

# The Systemic Functions of the Mediterranean Landscape

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Landscape, as an aspect of the territory, is a cultural construct. Hence in a purely phenomenological sense it has no specific systemic functions, either in the Mediterranean or anywhere else. However, it indirectly plays a considerable systemic role in so far as it perceptively encapsulates the roles of the elements that comprise it. Understood thus, its homeostatic self-maintenance and educational scope, in any place and particularly the Mediterranean, are two major landscape and systemic functions. Moreover, and in systemic terms, free spaces have a value that is usually ignored.

## Landscape Homeostasis and Fragility

Landscape homeostasis is the cybernetic trend of maintaining stability in the territorial system. It is a self-regulated mechanism through which, faced with any circumstantial deviation caused by an external agent or an internal dysfunction, the system reacts to recover stability. Homeostasis is in fact characteristic of any system to the extent that homeostatic regulation is systemically unavoidable. Thus, after a fire has destroyed a Mediterranean forest – its aerial part, to be more precise – the available space, ash nutrients, the temperature withstood by the conifer cones, the increased insolation and endless other vectors immediately cause the reappearance of surviving roots and stumps or the germination of thousands of seeds that were in a state of latency.

Biological diversity ensures the maintenance of all those elements that contribute to the homeostasis of natural systems; in other words, that

which ensures the physiological feasibility of a territory. More or less as happens in the homeostasis of any organism, capable of maintaining signs of life despite environmental fluctuations. It is a matter of cybernetic control in which each part plays its role. The greater the diversity of species and microlandscapes, the greater their homeostatic capacity (there would be some exceptions but in general terms the statement is valid). Consequently, the main objective of any sustainable territorial management strategy must be to guarantee the maintenance of the biological and landscape diversity beyond merely safeguarding the scenery. Most areas protected by the early American and British conservationist movements within their colonies corresponded to strategies for safeguarding the scenery. They protected big waterfalls, imposing forests or splendid valleys. In short, they protected things that could become postcards. However, this criterion was conceptually exhausted and surpassed by history.

There are highly illustrative examples of all of this. There are even analogies: when you seek financial security, you diversify risks, and when you want commercial security, you diversify markets. Productivity usually declines with diversification but stability increases. In reality, homeostasis does not pursue records but rather balances. The immense monocultures of the American heartland are breaking production records but are exposed to the most spectacular setbacks imaginable. They are fragile landscapes because they are homeostatically weak. They manage to maintain themselves by fulfilling the homeostatic deficiencies of their extremely simplified structure with constant agronomic care (which ends up consuming much of the profits, incidentally). The disasters to which they are exposed due to the sudden demographic explosions of certain parasites, for instance, do not usually take place in traditional agroforestry areas – less productive but perhaps yielding similar or better final net profits – because in the diversified biological stock that makes up the whole system there are always compensatory agents (enemies of the enemies). Putting all the eggs in one basket is also risky and dangerous.

Agriculture, and in general any other forms of exploitation of the land, is a pact between predators. The most active of these predators is undoubtedly the human species: it demands the whole crop and no one exceeds it in rapacity. If we break the pact, we get the exclusive but we lose other contributors. We can keep their part, of course, but at the expense of taking on their work. When we take the extraordinary trouble of dispensing with all our natural allies/rivals – in an act of typically human arrogance –, we take on all the work and responsibility. The wisest act would be to balance results and accept a compromise solution. In other words, the reasonable course is to buy homeostasis at the best price possible. This is the nature of good management, a good management that neces-

sarily is eminently protective. What has been explained for agriculture, with the due corrections, can be extended to forestry and livestock farming and even the leisure and sports uses of the natural space. In fact, today, protecting means managing. The mere restrictive decrees or the simple abolition of certain uses often lead nowhere, at least in the anthropised territories, made of built landscapes. Civilised management, the result of good work and prudence, must ensure stability while maintaining diversity. A diversity of the natural elements, needless to say, but also of anthropic elements.

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The partial loss of the homeostatic capacity involves greater fragility of the system. Insufficient precipitations or extreme temperatures also increase this fragility. Fragility is the degree of sensibility of a system or landscape to the disturbance caused by external agents. It is usually directly proportional to the friability of the substrate and the difficulties of healing the plant cover. This is the same as saying that arid and/or uneven systems are particularly fragile. The Mediterranean world, sparing in rains and excessively uneven, is a clear case of an area affected by intrinsic landscape fragility. The medio-European attitudes of proverbial respect for landscape have a powerful ally: the generosity of a nature rich in gentle precipitation, capable of healing any wound in a short time. An active vegetable ground cover immediately grows on any rough soil, which rapidly helps cover scars and, above all, stabilise slopes and levelled grounds. In the Mediterranean basin, in contrast, things are quite different. The Mediterranean world offers exposed landscapes, landscapes in which the potter's dry ochres tend to prevail over the lush shine



View of Athens (Nour Salameh).

of the green. It is a sub-arid domain, capable of producing barely six or seven tons of organic material per hectare and year in comparison with the fourteen or fifteen easily generated in humid Europe.

Indeed, plants grow slowly and discontinuously in the bioclimatically Mediterranean area: here rapid and complete herbaceous cover does not prosper but rather a dispersed woody bushy or shrubby system, which grows slowly and upwards, leaving many clearings between plants. A woody covering that barely casts enough shadow upon the soil to mitigate the evaporative harshness of an inclement insolation: an incomplete coverage that also shows a decisive trend to catching fire in summer. The rains, apart from being scarce ( $450\text{-}700\text{ l/m}^2$  a year in comparison to the  $700\text{-}1,000\text{ l/m}^2$  in humid Europe) are poorly distributed. In summer, when the heat is at its worst, they are almost inexistent while in autumn and in spring they can be torrential, to the extent of causing floods

and extensive soil erosion. The soils are usually not very deep, not excessively fertile and barely adhere to the rough, excessively sloping, substrates. Mediterranean landscapes, in short, are considerably fragile.

But if there is a landscape field that has experienced a centuries-old anthropic pressure, this is the Mediterranean. It had some positive aspects, because it created highly sophisticated secondary systems but also increased global fragility: when the intervention slackens, these assisted systems easily decompose. The final result is that an already fragile field made even more fragile by human action is approached as if it were the most robust of the systems.

### The Values of Free Space

Over time, we have tended to incorporate urban and para-urban structures in the landscape matrix. The landscape does not begin where

the city ends. However, non-built spaces are still the core of most landscapes. This is why the maintenance of wide areas of free spaces is fundamental in landscape terms. This entails a distending systemic role linked to the concept of landscape.

Free does not mean empty. Free means full of space; that is, the space strictly speaking. Neither does free mean intact. Certainly, there are free spaces that are untouched spaces, although on most occasions there are more or less transformed forestry spaces, agricultural areas or golf courses. The free space is similar to the emerging matrix and, in any case, it is the white that enables us to see the black of the letters. The territorial reading is impossible without these background whites. In any case, the concept of free space has many meanings depending on the context in which it is placed. Thus, in keeping with the Catalan Act 2/2002 on Town Planning, the town planning system of free public spaces comprises parks, gardens, green areas and recreational, leisure and sports areas in the open air. In contrast, from a more ecological perspective, free spaces are the different elements (agricultural, forestry, hydrological, etc.) that are not integrated into the urban or para-urban space and are articulated with a greater or lesser degree of connection between them. In territorial terms, when we speak of the free space matrix we consider this latter approach.

The addition of urban space (residential, industrial or tertiary) and para-urban space (peri-urban, rururban or vorurban<sup>1</sup>) gives the

dimension of the occupied space. What remains is the free space, although perhaps it is not “what remains”. In fact, the free space has for a long time been indirectly defined, which has lent it this marginal air characteristic of residual things. Like the “invertebrates” or the “land that cannot be developed”, the free space has been defined as what it is not. The free space has been, for a long time, the space “not yet developed”. This is quite wrong, especially when developing means building. Logically, developing would mean transferring to the territory the spirit of the *urbs* or, more precisely, the spirit of the *civitas*; that is, of urban citizenship. In this respect, developing would mean civilising, although in the common language developing simply means building, at least occupying, and in recent times transforming the rural or agroforestry landscape into urban or rururban.

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Thus, the misnamed “developments” have in the end harmed the best spots of the Mediterranean coast. And not because they have been built in the landscape but because they have destroyed the landscape by building elements of destruction. Thus, there is the paradox that the term develop finally means destroy, a deplorable paradox because there is nothing more constructive than the civilised spirit of the *urbs*. The *civitas*, which is the main exponent

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1. The peri-urban landscape is the incipient and poorly structured urban space located in the urban periphery; it constitutes a crown of diverse geometry, generally of poor urban quality, that houses the poorly structured peripheral neighbourhoods, the major sports or commercial facilities that have been expelled from the city centre, the road rings, etc. The rururban landscape, which means the presence of an urban origin or typology amidst a rural environment, is a landscape of greenhouses, power lines, agricultural storehouses, ponds and irrigation channels, etc., or even facilities quite removed from the farming needs, such as waste water treatment plants, roads and motorways, permanent motocross circuits, etc. The vorurban landscape corresponds to a marginal field of interstitial insulae of insufficient size, shipwrecked in a sea of motorways, diffuse cities, greenhouses, etc., halfway between peri-urban and rururban, bound to be confused with both in the long term but temporarily highly extended in all urban peripheries.

of the progressive and civilised attitude – hence the term –, builds the *urbs* to make it the home of its life activity. In short, there is nothing more positively constructive than taking the civic spirit of the *urbs* to the generality of the territory and, therefore, calling these antisocial destructions of the space developments is a perverse corruption.

In short, the ideal would be for all free and non-untouched spaces to be developed; in other words, sensibly built in keeping with the good sense of civility. This would entail, among other things, the good and respectful maintenance of the traditional farming areas and therefore the protection of the landscape would be guaranteed (at least in the European cultural sphere). If we look closely, what in modern times has been called territorial development does not correspond to any objective other than the appropriate and prudent development of the space; that is, in its development in the proper sense. What this entails, by the way, is the maintenance of its fine physiological health and not only its anatomical conservation. Fine physiological health in social and also ecological terms. Fine ecological health that cannot even be imagined without quite a high level of diversity and socioeconomic diversification.

## The Educating Landscape

Perhaps the most elaborate expression of urbanity, that is, civility, is education. Access to knowledge and personal training is a value inseparable from the spirit of the *civitas*. The development of culture, indeed, is closely linked to the benefits of urban life. The *urbs* itself, as an artefact, is an educating body, because it channels the life of the citizens and prefigures

its guidelines. In the city, therefore, knowledge is developed while an existential space is shaped that determines the way of life, which, in the end, has key cultural effects.

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This is the principle that gave way to the movement of educating cities. In 1990, the 1st International Congress of Educating Cities was held in Barcelona. A group of cities represented by their local governments set for themselves the common goal of “working together on projects and activities for improving the quality of life of their inhabitants on the basis of their active involvement in the use and evolution of the city itself.” In 1994, the movement was formalised as an international association on the occasion of the 3rd Congress, held in Bologna. This movement is the result of the reflections made in the field of urban sociology and is highly indebted to the work of the geographer Jordi Borja. However, it was born as a management objective, adopted and promoted by Barcelona City Council, which has gradually brought together an international network of member cities.<sup>2</sup>

The concept of the educating city is based on the realisation that the space is not neutral but explicitly and implicitly generates, disseminates and strengthens images and values. The more complex, diverse and rich the space of reference, the more intense this commu-

2. See [http://www.bcn.cat/edcities/aice/estatiques/angles/sec\\_iaec.html](http://www.bcn.cat/edcities/aice/estatiques/angles/sec_iaec.html).

nicative nature is. Thus, the city behaves as a formidable communicative artefact, in which messages understandable by almost all citizens are superimposed and intertwined with others that are only accessible to specific groups. Let's take as an example the fine grain public space, distributed in the urban layout in the style of European and Mediterranean cities. Its very existence, strengthened by the guidelines on the design of functions and facilities, involves a specific way of understanding the coexistence and interrelation between what is public and what is private. The distribution of areas for pedestrians, the layout and hierarchisation of the road network, the distribution and nature of green areas, for instance, certainly provide a service but at the same time send a permanent education message to citizens.

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Can the landscape contain or issue educating messages as cities do? Probably, yes. It should not be overloaded with artificial messages or contrived meanings, like tourism advertising. The aim is to learn and dare to read the landscape, to listen to it and act accordingly. As we must learn to move around the city, to interpret the signs that tell us how and where to circulate and detect the signs of insecurity or degradation, we must learn to act in and with the landscape. A frank dialogue with the landscapes that we have generated would be capable not only of informing us but of re-educating us.

For some decades, the issues related to the conservation of nature, the correct management of waste and the saving of resources are increasingly present at the different levels of formal education. They are the subject of several citizen awareness campaigns, both local and international, and have achieved a place in the audiovisual production of reports and documentaries. Everything contributes to a lesser or greater extent, and with more or less success, to what has been called environmental education. The European Landscape Convention, in Article 6, established that the member states should take measures to ensure the incorporation into education, from school to university, of values related to the landscape and its management. The Committee of Ministers of the Council of Europe has on several occasions made the same recommendation.

However, the geographer Joan Nogué notes that "the lack of a significant territorial culture and a landscape awareness extended to the citizens is one of the most notable shortcomings we suffer as a country."<sup>3</sup> We agree. At least here, so-called environmental education has neglected the territorial and landscape dimension. It has relapsed once again in the difficulties of finding common ground between an environmental vision, to a great extent marked by a separating approach of the environment, and the complex and interdisciplinary vision required by the treatment of the territory and landscape. We believe that environmental education should make an effort to integrate territory and landscape, not as another issue but as the dimension in which most of the variables it considers are specified and manifested.

The aim would be to induce, from individual perception and awareness to the collective imaginary, a systemic vision of the environment by understanding the structure and dy-

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3. Nogué, Joan, *Paisatge, territori i societat civil*, Valencia, Edicions Tres i Quatre, 2010.

namics of the territory and the landscape. We understand that this is the vision that focuses the work of the Observatori del Paisatge de Catalunya.<sup>4</sup> It is not enough to be aware of the problems or act “appropriately” in the personal and social sphere. We must collectively orient the action in function of the prospective, tactical and strategic elements. The aim is, ultimately, to determine where we want to go and how we can do so with the instruments at our disposal. This places us in the paradigm of sustainability, which is capable of giving meaning and orientation to action gestated in the awareness-raising process induced by environmental education. Framing environmental education in the horizon of sustainability orients training towards action and gives it a political meaning, in the most appropriate sense of the term. The landscape plays a key role in all this. Unfortunately, in the approach adopted by the United Nations, in which sustainability and education are linked, the aspects related to the landscape and the territory do not appear in the foreground.<sup>5</sup> The European Landscape Convention itself relates sustainability to the conservation of the natural and cultural heritage, to the responsible management of resources and to the aspirations of the population but does not explore the educational or training dimension of the citizens.

On the contrary, in the field of educational research many interesting advances are taking

place. The Italian geographer and educator Benedetta Castiglioni, with wide experience in landscape education, has developed a stimulating argument about the existence of strong synergies between landscape and training for sustainability. She starts from the conceptualisation of landscape as a communicative interface between the human subject and the territory: the landscape expresses and enables us to understand the territory. In a communication to the Council of Europe, Castiglioni states: “The discovery of language with which the landscape is communicated enables both the development of new cognitive skills and the acquisition of values. And in this dialogue, the landscape enriches the individual and, at the same time, enables him/her to respond with respect, participation and responsible construction.”<sup>6</sup>

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Castiglioni’s approach could be the foundation to start a parallel reflection to that which led to the principle of the educating city. This would enable us to speak of an educating landscape, always in the wider context of education or training for sustainability.

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4. The Observatori del Paisatge de Catalunya, with offices in Olot and in Barcelona, is a consortium created in 2004 by different bodies of the Catalan public administration, the ten Catalan public universities and several professional associations and civic organisations. According to its standing rules, it aims at “the diagnosis, proposal, study and awareness-raising of Catalan society for the preservation, protection, management and, if appropriate, restoration and improvement of the landscape of Catalonia, in a framework of sustainable development and protection of the environment, the rational use of the land and saving resources.”

5. For a description of the Sustainable Development Goals and the fields of action and expected results, see [en.unesco.org/themes/education-sustainable-development](http://en.unesco.org/themes/education-sustainable-development).

6. Castiglione, Benedetta, *Educare al paesaggio*, Treviso, Museo di Storia Naturale e Archeologia di Montebelluna, 2010.