

Guadalupe Posada: graphic designer. Analysis of Cover No. 29. Colección de canciones modernas "La serpentina"

Guadalupe Posada: diseñador gráfico. Análisis de la portada No. 29. Colección de canciones modernas "La serpentina"

María de la Concepción Hurtado Abril FIRST AUTHOR AND CORRESPONDING AUTHOR CONCEPTUALIZATION – FORMAL ANALYSIS RESEARCH – METHODOLOGY SUPERVISION VALIDATION VISUALIZATION – WRITING maria.hurtado@unison.mx Universidad de Sonora Hermosillo, Sonora, México ORCID: 0000-0002-1340-3269 José de Jesús Flores Figueroa second author conceptualization – formal analysis research – methodology – supervision validation – visualization – writing jose.flores@uacj.mx Universidad de Sonora Hermosillo, Sonora, México ORCID: 0000-0001-6266-5946

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♦ Abstract

Mexican graphic design has existed for only a few decades as a discipline and is constantly being reconfigured. The new lines of research of Design tend to identify the key actors in the building of the discipline and its contribution to the national identity. This is the case of Guadalupe Posada, recognized in different creative disciplines. This analysis aims to establish him as an active agent of the emergence of the graphic design in Mexico during the 19th century. In addition, it also seeks to reclaim his legacy and work from the design perspective, through the presentation of an argument based on the use of efficiency, functionality and suitability for print in his projects, all of which are objectives of visual design. For this purpose, the graphic design critique proposal established by Flores-Figueroa (2020) was used, which consists of four axes: functional judgment, formal description stage, conceptual description and relationship analysis. This discussion led to the conclusion that Posada practiced graphic design across different areas of action. It was also concluded that he executed his projects efficiently from a graphic design perspective.

Keywords: Guadalupe Posada, Mexican graphic design, graphic design, editorial design, design research, functionality

🛠 Resumen

El diseño gráfico mexicano tiene pocas décadas de existencia como tal y se encuentra en constante reconfiguración. Las nuevas líneas de investigación del Diseño tienden a identificar a los actores clave en la construcción de la disciplina y su aportación a la identidad nacional. Este es el caso de Guadalupe Posada, reconocido en diferentes disciplinas creativas. Este análisis pretende establecerlo como agente activo del surgimiento del Diseño Gráfico en México durante el siglo xix. Además, busca reivindicar su memoria y trabajo desde la perspectiva del diseño, mediante la exposición de una argumentación a través de la eficiencia, funcionalidad y factibilidad de impresión en sus proyectos, todos objetivos del diseño visual. Para ello, se empleó la propuesta de crítica de diseño gráfico establecido por Flores-Figueroa (2020), que consiste en cuatro ejes: el juicio funcional, la etapa de descripción formal, la etapa de la descripción conceptual y la etapa del análisis de las relaciones. Esta discusión llevó a concretar que Posada ejerció la disciplina del Diseño Gráfico en sus diferentes áreas de acción. Asimismo, se concluyó que ejecutó los proyectos eficientemente, desde la perspectiva del Diseño Gráfico.

Palabras clave: Guadalupe Posada, diseño gráfico mexicano, Diseño Gráfico, diseño editorial, investigación en diseño, funcionalidad

Introduction

he invention of the Gutenberg printing press in the 15th century lead the way to new professions such as editorial design, typographic design an illustration. In the middle of the 18th century, a multidisciplinary group of editors, illustrators and printers was established in the printing press of Mexico (Troconi, 2010). This group contributed to the spreading of different social, cultural, economic and political topics of the 18th and 19th centuries.

Thus, in the 19th century great exponents of the graphic arts were born. One of them was Guadalupe Posada, recognized as a popular engraver, whose works have been the subject of diverse interpretations (Becerra, 2014). Several documents after Posada's death, such as the one by anthropologist Anita Bernner in 1925 and the one by Frenchman Toor, Paul O'Higgins and Blas Venegas in 1930, "made him a reference for artists of the time" (Becerra, 2013, p. 2).

Troconi (2010) even points put that the works of Manuel Manilla and José Guadalupe Posada, directed by editor Antonio Vanegas Arroyo, are great references for the Mexican graphic design. Although Troconi introduces Posada into design, his contributions have mostly been studied in fields other than graphic design, such as social sciences and plastic arts. It is notorious the lack of exploration and analysis of his compositions from a graphic design perspective.

It is important to note that Posada was not a graphic designer, since that profession was not yet consolidated. Garone (2011) points out that the illustrators who worked in printing presses were called "draftsmen." The purpose of this analysis is to reconfigure his work from a deeper study of his works from the perspective of graphic design, an emerging profession by 1910, although some authors already identify him as part of the origins of this discipline (Garone, 2011; Troconi, 2010.) The study of his works is considered relevant through the presentation of objective arguments related to graphic design with the valuation of a visual piece, considering elements such as efficiency, functionality and execution of his projects. The document herein is committed to the social and scientific responsibility of new research on graphic design, analyzing the history in search of objective assessments and measurements. Especially, in the reconstruction of an exponent like Posada, not from the perspective of a plastic artist, but from a discipline that in his time had not yet been baptized with the name by which we know it today: graphic design. In the following paragraphs, based on historical references and authors' arguments, the criteria postulated in this research are pointed out.

State of the Art

In the 19th century, technological changes occurred, such as chromolithography printing (Garone, 2011). This allowed greater accessibility and speed in the production of signage used to create titles and illustrations in editorial compositions of the time. It also allowed "books, newspapers, and all sorts of minor printed materials to begin being produced, alternatively, by artists, craftsmen, and printers" (Garone, 2011, p. 77). As the demands for mass consumer goods increased, alternative approaches to commercial production emerged to meet these needs (Garone, 2011). Technological advances in image production in print media enabled the acquisition of technological skills needed to meet new challenges. At the same time, those referred to as draftsmen also participated in other types of projects, such as product and advertising design, even though these practices had not yet been given those names. However, it can be said that the draftsmen and illustrators were the predecessors of these new fields.

At this point, it is important to keep in mind that although Posada is now mostly recognized as a caricaturist, cartoonist, painter, engraver and illustrator, most of his works in the late 19th century and early 20th century were more rooted in the commercial and promotional field than in the artistic and visual arts fields.

Posada created a vast portfolio of work, which many authors identify as the inspiration for post-revolutionary Mexican art (Becerra, 2014; Reyes, 2018; Ríos, 2007). Nonetheless, his early work was in a different context: that of the printed editorial design, as by the late xix century, printing presses in Mexico had already become well-established for communication and the spread of ideas.

Troconi (2010) states that it was in the workshop of "José Trinidad Pedroza in 1868" (p. 21) where Posada developed his skills as an engraver. Later, he was tasked with expanding the newspaper in Leon, where he developed his skills as an illustrator. After moving to Mexico City, he worked in various print workshops, including: ""La Patria Ilustrada, Revista de México, El Ahuizote, Nuevo Siglo, Gil Blas, El Hijo del Ahuizote, among many others" (Cuevas, 2022, p. 11). It is worth mentioning that Posada's position as draftsman required printing skills, aesthetic knowledge and precision in executing various graphic techniques. His role involved solving communication challenges in different print projects, each with narrative and commercial demands. Through this, he established himself as a draftsman, fully engaged in a profession that would not be formally recognized as graphic design in Mexico until 1968.

A forerunner of graphic design in the 19th century

Since this analysis is based on the perspective of design and this encompasses a wide range of categories, it becomes necessary to clarify how graphic design is defined. First, some authors define design as a project-oriented discipline that involves specific processes and methods (Costa, 2014; Margolin, 2005). Thus, it is a way of solving problems that requires planning and the use of various techniques and methodologies.

Based on this, Posada's works align with the field of graphic design, since, as Costa (2014, p. 90) notes, focusing on graphic communication means "giving intelligible form to ideas... making them visible and tangible." Flores-Figueroa and Balderrama (2014) state that graphic design has the general purpose of informing and communicating. In this sense, design is about visually shaping different linguistic messages or ideas in order to transmit them. From this perspective, Posada's role as a draftsman is considered a forerunner of graphic design. It is clear how he acquired the ability to represent the reality of his time through graphic symbols.

According to De Buen (2014), Caldwell and Zappaterra (2014), Salinas (2021) y Troconi (2010), graphic design focuses on the creation of publications, defining layout characteristics and planning compositions using the principles of visual perception and compositional resources. Although this definition was given in the third decade of the xxi century, when applied to the late 19th century, it aligns with the graphic works of that period. In other words, Posada took part in a design process that produced documents arranged in sections or sequentially bounded pages, where the message was conveyed through text, visual narrative elements and compositional resources. Therefore, the relevance of his graphic pieces can be assessed within the framework of graphic design.

Methodological design

Thus, the purpose of this research is to delve deeper into the analysis of Posada's visual projects from the perspective of graphic design, through the presentation of objective arguments from the field and toward the evaluation of a visual piece.

The methodology is quantitative-descriptive, focusing on the formal structures of Posada's designs and assessing how effectively they fulfill their intended goals. As part of the research design, the first stage involved generating a systematic review of documents that have thoroughly examined either Posada's work or the graphic piece Cover No. 29 Colección de canciones modernas "La serpentina". Likewise, the piece was analyzed from a visual design perspective, focusing on efficiency, functionality, and printability.

Procedure This research was based on the work of Becerra (2014), Garone (2011), Reyes (2018), Ríos (2007), Troconi (2010) and Useda et al. (2013). The authors analyzed Posada's work from their respective areas of expertise. Based on their analyses, this research defined the design objectives that the 19th century booklet cover project, like the one under study, would have been expected to fulfill.

Therefore, the graphic design evaluation criteria established for this methodology are the following: first, structure seen as a basic set of active processes involving the organization and arrangement of stimuli (Alberich et al., 2014); second, contrast, described as the visual stimulation of color, size, texture or symbolic elements that clearly differentiate components within a composition. Additionally, hierarchy refers to the understanding of the visual sequence of the document and the relative importance of visual message elements (Arnheim, 1997); and organization, which includes the Gestalt principles of proximity, similarity, continuity, prägnanz, and figure/ground, working together to create element groupings that are perceived as part of a larger form (Black et al., 2017). The criteria also include visual narrative, understood as the ability to give meaning to a visual document or composition-requiring the capacity to process, understand, and solve problems through mental graphic representations (Black et al., 2017). Legibility is defined as "how easily a text can be clearly recognized and, therefore, understood" (Pérez et al., 2020, p. 71). Finally, consistency refers to the coherent use of design elements, which ensures a uniform appearance among them.

The method used for data collection was graphic design analysis, as outlined by Flores-Figueroa (2020), which includes four key stages: functional judgment, formal description, conceptual description, and analysis of relationships. To this proposed method, the evaluation criteria defined in the first stage of this methodology were added. The piece under study is the cuadernillo cover La serpentina, designed by Posada on commission from Antonio Vanegas Arroyo.

Cover No. 29. Colección de canciones modernas "La serpentina"

This study employed the graphic design criticism model proposed by Flores-Figueroa (2020). According to the author, the model "describes and interprets design elements, the work of a designer, or a specific movement, and then identifies how these design projects connect with society" (Flores-Figueroa, 2020, p. 164). Its main purpose is to help designers develop a structured and well-supported critique. The author suggests six stages, but only four were applied in this research, since the fifth stage involves the actual writing of the critique and the sixth involves its dissemination through publication. In other words, these two final stages are the outcomes of this research, that is, the writing and publication of a scientific article.

Next, a detailed description was made of the piece analyzed, the cover design of Colección de canciones modernas no. 29 *"La Serpentina"*, created by José Guadalupe Posada (see Figure 1).



Figure 1. Cover No. 29. Colección de canciones modernas "La serpentina". Source: Posada, 1894.

Note: Cover design for a cuadernillo titled "La serpentina" (1894), created using the zincography technique. Print dimensions: 35.2 × 23.8 cm. National Museum of Art, INBA, Constitutive Collection: Catalog 36 Engravings.

According to Becerra (2014, p. 77), it was a piece made on a "plate of lead, antimony, and tin alloy." A zincography technique was used, and its dimensions are 35.2×23.8 cm.

The type of paper used was called deleznable, and was colored (Moreno, 2003). These were inexpensive prints aimed at a low-income, illiterate audience.

1. Functional Judgment Stage

According to Flores-Figueroa (2020), this stage consists of analyzing the project and its fulfillment of the "basic function of design", since it was established that a general design objective is communication, the functional judgment is made through the study of "the sum of the technical elements, [which] together manage to communicate the fundamental message" (Flores-Figueroa, 2020, p. 165). With this premise, it is established that Cover No. 29. *Colección de canciones modernas "La serpentina"* fulfills the basic functional objectives of cost, functionality, and communication, as well as efficiency, functionality, and print feasibility.

In this regard, it is understood that it includes all the elements of a cover. In this case, Caldwell and Zappaterra (2014) note that the piece must include the publication name, the collection title, a distinctive image that should be attractive to the target audience, and the publisher's name. Figure 1 displays the complete elements of an editorial cover.

On the other hand, according to the authors, the material must be a project based on commercial and communication objectives, which were requested from Posada by the editor Antonio Vanegas Arroyo. In the research, it was necessary to separate the objectives of print feasibility and communication for the publication.

For the commercial objective, it is known that this type of publication was sold for one cent (Government of Mexico, 2024). But how much was one cent worth at that time? According to Batez (2004, p. 18), "in 1865, the minting of silver coins worth 1, 50, 25, 10, and 5 cents was ordered [...] Copper coins were minted for one cent and half a cent." It can be inferred that the one-cent coin was a small amount compared to the 50 or 25 cent coins. This is confirmed by the authors' statement that these were economical publications.

The communication goal, for its part, was to "spread the modern songs" of the time, sung to the "girls who are as lovely as silver" (Government of Mexico, 2024, n.p.).

¹ Type of paper that breaks or decomposes easily.

Therefore, it is established that the editor Antonio Vanegas was the one who defined the printing characteristics, cost, target audience, and type of message for the publication. In particular, it is argued that his communication objectives were to create an attractive publication aimed at lower-income men. Additionally, the cover had to quickly convey the "songbook" content and feature love songs.

Based on the above, the commercial and communication objectives were defined to form a functional judgment. However, this judgment would be incorrect without a mechanism for its evaluation. Thus, functionality can be evaluated through efficiency (Hurtado & González, 2023), which is closely tied to the optimal use of resources, implying the avoidance of excesses in the process. García and Serrano (2003) state that the key lies in maximizing resources while staying within budget, otherwise, management is considered inefficient. Consequently, Posada's graphic design project should have met these objectives in the most effective way for conveying the message.

It should be noted that effectiveness is related to the design objectives and the efficiency with which the (compositional) resources were utilized in relation to the outcomes achieved (see Figure 2).

EDE = Objetivos alcanzados/objetivos previstos

Resultado de recursos empleados / Resultado de recursos previstos

Figure 2. *Efficiency formula in editorial design (EDE).* Note. Formula adjustment from the visual design by Hurtado and González, 2023.

In visual design, inefficiency occurs when objects and design elements are not used optimally and when time, personnel and materials are employed indiscriminately.

Thus, the graphic piece is considered efficient when it reaches its goal frontier while optimizing resources.

At this point, it should be noted that there is no standard measure for defining efficiency, since each discipline has its own definition. For this research, considering that in economics a value of 1 is defined as highly efficient (meaning that a lower value indicates lower efficiency), efficiency will be defined based on how close the value is to 1, as defined in consumer goods industries. In this regard, it is acknowledged that it would be pertinent to seek objective parameters for assigning the number.

The efficiency formula in editorial design (see Figure 2) serves as a first approach within the discipline of Graphic Design for studying the visual and compositional characteristics of form from a functionality perspective, before addressing aesthetic elements. Through this approach, it is explored whether the design piece succeeded or failed in achieving the communication objectives and, above all, whether the editorial pieces were efficient or inefficient in transmitting the editorial message.

In this study, which is exclusively about the cover, the analysis begins with an assessment of editorial design from an efficiency-oriented perspective. In this respect, it is clear how Posada emphasized the image of the woman, since she is positioned at the center (see Figure 3), covering approximately 80% of the total composition. Furthermore, it can be observed that the titles are larger and have a greater visual hierarchy.



Figure 3. Cover No. 29. Colección de canciones modernas "La serpentina". Modified image, emphasizing the woman's illustration. Source: Compiled by authors.

Moreover, an analysis of the technical reproduction details or reproduction feasibility, first revealed that the engraving was created using the zincography technique on a metallic zinc plate. It is important to note that these were essential technical reproduction skills for the printing processes of the time and that mastering them provided an advantage in the speed and quality of printing, thus favoring efficiency in the production of the piece. Secondly, the characteristics of the illustration were observed, revealing the artist's mastery of the technique, as the lines show variable strokes that create volume and textures through the grouping and thinning of lines. Therefore, it can be seen that the author created a design that was both quick to produce and adaptable for efficient reproduction (see Figure 4).



Figure 4. Segment of Cover No. 29. Colección de canciones modernas "La serpentina" in a single ink. Museo Nacional de Arte, inba, Acervo Constitutivo. Source: Posada, 1894

As shown in Figure 5, the print was created using two inks and two plates: one for red ink, which created depth, and one for black ink, which was used for the important elements. In the red ink, the same technique of irregular lines was used, but mostly vertically, to create texture and volume. This technique is currently used in CMYK², color printing, where screens with different angles are employed to produce gradients and color blends.

² It is the contemporary version of the old Red, Yellow, and Blue color mixing model, traditionally used in the fine arts, which enabled the creation of a greater range of color tones and expanded the use of color in today's graphic arts.



Figure 5. Segment of Cover No. 29. Colección de canciones modernas "La serpentina". Museo Nacional de Arte, inba, Acervo Constitutivo. Source: Posada, 1894.

Next, Table 1 presents an analysis matrix of the stated objectives, most of which were achieved.

Table 1. Compliance table for the objectives during the functional assessment stage.

Objectives	Objectives achieved	Objectives not achieved
Cost	 Reproduction technique using an economical two-ink format. Printed on low-cost colored paper. 	
Communication	 Quickly conveys the theme of the publication. Highlights the collection number and the printer's brand. 	 The name "Serpentina" blends into the background due to insufficient contrast and figure/ground relationship. Overcrowding at the top of the design structure.
Printing feasibility	 Due to the optical perception of the color it creates one more ink. Achieves volume using a quick and adaptable design for reproduction in lithography. 	

Source: Compiled by authors.

Based on the arguments presented above, it can be concluded that knowledge of reproduction techniques to create volume and texture contributed to printing efficiency and supported the communication of the message to users and readers. Finally, printing feasibility was achieved, since an appropriate reproduction technique was employed, directly supporting the fulfillment of cost-related objectives.

2. Formal description stage

This stage allows to determine whether the studied product belongs to the field of study, according to the laws and principles of graphic design. Upon seeing Figure 6, it becomes clear that the composition is based on an axial grid. Likewise, the center is not mathematically determined but rather created by the waves of the dress and the perspective of the floorboards.



Figure 6. Axial grid present in Cover No. 29. Colección de canciones modernas "La serpentina". Source: Compiled by authors.

The cover's composition achieved optical balance in the distribution of elements, though not a mathematical one. In the upper quadrant the main illustrative element, the woman's head, is placed at the focal point according to the rule of thirds. Also, Posada created visual movement in this upper quadrant through the positioning of the hands on the upper left and right sides (see Figure 6). The titles create a sensation of movement and wavy rhythm, as they are not aligned in a straight line but in an organic form. Likewise, lettering was used in the composition of the cover. The typographic classification of the lettering is incise style for the title and mechanical style for the collection texts and number, creating a sense of organic movement. As shown in Figure 6, reddish and warm colors are used for the fragile type of paper. However, there is no evidence that Posada participated in the color selection process, as theses were assigned at the end of the printing process. On the other hand, his mastery of optical techniques to overlay colors and generate a third color is evident.

One detail worth noting is the reduced legibility of the name "La Serpentina" due to the execution of the lettering (see Figure 7). Also, in the title No. 29. Colección de canciones modernas, continuity is lost. However, the editor's name remains clear (see Figure 6), since no element interfere from understanding. Therefore, the editor's name, A. Vanegas Arroyo stands out as a distinctive branding element of the printed publication.



Figure 7. Guide lines for the construction of the lettering present in Cover 29. Colección de canciones modernas "La serpentina". Museo Nacional de Arte, inba, Acervo Constitutivo. Source: Posada, 1894.

Taking all of the above into account, a table could be constructed (see Table 2) summarizing he resources that were or were not achieved during the creation of the cover.

Table 2. Resource compliance table for the formal description stage.

Resources	Resources achieved	Resources not achieved
Structure	 It had balance in the distribution of the elements, creating an optical, but not mathematical, balance. The woman's head placed at the focal point according to the rule of thirds. 	

Hierarchy	 The positioning of the hands in the upper left and right quadrants guides the viewer's gaze toward the titles. The editor's name is obvious since there are no elements distracting from its understanding. 	
Legibility	 High legibility in the publisher's name. There is legibility in the rhetoric and the concept of the publication. Slight decrease in legibility of the name "I Serpentina." 	
Consistency	 The titles maintain the same organic and flowing style. Posada developed an illustration with rhetorical elements and created lettering designs for the titles according to the general style. 	• Loss of continuity in the lettering of the upper quadrant.

Source: Compiled by authors.

Summarily, Table 2 shows that Posada used elements of structure, organization, consistency, hierarchy and visual composition. Thus, he created the illustration using rhetorical elements and created a lettering design for the titles. Regarding legibility, it is considered that there are execution flaws and certain loss of consistency in parts of the composition.

3. Conceptual description stage

This section analyzes "aesthetics, innovation, and abstraction" (Flores-Figueroa, 2020, p. 165). First, the aesthetics and its visual narrative were analyzed. Useda et al. (2013) indicate that one of the characteristics of Posada's illustrations was his depiction of daily or social life, using rhetoric rooted in satire. At the same time, Ríos (2007) mentions Posada's ability to represent social signs in abstract and playful forms. Thus, it can be said that he possessed the ability to inform the economically less favored population in a fun and satirical way.

Regarding abstraction, Useda *et al.* (2013, p. 5) consider that Posada has the ability for a "potential explanatory" in his works, qualities that are indispensable for a contemporary graphic designer.

They also establish that he had innovation (see Figure 8), as the cover features three different colors: the background color, a light orange known as an opposing color, and the spaces left in the engraving of the dress, where the paper color is exposed to create a gradient effect, adding volume. Additionally, red and black were used.



Figura 8. Guide lines for the construction of the lettering present in the cover design 29. Colección de canciones modernas "La serpentina". Museo Nacional de Arte, inba, Acervo Constitutivo. Source: Posada, 1894.

Below, Table 3 is shown with the fulfillments achieved for the conceptual description.

Table 3. Table of achieved resource fulfillments for the conceptual description.

Resources	Resources achieved	Resources not achieved
Narrative resource	 Critical rhetoric from satire. Explanatory potential in his illustrations. Innovation in the use of colors in optical aspect, using the color of the paper. 	 In the upper part of the title there was little space left, which causes a sense of overcrowding or visual discomfort
Illustration technique	 Use of lines to create a gradient in the dress and give the sensation of volume. Mastery of illustration technique for accurate reproduction. 	

Source: Compiled by authors.

Table 3 presents the resources achieved in terms of narrative resources and illustration techniques. It shows that, regarding the narrative resource, there is an excessive grouping of elements, making it difficult the understanding of the units.

4. Stage of the analysis of product-society relationships and their articulation

According to the design criticism model, design objects are intrinsically connected to society. It is important to note that this stage is considered within the objectives established by the efficiency formula, in order to be analyzed in the results. Ríos (2007, p. 112), referring to Posada, states that "his sharp gaze captured in unforgettable prints the various faces of violence, an everlasting theme in Mexican life, both in times of peace and in times of war," which links to the role of graphic design, since on equality of every contemporary graphic designer is the ability to identify the symbolic and representative elements of society and incorporate them in a way that creates a connection that transcends the production itself.

Throughout his career, Posada critically reflected on society through his work, creating characters that depicted reality. His editorial work therefore featured a narrative sequence that made it easier for readers to understand the piece beyond the linguistic text. This approach allowed him to captivate the audience's attention and increase the work's marketability.

In addition, Posada was able to effectively convey messages, perhaps defined by his editor, with empathy toward the main figures of social life in Mexico during his time. He also developed the ability for representing social symbols through abstract and playful forms, which he incorporated into a rhetorical discourse in a highly effective way.

According to Ríos (2007), Posada was not only a witness to his time but also an active participant in it. Furthermore, he contributed to the creation of the "visual memory" that shaped the Mexican national identity. In doing so, Guadalupe Posada practiced his profession as an active agent, becoming part of a new movement that began to meet the emerging demands in a new field, graphic design. As such, this research about graphic design acknowledges him as a predecessor and founder of the profession within this field of study and its various areas of practice.

Finings The results of this study were generated based on four axes: functional judgment, formal description, conceptual description and analysis of sociocultural relationships.

The functional axis was developed from the perspective of efficiency, functionality and print feasibility. This reaffirms that Posada practiced the profession of graphic designer, leading to his recognition as a precursor of the profession.

Other findings:

Functional Judgment Stage: The piece analyzed fulfills the basic functions of: 1. Communication: It includes a title, a distinctive image likely intended to attract its target audience, the publisher's name, and the editorial designer's name. On the cover, the author emphasizes the central image of the woman, and the titles are larger with a greater visual hierarchy. 2. Commercialization: This type of publications was sold for one cent; indicating that its commercial objective was the exchange of goods for money. 3. Functionality: The resources were used efficiently, avoiding unnecessary excesses. For example, the engraving was made using the zincography technique on a metal zinc plate, offering advantages in printing speed and quality. Beside this, the piece was printed using two inks. Despite this, through the appropriate use of lines in the engraving, the feeling of a greater number of shades was achieved.

Formal description stage: Posada made use of structural, organizational, and compositional elements. He also created illustrations featuring rhetorical elements and designed title signage using just two colors. Regarding abstraction, he approached it from the perspective of an illustrator-draftsman, which meant omitting details that a photograph from the period would have captured.

Conceptual description stage: Posada's engravings served as advertisements portraying the daily or social life of his time, employing rhetoric based on satire. Through this approach, he was able to represent social symbols in abstract and playful forms, promoting products or ideas in a humorous and satirical manner, thereby resonating with the economically disadvantaged classes.

Analysis of Product-Society Relationships stage: There was articulation between them: Posada's works could be studied through the lenses of anthropology, sociology, or even history.

By applying the formula proposed at the beginning and incorporating the analysis tables for each stage, the data were converted into percentages. It is important to note that the numerical representation is subjective, since achieving an objective representation would require the use of instruments capable of transferring the information into parametric data. As such information is currently unavailable within the field, this exercise serves as an initial approach toward establishing a method for assessing the efficiencies of graphic design products.

The outcome of this process is summarized in Table 4 and represented as a formula in Table 5.

Table 4. Objectives and resources transferred to percentages

ltem	Percentage
Archieved goals	90
Planned goals	100
Outcome of employed resources	100
Outcome of planned resources	95

Source: Complied by authors.

Table 5. EDE Formula with Numerical Data Substitution

$$\mathbf{EDE} = \frac{90/100}{95} / .95 = .947$$

Source: Compiled by authors.

As part of the findings, it is concluded that the editorial piece is efficient, as the result of .947, shown in Table 5, is close to 1, meaning that the objectives were met in terms of resource optimization. However, efficiency is not a parameter for defining validity, as few references or measurement parameters have been found so far, since each discipline defines them differently.

♦ Discussions The purpose of this analysis was to study, from the standpoint of graphic design, one of the key figures in the development of the profession today, based on a structured and scientific critique. It is well established that there are authors who have pointed to Posada as part of the origins of Graphic Design in Mexico, highlighting his attributes as a graphic designer, as defined by Becerra (2014), Garone (2011), and Troconi (2010).

As mentioned previously, Troconi (2010) provides a more general analysis of many of his graphic projects, while Garone (2011) focuses on the signage and typographic elements used by the designer, with a graphic design perspective.

However, there are few studies in graphic design with structured critical approaches and quantitative methods regarding Posada's work.

It has been shown in various studies that each of the author's graphic pieces displays a strong command of composition and visual design communication, creating significant potential for research in areas such as product design, poster design, or editorial design. However, this type of work has mostly been documented in other fields, such as the arts, anthropology, or communication.

Design authors, such as Costa (2014) and Margolin (2005), identify the characteristics that define a graphic design project and a contemporary designer. Based on this, this study shows that Posada fully fulfilled the role of a graphic designer. Although he was not technically a graphic designer, since the profession or field of study had not yet been established at that time, it should be noted that the illustrator mastered the technology available during his era, had knowledge of visual design composition, and effectively used rhetoric in satire and semiotic tools. Just because the profession did not exist then, can it not be said that he was a graphic designer?

However, by applying the design critique model proposed by Flores-Figueroa (2020), along with the efficiency approach outlined by Hurtado and González (2023), it becomes clear that not everything related to visual design composition was correct or functional in Posada's work, as there are aspects of readability, organization, and hierarchy that could be improved.

♦ To conclude As part of the systematic review, it is highlighted that Posada played a role as an editorial graphic designer and was part of a multidisciplinary editorial team. On the other hand, it is noted that he specialized in the creation and production of graphic elements that integrated editorial-ized products, as he collaborated with an editorial team, also serving as the writer, editor, and the person responsible for organizing and structuring the information.

Through this, he acquired the skills characteristic of a modern graphic designer, visually conveying information through composition and creating products relevant to his time. Therefore, he possessed competencies in label design and complete compositions, such as the various songbook collections, and utilized different compositional and stylistic resources.

He also had a communication objective set by the printing press of the mexican publisher Antonio Vanegas, a goal he achieved. However, there is no evidence that Posada was involved in setting the communication objectives or making decisions about the content in the publications. He may have only been responsible for translating the texts into a graphic format. Nevertheless, it is clear that he participated in constructing the narratives from the visual composition side, using the existing technology, such as the technique of zincography, to reproduce his visual designs. With the advent of Gutenberg's printing press, there was an expansion of printed media, which led to the creation of new professions, such as graphic design. As a result, José Guadalupe Posada has not traditionally been considered a graphic designer, although it is believed that he was one, given that his work involved creating efficient print projects with both communicational and commercial objectives. In his time, his profession was known as illustrator, but he had skills in printing, aesthetics, and the ability to carry out what we now call Graphic Design projects. In other words, he visually shaped linguistic messages or ideas to communicate them.

As contributions of the present study, the commitment of the Graphic Design discipline to the reconfiguration of the figures who contributed to its construction as such is reaffirmed. This is especially evident when considered from an objective perspective and in terms of efficiency and functionality.

Another contribution of this study is the proposal of an analytical theory with the implementation of a formula for the objective assessment of editorial design and the first steps toward developing methodologies, methods, and techniques for its study. However, limitations were found in the study due to the current lack of editorial design tools that allow the transfer of information into parametric data, as well as the absence of reference data in the discipline to be considered as achievable objectives or forecasted resources.

As such, it is viewed as an area of opportunity to begin generating analysis and valuation studies that will enable the identification of optimal performance parameters for various visual design products. In the future, the regular application of these analytical methods will lead to the creation of benchmarks for objective evaluation.

Finally, in our case, the historical document was used to demonstrate that the engraver was, before being an artist, a graphic designer who developed visual communication work in which he criticized poverty, as well as power dynamics and relationships, through a countercultural discourse. Based on the evidence provided, it can be affirmed that, at the time, Posada performed the role of a graphic designer, albeit under the title of illustrator.

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🟵 About the Authors 🛛 María de la Concepción Hurtado Abril

PhD in design at the Instituto de Arquitectura, Diseño y Arte of the Universidad Autónoma de Ciudad Juárez, and a Conahcyt fellow. Holds a Master's degree in Administration from the Universidad de Sonora (*USON*) and a Bachelor's degree in graphic design from the Universidad del Valle de México. Currently a full-time faculty member in the Department of Architecture and Design at the Facultad de Humanidades y Artes of the Universidad de Sonora (*USON*).

José de Jesús Flores Figueroa

PhD in modern literature from the Universidad Iberoamericana. Currently a research professor in the Department of Design at the Instituto de Arquitectura, Diseño y Arte of the Universidad Autónoma de Ciudad Juárez, and also holds a research professorship at the Universidad Autónoma de Ciudad Juárez.



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