

## BUILDING THE LANDSCAPE. REHABILITATION AND RENEWAL OF TRADITIONAL MEDITERRANEAN STRUCTURES

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**Abstract** *One of the main features of Mediterranean landscapes, particularly in limestone areas, is the terraced land frame, usually supported by dry stone walls. In addition to the scenic aspects and landscape identity, network compartmentalization established by terraces, property division walls, pathways and traditional paths, shapes ecological corridors that frame the different human activities. It is a structure whose conservation is particularly important in areas of intense human impact, or rapid transformation, such as the urban-tourist spaces of the Algarve, where the hills displayed by such structures form the background scenario. In order to put in value their importance for landscape conservation and evolution, this presentation will focus on the interrelated ecological, aesthetic, symbolic, socio-economic and political aspects that influence the spatial distribution and image of the terraces. Of course, the values that local people can assign to their landscapes will be determinant, but specially at the Algarve, the role of tourists as outsiders must be seriously take into account. We then argue that the future of the dry stone walls structure must be prospected into the diversity of possible solutions about landscape development as the living part of a whole unit that includes the densest urbanized areas with less ecological functions. We call such unit the urban-touristic region of Algarve, inspired on two utopic references: the ‘urban regions’ and the ‘Agroplia’. It means that we try to use landscape as an instrument of knowledge and acknowledgement –democratic governance– of regional spaces.*

### 1. INTRODUCTION

In the Mediterranean context, landscape is the outcome of a very long building process. In fact, “Landscapes are never completed. Rather, they are constantly being built and rebuilt through people’s engagement with their inner images and with their physical environment.” [1].

In order to understand the dynamics of a complex system such as the landscape, it is usual to

use a systemic approach. Then, the first thing to do is to combine his structural aspects to reach a model of the system's functioning. However, in the case of landscape, we need to surpass the mechanic trends on approaching the biophysical –and aesthetic– features as merely observable and measurable objects, like being out of us. Thus, we'll try to get close to a *mesological* meaning of landscape [2] –landscape has a mediatory function between people and the environment.

In addition to the close relation with other structural elements, under different dimensions – cultural, ecologic, sociopolitical, economic, spiritual–, a structural feature of landscape can never be exterior to ourselves as individuals, as human subjects and, most of all, as a society. Under this perspective, we'll seek to frame the analysis of dry stone wall structure in the *barrocal*<sup>i</sup> of the Algarve. In fact, we focus on a very representative structure sketching the mountains and hills that form the skeleton of many Mediterranean landscapes [3].

That's why we begin by a short description of the main features of Mediterranean environment, in which the Algarve can be included, as a distinctive broad region, both in biophysical and socio cultural terms. The role of dry stone structure on terraced landscapes will be then emphasized as a hard work laid by many generations. Some functions and building aspects of dry stone walls will be stated. However, one can only reach the real significance and the future of such distinctive structures by emphasizing the construction of landscape as a process.

The general process of landscape construction is obviously influenced by prevailing ideas of the world. Since the religious beliefs and philosophical formulations influence the actions that transform the places, the evolution of the landscape cannot be detached from the ideas and the strategic framework at which such actions fall within. For instance, the fast landscape changes that we are witnessing nowadays, usually leading to well-known unsustainable territories with no apparent solution, is a consequence of a prevailing dualism inherited from the Aristotelian logic. We then feel compelled to show positive utopias regarding the prospect evolution of landscape, as the living part –with more biological activity– of the places where people lives.

Thus, we explore the idea of an Algarve urban-tourist region, grounded on landscape as a common. In this framework we indicate a variety of situations likely to influence the future of landscape structure supported by dry stone walls. Here, to facilitate communication and public participation encouragement, appears to be essential to legitimize real options. That's why, more than to present finished solutions, we were concerned to discuss a process of knowledge and acknowledgment of a structure that shapes the character of the 'algarvian' landscape.

## 2. GEOGRAPHIC OVERVIEW

The Algarve region is located in the Gulf of Cadiz, practically in the vestibule of the western entrance of the Mediterranean Sea, known as the Hercules Columns. Mediterranean influences are very present, at the climate level, vegetation cover and even people's traditions. Then, many characteristic features of Mediterranean landscapes can be observed, like terraces of 'barrocal'

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<sup>i</sup> 'Barrocal' means exactly clay (barro, in portuguese and spanish) and lime (cal, idem). It means, in real terms, a fine layer of clay –mostly 10 to 20 cm of clay over an extensive mass of lime rock. Then, a karstic process takes place forming big aquifers with various depths, normally reaching hundreds of meters.

hills, a distinctive factor of Algarve's landscape. These terraces were built over generations, supported by dry stone walls, which altogether form a structure with a decisive role in the conservation of traditional agrosystems not only as cultural and ecologic values but also in aesthetic terms.

## 2.1. The Mediterranean context

The first issue to clarify is the integration of the Algarve in the Mediterranean geographical context. According to Forman [4], the microclimate and the socio-cultural pattern are the two broad characteristics for defining a region. The Mediterranean climate extends a little more than the shores of Mediterranean Sea, embracing at least the south of Iberian Peninsula. One could say that the Mediterranean region, extended until the doorway of Hercules Columns, "contrasts mightily with the Sahara area to the south, temperate Europe to the north, and a cool, dry region to the east. The Mediterranean Region is distinctive in both physical and human terms." [5, p. 11]. As the Portuguese geographer Orlando Ribeiro used to say, the Mediterranean influence goes until the last olive tree (Fig. 1.).

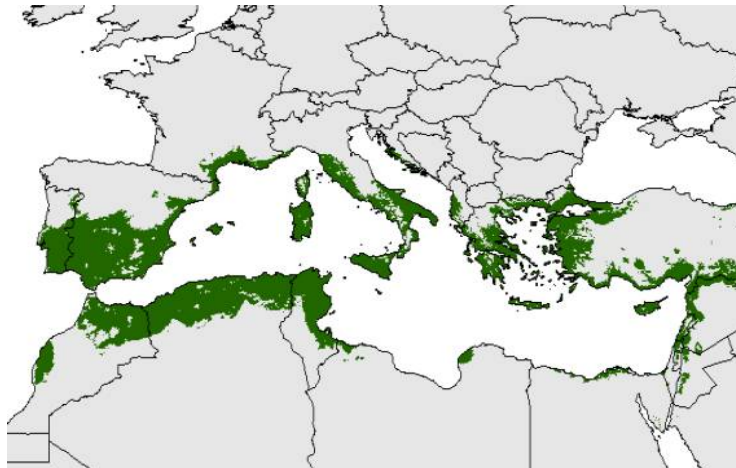


Fig. 1. Ecological niche of the potential olive tree distribution [22, p. 21].

Throughout the Mediterranean region, the omnipresence of mountains is very characteristic. "The Mediterranean space is devoured by mountains. They are present until the seafront, abusive, leaning against each other, inevitable, like the skeleton and the background of landscape." [3, p. 19].

It is true that in the Algarve, the presence of mountain ranges is not so visually impressive as in other Mediterranean coastal areas. But it is still omnipresent, on the coastline, the facade of limestone hills, with an alignment more or less parallel to the coastline that shapes a sort of amphitheater opened to the sea. This shaping is protected from the inconvenient cold north winds by a second line of Shale Mountains that form the 'Serra'. It makes the prevailing of meridional influences in all the littoral and part of 'barrocal' (Fig. 2.).

## 2.2. The background of 'algarvian' landscape

The 'barrocal' is exactly that homogeneous zone in terms of soil (lime) and climate features, shaped by the hills we mentioned above. Here prevails the unirrigated orchard agrosystem,

developed in terraces that constitute the hallmark of the Algarve rural countryside [6]. Much of this zone is, in fact, the background of the landscape perceived from the urban-tourist concentration along the coastline, which was spreading from the 1970s, like in many Mediterranean coastal areas.



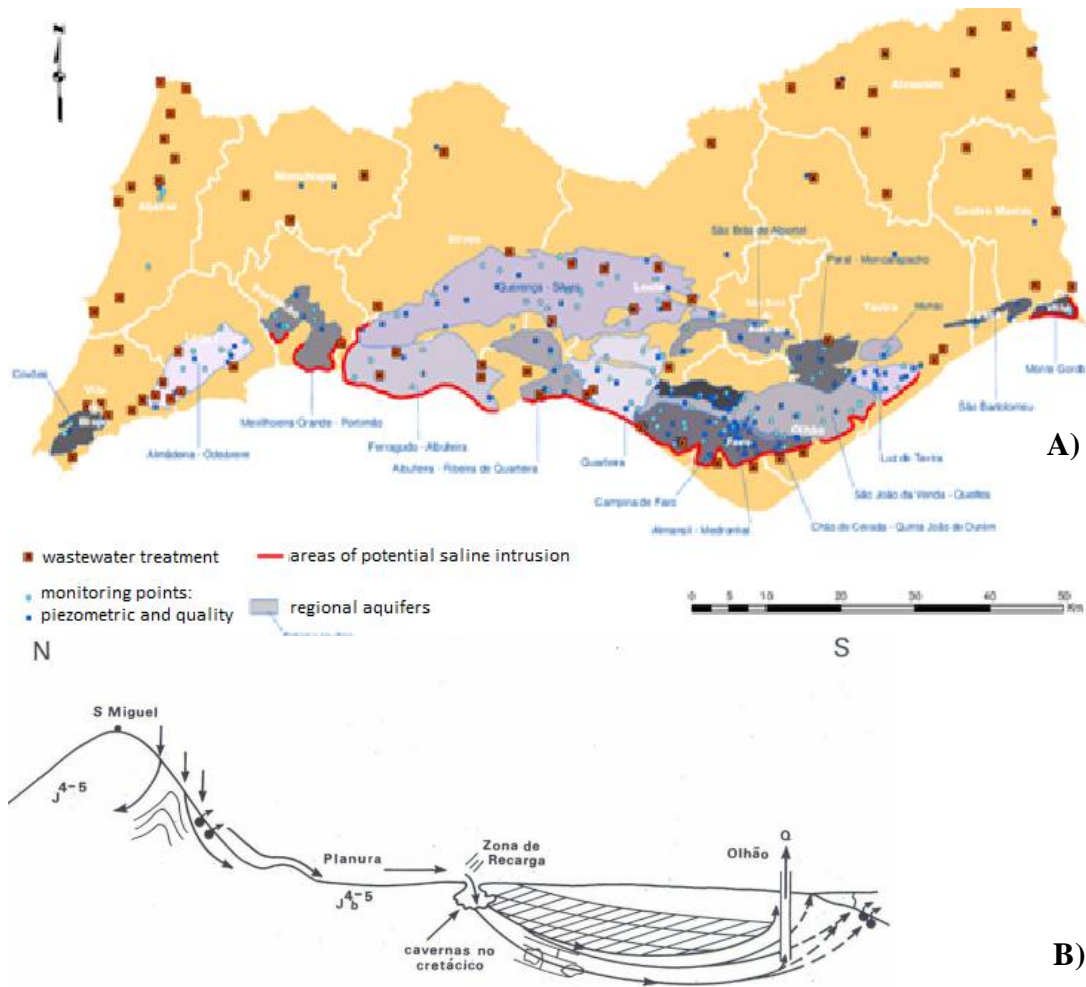
**Fig. 2.** Landscape units of the Algarve [23].

A whole complex set of aquifers, with high productivity and good water quality, is developed in the underground, given that limestone, mostly from the Jurassic period, is the geological bedrock of the ‘barrocal’. Such aquifers, poorly explored until now, granted the urban supply up to the end of the 1990s. Then, after the year 2000, urban water supply has been ensured by a system of dams, thus increasing the risk of eutrophication, and underground water have become more intensively used for irrigated agriculture.

Moreover, this irrigated agriculture, financed by EU, has been promoted just above the largest aquifer in the region, with obvious consequences in the degradation of groundwater quality. In addition to this vital negative impact, the massive incidence of dryland transformation in irrigated land led to a gradual substitution of part of the traditional terraced landscape. On the other hand, when soil sealing large areas of ‘barrocal’ or extracting large quantities of underground water, some disturbs can happen in the control of the salt wedge, leading to soil salinization at the littoral zone (Fig. 3).

Such features are hardly realized by urbanites and tourists, as well as the historic-cultural background and the actual range of ecological functions fulfilled by traditional agrosystems. In fact, these terraced dry orchards (Fig. 4) are basically composed by fig, almond and carob trees, allowing leguminous crops under the tree crown cover, such as peas and beans, which help to incorporate nitrogen into the soil. Apart from providing food products to the populations, through the fruits and leguminous plants, carob and fig leaves, as hay substitutes, still allow livestock [6].

As mentioned before, the platforms of terraces are supported by dry stone walls whose material comes from the work of taking some stones off in the previously existing relief; such operation allows a greatest thickness of clay soil, whose drainage is assured by the resulting dry stone walls.



**Fig. 3.** A) Potential zones related to water quality degradation [24].  
 B) Detail of hydraulic relations between limestone hills and littoral flat lands [25].

### 2.3. Traditional building structures

At a plastic standpoint, these land support walls, when combined with other property separation walls and paths limitation, define an extended constructive structure that form a complex and interesting alignment. In fact, we can perceive a compartmentation that defines the geometry of the entire space.

Much of these structures, usually founded in many Mediterranean landscapes, have been developed for the last three centuries, for agriculture purposes, following the population growth. In the case of the Algarve, at least in the mid-twentieth century, they were still in full expansion, primarily because the installed fruit trees production was much higher, in monetary terms, when compared to the cereal production. Around 1946-47, the production of dry fruits –figs, almonds,

carobs— represented an important part of Portuguese exportations, but already in the twelfth century, the geographer and Arab botanical Edrisi, mentioned the figs of Silves —the capital of the Algarve under the Moorish domination— that were taken to all Western countries.



**Fig. 4.** Typical image of Algarve countryside. Photo by the author, 2003.

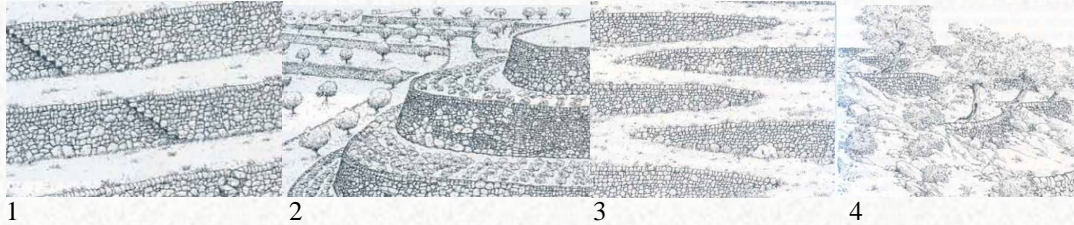
But this kind of structure, at apparently simple construction, represents the work of many generations, whose origin is lost in time. According to Seva [7], the dry stone walls supporting small terraces appear, at least in eastern Spain, around the XVIII century B.C., with no direct relation to agriculture, and originally serving as shelter for shepherds in transhumance practices along the mountains. “The ceramic rest that have been in some of them have demonstrated the antiquity of these structures of the rural architecture, and can be said without the smaller doubt that the dating reaches 18<sup>th</sup> century before Christ. The function was not, evidently, agriculturist, but they were establishments for house or traffic control points of cattle between valleys” [7, p. 9].

The constructive aspects, the adaptation to the relief and displaying, hydraulic and agro ecological functions, have been widely studied in southern Europe. We summarized in Box 1 the main features of some constructive aspects.

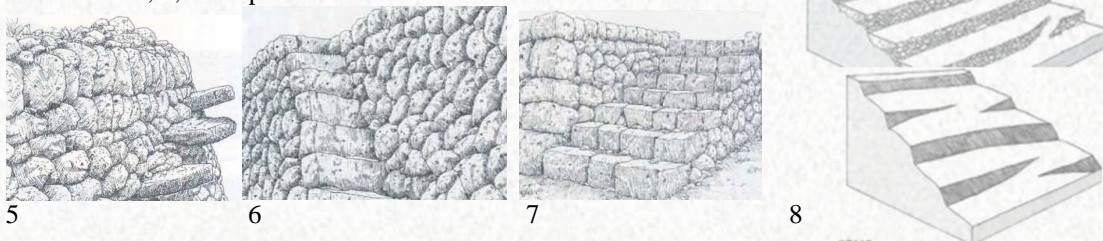
But the truth is that many of the traditional agricultural systems supported by these structures are actually being replaced, losing the basic functions or simply being abandoned. Then, the mainly question shall be how to prospect the possible future for these fundamental structures of a so hardly built landscape. It will depend on the values that people can assign to the place where they live. That’s why the cultural background and the scale that allows to develop the sense of place can be so important.

**BOX 1. Dry stone walls: some constructive features**

Topographic adaptation Parallel to level curves: 1 linear; 2 concentrically; 3 zigzag; 4 non geometrical



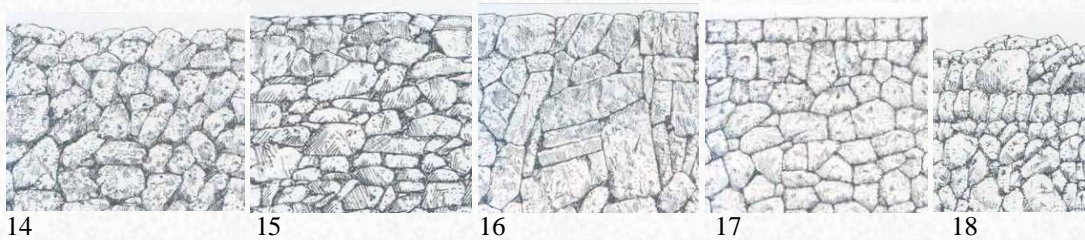
Access between platforms 5 cantilevered rungs; 6 side ladder; 7 side towers; 8, 3 ramps



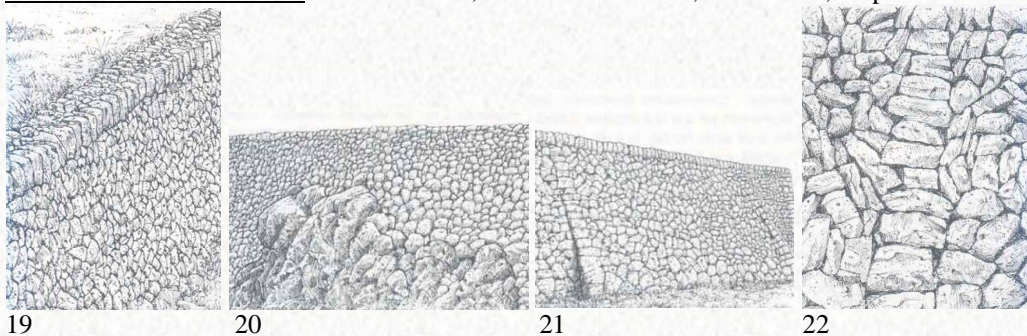
Preparation 9 non prepared; 10 irregular; 11 prepared irregular; 12 well prepared irregular; 13 well prepared polygonal



Crowning achievement 14 laminated (dais of small little rigged stones); 15 leveling of the upper layer; 16 regular upper level; 17 top layer with rectangular stones (crown); 18 raised, mixt



Other constructive elements 19 double wall; 20 embedded block; 21 buttress; 22 pilaster



### 3. BUILDING THE LANDSCAPE

It's quite consensual that landscape is the result of the interaction between society and his environment. That extent, in both collective and individual levels, three main facets to understand the landscape must be stated: visualization, interpretation of what is displayed and the objective functioning of what is visualized. Thus the landscape construction is a process that involves both subjectivity –including social construction– and objectivity. Augustin Berque [2] terms *trajection* the intimate involvement of the subject (human) and object (physical/biological) as two halves of the same reality. This means that landscape is defined by the perception of environmental features by some societies. “*Trajection* means that things exist according to how we grasp them by the senses, by thought, by words and by action” [8, p. 63].

Such understanding, apparently ‘logical’, challenges the typical dualism of scientific paradigm, in which one have, on one side, the human subject who observes and measures and, on the other, the objective target to be measured. As it seems that W. Montague said once, “according to the new physics, what cannot be measured does not physically exists”: everything has to be objectified. It happens that, according to Berque [8], the human subject includes a prosthesis of technical and symbolic systems which are part of its very constitution, in an ‘eco-techno-symbolic’ body. Then, everything will be both objective –ecological, technic– and subjective –symbolic. Or, as stated by Watsuji, the relationship between a society and his environment is “the structural *momentum* of human existence” [9]. Note that the *momentum* has the sense given by Physics, Mechanics, i.e. the power rating generated by a combination of two forces, in this case, the individual subject on one side, and his environment –or his half – on the other.

This change of perspective undermines, in some way, the common notion of ‘natural landscape’. In fact, the ‘natural’ often arises a reference for an observable and even imaginary nature that no longer exists, or who is succumbing to the constant aggression of a society that gradually broke up its ecological prosthesis. There is an illusion of fixing a standard unit, with which one would measure an observable external reality, hiding the effective conditions of a degradation that actually is affecting all of us. However, as Bernard Kalaora notes out, “contemporary nature cannot be conceived out of society, on the contrary she is grasped to all social phenomena” [10, p. 17].

That's why we'll put the emphasis on an accordance of "global landscape" [11] which encompasses urban and interrelated rural areas; thus referring to the places where more people concentrates, with all the physical, biophysical, cultural, economic, political environments that affects their own life.

Once the landscape is increasingly seen as a common good [12], public participation in decision-making about landscape evolution shall be crucial. Then, a clear communication about the aspects involved in landscape transformation, leading to understand it's complexity through soft models, seems to be essential. In this sense, we'll try to adapt the explanatory model developed within the Swiss National Research Program 48 “Landscapes and Habitats of the Alps” [1], encompassing a multidimensional approach, in which insights are shared and connected across the boundaries of disciplines.



### 3.1. Conceptual and philosophical aspects

We begin by synthesizing some conceptual aspects which, in the professed Western world, regulate the meaning, the thought and the actions on landscape building. And all that happens, once again, in the Mediterranean environment where Greek philosophy flourished.

In the Greek world, the concept of city-region included all the space surrounding the human settlements. Such space supported and nourished the city itself, being part of the same unit that thrived as a whole. Thus, human communities depended on a space that fulfilled all their needs, not only food, lodging, but also aesthetic references, mental well-being, etc. But at the same time, such space was shaped by those communities, therefore being the matrix of the urban society and enclosing at the same time his footprint.

In a philosophical formulation of the world's organization, Plato in the *Timaeus*, metaphorically took the reality of 'space - human community' relationships, proposing the term *khôra*. He placed such term between the Relative Being –*genesis*, which born, lives and disappears– and the Absolute Being –*idea*, independent from time and space. Apart the *idea*, the *khôra* feed the *genesis*, which could not live without the *khôra*, both forming the sensible world, the *kosmos*. Thus, the *khôra*, i.e. the *medium* that surrounds the existent [13], was both one thing –the print– and his contrary –the matrix. Following Berque [8], this was an *aporia* that Plato could not overcome, since he did not allow a third genus –*triton allo genos*–, nor Relative Being nor Absolute Being, which he points to the *khôra*.

The legacy of this *aporia* that rejects the third gender, prevailed in the of Aristotelian logic development and is at the root of modern dualism with strong influences in Western thought. Indeed, the principle of 'the third excluded' is a doubtful logical sense of environment to the human subject, once the biophysical surrounds will be considered an absolutely external entity. Hence, according to Berque [14], one ceases to relate the *micro* with the *meso* and the *macro Kosmos*, assumed as intrinsic components of human identity. In the view of Descartes through it would be considered a neutral object, in Newtonian physics, an absolute object, homogeneous, isotropic and infinite [15]. Basically, the ontological foundations of modernism end up having reference in *Timaeus*.

As a consequence, modern societies have lost their sense of *Kosmos*. Actually, in metropolitan areas, where most people live, urban policies heavily exploit a landscape imagery that masks the propensity to ignore the human labor that generated the real landscapes, thus directing attention to beautiful and ideal "natures". From the point of view of Berque's mesological geography, as stated by Donadieu [16], the liberal capitalist economy takes advantage of the popular trend to copy the position of elites wagered on making the work invisible for society.

Hence, we witness an individualism based system, in which the human subject cuts the links to the *medium* that surrounds him, thus separating a physical/eco body from his eco-techno-symbolic entirety. By breaking such existential ties that bind people to an autonomous interpretation of the real landscape, they lose the human sense of the world in which they dwell, since they are conditioned by *fétiche* objects and spaces. In a way, this explains why people do not react to cities with unscaled architectures, social environments of increasing inequality, segregated and guarded urban life, unreliable food supplies, fictitious land management plans and environmental conditions constantly deteriorating.

### 3.2. 'Kosmic' landscapes

This is the world we live –globalized and virtualized–, and the main and obvious questions are: 1) How can we take a step forward? 2) How can we discover alternative ways?

Well! That's what utopias are for! As Donnadieu [16] notes up, utopias suggest virtual and rational worlds; they are not predictions nor forecasts; they just build a virtual society without having a geographical location. This author distinguishes two types of operating utopias –which try to move from dream to reality– both pursuing the common values for wellbeing, living and thinking: the chimerical and realistic ones.

The early rely on dogmatic beliefs, specific to dualistic views and, when feasible, usually have a high price. History, not too distant, of National Socialism or regimes inspired by dogmatic Marxism provides significant examples. On the other hand, realistic utopias, with no *aporias* nor social dramas, search an access to common wealth based on solidarity and mutual respect.

*The object of the common good is the common wealth, i.e. the set of principles, rules, institutions and resources that promote and guarantee the existence of all the members of a human community. On the intangible level, one of the elements of the common good comprises the triptych recognition-respect-tolerance in relations with the other. In material terms, the common good is structured around the right to fair access for all to food, housing, energy, education, health, transport, information, democracy and artistic expression. [17, p. 13].*

According to Petrella [17], the Welfare State, already experienced after the great crisis of 1929, designates the aspiration to the common good based on solidarity. One can then point to as a realistic utopia example.

In more current terms, sustainability, and urban sustainability –many authors classify it as an oxymoron–, can also be seen as a realistic utopia, once it is an endpoint which we seek, but never reach [5]. Actually, because there is a huge gap between citizens and decision-making centers, one of the key issues to make a realistic utopia operational will undoubtedly be the scale. In fact, the strategies based on the maximization in profits of the inverters tends to prevail –capitalism 1.0–, thus nullifying global alternative ideals.

To search for a proper spatial and temporal scale where we can cause specific changes in order to move towards a better world will then face us with what Forman [4] calls the management paradox: “Small spaces are easily changed, but inherently unstable. Large spaces are hard to change, yet have considerable stability.” [5, p. 316]. When focusing on mid-size spaces, such as landscapes and regions, one's improvement efforts achieves an effect that can be visible on the short term and can persevere in the long term. Like trying to take care of our own garden, we should think that “Landscapes and regions are simply big gardens to be invested in and cared for.” [5, p. 316].

This author looks where best to focus efforts for an effective mesh of nature and people in and around cities, thus outlining the concept of urban region, applied to the places in which more than 50% of world population currently concentrates. In his scheme, the less living part corresponds to the hole of a donut –having several forms– and the part with highest bio-ecological potential and landscape value, corresponds to the ring forming the sugary mass of

the same donut.

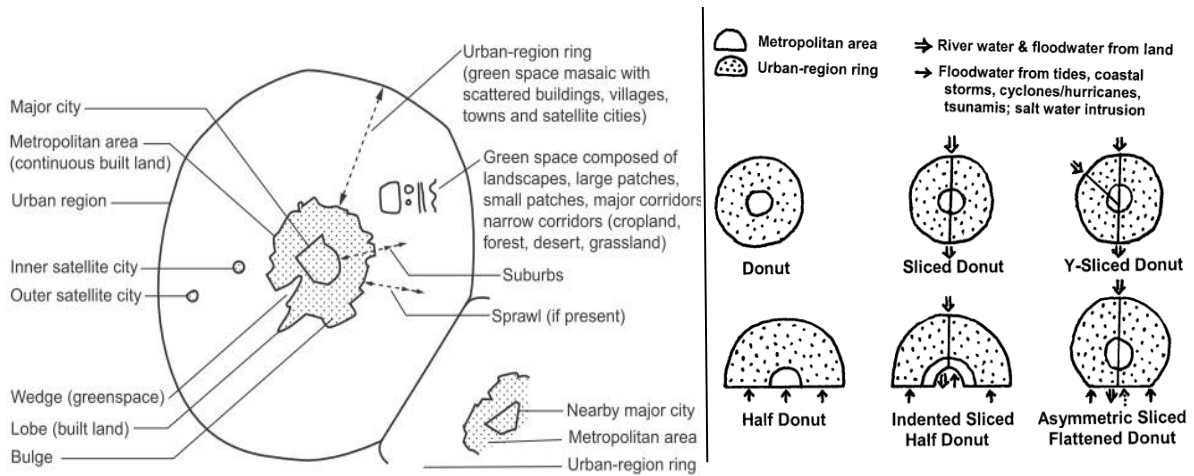


Fig. 5. Left: Concepts and terms for urban regions. Right: Donut model [5, pp. 6, 284].

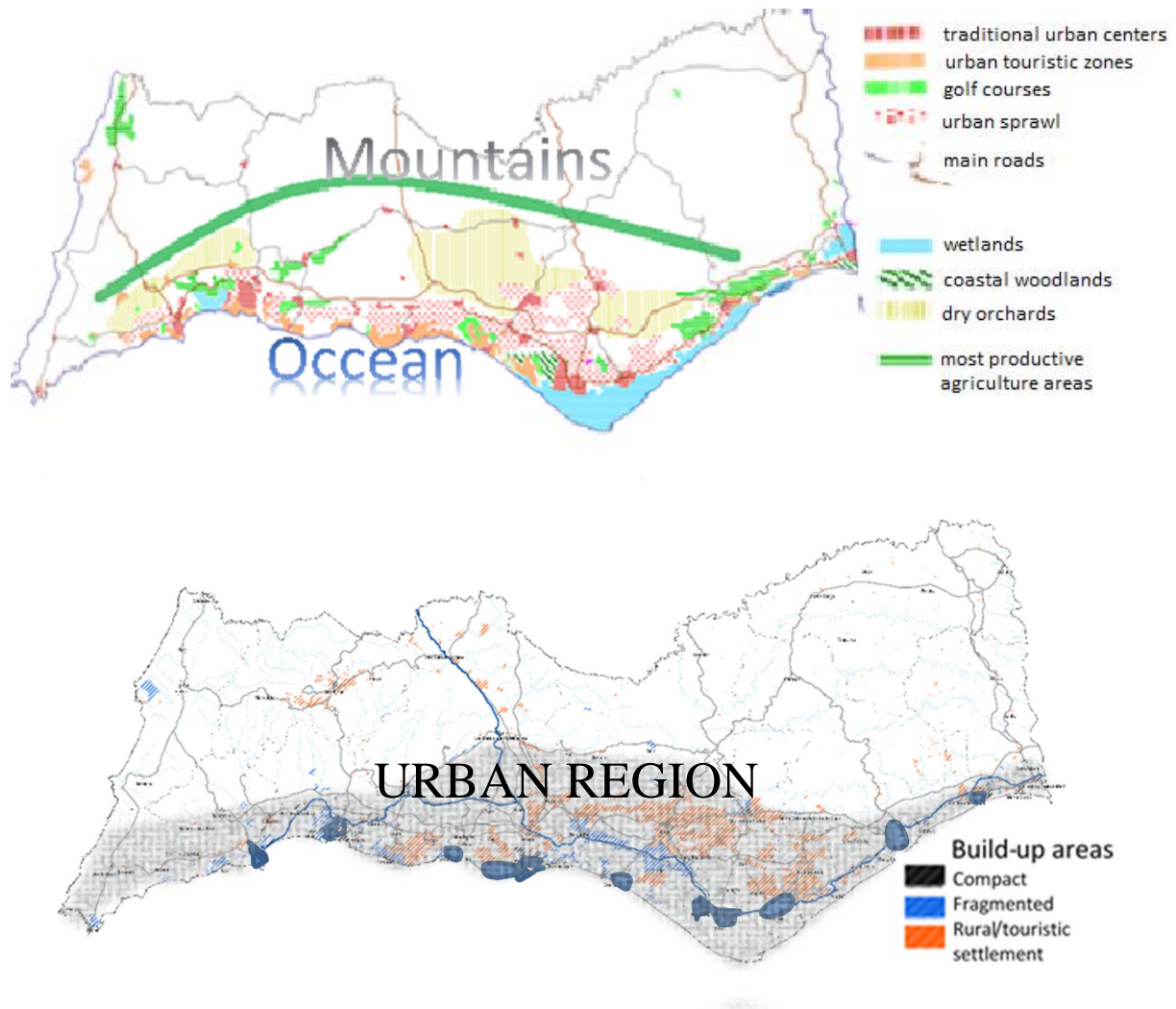
Based on the exploration of 38 examples of urban regions around the world, [5] reasserts some of the fundamentals already proposed by other planners of the late nineteenth century, early twentieth century, like Patrick Geddes, Fredrick Olmsted or Lewis Mumford. Those principles were grounded on the interdependence between the urban structure and the surrounding area that can support and feed such structure. It is, at bottom, a back to basics somehow related to the philosophical problem raised by Plato in the *Timaeus*, concerning the *Khôra*.

Nowadays, however, most big cities became the real *aporias*. In that sense, Donadieu [16] states the unsustainable future of the cities without close proximity agriculture, somehow inverting the *aporia* refused by Plato. It means that the future will be dependent on a third genus that unifies the matrix and the footprint of real human communities, since there is no solution for most of actual metropolitan areas. Then, he conceives a utopia similar to the urban region, imagining another urban world, with agriculture and farmers, which he calls ‘Agropolia’.

Accordingly, an existential vision of the urban world must explicitly be implemented in ‘Agropolia’, under two fundamental aspects. On the one hand, landscapes and places shall be perceived as they are in in fact, free from imposed cultural patterns, understood and admired to get a satisfaction beyond an amorphous comfort and an aesthetic pleasure of spectacles. On the other hand, sensitivity shall be developed to resume the ties that bind people to the environment in which they live and to surpass the fetish choices inculcated by experts that stimulate consumption.

In physical terms, the imaginary region is described as follows: “Agropolia is not an island, but an archipelago of Urban Spaces built among the fields, parks, forests and ponds. It is freely accessed by railways and highways, through ports and airports. Beyond Agropolia, the ocean extends on one side and, on the other, a barrier of wooded mountains intersected by rural valleys sparsely populated.” [16, p. 285].

The truth is that this description identifies a lot with urban-tourist Algarve, formally a polynuclear urban area with the following basic components: 1) the donut hole of his urban region correspond to the continuous built mass formed by traditional urban centers and by urban settlements for tourism purposes; 2) the ring of the donut is the miscellaneous formed by urban sprawl, villages and little towns, green spaces (golf courses, wooded and agriculture areas, wetlands, etc.); 3) limit south, the Atlantic ocean, and northern boundary, the shale mountains.



**Fig. 6.** The urban region of Algarve. Main components and barriers; spectral zone [26].

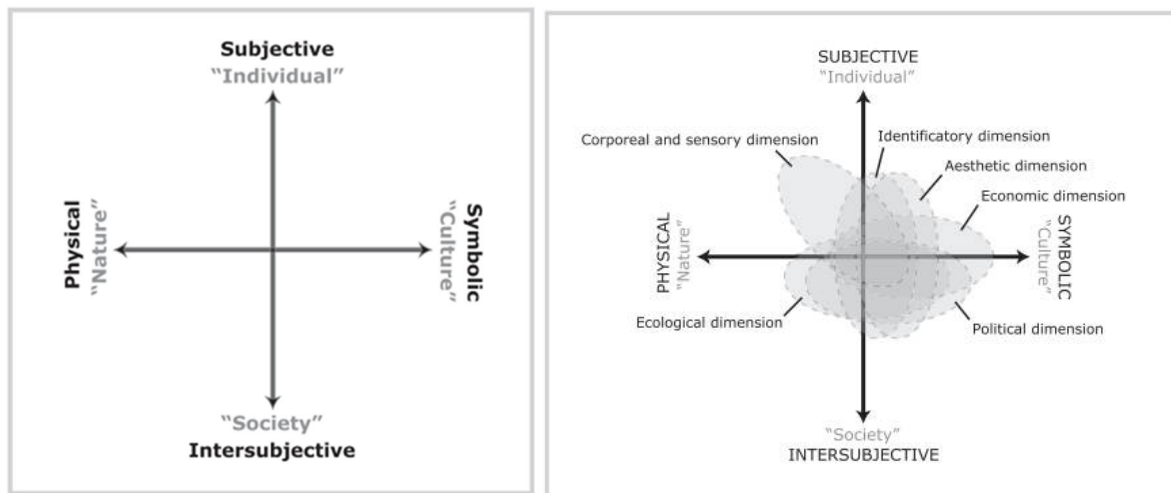
### 3.3. Explanation model of landscapes

Of course, the coastal zone of the Algarve, as well as his background area is full of problems – densification, bad locations, stressed sensible areas, aesthetic disharmony, etc. Nevertheless, the focus on this utopic urban region, where landscape can be taken as the half of the communities that lives here, may allow us an adequate scale for improving the actual situation, thus overcoming the management paradox. Then we need to support in a method that facilitates

communication, in order to stimulate the participation of citizens in landscape evolution. In fact, perceptions and conceptions of landscapes, should be communicated as clearly as possible in order to raise awareness and initiate processes of participation, and thus serve as a contribution to ethical discourse on landscape development [18].

The explanatory model developed within the Swiss National Research Program 48 “Landscapes and Habitats of the Alps” [1], includes a multidimensional approach, in which insights are shared and connected across the boundaries of disciplines.

The model is structured along two main axes. The first one goes from nature to culture, because the role of landscape in mediating between the natural environment and human activity depends on acquired rules, models, and cultural patterns. The second one goes from individual to society, because each individual has its own perception of landscape but he is part of a society that organizes and manages the space appropriated by different social groups. The 2 polarities are represented in fig. 7.



**Fig. 7.** Left: The 4 poles of landscape perception. Right: The multidimensionality of landscapes [1].

We then have four poles: physical, subjective, symbolic and intersubjective.

A) The physical pole refers to what people generally perceive first when beholding a landscape: arable land, rivers, woodlands, settlements, roads, animals, machines; nevertheless, landscape don't must be conceived *per se*, in an 'objective' way, but considering different points of view from which they are perceived.

B) The subjective pole comprehends, on the one hand, the subject as the center of emotions, sensations and perceptions –subjects intentionally grasp their surroundings using not only the visual sense but also all the other senses– and, on the other, the subjects referred to individuals as part of a society –individuals that choose the aspects of landscape that arouse their interest.

C) The symbolic pole relates with the cultural patterns, aesthetics and symbols that mediate people's perception of the word –and landscapes–; the art and media have an important role on transmitting patterns that are not merely instruments of perception but also systems of interpretation.

D) The intersubjective pole takes into account the landscape as a product of social practices – agriculture, trade, leisure, etc.–, involving economic factors –landscape as a resource with and use value or market value–, sense of belonging –authenticity, social history of representation, insiders and outsider’s perspective– and political aspects –political decisions impacts on landscape development.

Based on such four poles, Backhaus et al. [1] state six dimensions of landscape on which people may focus according to the angle of their perception, as represented in fig. 7. However, one can deduce several perception possibilities by exploring the relations between the poles, as we will follow.

#### **4. REABILITATION AND RENEWING OF TERRACED LANDSCAPE**

Although we cannot witness a visual exuberance of the Algarve hills, the terrace frame, supported by dry stone walls, can embody an aesthetical positive view for many perceptions. Furthermore, it is the base of an agrosystem with great ecological and cultural values. Hence, we realize the symbolic, aesthetic, cultural and ecologic values that need to be assumed by the society. In order to prospect the ways for rehabilitation or renovation actions, we must encourage public participation in a very effective way.

In that sense, we must first enlighten the trends or the evolutionary possibilities for terraces in the Algarve urban region. Next, there are three main questions we must raise up: 1) What kind of landscape may result from such evolution? 2) For whom is it intended and how can it be designed? 3) How can we manage such landscapes?

##### **4.1. Trends and evolution prospects**

Following the Donnadieu [19] scheme, we mark basically two trends more or less installed: abandonment and conservation of functionality. Abandonment, which occurs in most cases, has to do, on the one hand with the rural exodus to the cities and tourist centers and, on the other hand, the difficulties of modernization and agricultural techniques –steep slopes, cost of hand labor, marketing alternatives. The conservation of functionality, increasingly less frequent, may be related with CAP aids to subsistence agriculture, but also maintained activity by traditional farmers, or even modern ones in case of some farms economic viability.

However, at this point, we must search for three other alternatives. Firstly, we can think about assigning a patrimonial value to terrace landscapes, under a statute of cultural landscapes. In such a situation this landscapes are likely to fall into oblivion –collective amnesia– or stay as a souvenir object –anamnesis. It could also happen that they were proposed as world heritage classified sites, or included in museum figurines of planet cultures.

So, as a second possibility, it might be necessary to put landscapes into value through the image, i.e. by aestheticizing them, even if such landscapes do not exhibit any special attributes. This would occur within tourism interests, by *artializing* the landscape [20] via image and text descriptions, then creating beauty, excitement and spectacle. With less chances, we would consider an enhancement through agricultural economy, shaping the landscape in order to make it more attractive, not only for the ‘excellency’ of the products obtained, but even aesthetically.

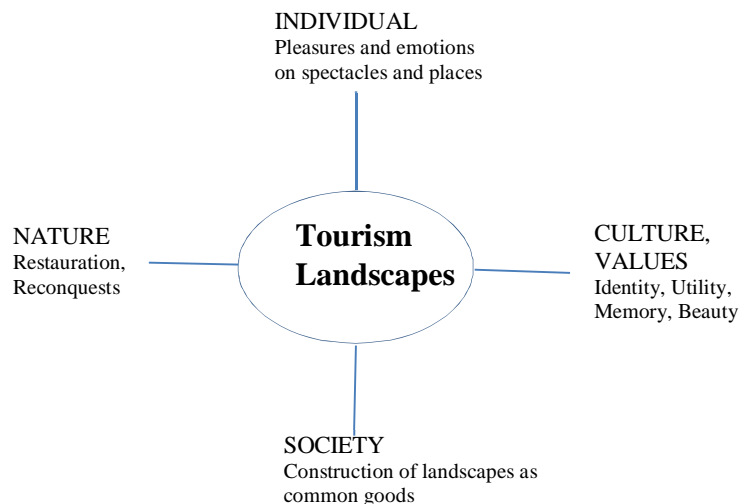
As a third possibility, one can consider to recover abandoned terraces or even to create new

platforms. For the ‘barrocal’ of the Algarve we could think about unique branded goods such as ‘unique Algarve orange’, famous Silves fig, etc., like the Oporto vineyards in the north of Portugal or the Cassis vineyards in France. On a touristic environment like the Algarve, the promotion of cultural and tourist circuits could be much plausible; once practically only linear developments should be expected, the combination with other solutions would be necessary.

In short, we can have the following typologies: 1) landscapes of abandonment – oblivion; 2) highly valued landscapes –individual economic profitability; 3) patrimonial landscapes – collective memory; 4) cultural landscapes promoted by recognition/artialization of unique places, notable, or even common places; 5) landscapes of reconquest –including the addition of types 2 + 3 + 4.

#### 4.2. Tourism landscapes and landscape design

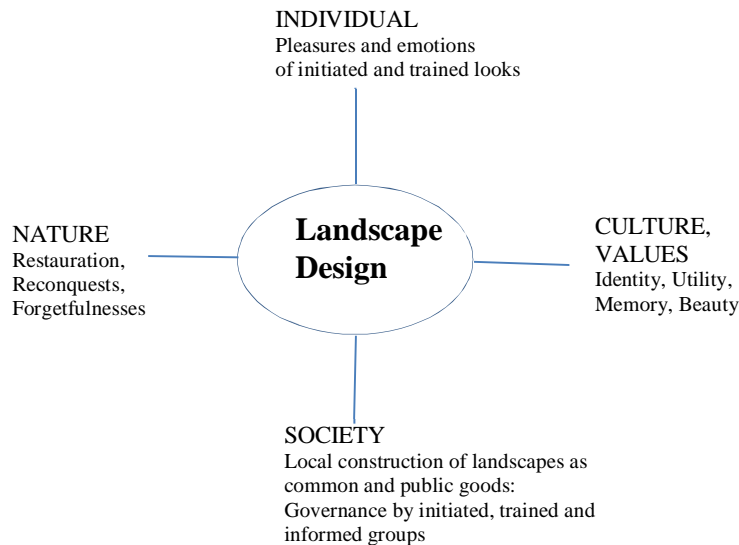
Once tourism is the driving force on the Algarve land planning, the temptation for the future fate of this region will be to embrace the dynamics of tourism landscapes (Fig. 8). Yet, after the landscape of the ‘barrocal’ is the living part of the urban region, to build landscapes as commons will be the main goal. This prejudice the individual demands of pleasure and excitement on the spectacles of the places. Therefore, rehabilitation and reconquest should respect the cultural features and identity values that invoke collective memory and convey beauty.



**Fig. 8.** The four poles in tourism landscapes [1] [19].

Anyway, once the goal is to promote rehabilitation or renewal, the central question will be: landscapes for whom? It will be then imperative to take into account the various ways of looking at the landscape, within different sensitivities, learning and training. In that sense, we next consider landscapes to: 1) looks trained in relation to the beauty and landscape art, aestheticians, outsiders, exogenous, including here most of the tourists; 2) Initiated looks in relation to the rules of local life, which will be insiders, endogenous, including here much of the urban population; 3) looks informed about material and immaterial production of landscapes, corresponding to scientific looks.

This does not mean that every way of looking corresponds to a single type of landscape. A landscape can please many ways to look at, although some landscapes will appeal more to certain ways of looking than others. Trained looks, usually attributed to some tourists, tend to value scenarios with more formal splendor and contrasts, like Machu Pichu in Peru or the rice field terraces in Asia. A landscape with striking visual effect on a traditional compact city will be valued as well as by many trained looks, tourists, as by the looks of initiated urbanites and farmers, as by the informed looks of agronomists, biologists, architects, landscape architects, etc.



**Fig. 9.** The four poles of landscape design [1] [19].

We must then think about designing the landscapes (Fig. 9) that can be rehabilitated or regained. At the same time, we must take into account those that will be forgotten –patrimony, collective amnesia. Anyway, the satisfaction of the various looks that will contemplate such planned landscapes should take into account the cultural values –identity, utility, beauty and memory. Thus, the landscape design will necessarily be sketched and promoted on a regional scale. It requires to share the governance between initiated, trained and informed social groups, that value locally built landscapes.

### 4.3. Landscape’s governance

The question is to inquire in what terms such governance can be established (Fig. 10). In the current situation, we can consider three essential facets: 1) legislative injunction –top down arising from the European Landscape Convention (2000) and the respective transpositions into national legislation (2005 in Portugal)–; 2) self-sustainable local initiatives [21], bottom up; 3) local governance landscape projects, bottom up and top down.

As for the legislative injunction, it should be recalled, for example, some articles of the European Landscape Convention: artº 1 a) [Landscape] “... an area, as perceived by people”; artº 1 b) “Landscape quality objective means, for a landscape, the formulation by the competent authorities of the aspirations of the public”; artº 6 c) 1 “Identification and assessment of the

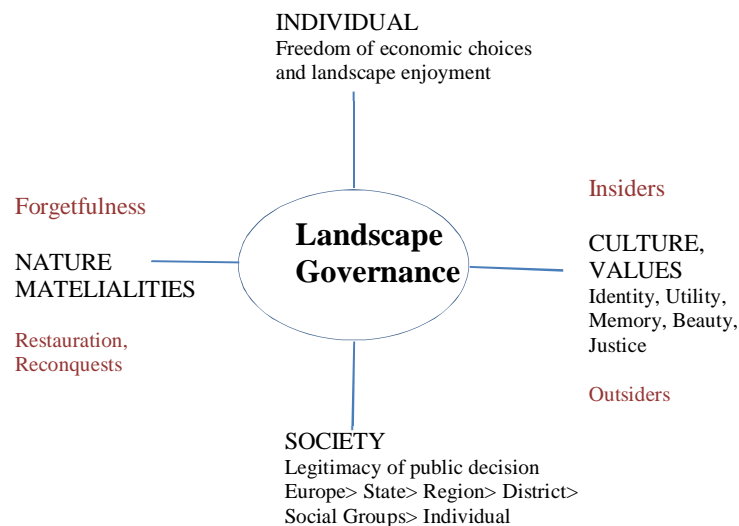


landscapes with the active participation of the interested parties”. Public participation is in fact where most problems arrive. In conventional planning processes top down practices prevail, once decision making fulfils a legitimacy ritual based on descending disclosure of information, consultation and conciliation attempt.

As a typical example of top down, Donadieu [19] refers George Brassens Public Park in Paris, in which terraced vineyards of XIX century have been recreated with non-commercial purposes. Similarly, one could imagine a decision about the reuse of the Algarve’s ‘barrocal’ dry orchard areas with mere aesthetic and recreational purposes for satisfying coastal urbanites.

Bottom up governance implies a delegation of decisions to local communities, which have the autonomy and the chance to pursue a participatory local democracy. Hobby farming can provide some examples in this case. For the Algarve urban region one could imagine urban citizens living in coastal cities, which form communities who’s aim will be to enjoy farming on ‘barrocal’; they would buy or rent some properties and explore the dry orchard products only for personal needs including the conservation of cultural identity.

Merging top down and bottom up implies to interchange information, co-decision and involvement in management. It can be the case of some projects promoted by local or regional institutions satisfying the ambitions of local representative agents or communities, who actively collaborate in the promotion and continuity of such projects. One can imagine a project for promoting the ‘Algarvian’ carob as a product of excellence, unique, conceived and prioritized by regional power; such decision would result from the lobbying of a significant group of farmers and other agents –conscious of dry orchards value–, taking advantage of the possibilities provided by EU funds.



**Fig. 10.** The four poles of landscape governance [1] [19].

In short, as shown in fig. 10, we have a physical, material, biophysical, reality to be construed in the light of identity, cultural values, collective memory, beauty and justice. Such values emerge from the ethical patterns of insiders and outsiders. At the same time, the freedom of

economic choices and landscape enjoyment, at an individual level, will frame the legitimacy of public decisions about the future of terraced landscape areas that can be restored, reconquered or forgotten.

That is why the sense of landscape should become an instrument of knowledge and acknowledgment –democratic governance– about the spaces that surround us, support us and feed us, spaces that were built by ourselves –as a society.

## 5. FINAL REMARKS

We actually follow a process of evolution in landscape policies requiring changes at social, cultural and individual levels [1]. It is not easy to overcome our dualistic matrix. For this reason, it is crucial to incorporate the intangible aspects on landscape design and development, in a progressive way. By rejecting the actual *aporias* of unsustainable cities and metropolitan areas, design processes necessarily face us with realistic utopias, both at local/regional levels and globally. As suggested by Forman [5], we can even take ‘big pictures’ –global sustainable scenarios– into account: “Think Globally, Plan Regionally, and Then Act Locally. Keep the globe in mind when making daily decisions. But most importantly, create a plan for every landscape and every region that provides sustainably for nature and people. Then with the broad plan in hand, make the important local changes and refinements that fit effectively into the big picture.” [5, p. 317].

In the case of the Algarve urban region, characterized by a terraced landscape supported by dry stone walls, the first step will be to achieve an effective knowledge of both, its physical presence and its significance. For the former, we mean its extension, adaptation to topography, forms, aesthetic combinations; for the last, we mean its symbolic, technological, ecological, economic values. In despite of the cascade of plans that emerged in the last two decades, it seems that such aspects have received little attention from public institutions responsible for land planning and management. As a second step, we must pave the way to more democratic forms of governance –bottom up or merged top down and bottom up. The encouragement of collective actions or concerted design projects will help to overcome the typical top down mechanisms of conventional plans.

The fact that the structure of dry stone walls of the Algarve does not have a spectacular appearance will surely difficult its recognition as a world heritage, unless such structure become part of a patrimonial set of the Mediterranean typical landscapes. But the most important thing will be an awareness of its cultural value by the people that coexists in such landscapes. In that sense, many looks must be initiate, particularly among urbanites. On the other hand, tourism can provide a valuable support towards an ‘artialization’, thus enhancing all symbolic values and making patrimonial value easier to be recognized. It will then be possible to rehabilitate and renew a large part of dry stone walls on the urban-tourist region of the Algarve, but we must also learn how to forget ... and to reassign new values.

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