

# Pictures of the Territory and the Landscape: Cartography and Drawings of the Mountains of Guadarrama

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**Abstract** Cultural Heritage is increasingly appreciated in our country. Nevertheless, this concept is still far from being considered in its real extent. While artworks, architecture, and archaeology were traditionally considered as essential vestiges of our past, landscapes and regions were ignored. As a consequence, their capacity to evoke old uses and customs was underestimated, as well as their power to create a strong sense of local identity. A deep knowledge of the history of the territory and the landscape is thus needed as a previous step before undertaking any regional planning or infrastructure. Drawing and mapping become essential tools to perform such a conceptual change.

**Keywords** Cartography · Landscape drawing · Cultural heritage

## 1 Introduction

Spain is fully aware of the value of its outstanding cultural heritage, as considered in the full sense that includes artworks and architecture, but also territory and landscape.

The underestimation of the territorial scale was evident in traditional researches into landscapes, that used to ignore the importance of old infrastructures. This omission is quite paradoxical when considering that minuscule fragments of Roman household items are carefully studied and classified, while big dams, long pipelines, or important bridges of the same epoch are still misregarded.

Industrial archaeology incorporated lately into the concept of heritage, despite its importance in daily life and socioeconomic development. Mills, saltworks, or mines, frequently built since the beginning of the Christian era, become essential elements to understand the evolution of a territory and a landscape. Similarly, an adequate knowledge and documentation of many other elements that historically

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served to structure the territory is needed, such as the royal roads with their related constructions—country inns, posthouses, or mountain passes—, but also the canals and the traditional irrigation systems, the railways, etc. All of them were only recently considered as essential parts of the cultural legacy.

An example of the lack of consciousness about the value of these constructions and devices was displayed by the Spanish Academy of History in 1918, when it faintly protested about the proposal of demolition of the Roman aqueduct in Sevilla that was agreed by the Provincial Commission of Monuments and the municipal council. Arguments presented involved an aesthetical point of view, reasoning that it was any artwork because “art was deserved to places where it could talk to the spirit and the eyes”. Finally only “the length to be preserved should be defined by mutual consent”, as the aqueduct was “vulgar, without artistic traces, or archaeological interest” (Fernández Casado [1972] 2008, 174–177).

Probably the strong functional character of all these constructions helped to foster this attitude, but their contribution to the development of communities was crucial, as they were the real signs of the spirit of progress that encouraged their builders, always at the avantgarde of new techniques and materials.

Unfortunately, sloth and unconcern led this essential heritage to ruin, or even to bad interventions that were built up with diverse results. As a consequence, it is urgent its location, documentation, description, and contextualization, as previous steps before planning or undertaking any action. Cartography and drawing play an outstanding role in this process.

As a case study we propose the Mountain of Guadarrama and its historical passes, that are documented from the Roman era onwards. Since the Middle Ages these mountain passes communicated uninterruptedly Segovia and Toledo, and lately the Royal Sites and Woods of La Granja, Valsaín and Riofrío –located in the northern slope of the Sierra—, with El Escorial, El Pardo and Madrid—in the southern side.

## **2 The Study of the Territory and the Landscape: A Methodological Approach**

The geographical phenomena which left their traces on the surface of the Earth due to natural or human activities, conformed along the centuries a structured set of forms and signs that must be read and understood, and are embodied in the concept of ‘territory’.

On the other hand, ‘landscape’ is the territory as it is perceived and experienced by an observer who establishes some aesthetic, scientific, emotional, moral, and cultural relationships with it. Accordingly, landscapes are unique and not transferable to each person.

Both concepts are subtle distinguishable, but compose a particular geographical area, a *locus* that can be approached from the point of view of the objective territory

—that is scientifically describable and analysable—, and from the perspective of the landscape—deep-rooted, full of subjectivities and cultural meanings. The integration of both approaches is a main target of our proposed methodology that will never renounce rigour.

As a consequence, the study of the construction of the territory (Chias and Abad 2012), or according to Ortega Cantero (2004, 44) “the historical geography of landscape”, needs to manage various types of graphic, cartographic, and written sources, both ancient and contemporary. Maps in particular provide essential information about the geographic elements existing in a historical moment or period. On the other hand, landscape drawings and photographs become subjective visions, partially influenced by schools of thought. Finally, written documents—including travel diaries, literature, and other historic papers—are frequently important in order to read and understand properly the graphic ones.

Once the various elements are found and checked on the different sources, they are georeferenced. Their location and state are also verified along the phase of field work. This stage of the research is particularly interesting because it comprises the production of drawings and surveyings, as well as an exhaustive description and illustrated report.

All these datasets are integrated into relational multiformat databases that we designed by means of an open source software.

Simultaneously, the digital cartography scale 1:25,000 is produced. It is based on the updated edition of the MTN series, and structured as layers corresponding to the different types of geographic elements. Many other features are drawn on the map, as they are found and located on the various sources, and during the following field work campaigns.

On a later phase databases are linked to the map in order to implement a geographic information system (GIS). Among the outputs of the GIS the thematic map series representing the successive historic periods must be highlighted, and when they are considered as an ensemble, they permit to reconstruct in an objective manner the successive phases in the construction of the territory and the landscape.

### **3 Mapping the Territories Around the Mountains of Guadarrama**

The famous statement coined by Alfred Korzybsky that “the map is not the territory”, summarizes the quality of the map of being an abstraction derived of the territorial reality. It is then an artifice that permits the cartographer to select, simplify and represent at a reduced scale those elements of the geographic reality worth to be drawn. Maps benefit themselves of a cartographic tradition, of its methods and techniques, but they are also the result of historical events and of cultural contexts.

Before the use of the modern map symbology and conventions were agreed by the Western Countries –what happened as a result of Napoleon’s campaigns and the

creation of the Bureau Topographique de l'Armée in 1802—, cartography used various iconic symbols lacking of accuracy. This problem proved to be irrelevant in large scale maps surveyed with the traditional topographic instruments, as they were enough accurate and reliable to their purposes (Chías and Abad 2014). Similarly, local maps and plans of buildings and civil works were drawn in detail, as they focused on strategical points and landmarks, as mountain passes or royal estates (Chías 2013, 2014).

However, the lack of accuracy could be important in small scale maps. In this sense, reports by Bory de Saint-Vincent revealed the ambiguity of the maps drawn by the famous cartographer Tomás López (Manzano, Fernández and San Antonio 2013), that were considered until then the most complete and trustable about the Iberian Peninsula. Lopez produced his maps by means of compilation without any field work, resulting useless for military campaigns. “It is specially to separate the slopes towards the Mediterranean Sea from those draining to the Ocean, that multiple crests, summits, anastomoses, spurs, and all what a burin can imagine were drawn in black to offer a rough alpine physiognomy. However, wide plains [...] extend exactly where these mountains were supposed to be. Confused about such information, the officer estimates the position of obstacles or defence points he will never meet. Naturalist also dreams of steeps propitious to his researches, that will transform into an arid horizontal area” (Bory De Sain-Vincent 1823, 7) (Figs. 1 and 2).

The lack of a trustable cartography of some strategic points as the mountain passes along the mountains of the Central System in general, and along the Guadarrama in particular, fostered the production of an important set of maps during the Peninsular War. This production extended to the 19th century as a result of the Spanish-French campaigns that took place within the agreements reached from 1823 until 1832. Previous experiences of the French officers in the Peninsula, together with the increasing demand of travel books on Spain, involved the production of an important set of manuscript maps. This set is still custodied in the Archivo Cartográfico y de Estudios Geográficos del Centro Geográfico del Ejército in Madrid, and also in the Service Historique de la Défense in Vincennes (Chías and Abad 2016).

These works set the basis of the modern cartography of Spain, that was soon after initiated by the famous Spanish cartographer Francisco Coello in his *Atlas de*



**Fig. 1** Juan de Villanueva, 1788. *Plan que demuestra el trozo de camino que se proyecta ejecutar desde el Real Sitio de San Lorenzo hasta unirse con el camino antiguo que desde el mismo Sitio conduce a El Campillo y Guadarrama.* Archivo del Palacio Real, Patrimonio Nacional, Madrid

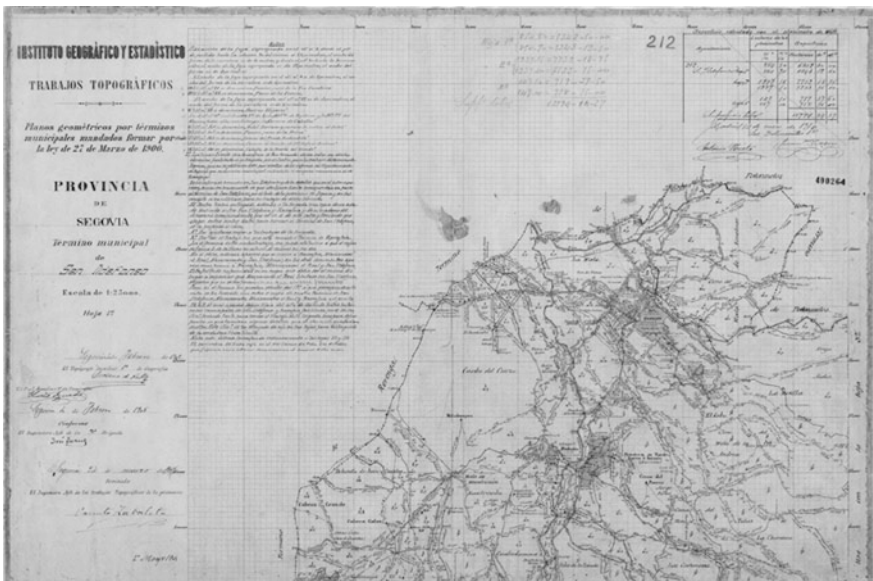


Fig. 2 Tomás López, 1786. *Cercanías de Madrid*. Real Academia de la Historia, Madrid

*España y sus posesiones de Ultramar*. Coello's cartography began in 1844 to complement the *Diccionario* by Pascual Madoz, and was almost immediately followed by the works led by the Commissions of the Map of Spain (Comisiones del Mapa de España) depending on the Junta de Estadística. These commissions completed the geodetic surveying and closed the national geodetic network, and started as well the production of the outstanding series of the Topographic Map of Spain (Urteaga and Camarero 2014; Arístegui et al. 2015) (Figs. 3 and 4).



**Fig. 3** Depósito de la Guerra [1809], *Plano de los alrededores de Madrid*. Archivo Cartográfico y de Estudios Geográficos del Centro Geográfico del Ejército, Ministerio de Defensa, Madrid



**Fig. 4** Instituto Geográfico y Estadístico, 1905. *Planos geométricos por términos municipales mandados formar por la ley de 27 de Marzo de 1900. Provincia de Segovia. Término municipal de San Ildefonso*. Instituto Geográfico Nacional, Madrid

## 4 Drawing the Landscapes of Guadarrama

Since the end of the 18th century von Humboldt ([1845–1862] 1874–1875, I: 7–71) modernized some of the concepts related to the knowledge of the territory, through the adoption of its cultural aspect—its associated set of values and meanings—and the attribution of its capability to express both the structure and the internal order of the geographic reality perceived through vision (Fig. 5).

The new aesthetic atmosphere supposed a true renewal of the ways of thinking, of perceiving, and feeling. This new attitude could be summarized “who looks at a landscape and understands its language, can read an accumulation of geological forces, climate changes, passes across steppes and woods, rivers or lakes, hunters, farmers, devastating armies, patient reconstructions, forest fires, gardens, economies and societies that were gone or still persist or still are to come” (Martínez de Pisón 2010).

It was then obvious the need of learning the way to see and how to read, concerning also those integrated elements that were not so evident. It became also essential to look for new ways to describe the landscape, both graphic and written—not to mention other kind of expressions as music.

Humboldt himself devoted a chapter of his book *Kosmos* ([1845–1862] 1874–1875, I: 72–89) to “the influence of landscape drawing in the study of Nature”, where he stressed the importance of representing the existing links between men, territory and landscape, “some of these mysterious analogies and moral harmonies that link man to the external world” ([1845–1862] 1874–1875, II: 4).

Romanticism brought up the modern tradition of modern landscape painting, and thus the images included in traveller’s books, in reports of expeditions and in literature, turned to be their essential complement, as well as scientific evidences and demonstrations of the writings (Duviols 1989, XV).



**Fig. 5** José de Hermosilla y Sandoval, 1757. *Vista del Monasterio de El Escorial*. Biblioteca Nacional de España, Madrid

As we mentioned above, the Peninsular War strongly contributed to raise the interest on Spain. And the same way it fostered the cartographic production, many travel books on Spain were written by foreign authors, mainly French and British, as Borrow, Ford, Merimée, George Sand, Gautier, Quinet, Dumas or Hugo. They created a new image of Spain, of its ways of life, human types, customs, and social structures. They were sometimes affected by clichés, but surprisingly their descriptions of the landscapes were less influenced by commonplaces (Alberich 1987, 21–44).

The crossing of the Guadarrama Mountains as described by Gautier (1845) is among the most significant examples of the Romantic visions of Spain: “Mountains rised higher and higher; as soon as we crossed one of them, a higher one emerged, previously hidden to our eyes; mules were not enough and oxen were needed, what favoured that we got off and ascended the mountain on foot. I was drunk with such a pure vivid air; I felt so agile, so happy, so filled with enthusiasm, that I cried and jumped as a kid; I desired to dive into such charming precipices, so blue, vaporous and velvety; I would like to be swept away by every waterfall, to put my feet in each spring, to pick up a sheet of every pine tree, to roll on the sparkling snow, to blend myself with Nature and melt as an atom in such immensity. Under the sunbeams, the dazzling high summits shone and glittered as the sequins on the skirt of a dancer; other peaks were covered by clouds and blended with the sky in insensitive gradations, as there is nothing more similar to a mountain than a cloud. There is no artwork that can express such undulations, scarps, shades and forms: neither a paintbrush nor a pen.”

The contributions by the Spanish writers were also really interesting. Enrique Gil y Carrasco “was the first one to watch a landscape without using literary topics, to capture it within his soul, and to describe it so faithfully as his art could do” (Picoche 1978, 193); the works by Rosalía de Castro showed a deep feeling of the landscapes of Galicia, and Gustavo Adolfo Bécquer found in landscape a vivid stimulus to his imagination (Ortega Cantero 2004, 38) (Fig. 6).

These authors coexisted with more realistic perspectives at the end of the 19th century, as those of Jose María de Pereda, Emilia Pardo, Vicente Blasco Ibáñez and Jacint Verdaguer. An approach that showed its preference for description and its detachment from sentimental positions. It could be considered as a literary parallel to the tendencies in painting led by Corot and the *École de Barbizon*.

The integrated perspective was due to Francisco Giner de los Ríos and the liberal ideology of the *Institución Libre de Enseñanza*. Not forgetting the subjective cultural approach, they tried to meet both perspectives, supported by “the mobility of the look” (Berdolulay and Saule-Sorbé 1998), and based on the direct experience of landscape. This attitude changed the way of looking at the Country, helped to valuate its past and its present, and started a process of creation of a national identity (Ortega Cantero 2001).

According to Azorín (1916), “the aim of the *Institución Libre*—what means, the spirit of Giner—, has defined the group of writers of 1898; this spirit has evoked the love for nature, and consequently, for landscape and for Spanish matters, Castilian





**Fig. 6** Fernando Brambila, 1821. *Vista de San Ildefonso desde el camposanto*. Patrimonio Nacional, Madrid

matters, love that has renewed our painting (Beruete, Zuloaga, etc.); this same spirit has provoked to turn the eyes in the direction of the traditional literary values, to revive memories of old poets, to reprint old editions of the classics as never before, and to create a new school of philologists and critics imbued with a brand new spirit.”

Giner de los Ríos ([1886] 1915) wrote a lot about Guadarrama, stating that “granite, due to its composition and internal structure, shows a certain consistence, not only in quantity but in direction, to the atmospheric agents; as a consequence, it can not be destroyed but in way that is the origin of certain form. Wherever it arises, water rounds it off, producing in the smallest pieces such rough surfaces covered by lichens, that interrupt the continuity of the topsoil; and in the biggest stones create the typical forms of the ‘piedras caballeras’, enormous monoliths that oscillate sometimes as many other natural megalithic monuments do; until the effects of solar radiation, that heat and dilate them all day long, contract them by night, and cut them deeply into thousand cracks where ice swells making them break out, spreading enormous splinters, that piled up, conform the sharp serrated peaks of our mountain; their sawlike edge is particularly visible where the two types of granite meet: one of them more resistant, the other more breakable and fragile [...] On the mountain [...] all is matt and unfriendly [...] Down in the wide valley, light is more uniform, shadows are less accentuated, shades are richer and brighter.”(Figs. 7 and 8).

The ideology of the Institución Libre de Enseñanza, its didactic practice based on trips and direct experience of landscape influenced famous painters as Aureliano de Beruete and Jaime Morera, whose pictures reflected the reality of Guadarrama both perceived and objective, as a morfologic sign of the natural evolution and the footprints of man in such a wild country.



**Fig. 7** Jaime Morera, 1891–1897. *Guadarrama*. Museu d’Art Jaume Morera, Llérida



**Fig. 8** Aureliano de Beruete, 1911. *Vista de la Sierra de Guadarrama desde El Plantío*. Museo Carmen Thyssen, Málaga

## 5 Conclusions

Thanks to the fieldwork and to the ancient documents located in the main archives, it is still possible to recover lots of elements that conform the history of the territory and the landscape. Other sources as literature and art help to preserve our memory and identity.

Our methodology can be worldwide applied to reconstruct the successive historical epoch that conformed our territories and landscapes. As Bruno Zevi stated in the title of his famous book, we must “learn to look at landscapes”. And according to Muñoz Molina (2016), “there is a plastic beauty that stresses and highlights the world of sounds [...] Not far from there, when the visual is very much imposed, the

ear gets distracted and deafened, as if the brain could not process simultaneously such an amount of sensorial novelties. If noise impedes a better vision, the visual agitation obstructs the full listening.”

To summarize, we show our interest and ability as architects to recover and document the built heritage at the architectural and urban scales, but the forgotten heritage that composes the territory and the landscape must also play an essential role in our priorities.

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