacks or greyscales is also evident in 16 marks, as achromatic colours.

The majority (n=46) of the colour location is in the graphic elements, while the remaining 4 are both in the background and in the graphic elements.

### Conclusions and discussion

The main objective of this research was to construct an iconographic-symbolic analysis model of Corporate Visual Identity (CVI), designed on the basis of theoretical variables collected from a liter-

ature review and validated by expert judgement, in order to subsequently execute the iconographic taxonomy on a pilot sample of the main 50 companies in the pharmaceutical sector in Spain. The usefulness of this study is twofold: the first is to offer a system for analysing IVC, a pending task for the academic community, and the second is to determine, through an applicability test, the relevance of the model.

In this sense, answering the first research question (RQ1), the theoretical implication of the present research lies in offering a set of dimensions, variables and indicators of CVI with which to carry out iconographic analyses, while the practical utility is very broad and ranges from offering an ordered framework of symbolic construction elements for graphic designers, and corporate and business communicators, to offering the different productive sectors studies of their graphic elements. Considering, the impact this has on the consumer in an unconscious way has a determining effect on their behaviour (Ore Vilchez, Ccama Gutiérrez, and Armanda Pacheco, 2022).

After the application test, it has been observed that, in part, the pharmaceutical sector makes use of some typographic and chromatic resources that are very common in digital design (RQ2). The sector's priority to be direct and simple so as not to disconcert the user is achieved mainly by means of a typography without finials, simple strokes and of medium thickness, as opposed to other more visual styles such as bold but which would overload the user's sight more. The generalised use of chromatic dyads and triads was also clearly evident, complying with the recommended range of colour quality so as not to overload the designs excessively.

Furthermore, it is worth highlighting the use of colours related to the field of health (RQ3), such

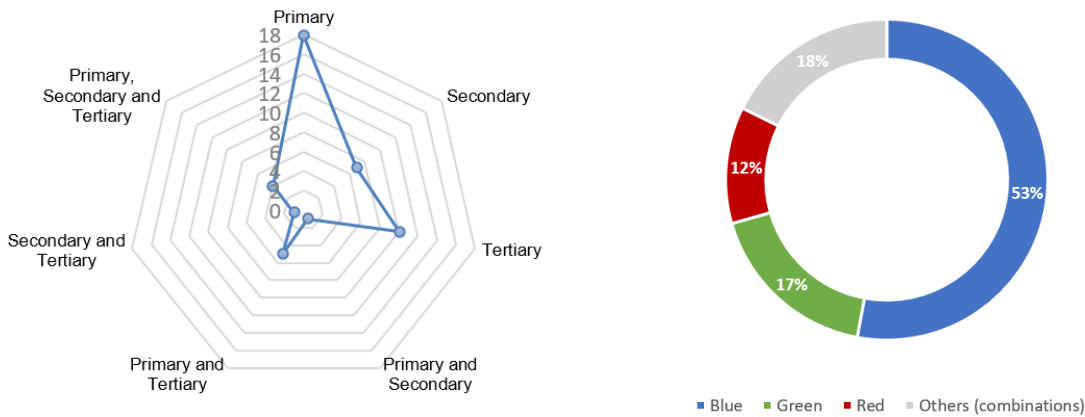


Figure 7. Shade of the chromatism of the sample brands

as green and blue (mostly monochromatic), as well as scales of grey, black and white, leaving completely absent the use of any other typology that could clash with the personality of the industry, showing that the pharmaceutical companies give importance to values such as tranquillity, confidence, closeness and mobility, psycho-chromatic sensations that these colours are capable of transmitting (Ambrose y Harris, 2006; Heller, 2008).

Most brands have opted for the use of imago-types, given that the combination of both elements (text and image) can greatly reinforce the identification of companies with their stakeholders. It is accompanied by simple geometric shapes, few additional and decorative resources, with a sign on the left and text on the right, patronymic typologies and a non-figurative level of iconicity.

However, some are determined to introduce more colour into their visual identities, especially to play with contrast (e.g., Novartis, Astra Zeneca, GSK, and Lundbeck), and the use of contractions; a recent trend towards minimalism based on basic lines and shapes is increasingly present, allowing organisations and professionals to create simple but functional logos, with a great deal of meaning and implicit qualities that lines and shapes are able to bring to designs.

Following Meinel & von Tienen (2016), it would be interesting to eliminate superfluous elements that do not provide a specific value and keep the

icons that make the brand easily recognizable. With the analysis of the main brands some general design recommendations can be made. The use of imago-types and iconographic symbols facilitates brand recognition, while if it is accompanied by text it is preferable that it be a single word, with rounded and bold characters, which facilitates its application in different formats. Regarding color, most of them tend to use primary colors, monochromatisms and blue stands out as a representative color of the pharmaceutical area.

One of the limitations of the study is observed in the selection of the sample, since the MERCO ranking is a business monitor of corporate reputation. Therefore both the order and the presence of pharmaceutical companies are conditioned by this factor. On the other hand, only one human coder was used to carry out the analysis with the validated instrument, so despite having specialized training and experience, more coders could have been used to verify the reliability between them.

This study opens the door to some interesting lines of future research, such as the application of the taxonomy of analysis to companies in different sectors to study their identities and verify their usefulness in various fields of action of the organisations, or even extrapolate the study to the international pharmaceutical sector, which would also represent a revolution and a notable advance in the application of graphic design for the sector from all perspectives.

## References

- AEMPS (2022). *Registry of Pharmaceutical Laboratories in Spain*, <https://labofar.aemps.es/labofar/registro/farmaceutico/consulta.do#nav-no>, accessed 20 March 2022.
- Acaso, María (2006). *El Lenguaje visual [Visual Language]*. Barcelona: Paidós Ibérica.
- Alkibay, Sanem, Ozdogan, Bahar, and Ermec, Aysegul (2007). Corporate Visual Identity: A Case in Hospitals. *Health Marketing Quarterly*, 24(3/4), pp. 131-149. doi: 10.1080/07359680802125204
- Ambrose, Gavin, and Harris, Paul (2006). *Color*. Barcelona: Parramón.
- Balmer, John M.T. (2001). Corporate identity, corporate branding and corporate marketing: Seeing through the fog. *European Journal of Marketing*, 35(3/4), pp. 248-291. doi: 10.1108/03090560110694763
- Balmer, John M.T. (2008). Identity based views of the corporation Insights from corporate identity, organisational identity, social identity, visual identity, corporate brand identity and corporate image. *European Journal of Marketing*, 42(9/10), pp. 879-906. doi: 10.1108/03090560810891055
- Balmer, John M. T. and Gray, Edmund R. (2000). Corporate identity and corporate communications: Creating a competitive advantage. *Industrial and Commercial Training*, 32(7), pp. 256-262. doi: 10.1108/00197850010379811
- Bolhuis, Wendy, de Jong, Menno D.T. and van den Bosch, Annette L.M. (2018). Corporate rebranding: Effects of corporate visual identity changes on employees and consumers. *Journal of Marketing Communications*, 24(1), pp. 3-16. doi: 10.1080/13527266.2015.1067244
- Cabrera Martínez, Octavio (2018). The Evolution of the Prosumer and Brands in the ICT era. *Kepes*, 15(17), pp. 119-150. doi: 10.17151/kepes.2018.15.17.6
- Calvo-Rubio, Luis M., and Ufarte-Ruiz, María J. (2020). Perception of teachers, students, innovation managers and journalists about the use of artificial intelligence in journalism. *Profesional de la información*, 29(1), pp. e290109. doi: 10.3145/epi.2020.ene.09
- Capriotti, Paul (2009). *Branding Corporativo. Fundamentos para la gestión estratégica de la Identidad Corporativa [Corporate Branding. Fundamentals for the strategic management of Corporate Identity]*. Santiago de Chile: Andros Impresores.
- Capriotti, Paul (2013). *Planificación estratégica de la Imagen Corporativa [Strategic planning of the Corporate Image]*. Santiago de Chile: Andros Impresores.
- Casula, Mattia, Rangarajan, Nandhini, and Shields, Patricia (2021). The potential of working hypotheses for deductive exploratory research. *Quality and Quantity*, 55(5), pp. 1703-1725. doi: 10.1007/s11135-020-01072-9
- Cooper, J., Lewis, R., and Urquhart, C. (2004). Using participant or non-participant observation to explain information behaviour. *Information Research*, 9(4).
- Cornelissen, Joep, Haslam, Alexander, and Balmer, John (2007). Social Identity, Organizational Identity and Corporate Identity: Towards an Integrated Understanding of Processes, Patternings and Products. *British Journal of Management*, 18(s1), pp.1-16. doi: 10.1111/j.1467-8551.2007.00522.x
- Costa, Joan (2009). *Identidad Corporativa*. Ciudad de México: Trillas.
- Dacin, Peter A., and Brown, Tom J. (2002). Corporate Identity and Corporate Associations: A Framework for Future Research. *Corporate Reputation Review*, 5(2/3), pp. 254-263. doi: 10.1057/palgrave.crr.1540178
- Dember, William (1990). *Psicología de la percepción [Psychology of perception]*. Madrid: Alianza Editorial.
- Denzin, Norman, and Lincoln, Yvonna S. (2017). *The SAGE handbook of qualitative research*. Thousand Oaks: SAGE Publications.
- Erjansola, Ari-Matti, Lipponen, Jukka, Vehkalahti, Kimmo, Aula, Hanna-Mari. and Pirttilä-Backman, Anna (2021). From the brand logo to brand associations and the corporate identity: visual and identity-based logo associations in a university merger. *Journal of Brand Management*, 28(3), pp. 241-53. doi: 10.1057/s41262-020-00223-5
- Frascara, Jorge (2000). Information design and cultural difference. *Information Design Journal*, 9(2-3), pp. 119 - 127. doi: 10.1075/id-j.9.2-3.03fra
- Handley, Melanie, Bunn, Frances, Lynch, Jennifer, and Goodman, Claire (2020). Using non-participant observation to uncover mechanisms: Insights from a realist evaluation. *Evaluation*, 26(3), pp. 380-393. doi: 10.1177/1356389019869036
- Heller, Eva (2008). *Psicología del color. Como actúan los colores sobre los sentimientos y la razón [Color psychology. How colors act on feelings and reason]*. Irún: Gustavo Gili.
- Hernández Sampieri, Roberto, Fernández Collado, Carlos, and Baptista Lucio, Pilar (2014). *Metodología de la investigación [Research*

- Methodology*] (6th ed.). Ciudad de México: McGraw-Hill.
- Hontanilla Pizarro, Beatriz (2020). El papel de la tipografía en la percepción de una marca [The role of typography in brand perception]. *Grafica*, 8(16), pp. 11–20. doi: 10.5565/rev/grafica.158
- Joly, Martine (2009). *La imagen fija [The fixed image]*. Buenos Aires: La marca editora.
- Kononenko, Oksana (2021). Theoretical aspects of the organisation brand management. *Innovative Technologies and Scientific Solutions for Industries*, 15(1), pp. 76-82. doi: 10.30837/ITSSI.2021.15.076
- Llorente Barroso, Carmen, García García, Francisco, and Soria Jiménez, Virginia (2018). Comparative analysis of chromatic symbology in advertising. NIKE in China and Spain. *Vivat Academia*, (142), pp. 51-78. doi:10.15178/va.2018.142.51-78.
- Melewar, T.C. and Saunders, John (1998). Global corporate visual identity systems: Standardisation, control and benefits. *International Marketing Review*, 15(4), pp. 291-308. doi: 10.1108/02651339810227560
- Martínez, Chus (2014). *Manual de recursos tipográficos: Una guía para experimentar con tipografía [Handbook of Typographic Resources: A Guide to Experimenting with Typography]*. Valencia: Campgràfic.
- Meinel, Christoph, and von Thienen, Julia (2016). Design Thinking. *Informatik-Spektrum*, (39), pp. 310–314. doi: 10.1007/s00287-016-0977-2
- MERCO (2020). *Ranking of pharmaceutical companies in Spain*, <https://www.merco.info/es/monitor-reputacion-sanitaria-empresas-farmaceuticas> accessed 20 March 2022.
- Montes Vozmediano, Manuel J. and Vizcaíno-Laorga, Ricardo (2015). *Diseño gráfico publicitario [Advertising Graphic Design]*. Madrid: Omipress.
- Ore Vilchez, Lizbeth M., Ccama Gutiérrez, Lizbeth, and Armada Pacheco, José M. (2022). Neuro-marketing strategies in advertising campaigns for companies in the restaurant sector in Huancaayo-Peru. *Revista de Ciencias Sociales*, 28(1), pp. 322-333.
- Reinders, Machiel J. and Bartels, Jos (2017). The roles of identity and brand equity in organic consumption behavior: Private label brands versus national brands. *Journal of Brand Management*, 24(1), pp. 68-85.
- Romero-Rodríguez, Luis M. (2020) *Manual de Gestión de la Comunicación Corporativa [Handbook of Corporate Communication Management]*. Madrid: Tecnos.
- Tavakol, Mohsen, and Dennick, Reg (2011). Making Sense of Cronbach's Alpha. *International Journal of Medical Education*, (2), pp. 53-55. doi: 10.5116/ijme.4dfb.8dfd
- van den Bosch, Annette L.M., de Jong, Menno D.T., and Elving, Wim J.L. (2016). Managing corporate visual identity: Exploring the differences between manufacturing and service, and profit-making and nonprofit organisations. *Journal of Business Communication*, 43(2), pp. 138-157. doi: 10.1177/0021943605285476
- van Riel, Cees B.M. and Balmer, John M.T. (1997). Corporate identity: The concept, its measurement and management. *European Journal of Marketing*, 31(5), pp. 340-355. doi: 10.1108/eb060635
- Verma, J.P. (2019). *Statistics and Research Methods in Psychology with Excel*. Berlin: Springer.
- Villafañe, Justo (2006). *Introducción a la teoría de la imagen [Introduction to image theory]*. Madrid: Pirámide.
- Villafañe, Justo (2011). *La gestión profesional de la imagen corporativa [Professional corporate image management]*. Madrid: Pirámide.
- Whelan, Bride M. (1994). *La armonía en el color. Nuevas tendencias. Guía para la combinación creativa de colores [Harmony in color. New trends. Guide for the creative combination of colors]*. Santander: Somohano
- Wong, Wucius (1996). *Principles of Color Design: Designing with Electronic Color*. New York: John Wiley & Sons.

