

# Drawing as Language in Panoramic Sketches Created During the Spanish Civil War

Santiago Elía-García, Ana Ruiz-Varona, Rafael Temes-Cordovez

## Abstract

*The article focuses on the analysis of panoramic sketches drawn during the Spanish Civil War in Aragón. These sketches are perspective drawings that depict the warfront landscape as perceived by combatants from strategic positions on both sides of the contact line. They are elongated graphic documents, generally of large dimensions, created by specialists integrated into the participating Spanish and Italian troops.*

*These sketches are part of the cartographic material necessary for the meticulous study of the terrain where military actions took place. The prolonged stagnation of the front in Aragón allowed for precise delineation of the relief profiles and the placement of positions, trenches, and fortifications. The sketches served as a means of communication between the message sender, the draftsman, and the receiver, who projected operations onto the territory.*

*The technical quality of the documents and the validity of the transmitted message are evaluated. The authors' ability to express the complexity of the territory through the language of drawing is assessed. The phases of their creation and their characteristics are investigated. Additionally, the calculation procedures, graphic techniques used, and methods available for obtaining duplicates are analyzed.*

*Keywords: landscape, graphic expression, Spanish Civil War, territory, chorographies.*

## Introduction

This research utilizes panoramic sketches as primary sources, which depicted the Aragonese territory during the Spanish Civil War. Panoramic sketches are perspective drawings of the landscape, created during the war to represent the territory as observed by combatants from the battlefield [Elía-García et al. 2023].

From the onset of the conflict in July 1936 until March 1938, the warfront in Aragón divided the territory from north to south into two equivalent halves: the Republican zone to the west and the insurgent zone to the east (fig. 1). During this period, the contact line remained relatively stable, with few variations [Maldonado 2007]. This stalemate situation caused the various units of both armies to observe each other from their defensive

positions. The panoramic sketches are the result of this meticulous observation and form part of the cartographic material created to understand the relief and its occupation [Nadal, Urteaga 2013].

After gathering a significant sample (fig. 2), which has been organized and classified based on the author's origin and the section of the front represented, the graphic expression of these panoramic sketches is explored, focusing on the use of drawing as a tool for knowledge and communication. All of this aims to serve strategic planning and decision-making. The working tools employed are analyzed, and common norms and standards in the graphic language used to convey the complexity of the combat territory are identified.

## Reading panoramic sketches

Panoramic sketches were not created as an end in themselves, but as a means to convey information. These sketches served as a tool within a broader process that neither began nor ended with them. Straight or wavy lines, appropriately arranged on paper, generated contours equivalent to the reality of the territory at the front. In this way, just as the reading of alphabetic signs in written language evokes concepts in the reader's mind, the observation of drawings played a similar mediating role, evoking in the recipients of the graphic message the experience of perceiving the landscape [Jiménez Caballero 1992].

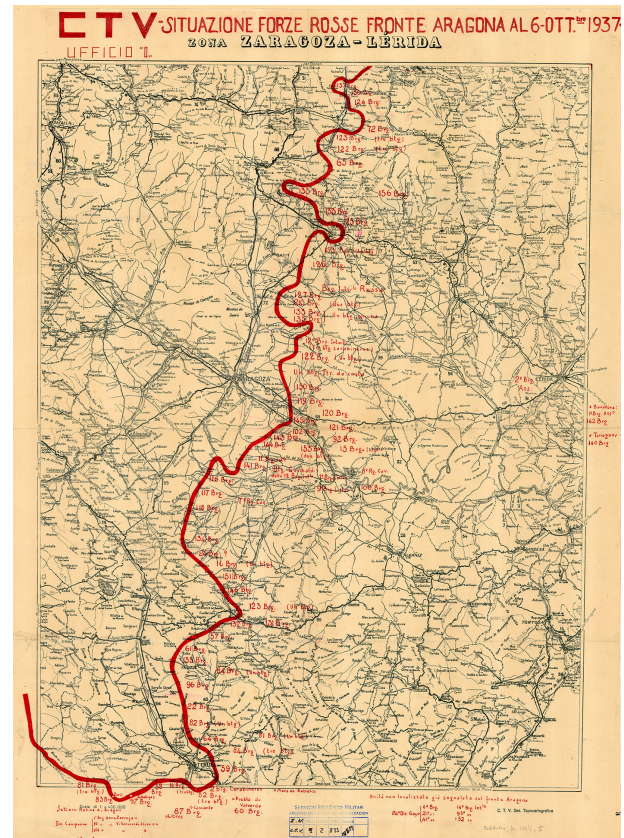
In these landscape representations, the laws governing perspective are recognized, a set of graphic resources that, when applied in drawing, reflect the image of reality as seen by humans. According to Panofsky, perspective was not only a technical revolution of the Renaissance for drawing the world but also the symbol of a new way of understanding it, based on reason rather than mystery [Panofsky 1999]. Similarly, panoramic sketches can be interpreted as the rationalization of a landscape that appeared overwhelming to the draftsman, who, through drawing, was able to synthesize it to make it more comprehensible.

The aim is to identify the characteristics of the graphic language used in the panoramic sketches of the sample, abstracting from the context in which they were created and the military origin of their authors. Thus, attention can be focused on the drawn lines and common aspects identified in each phase of the creation of the sketches, from initial decisions and data collection to the reproduction of the drawing and its use as support in strategic planning. Four distinct phases in the process of creating and using panoramic sketches have been considered.

### Preparation phase

Given that the activity of drawing is intrinsically linked to vision and reflection on what is being represented [Ching, Juroszek 2007], those responsible for creating the sketches necessarily had to acquire adequate knowledge of the territory to be depicted. Before drawing any lines, the authors had to examine the territory and make a series of preliminary decisions, some of which become evident upon observing the sketches themselves.

Fig. 1. M.1308.5, Aragón Front Line, October 6, 1937. Left: Insurgent zone, Right: Republican zone. Archivo Militar de Avila.





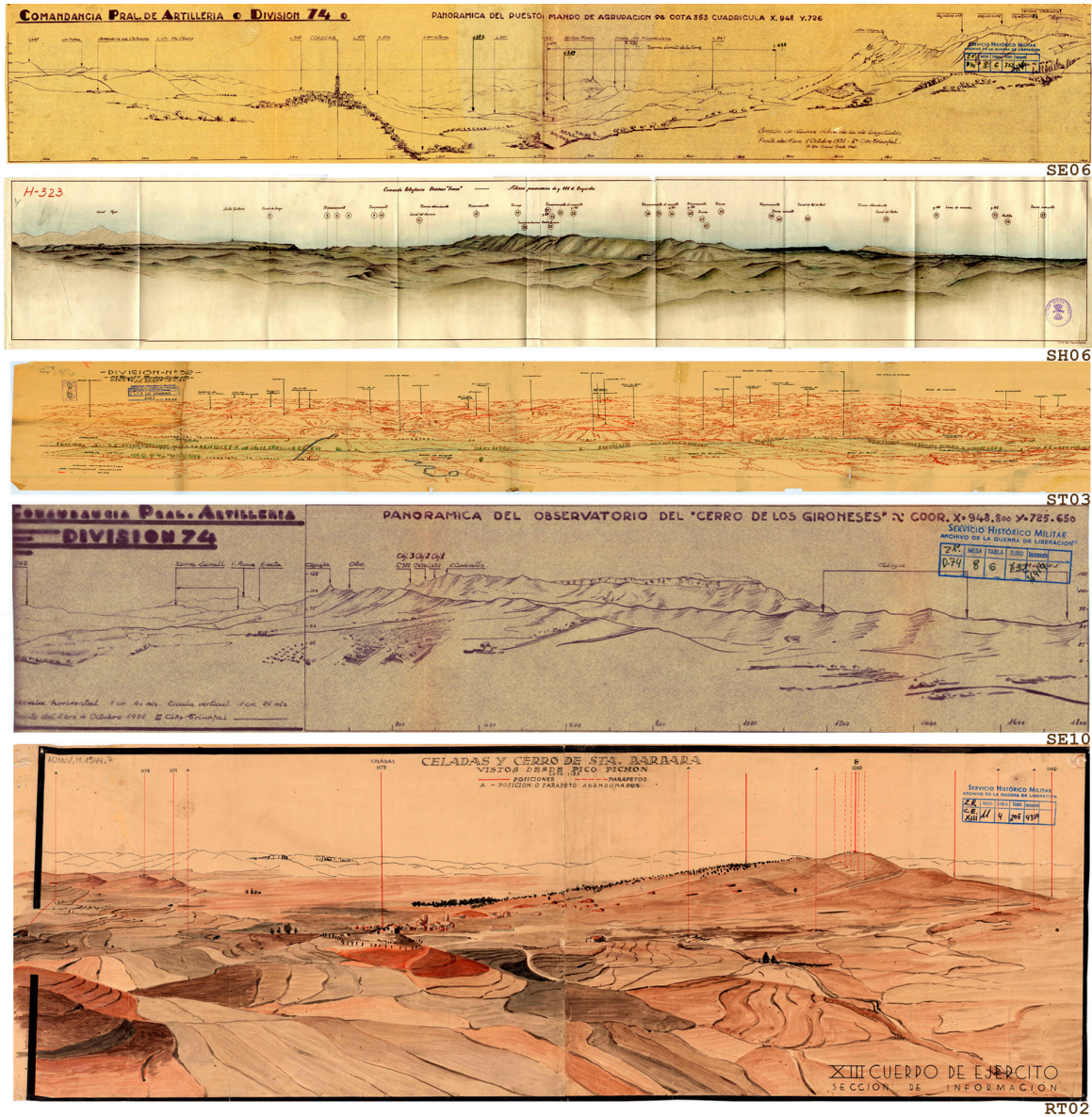


Fig. 2. Sample of panoramic sketches from the Spanish Civil War included in the study material. 1937-1938. Archivo Militar de Ávila.

All the examples contain expansive landscapes, full of nuances, distributed along elongated supports. This necessitates that their examination is not immediate but requires a careful look from one end of the paper to the other. It is evident that the vantage points had to be selected based on the visual possibilities they offered over the surrounding territory. Additionally, given the circumstances of the war, the choice of location implied understanding of the orography and the conditions for protection against potential enemy attacks.

Similarly, the authors decided on the framing of the perspective and identified the elements that would dominate the scene and limit it at its edges. The expectation of achieving the greatest effectiveness with the least amount of graphic resources led the draftsmen to recognize what, being present before their eyes, would not be included in the sketches. All circumstantial elements, such as people, clouds, cast shadows, vehicles, or weaponry, were omitted, and attention was focused on the strip of territory under study, avoiding the immediate area around the observation point, as sectors more or less distant were always represented.

In the panoramic sketches, it is evident that the draftsmen had prior knowledge for constructing these perspectives [Gómez de Salazar 1911; González de la Vera 1912; Prats 1937]. This results in homogeneous outcomes regarding the systems of representation and drawing alignment. However, despite starting from a common methodological base, the graphic quality of the sample sketches varies considerably, with some examples standing out due to the greater experience of their authors, who drew their sketches with more skill and dexterity.

Another consideration before drawing focused on the proportions of the perspective, as the author had to decide whether to distort them or not. For relatively flat terrains, it was advised to exaggerate the heights relative to the horizontal distances [Prats 1937], so that the configuration of the relief would be reflected more intensely, and the message receiver could assimilate it more quickly and effectively.

In several examples from the sample, this recommendation was followed, as indicated in annotations, graphic scales, or alignment grids. However, this distortion in the proportions of these sketches only becomes evident in a direct visual comparison with the current landscape (fig. 3). Examples have been identified that contain sketches made from life, recognized as data collection. These somewhat

untidy drawings were made quickly, with short, repeated strokes, and are filled with disordered annotations, indicating they were taken from the observation point (fig. 4). This suggests that the primary source of information for drawing the sketches was direct visualization from the actual location.

#### *Drawing phase*

Panoramic sketches, being drawings, represent the record of their authors' actions and were influenced by their intellect, skill, and interests [Seguí de la Riva 1993]. Once separated from the hand that shaped them and transformed into graphic objects, they can be observed and studied independently.

Most of the analyzed sketches approximate the definition of drawing proposed by Ching and Juroszek [Ching, Juroszek 2007], who describe it as a process for representing something—in this case, landscapes—by tracing lines on a support. According to this interpretation, the line constitutes the essence of drawing and establishes the fundamental difference with painting or surface coloring. Through reading the lines that form the represented landscapes, it is possible to reconstruct the path followed by the draftsmen in creating them.

To draw these lines, a relatively limited repertoire of drawing tools was used. On one hand, the texture, thickness, and variable intensity characteristic of the pencil are distinguished, primarily used to shape the initial sketches and some final perspectives, where the smudges resulting from graphite wear on paper can be seen (figs. 5.1-5.3). On the other hand, the definition, precision, and continuity typical of ink lines, generally black, are evident, resulting from the use of pens, nibs, or some type of marker, with which most of the sketches were defined in their final version (figs. 5.4-5.6).

Although the main structure of the perspectives was constructed with gray or black lines, it was common in the original examples to use color occasionally to add chromatic value and highlight specific aspects (fig. 6).

Red was frequently used to highlight positions in the territory or distinguish the roofs of buildings in the landscape. Blue was applied both to watercourses or bodies of water and to subtly tint distant mountain profiles. To a lesser extent, green was also used to highlight vegetation masses. Some of the perspectives in the sample were even fully colored using a wide variety of drawing tools, such as colored pencils, pastels, or watercolor.



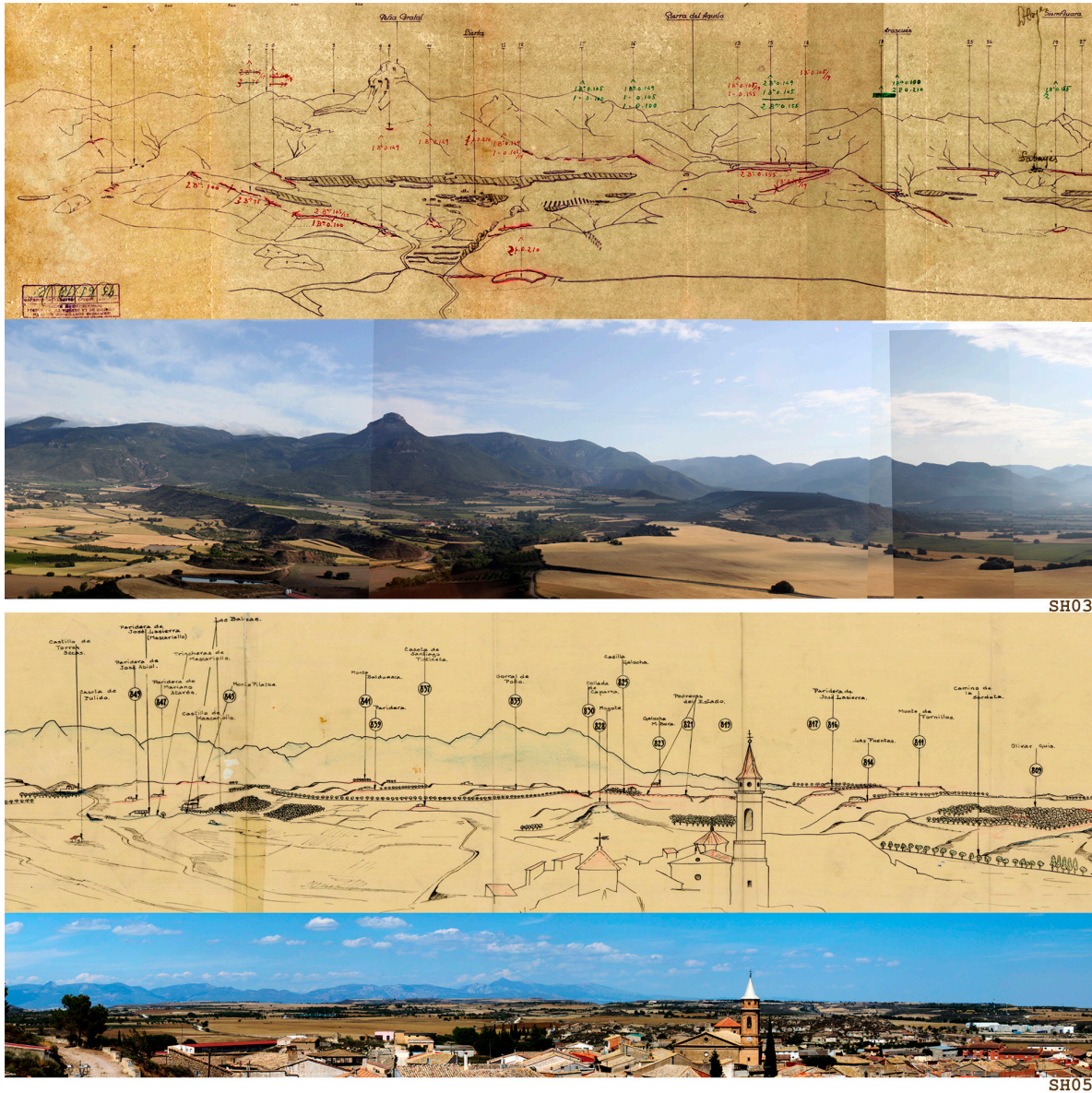
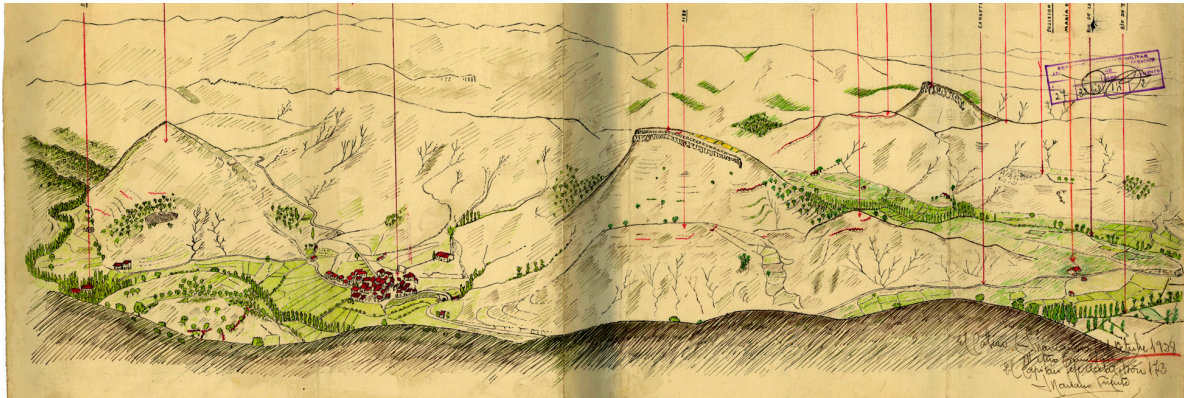


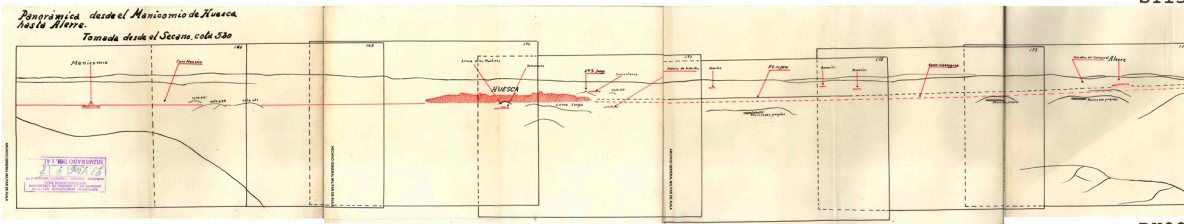
Fig. 3. Panoramic sketches with exaggerated heights. 1937-1938. Archivo Militar de Ávila. Current photograph (graphic elaboration by the authors).







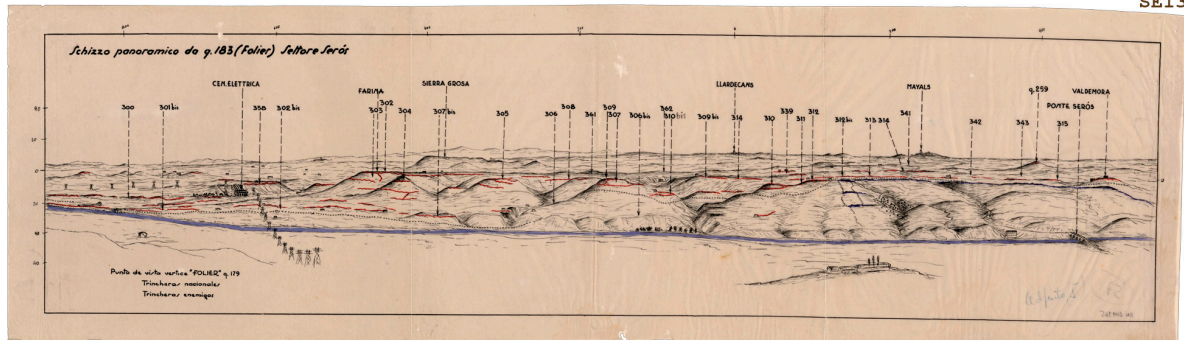
ST13



RH02



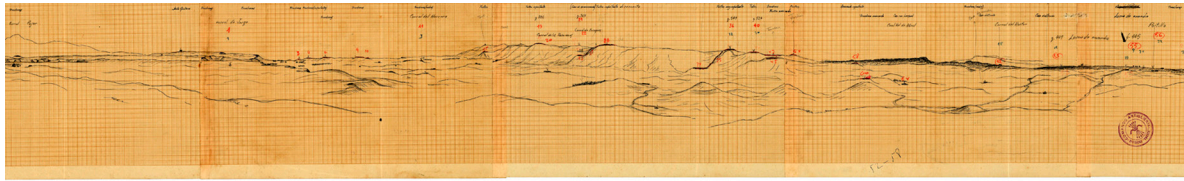
SE13



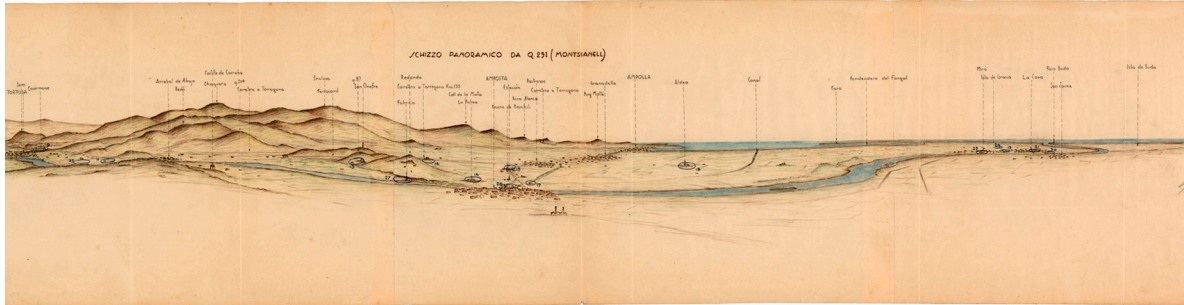
SE12

Fig. 6. Sketches with occasional color incorporation. 1937-1938. Archivo Militar de Ávila. Instituto Cartográfico de Cataluña.

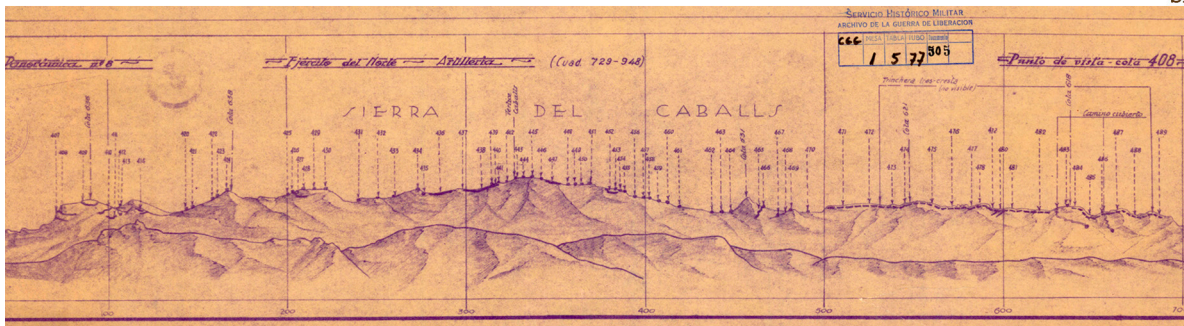




SI



SI



SI

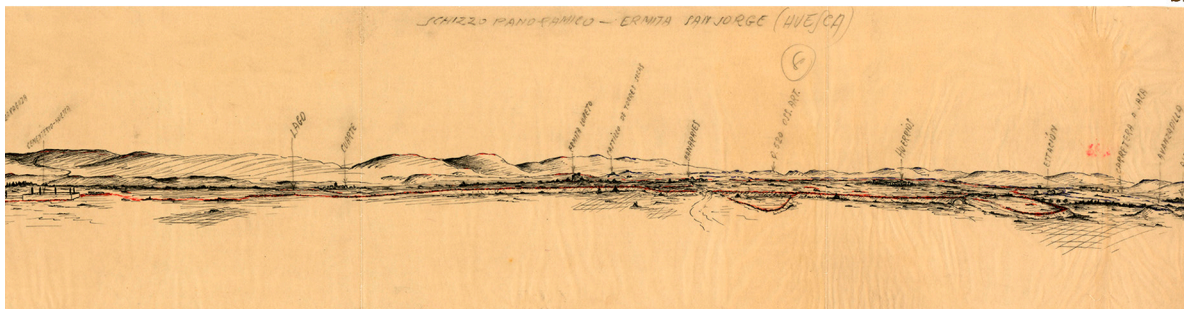


Fig. 7. Types of Paper: Graph Paper (1), White Paper (2,3), Tracing Paper (4). 1937-1938. Archivo Militar de Ávila. Instituto Cartográfico de Cataluña.

landscape were left un-erased, supporting the alignment of the main shapes, whether reference lines drawn from notable points in the territory or calibrated grids, made by hand or integrated into graph paper.

In addition to drawing the main lines that defined the contours, graphic techniques were used to represent the surface characteristics of the territory. Through line valuation and tonal gradation of the drawings, the perspectives were enriched with textures and conveyed the sensation of light, mass, and space in the landscape [Ching, Juroszek 2007].

Graphic techniques allowed the draftsmen to establish the internal hierarchy of each sketch, reflecting aspects such as texture, volume, scale, and occasionally, color, with varying precision [González Presencio 1992]. In most sketches, graphic resources were used to capture the landscape's qualities monochromatically. The draftsmen had to convert the chromatic values of reality into equivalent tonal values, using only pencil or pen, and mainly employing hatching techniques.

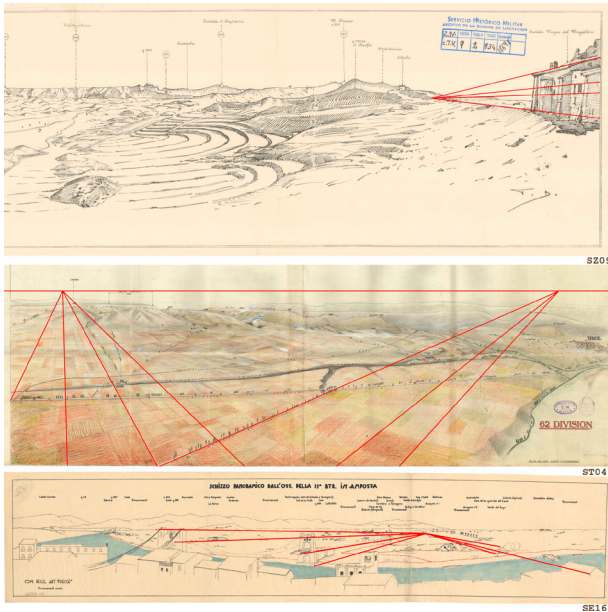


Fig. 8. Vanishing lines in red on sketch. 1937-1938. Graphic elaboration by the authors own on original. Archivo Militar de Ávila.

Some examples stand out for the skill with which their authors applied these hatching techniques, excelling in the tonal variety achieved through loose, confidence, and balanced strokes (fig. 9). The craftsmanship of their authors is also recognized in the tools used to apply ink to paper. In the sketch of figure 9.1, the subtle modification of line thickness, caused by varying pressure and the ability to fade the end of strokes by reducing thickness and intensity, suggests the use of some type of flexible pen. This way, the result effectively represents curved surfaces, tonal gradation, and ranges of light and shadow. In the sketch of figure 9.2, the range of line thicknesses and gray tones suggests it was drawn with different instruments, explaining the variety in stroke types. Thus, the depth of the scene is more vigorously captured, with thicker and darker contours and hatching in the foreground, which soften as they recede from the observer.

Some sketches show traces of the drawing process, such as corrections and adjustments that completed

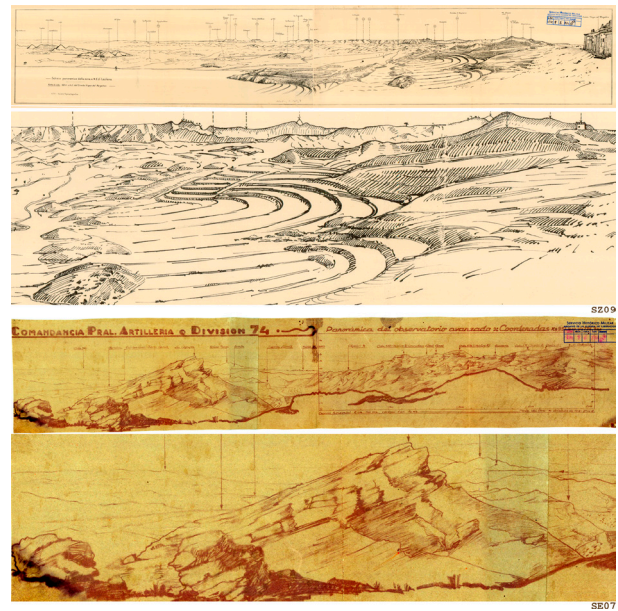


Fig. 9. Panoramic sketches that stand out for their skillful shading. 1937-1938. Archivo Militar de Ávila.



or corrected the initial contours. This is justified by the challenge of representing broad, formally complex scenes filled with information that the draftsman had to synthesize. This way, it is evident that the act of drawing is intrinsically linked to thought and involves continuous decision-making [Barbadillo 1999]. These corrections illustrate the process experienced by the draftsmen, who attended to the changes suggested by the drawings as they took shape [Seguí de la Riva 1993].

The main difficulty faced by the draftsmen was avoiding wasting time on the multitude of details present in the reality they had to represent. These details, although striking, did not always have the importance they appeared to have. The authors had to focus their energy on faithfully reproducing what was essential and important [González de la Vera 1912]. This is the impression offered by the graphic set selected in this research, justifying the extended use of panoramic sketches over photographic panoramas. Aside from the greater dimensional possibilities of the sketches and the ease of acquiring the required tools for their creation, the significant difference was that photography presented totalizing images, while sketches expressed a smaller fragment of reality. This fragment had been consciously processed by the draftsman's particular mind [Ching, Juroszek 2007], allowing for greater effectiveness in message transmission in a given context.

#### *Duplication phase*

Among the selected panoramic sketches, those that are printed replicas on paper are distinguished from the original examples. To ensure that the resulting copy was faithful and legible, the reproduction machines of the time required specific conditions for both the drawing and the type of paper used. Therefore, the sketches intended to be reproduced with these machines had to be outlined according to these conditions. The use of color was discarded in them, as the reproductions were monochromatic, and graphic techniques were limited to assigning tonal values to the perspectives, serving only those drawn with sufficient intensity.

With multiple copies of each panorama, more than one example containing fixed information about the landscape configuration of the same area was available (figure 10.1). Variable information, such as the location of units in the territory and possible troop movements, could be recorded on these documents. Additionally, the

reproduced sketches could be distributed to support war planning at several locations simultaneously.

The means of reproduction influenced the way of drawing. In the sample, there are sketches that were defined and detailed as unique examples, as they were not going to be duplicated or distributed. In these, graphic techniques were used to add color and set the scene. However, other sketches were made considering the limitations of reprographic machines. In these documents, monochromatic ink drawing and hatching techniques were prioritized to give the perspective volume and depth. Thus, soft shading or color marks that would have disappeared or lost their properties in the duplication were avoided (figs. 10.2-10.5). Some examples worked under these parameters, once reproduced, were completed and richly colored, resulting in very expressive scenes that contrasted with their clearer twin perspectives (fig. 10.1).

The procedures for copying plans required the original to be drawn on tracing paper, as demonstrated by the panoramic sketches in the sample, of which duplicates are also preserved. Thus, the original document consisted of a set of opaque continuous lines distributed on transparent paper. To obtain an exact copy, in scale and detail, of this drawing on white paper, another type of specially prepared paper, such as ozalid, ferrogallic, or ferropussian paper, was used [Prats 1937]. The tracing paper with the drawing and the specially prepared paper were subjected to a light exposure and development process, whereby the opaque lines of the former were marked on the latter. Depending on the machine used for this process and the type of receiving paper, copies with different color shades were obtained. The selection includes many dark brown copies, but there are also black and bluish-toned ones (fig. 11).

#### *Application phase*

Once planned, drawn, and, if necessary, reproduced, the panoramic sketches were intended to play a decisive role concerning the graphic information they contained. Fundamentally, the sketches served as a means of communication between the sender; that is, the draftsman, and the receiver, who planned operations over the territory. Specific actions were projected in the drawings, and in some examples, traces of this purpose can still be observed.

The panoramic sketches were meant to stimulate the knowledge of the graphic message receiver. A well-executed sketch resulted in an attractive outcome that



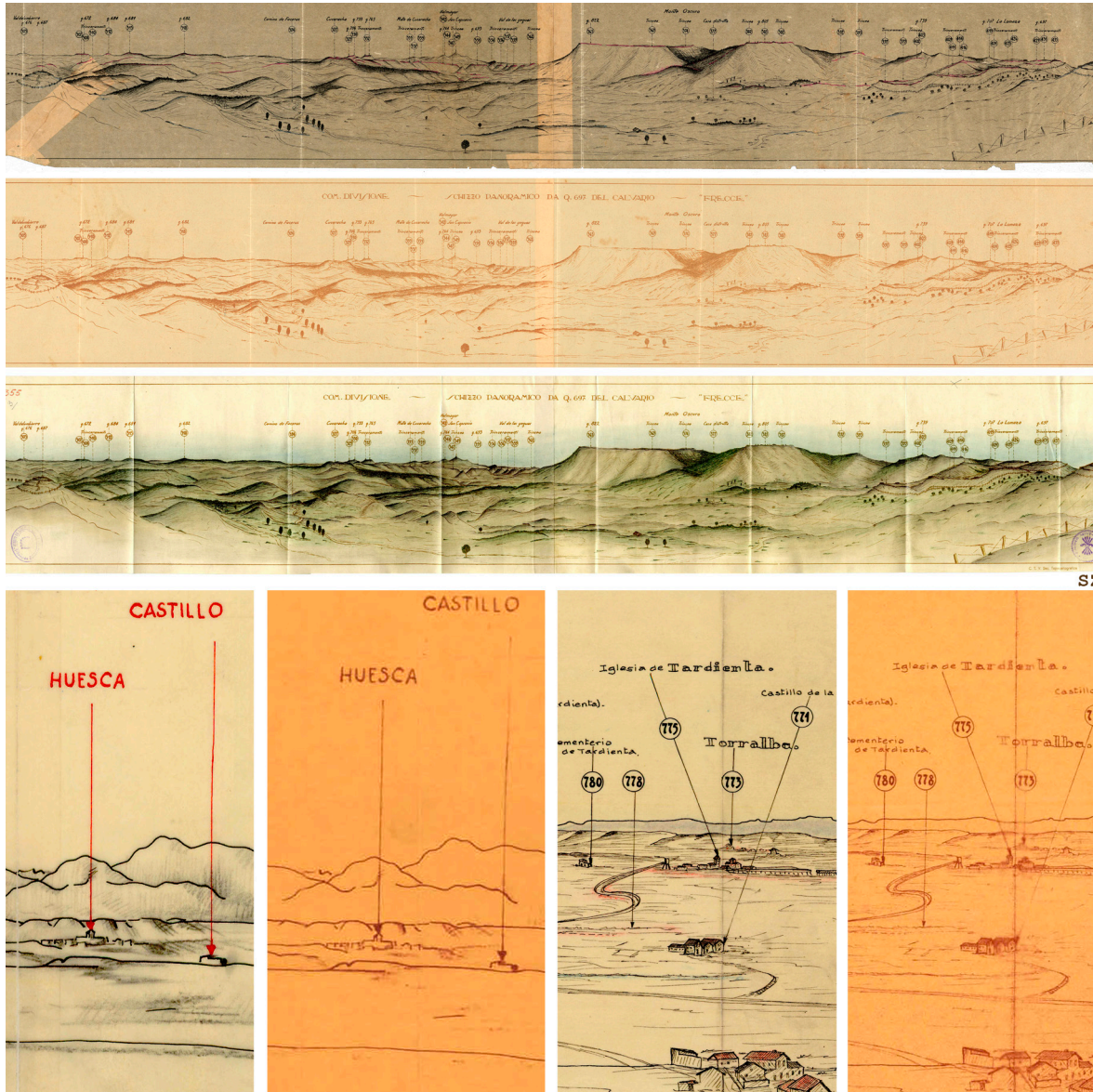


Fig. 10. Original panoramic sketches and duplicated versions. 1937. Archivo Militar de Ávila. Instituto Cartográfico de Cataluña.

captured the observer's attention and induced a reaction, fostering their imagination [Barbadillo 1999]. It was essential that the visual information provided was easily understandable by the recipients, which depended on the author's knowledge and skill. The ability to graphically represent reality as it was seen could replace the need for explanatory texts, legends, and topographic symbols [Ching, Juroszek 2007]. This differentiated panoramic sketches from other types of terrain representation, such as maps and topographic plans, which were more abstract and less realistic documents, requiring greater preparation for proper reading.

The sketches have endured to the present day as evidence that a drawing can remain on paper for a long time without losing its communicative potential. As drawings, they served to fix the knowledge that their authors poured into them, preventing it from being lost, and acted as a source of ideas that provoked a reaction in the observer [Barbadillo 1999]. Evidence of this is that in several sketches, at least two different types of hands can be distinguished: those of

the individuals responsible for depicting the landscape and those who interpreted it. Thus, on a homogeneous base defining the configuration of a territory, new traces were added, usually in color, highlighting aspects not included in the original (fig. 12). These new superimposed marks illustrate the thoughts and conclusions that the sketch triggered in the mind of the message receiver.

The recipient of the sketch, after understanding the formal complexity of the represented territory, could incorporate new data from various information sources. In this way, the user of the sketch transformed the nature of the drawing by placing it in a specific context. A timeless and fixed view of the place became the reflection of a particular and dynamic situation, as it could even include the representation of planned or already executed movements. Thus, the sketch could be subjected to multiple interactions, as many as copies, reflecting changes over time.

Panoramic sketches fulfilled their function both away from the place they represented and from the observation point itself. On one hand, they were documents that

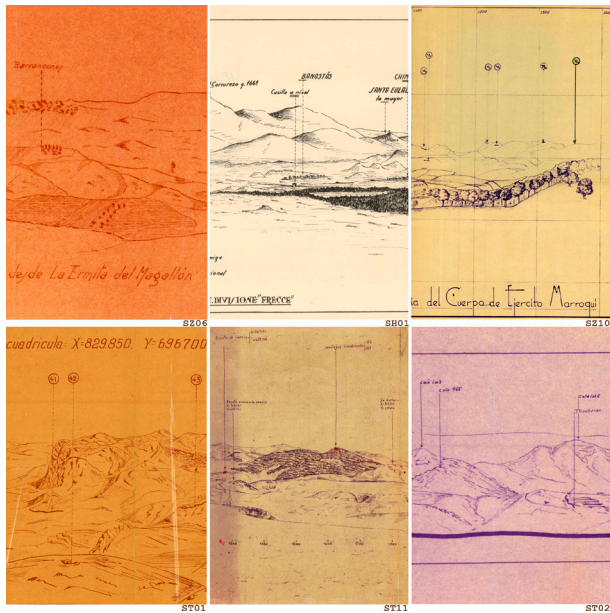


Fig. 11. Fragments of copies in brown (1,4), black (2,5), and blue (3,6). 1937-1938. Archivo Militar de Ávila.

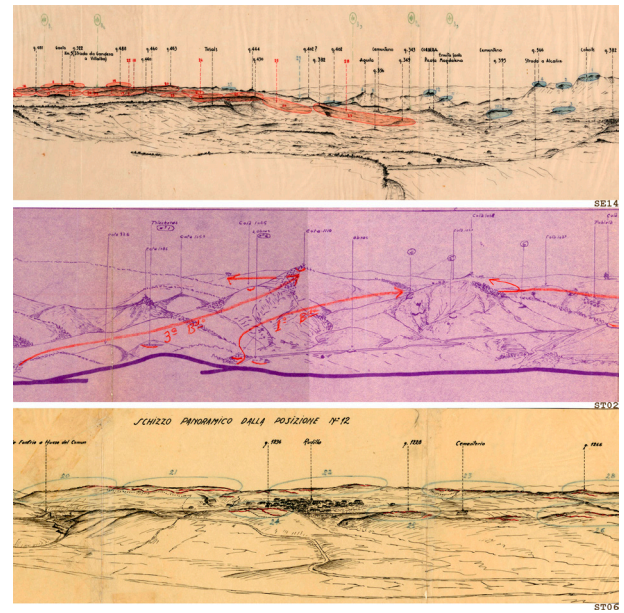


Fig. 12. Copies with added colored strokes. 1937-1938. Archivo Militar de Ávila. Instituto Cartográfico de Cataluña.



conveyed a three-dimensional image faithful to the reality seen from a specific strategic point to distant locations. Being easily interpretable graphics, they supported the reading of other less immediate sources, such as maps or written reports. On the other hand, the sketches offered an alternative view to direct observation of the territory, reflecting the trained eye of specialists who depicted only the necessary aspects. In this sense, the sketches acted as an instruction manual, revealing how to observe the territory to intervene in it.

## Conclusions

Panoramic sketches were not an end in themselves but a means of communication between the draftsman and the person responsible for planning actions over the territory. Through drawing, the former transformed the image of a complex reality into a synthetic and comprehensible graphic document, containing only the necessary information for the latter.

The common characteristics of the graphic language used in panoramic sketches have been described. The training received and the expected essentiality in the result predisposed the authors to use line drawing. This type of

drawing was further enhanced by the limitations imposed by the plan reproduction machines of the time.

The tracing of lines on paper was not simply a translation of what was observed but required a prior process of study, understanding, and recognition of the territory, as well as deliberate planning of the document's composition. Most drawings identify similarities in the tools used, the methodologies employed to outline the contours, and the graphic techniques applied to qualify the scenes. It is deduced that a strict calculation of perspective would have required working conditions and initial information difficult to obtain during the war. Compliance with the laws of perspective was achieved thanks to the draftsman's experience and prior knowledge.

It is inferred that the sketches could be used both to provide a fixed image of a place, which could fulfill its function anywhere, and to guide an observer from the observation point itself. Thus, in the face of the immensity of a complex and silent landscape, there was a graphic guide that helped to discriminate against those elements that were truly of interest.

Beyond the lines, technique and history converge in these drawings, demonstrating the utility of drawing to satisfy one of the most remote needs of human beings: to know and situate oneself in the surrounding territory.

## Acknowledgements

This work has been funded by the *Departamento de Ciencia, Universidad y Sociedad del Conocimiento, del Gobierno de Aragón, España (S04\_23R)*.

## Authors

Santiago Elía-García, Escuela de Arquitectura y Tecnología, Universidad San Jorge, selia@usj.es

Ana Ruiz-Varona, Escuela de Arquitectura y Tecnología, Universidad San Jorge, nruiz@usj.es

Rafael Temes-Cordovez, Departamento de Urbanismo, Universitat Politècnica de València, rtemes@urb.upv.es

## Reference List

Barbadillo, P. (1999). *Dibujar. Aprender y pensar. Aprender a pensar*. San Lorenzo del Campo Grande: Ediciones Arquna.

Ching, F.D.K., Juroszek, S.P. (2007). *Dibujo y proyecto*. Barcelona: Gustavo Gili.

Elía-García, S., Ruiz-Varona, A., Temes-Cordovez, R. (2023). Líneas en el frente. El dibujo como arma durante la Guerra Civil Española en Aragón. In *EGA Revista de Expresión Gráfica Arquitectónica*, No. 28(49), pp. 120–137. <<https://doi.org/10.4995/ega.2023.19410>> (accessed 28 May 2025).

Gómez de Salazar, F. (1911). *Principios y reglas fundamentales de perspectiva lineal*. Toledo: Academia de Infantería e Instituto Geográfico y Estadístico.

González de la Vera, L. (1912). *El croquis panorámico: aplicaciones militares del dibujo de paisaje*. Burgos: Imprenta Marcelino Miguel.

González Presencio, M. (1992). Fórmulas en figuración. Sobre la percepción y representación de las formas. In J. Lorda Iñarra, I. Jiménez Caballero (Eds.), *El arte como oficio*. VIII Seminario Artes Plásticas Nestlé, pp. 89-90. Pamplona: Universidad de Navarra.





Jiménez Caballero, I. (1992). El medio de la creatividad: el dibujo. In J. Lorda Iñarra, I. Jiménez Caballero (Eds.), *El arte como oficio*. VIII Seminario Artes Plásticas Nestlé, p. 18. Pamplona: Universidad de Navarra.

Maldonado, J.M. (2007). *El Frente de Aragón. La Guerra Civil en Aragón (1936-1938)*. Zaragoza: Mira editores.

Nadal, F., Urteaga, L. (2013). *Mapas y cartógrafos en la Guerra Civil española (1936-1939)*. Madrid: Centro Nacional de Información Geográfica.

Panofsky, E. (1999). *La perspectiva como forma simbólica*. Barcelona: Tusquets. [First ed. *Die Perspektivw als "symbolische Form"*. Leipzig-Berlin 1927].

Prats, F. (1937). *Conocimientos topográficos para campaña*. Madrid: Defensa Nacional.

Seguí de la Riva, J. (1993). Anotaciones acerca del dibujo en la Arquitectura. In *EGA Revista de Expresión Gráfica Arquitectónica*, No. 1, pp. 5–14. <<https://cartotecadigital.icgc.cat>> (accessed 28 May 2025).