Entropic Assets. Housing occupation processes in Campo de Dalías (Almería) in the second half of the 20th century
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"Architects tend to be idealists, and not dialecticians. I propose a dialectics of entropic change."
Robert Smithson, 1973

Introduction

In 1941, several territories in Spain were declared as zones of national interest for the agricultural colonization of large areas. Among them, it is surprising to find Campo de Dalías, a barren, desert, and sparsely populated area of some 35,000 hectares in the province of Almería [Fig. 01]. It is also surprising, because it is contradictory, that the first report on the viability of colonization in this area, written by the first provincial head of the National Colonization Institute (Instituto Nacional de Colonización, INC), denoted excellent qualities for the cultivation of the area. As José Rivera Menéndez describes it, the personal interest of an important player in the new Francoist government and personal friend of General Francisco Franco, Máximo Cuervo Radigales2, came to weigh as much as, if not more than, the aforementioned report in the official declaration of interest for colonization3. He, as a medium-sized landowner, had already tried to prepare his land for cultivation, carrying out initial prospecting in search of underground water and even initiating contacts with German companies to irrigate the Roquetas de Mar area as early as in the 1930s. Subsequently, his actions were also crucial in the declaration of the nearby village of Aguadulce as a Zone of National Touristic Interest, on land he owned as well4. As exemplified in the figure of Cuervo Radigales, the parallelism between the two sectors, agriculture and tourism, is more entangled than it seems.

In Almería’s Westland, tourism shares the demand for optimal sunlight conditions with the raw materials, the sand on its beaches and the water in its aquifers, within the same territorial area. And just like the rapid growth of the agricultural industry in Campo de Dalías, sectors of its coastline have come to grow as centers of sun-and-beach tourism in a few years, in parallel with the proliferation of greenhouses. The conjunction of shared territorial and environmental factors for the coexistence of both activities is frequently replicated in global locations of similar qualities5. But beyond shared starting conditions and the antagonistic struggle for resources, in Campo de Dalías, both activities are intertwined in a difficult economic, social, and ecological imbalance.

The agrarian colonization of Campo de Dalías was produced, on the one hand, by the articulation of an intense activity in the construction of irrigation infrastructures and the technological implementation of plasticulture by the State but also, on the other hand, by the deliberate freedom offered to private agents such as immigrants, landowners, intermediaries, and credit entities, which generated a highly speculative market amid the purchase and sale of plots and the high profitability of the new greenhouse crops during the period of most effective development in this region, in the last third of the 20th century. However, the mature version of this active speculative real estate market has come to compromise the very survival of the productive system as well as the housing model, based on the spatial segregation of its inhabitants.

The colonization of Campo de Dalías

The reform of rural life has been an ongoing theme for modernity in a wide range of countries since the first third of the 20th century. From socialist utopias such as Tony Garnier's cité industrielle to the pragmatism of the large engineering works by the US government, from the Central Valley Project in California, to the unbuilt proposals of “agrarian urbanism”, enunciated around the 1930s by architects such as Le Corbusier7. Among the projects undertaken at this historical moment, the Mussolinian Agro Pontino in Italy and the moshavas and kibbutz in the Jewish territories of the future state of Israel in the 1930s8, stands out as influential precedents for rural planning. In Spain, the “Competition for Preliminary Projects for Villages in the irrigable areas of the Lower Guadalquivir Valley and the Guadalmellato Canal” of 1933, organized by the Republican government's Servicio de Obras de Puesta en Riego (Service for Irrigation Works) of the Instituto de Reforma Agraria (IRA, the Institute for Agrarian Reform) is a crucial paradigm for understanding the colonizing work of the Spanish countryside in the 20th century, for having established a precedent in terms of colonization urbanism that served as a fundamental basis for the creation of the agenda of the future Architecture Service and its actions within the National Colonization Institute (Instituto Nacional de Colonización, INC), once the Spanish Civil War was over [Fig. 02].

With its foundation in 1939, the National Institute of Colonization (INC, renamed in 1971 as Instituto Nacional de Reforma y Desarrollo Agrario or IRYDA) took over the responsibilities of the IRA, the corresponding agency of the previous republican democratic government. Most of its members came from the IRA itself, at least those who were not purged after the war and subsequent repression. Similarly, its work was a continuation of the projects already underway, with the implementation of certain singularities. Especially in the last decade of Franco’s dictatorship, the decade of autarchy, the colonization of the inland moors was a necessary task to alleviate the backwardness and marginality after the war, as well as an apparatus for consolidating the regime by linking reference, propaganda9. Such context reinforces the advanced character of the policies proposed by the Service for Irrigation Works directed by Leopoldo Ridruejo, almost twenty years before the first actions of the INC in terms of colonization villages10. The rules of the aforementioned competition, such as the construction of a detailed document of the progressive quality of these colonization plans as well as of their programmatic development and economic plans for the construction of the new villages. At the same time, it confirms that the principles considered for the construction of these settlements in Almería remained stuck in the precedents of the first third of the 20th century, even though they were built between 1960 and 1980, in a new world. As a whole, the main value of the INC’s actions regarding the colonization villages developed in those years would be the fact that they had been carried out when the necessary resources were obtained, but with little modifications regarding the mentioned approach and requirements [Fig. 03].

The colonization of Campo de Dalías began in practice with its 1953 plan11, and it was basically a technical and financial intervention to increase the value of the land. In Campo de Dalías there were no big landowners and therefore, the majority of medium-sized landowners willingly accepted the transfer of their “excess land” in payment for being able to irrigate their fields with the help of the financial strength of the State. Thus, the government, through the INC, concentrated its efforts on: providing the technical means and building irrigation works to increase the value of the land; acting as a technological hub by testing successive technologies to improve agricultural yields on the plots of the settlers under its protection; serving as a financing agent in the early years and undertaking, in a modest way, the settlement of colonos (settlers) in the colonization villages.

The good results of the agricultural exploitation model proposed by the INC worked as an incentive for the arrival of thousands of families from outlying towns and regions to Campo de Dalías from the 1960s onwards. To serve these growing populations of settlers, the INC foresaw the construction of a series of urban centers, but it is important to explain that the number of settlers housed in the colonization villages turned out to be very small in comparison with the demographic explosion that was taking place12. In this particular case, the INC carried out the construction in successive phases of some eight hundred dwellings for settlers and other workers over a period of approximately thirty years, and distributed throughout seven colonization villages in addition to the existing small, inhabited places, such as Aguadulce, Roquetas de Mar,
El Ejido and Balerma. With a fivefold growth in the registered population in two decades (Chiclana: 3,000 to 8,000 to 40,000 inhabitants and that today exceeds 250,000, definitely the INC’s capacity to attach population was short-sighted and practically overwhelmed from the beginning.

Furthermore, the rigid spatial definition and lack of adaptation to the moment in which they were built and to the real needs imposed start to be revealed upon consideration of the almost identical programs defined for each village. The total absence of any provision centers, sports and entertainment infrastructures is remarkable: programmatic elements which ended up finding their place in an improvised manner; those linked to production, mainly around the great logistical axis of the N-340a national road, later turned into the Mediterranean corridor motorway along its route; and those of a social nature being attracted towards the maritime enclaves. These tourist enclaves originated from the interest of certain big owners of agricultural land, who fundamentally sought a solvent speculation on land ownership, the active demand for small plots (more affordable, due to the profile of the average buyer), by accommodating capital investors. With a fivefold growth in the registered population in two decades (Chiclana: 3,000 to 8,000 to 40,000), the main promoters of these initiatives, new urban development models, the State of Franco promoted segregation between urban centers for farmers and for tourists. In addition to the small real impact of the colonization villages as an instrument of settlement, this binary consideration demonstrates the reduced interest of the Regime in the social transformation that this urbanism was supposed to bring about. Today, the virtual disappearance of the colonization villages, in contrast to the better preserved and contemporary interventions in tourist enclaves such as Agua dulce, is a sign of their outdated urban organization, although their aesthetic presence is unquestionable. This, in fact, contrasts with the urban planning of such tourist areas which, over time, have performed in a more operative manner and in a much higher spatial and economic proportion than the colonization villages. The credit availability provided by the banks, encouraged the “myth of the pioneer”, whereby many immigrants who moved to the area, in most cases without funds, were granted to the province of Almeria during the 70s, in order to consolidate the family’s conjunction with domestic tasks, everything to be competitive and diversify their products, in coincidence with the definitive entry of Spain into the European market in 1981. This implied a necessary increase in daily-paid workers, the growing demand for which was met by foreign immigration. The variable seasonal need for labor, together with the fact that the immigration quotas granted to the province of Almeria were insufficient to absorb the workload, came to feed the labor market with irregular workers, in even worse conditions than those with work permits. The productive logic of the agricultural system determines that a low percentage of immigrants in a legal situation have access to funds, housing and resources for the whole year. Most of them work for a few months only, no more than six months a year, which hinders their ability to save funds, access housing, and pursue family reunification. In addition to this situation, the Campan de Dalias area (but mainly Nijar-Campanthomas), to the east of the province capital city and in proximity to the Cabo de Gata Natural Park), serves as an entry point of absorption from 8,000 to 40,000 to 40,000 inhabitants and that today exceeds 250,000, definitely the INC’s capacity to attach population was short-sighted and practically overwhelmed from the beginning.

In such a clear asymmetric relationship between the availability of housing and the sustained wave of immigration to the area, the question arises: Where did all these people end up settling? In most cases, the local typology was adopted, courtyard or isolated farmhouses in the countryside, but consequently multiplied and distributed throughout the territory as the colonization progressed. These constructions, most of them with precarious or non-existent electricity and water supplies, proliferated all over the countryside, mostly in the 1970s. The scene in those days is vividly described by the French geographer Christian Mignon: “The Campo has the appearance of a huge construction site, that of an unstable and unfinished world. Land speculation and the excesses of trading clearly show the disorder of such regions that change so quickly that it is impossible to control their growth. The confusion of the landscape and the anarchy of the immigrant settlements are strong evidence of this.” Along with the desire to make money quickly, a culture of working to the point of exhaustion was being nurtured as a way to pay off debts first and, in many cases, continue to accumulate land for crops.

Speculative mirages

As a matter of fact, the confirmation of the profitability of the land under the technified model of the new agriculture, together with the credit availability provided by the banks, encouraged the “myth of the pioneer”, whereby many immigrants who moved to the area promised to satisfy the demands of capital on account of future harvests. The existence of opportunistic intermediaries dedicated to buying and selling land plots, attracted by the economic claim of the new agriculture in rapid expansion, linked to the very high demand of immigrant labor. The primary aim of gaining access to property, fueled an extraordinary rise in land prices in a short period of time. As early as 1974, it became clear that there was an active speculative market for land ownership. With ease, a plot could easily change hands between five to ten times before finding its final owner in a brief time span. As a result, up to twenty percent of the total area under cultivation could change its ownership during the annual season. In this way, alongside the profits associated with agricultural production, there existed a real estate market in which the rising value of land could be as profitable, if not even more, than the farming itself. But at the same time, in response to the high demand for small plots (more affordable, due to the profile of the average buyer), by dividing the initial big plots, large but with no preparation, into smaller units, the speculative attitude was contributing to reinforcing the smallholding structure of the farms, which is still the majority today. Owning a house, usually self-built, next to the farm had other advantages for farmers: proximity, cost reduction, surveillance, and conjunction with domestic tasks, everything with the aim of consolidating the family’s economic situation, day after day. Thus, all capable members of the family could be at work under the greenhouse, self-exploiting themselves with the spirit of the pioneer and in the fear and urgency of paying off the debts incurred. Until the mid-1980s, the production model relied exclusively on national immigrant labor. These were the years of greatest effervescence in the proliferation of farms, mainly worked by family nuclei that were capable of absorbing peaks in labor demand, such as planting and sowing, relying on family networks and by means of “labor barter”. But towards the end of the 70s, the forms of this form of labor became less common and with the reduction in profit margins, many farmers had to opt to expand their farms in order to be competitive and diversify their products, in coincidence with the definitive entry of Spain into the European market in 1981. This implied a necessary increase in daily-paid workers, the growing demand for which was met by foreign immigration. The variable seasonal need for labor, together with the fact that the immigration quotas granted to the province of Almeria during those years by the State were insufficient to absorb the workload, came to feed the labor market with irregular workers, in even worse conditions than those with work permits. The productive logic of the agricultural system determines that a low percentage of immigrants in a legal situation have access to funds, housing and resources for the whole year. Most of them work for a few months only, no more than six months a year, which hinders their ability to save funds, access housing, and pursue family reunification. In addition to this situation, the Campan de Dalias area (but mainly Nijar-Campanthomas), to the east of the province capital city and in proximity to the Cabo de Gata Natural Park), serves as an entry point of absorption from 8,000 to 40,000 to 40,000 inhabitants and that today exceeds 250,000, definitely the INC’s capacity to attach population was short-sighted and practically overwhelmed from the beginning.
platform to Europe for “undocumented immigrants” who cross the Mediterranean in pateras (small and precarious boats), but who do not consider the Almerian countryside and, in many cases, not even Spain as their final destination. Thus, old semi-abandoned farmhouses, sheds made of pallets and plastic and other improvised shelters between difficult-to-access lanes and greenhouses constitute an informal and surreptitious base camp to start their lives as temporary and usually exploited workers while they try to subsist and obtain permits to regularize their situation in Spain or operate as a platform for their exodus to the more prosperous lands of northern Europe.

In this way, these first generations of settlers who were able to gain access to property and farm it, by improving their economic capacity, changed the cortijos next to the farms for more comfortable and spacious residences in the urban centers like El Ejido, Vícar or Roquetas de Mar. In parallel, the immigrants of the second wave, foreigners with no easy chance to gain access to property, came to inhabit these farmhouses [Fig. 08 and Fig. 09], in some cases granted by their owners while in others, rented or sublet by other immigrants or just simply squatted. As the economic situation of some of them improved, they started gaining access to housing in the traditional urban centers. Meanwhile, the first generation of immigrants and before them, the primitive settlers, now in a position of property owners, have found more exclusive and better equipped environments in which to establish their main residence in the tourist developments or to maintain a secondary residence, despite the proximity to their original homes in the inland villages. It should be added that, with the exception of the colonization villages, even with their limited impact, the municipal public initiative has had a passive attitude towards housing development, leaving the preponderant role in the construction of urban centers in the hands of private initiative, and ignoring any possibility of action on the scattered farmhouses. Between 1950 and 2003, the construction of public housing did not account for more than ten percent of the total. In this way, the landowners in the planned development areas of the municipalities, the developers, and the real estate companies have been, in practice, the material producers of the spatial organization of the housing.

Although from the beginning of colonization, access to property by small landowners and real estate speculation encouraged the smallholding structure of the territory, today, following the same logic, those who have been able to accumulate capital have found in coastal urbanizations a real estate investment market to diversify the benefits of agricultural activity as a preferred form of investment. But on the contrary, with the accumulation of properties and the rise in prices, speculative mirages are reinforced, perpetuating spatial segregation and deepening the degradation of inhabited spaces in a similar way to intensive agro-industry, compromising the resources and the natural environment on which they are sustained.

**Entropic Estates**

Over time, both phenomena described, industrial agriculture and urban centers in the coast, have come to synthesize a territory of a dialectical nature, overcoming the relationship of opposites that was initially proposed. By definition, a dialectical relationship means a synthesis of its components, but a hybridization; and the state of exchange and dialectical relationship between agricultural business and tourism is a demonstration of the capabilities of overlapping systems. The role played by the coastal developments has been paradigmatic in demonstrating the viability of such diversification to keep the system alive: the renouncement to a certain degree of intensive productivity in exchange for an increase in the resilience of the system. In synthesis, the turbulent relationship between both entropic estates and the complex global imbalance they have reached together at the present time is, essentially, the constantly updating record of the powerful undeclared agents who build the territory of Campo de Dalías.

Keller Easterling’s propositions regarding undeclared political and economic activities and their influence on the configuration of the space of reality as a valuable source of information, are relevant and useful to the case. As such, if we consider that these physical phenomena in the territory are an “active form” and, therefore, they are “doing something” in the environment, from their interpretation as an information repository we can infer that the definition of the order of the system would come from quantifying the amount of information necessary to describe it, which according to the theory of information would be its greater or lesser level of entropy. In the transfer of this information (in the proposed case, it would be the literal construction of the physical reality, such as tourist developments and greenhouses) there will be a transformation of energy and a rearrangement of matter, otherwise, an external contribution will be necessary to avoid the degradation towards the inert state of equilibrium. In the first decades of accelerated development, in order to maintain a low level of entropy and thus of high efficiency, the system literally fed itself through the reorganization of the available material and human sources. In the recent state of things, it is clear to identify the renewed interest of settlers and investors in the coastal urbanization zones, which have come to function precisely as a source of negative entropy, that is, as an influx of energy external to the agricultural industry apparatus with which to feed the system and sustain it within a necessary imbalance.

This market of entropic estates, driven by the general solvency of the purchasers during recent times, encouraged a rise in prices and, in the absence of municipal arbitration, it produced spatial segregation based essentially on purchasing power, which assigns a place in the scattered cortijos to lower incomes, the inland municipalities to middle incomes and the coastal urbanizations to high incomes. In this way, the diversification of investment towards second homes, in addition to disturbing migration routes within the Campo, also diversifies capital flows from the agro-industrial activity towards the real estate market and its capital gains, a logic well-rooted locally, but not exempt from risks. Far from equilibrium, the crisis of the real estate bubble in Spain in 2008 had a strong impact on the productive economy of Campo de Dalías, compromising the competitiveness of the agricultural sector by diverting funds to real estate assets, instead of using them to reinforce the production and logistics systems or for the technological improvement of the crops.

Like the hybrid of greenhouse and cortijo that provided a territorial structure to this place, today one cannot simply speak of a relationship of opposites between the phenomenon of agro-industry and the tourist developments on the coast. Similarly, the problems of housing degradation and those that threaten the agro-industrial productive model must be approached in synthesis, from a “dialectic of entropic change”. The long-term sustainability of the whole system depends on the appropriate dialectic relationship between the productive environment and the housing environment. Thanks to the complete anthropization of this territory and to its open nature, the total transformation of the multiple capacities of the land presents possibilities for an open and distinctly artificial future development as a complex territory to inhabit and not exclusively to exploit.

If at the end of the 1990s, in a visionary acknowledgment of the death of urbanism, Rem Koolhaas speculated on the qualities of the “new urbanism” to come based on the staging of uncertainty, in Campo de Dalías there is sufficient spatial evidence to put his hypothesis into practice. Thus, later, it should come as no surprise that his interest and claims are shifting towards these other inhabited territories of the non-city.

Without urbanism or architecture, made up of a magma of infrastructural proliferation and real estate speculation, the Campo is all we have. A field of possibilities in a territory of utter artificiality, ready to give birth to hybrids-yet-to-be-named for a brave transformation of the ways of inhabiting this territory.

**Biography**

José Navarrete Jiménez studied architecture at the University of Granada and has obtained a post-professional Master’s Degree in Advanced Architectural Design (MPAA) from ETSAM School of Architecture/ Polytechnic University of Madrid. Since 2016 he is a collaborator of OFIS arhitekti, with whom he has participated in more than thirty projects and has shared teaching. He has been a design studio tutor at the Architectural Association, Hong Kong University and Leeds Beckett University. The paper presented here is part of a research project conducted within the MPAA programme.
3. Ibid.
5. Ibid.
7. “El balance final es la construcción en el Campo de Dalías de 647 viviendas de colonos, 109 de obreros y 58 de artesanas, a los que hay que añadir las de comerciantes, médicos, maestros y personal administrativo, además de los equipamientos públicos habitables de iglesias, salas de aulas, ayuntamientos y hermandades sindicales. Las viviendas de colonos oscilarán entre los 350 m2 de la ampliación de Roquetas de Mar y los 600 de San Agustín.” (Translated by the author) Centellas Soler, Ruiz García, y García-Pellicer López, Los pueblos de colonización, Madrid: Cátedra, 2014.
9. Ibid.
10. Ibid.
11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.
16. Ibid.
17. Ibid.
18. “Yet infrastructure space, even without media enhancement, behaves like spatial software. And while we also do not typically think of static objects and volumes in urban space as having agency, infrastructure space is doing something.” Easterling, Extrastatecraft: the power of infrastructure space, 15-14.
22. “If there is to be a ‘new urbanism’ it will not be on the twin fantasies of order and omnipotence; it will be the staging of uncertainty; it will no longer be concerned with the arrangement of more or less permanent objects but with the irrigation of territories with potential, it will no longer aim for stable configurations but for the creation of enabling fields that accommodate processes that refuse to be crystallized into definitive form; it will no longer be obsessed with meticulous definition, the imposition of limits, but about expanding notions, denying boundaries, not about separating and identifying entities, but about discovering unnameable hybrids; it will no longer be obsessed with the city but with the manipulation of infrastructure for endless intensifications and diversifications, shortcuts and redistributions – the reinvention of psychological space. Since the plan is now pervasive, urbanism will never again be about the new only about the “more” and the “modified.” It will not be about the civilized, but about underdevelopment.” Rem Koolhaas, “What Ever Happened to Urbanism?”, Anynewyork Any: Architecture New York, no. 9 (1994): 10–13.

Instituto Nacional de Colonización
Colonization villages
Real estate speculation
Agrarian urbanism
Plasticulture
Spain