Factory-Territory System: Cultural Constructs Around Spanish Autarkic Agroindustrial Landscapes

Isabel Rodríguez De la Rosa
PhD, assistant professor, Department of Architectural Composition, Cultural Landscape Research Group, ETSAM, Universidad Politécnica de Madrid, Spain
isabel.rodriguez.delarosa@upm.es

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A Country's Autarkic Industrialization Project

Under the slogan "produce!!, produce!! and produce!!,"[1] the Franco regime promoted in Spain an autarkic industrialization policy. This was particularly pronounced during the first twenty years of the dictatorship—between 1939 and 1959—within the framework of an ambitious autarky that acquired political, sociocultural and, consequently, economic effects.[2] This industrialization program was based, in general terms, on the location and exploitation of a wide range of natural resources available in national territory. Therefore, this was a program with a high territorial impact, that reached the most diverse sectors, such as energy, water, mining, quarrying, oil extraction, livestock, forestry, fishing and, as developed in this paper, agriculture.

The research underlying this contribution aims to revisit the industrialization undertaken during Franco's autarky from a new angle, to examine it as a complex practice of spatial and sociocultural design.[3] Thus, it seeks to explore the intricate relationship established in the early Franco regime between political ideology, territorial planning and cultural landscapes. The construction of these landscapes intended primarily for production caused important transformations of an environmental and geographical nature, but also others of a sociocultural and aesthetic nature. That is, with this industrialization, not only industrial objects of unquestionable interest were designed, but also a fundamental chapter in the environmental history of Spain was written, with important consequences for understanding some contemporary territorial, industrial and sociocultural logics.

Seeking to provide a critical approach to the cultural construction of the landscapes derived from this intense industrial activity, this research addresses, as a starting point, the analysis of territorial planning in relation to social transformation and cultural impact in its broadest senses and scope. In this regard, it is worth asking: What was the quantitative and qualitative extent of the industrializing phenomenon? Which were the functional and sociocultural design practices employed in the territories of autarkic industrialization? And to what extent are these landscapes recognizable and recognized today? To discuss these hypotheses and interrogations, this paper takes the agricultural sector, and specifically the development of irrigated agriculture, as a guiding thread to examine a landscape (re)designed and constructed during Franco's autarky.

1 Francisco Franco Bahamonde, *Palabras del Caudillo: 19 abril 1937 - 7 diciembre 1942* [Quotations of the Caudillo: April 19, 1937 - December 7, 1942] (Madrid: Ediciones de la Vicesecretaría de Educación Popular, 1943), 122. Address delivered at the meeting of the Consejo Nacional de F.E.T. y de las J.O.N.S. held in Burgos on June 5th, 1939. Original: "¡¡producir!!, ¡¡producir!! y ¡¡producir!!"

2 Regarding the concept of autarky and its application to the case of Francoism in Spain, see Isabel Rodríguez De la Rosa, "Raw Materials in Transition: Narratives Around Water in the Construction of an Industrialized Spain," *Change Over Time* 12, 1 (2023): 53-54.

3 Regarding the wider research framework, sources and methodology in which this contribution is embedded, see Isabel Rodríguez De la Rosa, "Un territorio-fábrica: La construcción del paisaje industrial durante la autarquía española, 1939-1959" [A Factory-Territory: The Construction of the Industrial Landscape during the Spanish Autarky, 1939-1959] (PhD Thesis, Universidad Politécnica de Madrid, 2025).

Francoist factory-territory system

In the above-described scenario and from a position aligned with the postulates of *Geographic Voluntarism*—which consider humans as a geographical factor capable of influencing their own future through the alteration of the physical environment—,[4] the industrial activities promoted by the Franco regime led to the construction of what is identified here as an extensive *factory-territory system*. This concept of self-enunciation refers to the process of territorialization with eminently productive purposes that the Franco regime undertook through its specifically autarkic industrialization policy. Acting via its multiple bureaucratic-administrative instruments, the state produced a new territorial order by means of practices of spatial design and reconfiguration, as well as through the use of available human and non-human resources.[5]

As a result of this process, the existing sociocultural and ecological structures, which were linked to them in one way or another, were profoundly affected, in the context of an action with profound consequences, some planned, some unforeseen. That is to say, a complex relationship was developed between project and result; or in other words, between the intrinsic and narrative aspects of the project promoted by the Franco regime and those that arose spontaneously as a result of its materialization.

The starting point for these operations was always the raw material, understood as an element or resource extracted from the natural environment and used for various purposes. Accordingly, public authorities promoted numerous campaigns to study the territory in order to assess its exploitation limits. All of this was based on the conviction that there was a vast wealth of raw materials scattered throughout the country that had not yet been exploited or simply not been located. At the end of the study phase, it was decided that it would be advantageous to exploit a particular raw material in a particular place, which needed the implementation of territorial systems of exploitation and transformation of various kinds, to obtain, often in the same place, energy resources, semi-processed products or consumer goods.

By prioritizing the productive capacity of the natural environment, the Franco administration became a powerful agent for the transformation of landscapes and the forms of human organization associated with them, without paying much attention to the economic, sociocultural, or environmental costs.[6] Likewise, in the course of these actions, autarkic industrialization underwent a process of (re)discovery, transformation and aestheticization, both of the raw material itself and of the means and resources used to transform it.

In order to carry out these actions, the state adopted an attitude of territorial appropriation, which in any case was not exclusive to the Franco regime, but can be generalized to most modern state administrations.[7] By considering the territory as part of its being, not only in a military but also in a material sense, the early Franco regime transformed its physical reality and

4 Regarding the postulates of *Geographic Voluntarism* (also known as *Geographic Possibilism*), see Manuel de Terán, "La causalidad en geografía humana: determinismo, posibilismo, probabilismo" [Causality in human geography: determinism, possibilism, probabilism], *Estudios Geográficos* 67-68 (1957): 273-308.

5 Regarding the notions of territory and territorialization on which this research is based, see Philip E. Steinberg, "Territory, territoriality and the new industrial geography," *Political Geography* 13, 1 (1994): 3-5; and Eugenio Pérez Certucha, "La producción del territorio como proceso político. Anotaciones con respecto a la dimensión espacial del poder en el Estado" [The production of territory as a political process. Notes on the spatial dimension of power in the state], *Acta Sociológica* 73 (2017): 247-71.

6 Regarding the role of the Public Administrations in the transformation of the territories, see José Luis Palma Fernández, "Políticas públicas de ordenación del territorio rural en Andalucía: la perspectiva de un siglo de transformaciones jurídicas" [Public policies for rural land management in Andalusia: the perspective of a century of legal transformations], *Reflexiones: Revista de Obras Públicas, Transporte y Ordenación Territorial* 1, 1 (2007): 63-81.

7 Lino Camprubí, *Los ingenieros de Franco: ciencia, catolicismo y Guerra Fría en el estado franquista* [Franco's Engineers: Science, Catholicism and Cold War in the Francoist State] (Barcelona: Crítica, 2017), 32-33.

imprinted its particular political, economic and sociocultural ideas on the landscape.[8] In order to achieve this goal, the state—like other fascisms and parafascisms—[9] relied on a discourse that generated an imaginary through which a decisive link was established between the ideas of natural environment, industrialization, progress, resurgence and national independence.[10]

This is how Francoism conceived its *factory-territory system*, envisioning the country as a space to be transformed to ensure its exploitation by the most varied industrial means. In this regard, after more than two decades of dictatorship, Franco declared in a speech to a predominantly peasant population: "If in our territory nature has not been easy for us, we can change it, as you have done with your work."[11]

Land, Water and a Model Society: Planning a New Territorial System

In the framework described so far, the agrarian issue became one of vital importance for Franco's regime. Once the dictatorship began, Spain was plunged into a long post-war period marked by scarcity, shortages, lack of human and technical resources, rationing of staple foods and, in short, hunger.[12] In this context, a large part of the population, which decades earlier had begun a process of progressive urbanization, returned to the rural environment, at least for the sake of survival.[13]

All these circumstances were then used as a justification for continuing or implementing numerous interventionist and rationing policies in the agricultural sector.[14] In Franco's words, it was necessary to carry out "the total transformation of the life of a country that would not be possible without the total transformation of the life of our countryside."[15] In this regard, the new agrarian discourse was built on the inheritance and rejection of previous periods, especially the regenerationist movement of the nineteenth century and the postulates of the Second Republic.[16] Certain foreign experiences, like those of Italy and the United States, were also used as leading references.[17]

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8 Ibid.

9 Tiago Saraiva, "Fascist Modernist Landscapes: Wheat, Dams, Forests, and the Making of the Portuguese New State," *Environmental History* 22, 1 (2016): 55-56.

10 Miguel Ángel del Arco Blanco, and Santiago Gorostiza, "«Facing the Sun»: Nature and Nation in Franco's New Spain (1936-51)," *Journal of Historical Geography* 71 (2021): 74; and Ángeles Layuno, "Cambiar el paisaje: la obra del Instituto Nacional de Industria (1941-1975)" [Transforming the landscape: the work of the National Industrial Institute (1941-1975)], in *Arquitectura y transferencias históricas, retos contemporáneos* [Architecture and Historical Transfers, Contemporary Challenges], AA.VV. (Granada: Abada Editores, 2022), 871-76.

11 Agustín del Río Cisneros, *Pensamiento político de Franco: Antología* [Franco's Political Thought: An Anthology] (Madrid: Servicio Informativo Español, 1964), 372. Franco's speech in Cabra, Cordoba, May 4, 1961. Original: "Si en nuestro territorio la naturaleza no se nos mostró fácil, podemos, sin embargo, cambiarla, como habéis conseguido con vuestro trabajo."

12 Miguel Ángel del Arco Blanco, *Las alas del Ave Fénix: La política agraria del primer franquismo (1936-1959)* [The wings of the phoenix: The agrarian policy of the early Franco regime] (Albolote (Granada): Comares, 2005), 29-30.

13 Cristóbal Gómez Benito and Emilio Luque Pulgar, *Imágenes de un mundo rural: 1955-1980* [Images of a rural world: 1955-1980] (Madrid: Ministerio de Agricultura, Pesca y Alimentación, 2006), 9-14.

14 Del Arco Blanco, *Las alas del Ave Fénix*, 8-11.

15 Del Río Cisneros, *Pensamiento político de Franco*, 351-52. Original: "la transformación completa de la vida de un país que no cabría sin la transformación total de la vida de nuestro campo."

16 The regenerationist movement was an ideological trend that emerged in Spain in the 1870s and sought the regeneration of the country's political, social, and economic situation through a modernization that would align it with the rest of the central European countries. Besides, regarding the influences that configured Franco's agrarian policy, see Del Arco Blanco, *Las alas del Ave Fénix*, 285-90.

17 José Luis Mosquera Müller, "Antecedentes históricos" [Historical background], in *Pueblos de Colonización en Extremadura* [Colonization villages in Extremadura], coords. Sara Espina Hidalgo and Rubén Cabecera Soriano (Mérida: Consejería de Agricultura y Desarrollo Rural, 2010), 49-50.

On this foundation and since its inception the Franco regime understood that control over water was essential to carry out this process of transforming the countryside. However, the official objectives were not only a general increase in the production and productivity of the land, but also the regeneration and construction of a certain character and social development of the rural population. To this end, the management of the country's water resources became one of the fundamental pillars of the agrarian policy of the period, articulated in line with the redistribution and control of at least part of the rural population. In order to achieve these objectives, the priority was to select sites that combined unexploited natural opportunities, generally vast rural areas characterized by the predominance of large estates and proximity to abundant watercourses, with situations of high social instability.[18]

In this regard, the irrigation and colonization plan carried out in the province of Badajoz is particularly significant. The objective was to achieve a profound restructuring of the economic and sociocultural structure of Spain's largest province through the physical transformation of its territory.

After creating the necessary public organizations and institutions, the Badajoz Plan began with the exploitation of the "untapped wealth of the Guadiana" and its tributaries, with the goal that "the technically managed waters would transform the unproductive fertile plains into an emporium of wealth."[19] The aim of the plan was to reorganize and optimize the agricultural, livestock and forestry structure of the province, while promoting its industrial development. To this end, an action area of approximately 115,000 hectares was defined around the Guadiana River (Fig. 1), and a series of actions on the natural environment were implemented almost simultaneously.[20] These actions consisted of: water control—the trigger resource of the plan—, the irrigation of large areas, the redistribution of land ownership, the introduction of a work force with strong ties to the territory, and the improvement of public services and communication infrastructures.[21]

All these actions were possible thanks to spatial design practices that also transformed the aesthetic and sociocultural characteristics of the province. Beyond the description and analysis of the actions of the plan, it is of particular interest to delve into the steps of planning and execution of the colonization process. By moving back and forth between territorial and domestic scales, these practices made it possible to project and build with great precision a new landscape.

As mentioned above, the plan sought to affect the socioeconomic situation of the entire province through a more limited focus of action: the area converted from rainfed to irrigated land around the Vegas del Guadiana. As shown on the map in Fig. 1, this area was divided into the Vegas Altas and the Vegas Bajas, and these areas were subdivided likewise into four large irrigable zones.[22] Thus, the definition of the areas and their irrigable zones prepared the ground for the (re)planning and functional design of this area.

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18 José Luis Mosquera Müller, "Plan de Colonización de Extremadura. Introducción" [Colonization Plan of Extremadura. Introduction], in *Pueblos de Colonización en Extremadura* [Colonization villages in Extremadura], coords. Sara Espina Hidalgo and Rubén Cabecera Soriano (Mérida: Consejería de Agricultura y Desarrollo Rural, 2010), 74.

19 Noticiario Cinematográfico Español (NO-DO), *La provincia resurge: el Plan de Badajoz* [The province re-emerges: the Badajoz Plan] (1957, NO-DO), min. 1:20 to 1:35. Original: "riqueza desaprovechada del Guadiana" and "las aguas dominadas por la técnica convirtiesen las vegas improductivas en un emporio de riqueza."

20 Jefatura del Estado, "Ley de 7 de abril de 1952 sobre el Plan de obras, colonización, industrialización y electrificación de la provincia de Badajoz" [Law of April 7, 1952, on the Plan of Works, Colonization, Industrialization and Electrification of the Province of Badajoz], *Boletín Oficial del Estado* 99 (April 8, 1952): 1587-88.

21 Instituto Nacional de Industria, Secretaría Gestora del Plan Badajoz, *El Plan de Badajoz: su realidad actual* [The Badajoz Plan: its current reality] (Madrid: Secretaría Gestora del Plan Badajoz, Instituto Nacional de Industria, 1965), 15.

22 Presidencia del Gobierno, *Plan de obras hidráulicas, colonización, industrialización y electrificación. Provincia de Badajoz* [Hydraulic works, colonization, industrialization and electrification plan. Province of Badajoz] (Madrid: s.n., 1960), 15.

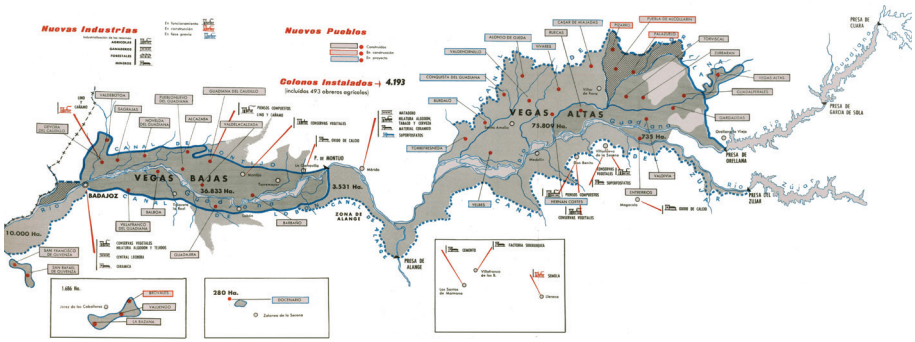

Fig. 1: Summary of plan actions

Sectorization of irrigable land

As in any design process, before implementing any of the actions of the plan, exhaustive study and cartography campaigns were carried out for each of the potentially irrigable areas, mapping their initial conditions. Thus, studies were made, for example, of the altimetric characteristics, the layout of existing infrastructures, the distribution of plots, the location of any type of landmark or built element or the qualities of the soils and their classification of use, among other data.

It was then necessary to manage the supply, distribution and control of the land needed to carry out the plans. This issue was particularly relevant in the case of Badajoz, considering at least two factors: the official determination not to cause excessive prejudice to the original large landowners, and the need to control a large volume of land, since it was necessary not only for the processes of transformation into irrigated land, but also to carry out the settlement of colonists.

In order to achieve this objective, the plan adopted a strategy of land redistribution based on the criteria of "surplus land" and "reserve land," based on the experience of the United States colonization, imported and adapted in its technical and legislative components to the Spanish case.[23] Thus, once the specific area affected by the plan had been defined and declared to be of national interest for colonization, an administrative mechanism was set up to carry out the reparcelling and redistribution of land ownership through partial expropriations.

In accordance with this approach and as shown in the plan in Fig. 2, each original plot was divided in such a way that, on the one hand, the "reserve lands" remained in the hands of their original owners.[24] And, on the other hand, the "surplus lands" came under the control of the Instituto Nacional de Colonización (National Colonization Institute, INC), the main administrative instrument created by the Franco regime for the implementation of this type of plan. This process was applied to each and every one of the plots affected by the demarcation of the plan. Thus, the sum of its results led to the redistribution of the ownership of a large territory and the provision of the necessary lands for the materialization of the transformation actions by the INC.

In most cases, the original large landowners benefited from these operations because, although the area of their plots was reduced, they were converted into irrigated land at a price subsidized by the state itself, which they could generally pay with the revenue from the expropriation, and

23 Regarding land distribution strategy, see Alfredo Villanueva Paredes and Jesús Leal Maldonado, *Historia y Evolución de la Colonización Agraria en España. Volumen III: La planificación del regadío y los pueblos de colonización* [History and development of agricultural colonization in Spain. Volume III: The planning of irrigation and colonization towns] (Madrid: Ministerio para las Administraciones Públicas, 1991), 24. Original: "tierras en exceso" and "tierras en reserva."

24 Ibid., 24-25.

VALORACION DE LA FINCA "DOCENARIO"
PLANO DE PLANTA

ESCALA 1:2.500

BADAJOZ - 1.956

LOS INGENIEROS AGRONOMOS

PERITO DE LA PROPIEDAD - PERITO DE LA ADMINISTRACION.

Plano 2 de 2 planos 8 Topográfico 1007

ZONA DEL CANAL DE ORELLANA

ESCALA GRAFICA.

0 1 2 3 4 5 6 7 8 9

ESCALA 1:150.000.

Plano 2 de 2 planos 3 Topográfico 252

Fig. 2: Land valuation plan of the Docenario estate, 1956 (facing page, above)
Fig. 3: Plan of sectors of the irrigable area of the Orellana canal (facing page, below)

they had the possibility of doing so over a longer period of time.[25] As a result, they received much more productive land per cultivated unit. Specifically, the state expected this transformation to achieve a degree of intensification of production that would multiply the value of the products obtained in rainfed agriculture by eight or ten times, an increase greater than the reduction in land area to which the original owners were subjected.[26]

Once the necessary lands had been acquired, their surfaces leveled, and the general hydraulic infrastructures that would structure the territory laid out, all the irrigable areas were divided into sectors. These were designed with a variable surface area, depending on the conditions of each zone, without, as a rule, exceeding two thousand hectares in size. In addition, all sectors had to be hydraulically independent in their layout and demarcation.[27] In other words, each sector had to be directly connected to a primary water supply source through a main irrigation ditch, which in turn was connected to the Guadiana River itself, one of its tributaries, or one of the four major irrigation canals.

The plan in Fig. 3 shows this sectorization process carried out for one of the four large irrigable areas. Based on the layout of the river and its tributaries, existing towns and roads, and the main canal, the thirty-seven sectors into which the area was divided were delineated. In addition, the plan includes the layout of the irrigation ditches and the main drains of the area, confirming the effective connection of each of the sectors to a main water supply source.

Parceling of the sectors

After the sectorization of the irrigable areas, a detailed planning process began, both for their irrigation and, in the case of a new town, for their colonization. To this end, the layout of the irrigation ditches and drains, both main and secondary, was proposed, starting from their points of connection with the primary water source, and associated with them were the new roads, creating a network of infrastructures that restructured the territory of the sector. In addition, in cases where a new town was planned in the sector, its location was determined considering, as will be explained below, variables related to the quality of the soil, the distance to certain points of interest and the relationship with other new towns in the vicinity.

The plan in Fig. 4 shows the detailed design of one of these sectors, specifically sector X of those outlined in Fig. 3. The plan shows the layout of a dense network of elements, including ditches, drains and roads, which is the result of a detailed design process and responds to the need to connect each of the future plots to these networks, both to the water supply and evacuation systems and to the access and maintenance roads.

Once the infrastructure was designed, the new distribution of land uses in the sector was carried out. For this purpose, soils were classified into agrological groups according to their quality and suitability for certain crops, using data obtained from soil samples taken during the analysis phase. Those classified as lower quality were reserved for the location of villages, industrial facilities or non-irrigable areas dedicated to other agricultural or forestry uses.[28]

The next step in the process of detailed design of the sectors was parceling. Thus, the land acquired by the INC, which was not intended for the location of a town or an industrial facility,

25 Luis García de Oteyza, Manuel Martin Lobo and Instituto Nacional de Industria, Secretaría Gestora del Plan Badajoz, *El Plan de Badajoz* [The Badajoz Plan] (Madrid: Instituto Nacional de Industria, Secretaría Gestora del Plan de Badajoz, 1958), 40-41.

26 Instituto Nacional de Industria, et al., *El Plan de Badajoz*, 10.

27 Jefatura del Estado, "Ley de 21 de abril de 1949 sobre colonización y distribución de la propiedad de las zonas regables" [Law of April 21, 1949 on the colonization and distribution of ownership of irrigable areas], *Boletín Oficial del Estado* 112 (April 22, 1949): 1807, article four.

28 José Tamés Alarcón, "Actuaciones del Instituto Nacional de Colonización 1939-1970" [Actions of the National Colonization Institute 1939-1970], *Revista Urbanismo COAM* 3 (1988): 9.

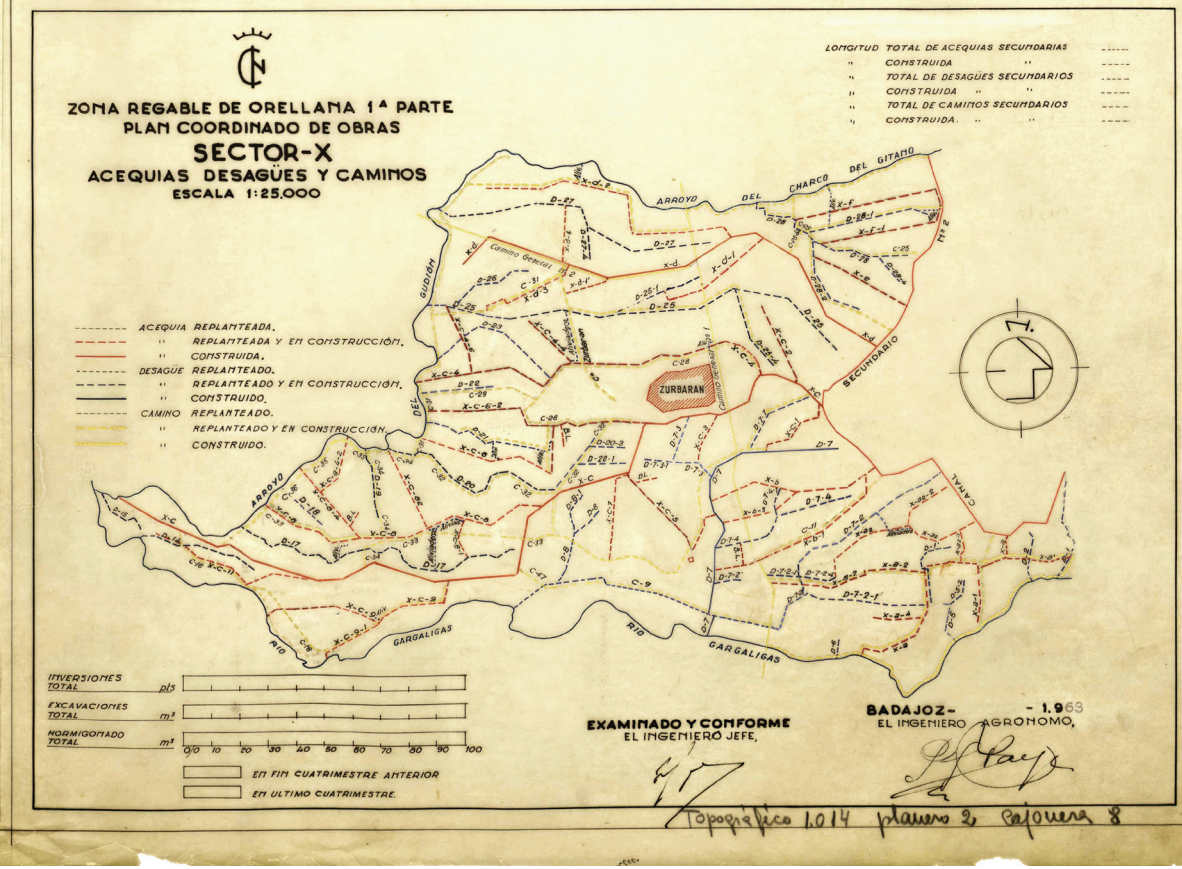

Fig. 4: Detailed plan of sector X of the Orellana irrigable area, 1963

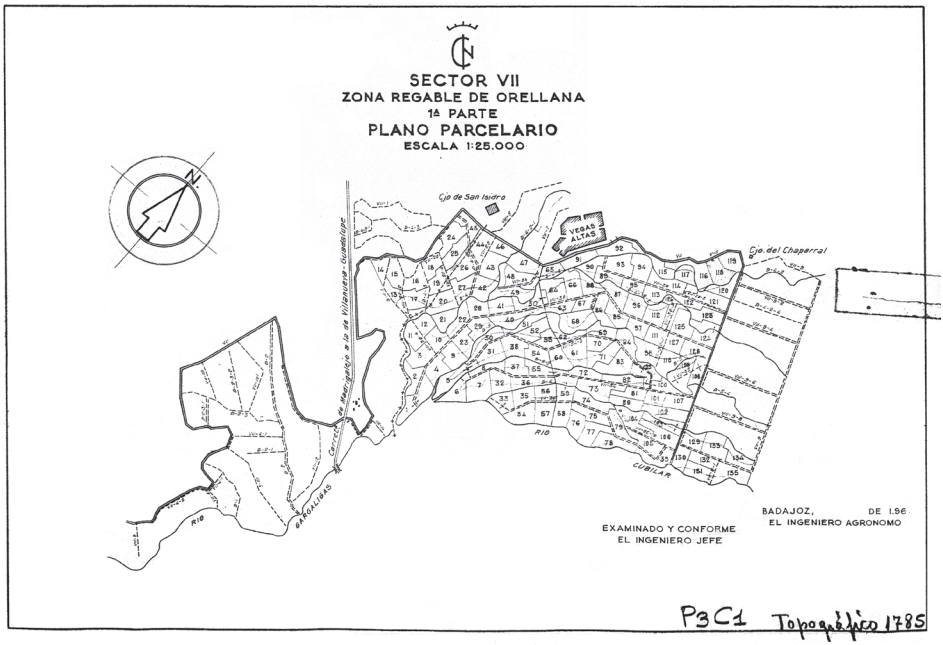

Fig. 5: Plot plan of sector VII of the Orellana irrigable area, ca. 1960

or for the installation of hydraulic or communication infrastructures, was parceled into two possible categories: "working plot" or "complementary plot."[29]

On the one hand, the "working plot" was the one intended for a settler, where he had an average working area of about four or five hectares. This area was considered sufficient for the establishment of "economically independent agricultural units."[30] The goal of these units was that the settlers, by working their own plot, could first provide for their own families and then produce a certain amount of surplus, the sale of which would allow them to achieve a standard of living considered dignified by the authors of the plan.

On the other hand, the "complementary plot" was the one intended for an agricultural laborer—worker in the plots maintained by the original landowners or in the new industries—and had an area of about half a hectare. Access to these small plots was considered a way of supplementing the wages of agricultural workers, who thus had an area to establish their own family orchard on an irrigable plot. These plots were usually grouped in a large plot close to the village, where both settlers and agricultural workers lived with their families.

This process of (re)parceling can be observed in the plan in Fig. 5. In this case, a total of 135 plots of equivalent area are obtained, which, after their levelling and irrigation, were destined for the work of the settlers. This plan also shows a series of areas that, due to the layout of the hydraulic infrastructures in them, show that they were also destined to be transformed into irrigated land. However, they were not subdivided. These areas correspond to the plots reserved for their original owners and which, in most cases, were subsequently cultivated by agricultural workers.

As in previous scales of the project, this detailed design work was repeated for each of the sectors that made up the irrigable areas, resulting in the parceling and reconfiguration of the entire area affected by the plan. Faced with a territory dominated by large estates, with few population centers and almost no infrastructure, the plan completely changed its physiognomy, even transforming the traditional ways of working and living in it.

The photograph in Fig. 6, taken during one of the aerial photography flights carried out by the company Paisajes Españoles over the affected area, shows clearly—and even magnified using aerial photography—[31] this new physiognomy resulting from a (re)designed territory. From the irregular line of the river that crosses the upper part of the photograph, the networks of roads and infrastructures that structure the territory on the basis of a perfectly regular grid start towards the viewer. In between, like pieces of a mosaic, are the new plots of land, with their leveled and plowed fields in the direction of a controlled slope that connects the irrigation ditches with the drains in a closed irrigation system. This distribution creates a kind of board of square pieces that are presented as the most efficient for intensive cultivation, especially when machinery is involved.

In this manner, there was a transition from an organic distribution of plots, mostly devoted to pasture or low-yield crops and subject to almost no constraints in their spatial conditions, to a geometric distribution of plots determined by the constraints imposed by the search for efficiency and maximum use per cultivated unit. Thus, an image was composed that, once again, resonates with that of the structure of modern agricultural fields, laid out over a large part of the vast agricultural extensions of the United States.

The plan succeeded in transforming the structure and image of thousands of hectares of land,

29 García de Oteyza, et al., *El Plan de Badajoz*, 40-41. Original: "parcela de labor" and "parcela complementaria."

30 Presidencia del Gobierno, *Plan de obras hidráulicas*, 33. Original: "unidades agrícolas económicamente independientes."

31 Regarding the use of aerial photography in Francoist industrial developments, see Ángeles Layuno, "Paisaje y política: Imágenes e imaginarios de la industria estatal del franquismo" [Landscape and Politics: Images and Imaginaries of Francoist State Industry], in *Ensambles. Paisaje contemporáneo y práctica patrimonial* [Assemblages. Contemporary Landscape and Cultural Heritage Practice], eds. Manuel Rodrigo De la O Cabrera and Francisco Arques Soler (Madrid: Abada Editores, 2023), 198-99.

Fig. 6: New parceling in Vegas del Guadiana (author: Paisajes Españoles)

but also its sociocultural structure.[32] The new biophysical arrangement was superimposed on a socio-administrative organization designed to extend state control over the territory at all levels. The colonization of this new landscape was thus conceived as a practice of spatial design with multiple purposes at the service of the state: the distribution and settlement of a population tied to the place by an imaginary of promises of well-being and a favorable future was the best way to dominate and govern a territory that then was on the verge of a major social conflict.

With regard to the housing of this population, the simplest and most economically viable solution, as well as the most appropriate from a hygienic point of view—due to the presence of stabled cattle—, was to build a house for the settler and his family on each new plot of land and to place the equipment and social facilities deemed necessary in certain strategic locations.[33] This solution, however, turned out to be in complete contradiction with one of the main objectives of the plan: the creation of a new ideal peasant society, governed according to the principles of Christian autarky, born of a vision that was decidedly paternalistic in nature and in which the conformation of communities was one of the keys for success.[34]

32 José Antonio Flores Soto, "Aprendiendo de una arquitectura anónima. Influencias y relaciones en la arquitectura española contemporánea: El INC en Extremadura" [Learning from Anonymous Architecture. Influences and relations in contemporary Spanish architecture: The INC in Extremadura.] (PhD Thesis, Universidad Politécnica de Madrid, 2013), 176-80.

33 Tamés Alarcón, "Actuaciones del Instituto," 7-8.

34 In this regard, there was an intense open debate during the period. For example, see Víctor d'Ors, "La

The state understood that this objective had strong spatial implications in terms of the settlement and housing conditions of the population.[35] Although it was a less favorable path from an economic point of view, the solution was to create a polynuclear system of villages, in which the daily coexistence of all its members would favor the civic, social and religious development of the population.[36]

For this purpose, once the areas of land available to the INC had been defined and the exact number of plots in each sector had been determined, it was possible to calculate the number of houses needed to accommodate the settlers. To these were added the ones needed for the agricultural workers and support staff who would work in the villages themselves.[37]

With this number, their final location in the territory was determined by applying a series of restrictions: the villages were to be located in any case on "surplus land" and, whenever possible, on land classified as of low quality for agricultural production. In addition, the plots corresponding to the settlers and the work centers of the agricultural laborers were to be located within a maximum distance of about three kilometers, measured in any direction from the village.[38] In addition, whenever possible, a village would not be more than six kilometers away from another village, in order to promote contact between people and the possibility of sharing larger social facilities. This way, the villages of the plan were born from nothing in a territory in transition, creating a network that connected them physically, socio-culturally, and even emotionally.

The state took each new step in this process of (re)shaping the territory as another opportunity to make itself present in it. Conquista del Guadiana (which could be translated as Conquest of the Guadiana), Guadiana del caudillo (Guadiana of the commander), Villafranco del Guadiana (Franco's town of the Guadiana), Gévora del caudillo (Gévora of the commander) or Huerta del Guadiana (Guadiana orchard), for example, were some of the names that the state used to baptize the new towns, along with others related to the American colonization that they claimed as the inspiration for the process. In this way, it extended its project of territorial and sociocultural appropriation to local toponymy, presenting itself as the redeemer and creator of a new nature at the service of human beings.

The colonization of plots and villages

At this point, the plan had already descended in its design scale from the provincial to the domestic level. In this process, it also covered the detailed project of the conception of the towns, from their urban configuration to the design of their housing and equipment, becoming the visible face of the agrarian policy of irrigation and colonization.[39]

However, state intervention in the territory and over its population did not end there. It was considered necessary to go further down the scale of planning to determine what should be cultivated and by whom. When it came to crops, and especially in the early stages of village life, the INC left little room for individual initiative. For each campaign and population nucleus, the INC drew up a plan of exploitation through which it ordered the production of all the land

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estética en el paisaje. Preservación y realce de las condiciones naturales de las comarcas" [Aesthetics in the landscape. Preserving and enhancing the natural conditions of the counties], *Revista Nacional de Arquitectura* 85 (1949): 20-22.

35 Ángel Martínez Borque, *El hombre y la colonización: Conferencia pronunciada en el Instituto de Ingenieros Civiles, Asociación Nacional de Ingenieros Agrónomos, el día 7 de diciembre de 1944* [Man and Colonization: Lecture delivered at the Institute of Civil Engineers, National Association of Agricultural Engineers, December 7, 1944] (Madrid: Instituto Nacional de Colonización, 1945), 6-10.

36 Flores Soto, "Aprendiendo de una arquitectura anónima," 455-56.

37 Tamés Alarcón, "Actuaciones del Instituto," 8.

38 García de Oteyza, et al., *El Plan de Badajoz*, 63.

39 Ignacio Solá-Morales, "Arquitectura de la vivienda en los años de la autarquía (1939-1953)" [Residential architecture in the years of autarky (1939-1953)], *Arquitectura: Revista del Colegio Oficial de Arquitectos de Madrid (COAM)* 199 (1976): 25.

under its control.[40] This plan included, among other regulations, a cultivation calendar that the settler had to follow to obtain two harvests per year of the identified products. These products were selected according to the provincial or national needs and the processing or agricultural industries associated with each nucleus.

As a result, a high intensity cropping program was implemented that transformed the preplan production system. From a system in which almost one-third of the land remained uncultivated, and the rest devoted mainly to extensive cultivation of cereals and grapevines, a new and extensive variety of crops was added to the intensive sowing distribution.[41]

This transformation required the adoption of new measures in the way the fields were worked, not only because of the change from dry to irrigated land, but also because of the specialization required by certain species in their cultivation, reproduction and maintenance. However, most of the new settlers who were to work on these lands had no experience of working in irrigated fields and with this type of crop. For this reason, it became necessary to transform the farmer into a horticulturist.[42] Aware of this situation, the plan also provided for the complete training of the settlers so that their work would maximize the benefits of their new farmland in the shortest possible time. To this end, a system of training courses and a hierarchy of personnel responsible for training the farmers in the plots was established.[43]

However, the state was not only interested in creating an army of peasants specialized in irrigated agriculture, but it also wanted to create, through the colonization process, a new exemplary Catholic rural society that would carry the values with which it wanted to identify Franco's "New Spain." Once again, the plan, which left no room for improvisation, evolved until the concrete definition of the ownership of each of the new plots of land.

Each of the new settlers—which, according to the initial projections of the plan, amounted to a total of ten thousand—[44] was carefully selected according to a detailed profile required by the state. According to this profile, these people had to be male, between twenty-three and fifty years of age, healthy and without any disability, married or widowed with children—the more children, the greater the preference—, with a basic elementary education, capable of certifying certain agricultural practices at a professional level, and with "acceptable moral and behavioral qualities."[45]

The Emergence of a New Landscape

In 1968 the construction of the last villages included in the plan for the province of Badajoz was completed. Thus ended a period of little more than fifteen years in which the Vegas del Guadiana witnessed its transformation. This transformation can be observed at different levels of the territory and in terms of its visible and invisible components.

As an example, the Plan Management Secretariat repeatedly published in its plan progress documents displaying the comparison of aerial photographs, like those shown in Fig. 7. Taken only ten years apart over the same intermediate stretch of the Vegas Bajas area, a more than obvious transformation can be observed through them.

40 García de Oteyza, et al., *El Plan de Badajoz*, 94-95.

41 Secretaría Gestora del Plan, *El Plan de Badajoz. Gráficos representativos de sus rasgos más característicos, ilustrados por comentarios que facilitan su interpretación y el conocimiento de su significado* [The Badajoz Plan. Representative graphics of its most characteristic features, illustrated with comments that facilitate their interpretation and knowledge of their meaning] (Madrid: Secretaría Gestora del Plan, 1975), graphic I-6.

42 Vidal Benito Revuelta, *Aprovechamientos hidráulicos* [Hydraulic developments] (Madrid: Publicaciones españolas, collection "Temas españoles," no. 317, 1957), 16.

43 García de Oteyza, et al., *El Plan de Badajoz*, 90-93.

44 Ibid., 68.

45 Martínez Borque, *El hombre y la colonización*, 22-23. Original: "unas dotes de moralidad y conducta aceptables."

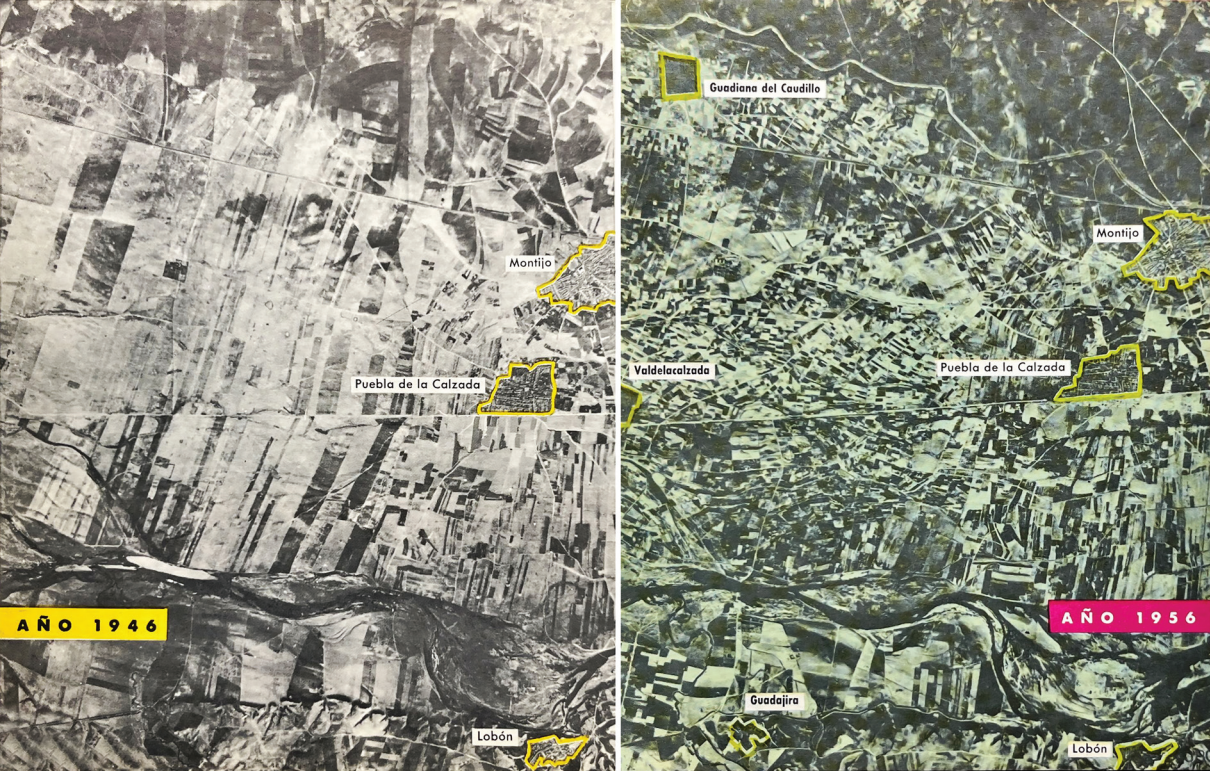

Fig. 7: Comparison of aerial photographs from 1946 and 1956 in the middle section of the Vegas Bajas area

On the one hand, the 1946 photograph shows a territory of elongated plots that develop in the direction of the river, probably determined by the slope of the land that descends towards it, and among which it is often difficult to differentiate their limits. For the three villages framed in the photograph, some faint lines allow us to intuit some of their main roads, without observing at first sight, behind them, a hierarchy of minor roads that connect the plots. Although it is a black and white photograph, it suggests an area where, much of the year, yellow and ochre tones dominate with the occasional green of the wooded areas.

On the other hand, the 1956 photograph shows a completely different panorama. In its upper part, it can be seen the trace of one of the main irrigation canals that delimited the transformed area. Below it, there is a mosaic of hundreds of small plots without a dominant orientation, in this case not conditioned by the slope of the land, previously modified and adapted to the new needs of the water flow. In addition to the three existing villages, three more have appeared as new landmarks in the landscape, with new lines of communication between them and with the plots. In this case, in a very deliberate color reproduction, there is a predominance of green tones typical of irrigated crops that will be maintained throughout the year, which allows us to speak of the birth, in just ten years of a kind of fertile and lush valley.

Landscape and Irrigation: (Re)planning and Cultural Meanings

Considering what has been argued up to this point, it can be observed that the transformation of the physical forms of the landscape and its associated territorial structures is therefore more than evident, having given rise to the construction of a new landscape. A landscape whose high degree of technification has generally remained hidden behind the myths of nature and rurality. As a result, today the collective imaginary frequently and mistakenly considers this type of landscapes as natural and not as what they really are: an anthropic construction planned on a large scale and executed in our recent past, barely seventy years ago.

In addition to the physical component of the territory, the transformations resulting from the construction of this new landscape also reached the environmental, sociocultural and emotional levels, in a process whose effects and consequences, positive or negative, continue to this day.

Over the past few decades, various studies have revealed that the objectives of the plan to industrialize the province and to improve its backward socioeconomic situation were not achieved.[46] In any case, its implementation did entail a certain increase in agricultural production, at least in those areas that were subsequently improved by the specialization and mechanization of agricultural work. In this regard, the introduction of irrigation caused changes in certain aspects of its traditional ecological systems, resulting in the disappearance and insertion of new species, both animal and plant, which required the adoption of new ways of caring for, preserving, coexisting with, or confronting the territory.

Moreover, the impact of the Plan was particularly evident in its sociocultural and emotional components. From its autarkic and paternalistic approach, almost paradoxical at a time when the country was gradually moving toward a certain openness and economic liberalization, cases like the Badajoz Plan became a redoubt in which the state still dreamed of building an ideal society. Selection, order and social control became the basis for building it and, more importantly, for trying to maintain it. The new inhabitants of these newly born cities, as "emigrants in their own nation,"[47] became the protagonists of sociocultural and even material mobilization—in most cases imposed—and that led to acute situations of uprooting and new emotional roots.[48]

In these scenarios, thousands of people left behind entire lives and memories tied to places that in many cases disappeared. The Spanish writer Julio Llamazares reflects this reality in his novel *Distintas formas de mirar el agua*, inspired by his own experience.[49] With extraordinary sensitivity, the author narrates how, while still a child, he lived through the flooding of his hometown under the waters that formed a reservoir in the province of León.

"What would my life have been like if the order of an engineer who decided to stop the river like the one who decides to stop time had not crossed my family's path?"[50] This is one of the many questions raised by its characters gathered by the shore of the reservoir that decades ago buried the village where the protagonist family had lived for several generations. They share stories and reflections both about the village they had to leave behind, as well as the new one that received them along with so many other people to try to build in it a new identity uprooted from all traces and family memories.

Regarding this and many other landscapes built during the autarkic industrialization of the early Franco regime, this research argues that understanding our environment, leaving aside myths and accepting the environmental lessons of the recent industrial past, is a very relevant step to face the environmental challenges of the present.

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46 Carlos Barciela López, María Inmaculada López Ortiz, Joaquín Melgarejo Moreno and Fundación Empresa Pública, *La vertiente industrial del Plan Badajoz: La intervención del INI* [The industrial aspect of the Badajoz Plan: The intervention of INI] (Madrid: Fundación Empresa Pública, 1996), regarding an analysis and argumentation on the failure of the plan's industrialization approaches and objectives.

47 Ana Amado and Andrés Patiño, *Habitar el agua: la colonización en la España del siglo XX* [Inhabiting Water: Colonization in 20th Century Spain] (Madrid: Turner. Ministerio de Agricultura, Pesca y Alimentación, 2020), 18. Original: "emigrantes en su propia nación."

48 Regarding cases of relocation of individuals and objects and preservation of the memory of physically missing places due to the creation of reservoirs see, Eduard Callís Freixas, "Arquitectura de los pantanos en España" [Architecture of reservoirs in Spain] (PhD Thesis, Universidad Politécnica de Cataluña, 2016), 364-67.

49 Julio Llamazares, *Distintas formas de mirar el agua* [Various ways to look at water] (Barcelona: Penguin Random House, 2016).

50 Ibid., 67. Original: "¿Cómo habría sido mi vida de no haberse cruzado en la trayectoria de mi familia la orden de un ingeniero que decidió detener el río como el que decide detener el tiempo?"

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