Contemporary landscape: preservation and transformation.  
A contribution to an intervention methodology.

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Abstract: - This article contributes to the debate and reflection centred on the state of contemporary landscape: a mosaic of presently and past constructed landscapes. It addresses the urgency of analysis and evaluation of the historic process of landscape (trans)formation through a cultural and ecologic interpretation taken together with the evaluation of the dynamics and tendencies of change, and taking into account the spatial model of landscape. In the context of the changeable dynamics typical of contemporary landscapes, this article contributes to the formulation of an intervention methodology, seeking both to respond to social needs and guaranty the sustainability of the inherited landscape.

Key-Words: - landscape, ecology, culture, heritage, identity, preservation, transformation, intervention methodology

1 Introduction

The historic process of territorial transformation, that is, landscape construction, had its origins in the interaction between people and nature. Implicitly influenced by culture, landscape construction transformed the natural ecosystems, allowing human beings to make the best use of resources.

By adapting the cultural to the natural order, each society produces culturally and historically its own landscapes [1], that is, “(...) the landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity (...)” [2]. The landscape attests for the mutual and evolving relationship established between society and nature. It reflects the deeply engrained values of a community and culture. It constitutes the constantly updated heritage of a society.

Deeply engrained in history, the landscape as a heritage site reflects the successive interventions operated by different civilisations. For the role it plays in the definition of national and European identities, the landscape acquires therefore deep social, economical and cultural values. Because of this, the Council of Europe has produced guidelines for landscape policy which aim to guarantee the respect for, preservation and enhancement of European cultural identities.

In its guidelines, the Council of Europe highlights the triple cultural dimension of landscapes. First, landscapes reflect the individual or collective interpretation of a territory. Second, landscapes testify to the spatial and temporal relationships established between society and nature. Finally, the landscape contributes to the definition of cultural practices, local traditions and beliefs.

Despite the Council of Europe’s directives, the cultural and heritage values of the landscape are under threat. Territorial exploitation guided by maximum productivity alone, ignores the value and importance of the natural systems and of the cultural mosaics that sustain and qualify the inherited landscape. Territorial exploitation is in this way contributing to the adulteration and degradation of the landscape.

While human intervention is rapidly and profoundly changing the landscape, it is not fully destroying neither the landscapes’ traditional forms of organisation nor the specificities intrinsic to its identity and character. As a mosaic of present and past constructed landscapes, contemporary landscapes (and its configurative dynamic processes) need to be interpreted using new approaches (fig. 1).

2. The contemporary landscape situation

Human survival and well-being has always been dependent on the relationship established with the natural environment, that is, on the exploitation of the territory and its natural resources. Until fairly recently, however, a balanced use of resources
through the conscientious occupation of limited spaces was the rule rather than the exception.

Fig.1- Albergaria da Serra, Arouca, Portugal (mrc).

Beautiful and harmonious, the traditional landscapes were altered as a result of collective action based on empiric, environmentally friendly and inter-generational knowledge. Of late, nevertheless, these landscapes have been altered disregarding all the effort and cumulative knowledge of prior generations.

Transformations to the landscape have demonstrated a failure in understanding the essence, workings and complexity of landscapes. These more recent changes have frequently ignored the landscape’s intrinsic economic value, its formal and aesthetic contents, the continuity of the ecosystem, its inherent richness and the role it plays in the daily lives of the populations.

Growing urbanisation, extension of communication infrastructures and profound changes affecting traditional agro-systems have all led to the fragmentation and homogenisation of the landscape, to its reduced diversity and complexity, and to the loss of elements and structures essential to the landscape’s functional and ecological equilibrium, besides considerably impacting on the built heritage sites.

Resisting oversimplification and a tendency for homogenisation, partial biophysical and cultural structures remain, nevertheless, on those landscapes. Spatial references can also be found. All of these are useful for understanding the symbiotic relationship between society and landscape.

It is undeniable that today two extreme situations coexist regarding landscape. On the one side, some landscapes have preserved their cultural heritage and spatial balance. On the other, some are characterised by severe unbalances and environmental dysfunctions resultant from a process of transformation, which has been blind to the richness and singularity of our heritage. When considering the continuous transformations of the landscape, and the continuous social and economical changes, important questions come to mind.

How can we adequately respond to the new environmental and spatial problems resulting from the current process of territorial transformation without ignoring the expectations and needs of contemporary society?

How can we put into practice a planning system that both considers the unavoidable spatial transformations of the territory and the need to preserve long-term invaluable landscapes?

2.1 Analysis and evaluation of the (trans)formation process of the landscape

Aiming to answer the questions presented above, this article proposes to carefully consider core principles, objectives and concepts for the development of new methodologies and intervention strategies in the landscape. To do this, a reading of the current state of the landscape, and of its models and set tendencies, will be taken into account, even if the main purpose behind this may be to correct or oppose these tendencies. Finally, the main agents and processes of landscape transformation will be identified.

Answering the questions above should involve a balanced and up-to-date reading of the landscape based on the one hand on its spatial, traditional and cultural values and on the other on a dynamic visualisation of the contemporary landscape. In this way, the landscape may adapt itself to the current social needs and strategies, besides contemplating the innovative re(drawing) and reinvention of space.

This approach entails considering both the agents and dynamics of landscape transformation and the rigorous reading of the ecological and cultural dimensions of the landscape.

2.1.1 Reading ecology and culture into the landscape

The ecological and cultural readings of the landscape allow for the global understanding of the decisive factors (ecological, social, economical and political) in landscape transformation. Ecology and culture are the two primordial dimensions of landscape formation. By analysing and characterising ecology and culture, one reveals both the forms developed by nature over millions of years and the forms resulting from human intervention, which are then translatable into the cultural and ecological structures of the landscape.
Landscape is understood here not merely as a basis for transformation. It is analysed according to its physical image and historical construction, taking into account the interaction between the natural and cultural components of its morphology. Studying landscape morphology therefore requires the joint study of biophysical features such as geology and geomorphology, relief, hydrograph, soils, vegetation and climate, together with the study of the anthropic elements that inform the landscape construction process such as relief manipulation, allotments, fields, hydraulic structures, human settlements and the network of roads and pathways (fig. 2).

Fig. 2- Serra da Peneda, Portugal (mrc).

The ecological and cultural reading of the landscape frames it as a constructed manifestation of society. Landscape portrays society as planning change consciously and formally, through projects and drawings, but also by empirically (re)building the landscape. Both approaches are coupled in an identifiable landscape architecture, even if centuries have been drawn. Examples of this include the Alhambra in Granada, Versailles in Paris, the roman territorial operations known as centuriatio, the medieval colonisation of the Iberian Peninsula (fig. 3) or more recently in the construction of the terraced vineyard landscape of the Douro region, a world heritage site located in the north of Portugal.

Fig. 3- Mértola, Alentejo, Portugal (mrc).

An integrated analysis of the natural and cultural aspects of landscape draws on the definition of landscape as a construction dependent on collective economical, social and cultural dynamics. In this definition, landscape represents an important heritage and a guaranty of national and European identities.

A society’s culture and identity are constantly mirrored in its landscapes. Because of this, landscapes become an indispensable support for guarantying and developing culture, memory and the historic perseverance of a civilisation (fig. 4).

Fig. 4- Douro, Portugal (mrc).

The global understanding of territorial organisation and planning should be currently drawn from a cultural matrix matching the traditional landscape of each place and the typology of its constitutive elements. The landscape’s constitutive elements are based on natural and cultural values, autochthon and vernacular standards, defined through their ecological and cultural partitioning and organisation.

2.1.2. Evaluation of the agents and dynamics of landscape transformation. The spatial model of landscape ecology

Societies’ development, and changed economic perspectives and dominant values have of late caused alterations to economic activities and to the systems of territorial and resource exploitation, in addition to modifications to the living and working conditions. Based on short-term goals and maximum profit objectives, such changes are responsible for landscape transformation, resulting in the degradation of the landscape’s morphological and functional structures.

The process of landscape transformation is intrinsic to the creation of a new constantly shifting reality characterised by changes operated to the
increasingly scattered urban systems, together with the progressive urbanisation of the rural (fields, orchards, gardens, vineyards) and natural systems (forests, bushes, dunes, marsh zones, water streams) (fig. 5).

Fig. 5- Faro, Algarve, Portugal (mrc).

Increasingly urbanised landscapes, mutating cities and heritage degradation constitute an ever changing complex territory which therefore requires a study of the agents and dynamics of landscape transformation. The circumstances deriving from these changes should be read as opportunities, that is, intervention opportunities requiring planning and the overall understanding of the breaking points, the dynamics and the agents of landscape transformation. Landscape is prospectively analysed and surveyed and in doing so the problems, qualities, predisposition for change and the guidelines for landscape management and organisation are identified. By a diagnosis of the land mosaic, that is a consideration of its structure, running and tendencies for change, the processes which bring about landscape transformation and degradation can be avoided and, in this way, it is possible to prevent the most recent trends and aims of the accelerated changes inflicted upon the landscape.

Landscape ecology, as a model for analysis and territorial intervention, provides a landscape mosaic through which any territory (natural, rural, urban, suburban) can be explained. The group of principles it offers, because based on land use organisation, facilitate the harmonious and long-term progression of nature and society [3].

The spatial model matrix–corridor–patches constitutes a fundamental tool for the planning of land use, as it effectively “controls” the movements, fluxes and changes in the social and natural systems. With the spatial matrix model, landscape ecology clearly contributes to the creation of sustainable landscapes through a large-scale approach to territorial organisation [4] (fig. 6).

Fig. 6- Serra do Marão, Portugal (mrc).

3. Formulating a methodology for landscape intervention

The presently rapid, intense and continuous territorial mutations have increasingly caused severe problems such as fragmentation and the loss of the landscape’s ecological integrity and cultural identity. These problems currently affecting the landscape require new approaches and intervention tactics in order to better respond to the new demands made upon and the new opportunities provided by regional and urban planning.

For a constant mutating landscape such as the present one, finding planning systems capable of addressing landscape intervention becomes a challenge. To respond to this challenge, innovative intervention methodologies must be sought in order to guide these inescapable changes. Such methodologies must balance the desired preservation of cultural and natural values which confer singularity and identity upon landscape with the multiple changes affecting its constitutive structural elements.

It will be essential to use a planning system which will absorb the unavoidable spatial alterations while working on the assumption of preserving ecology and heritage. A planning system which will strive for environmental and heritage sustainability by recognising the value of the main landscape structures, side by side with acknowledging the spatial relationships established between the structural elements of the landscape mosaic.

It is because landscape amounts to an irreplaceable heritage and a guarantee for collective identity that preserving it must constitute a primordial objective. In this way, changes to landscape must be controlled by ecological reasoning which covers securing environmental quality in addition to the socioeconomic roles of ecosystems. Furthermore,
spatial and formal configuration must be considered for the primordial role played in the definition of the natural and cultural memories of a place (fig. 7).

Fig. 7: Evoramonte, Alentejo, Portugal (mrc).

An ecological and cultural reading of the landscape becomes essential for achieving the types of spatial development analysis useful to the planning process. This approach will guide the drawing of new objectives framing the preservation and transformation of the landscape, facilitating concerted and time-effective interventions which recover the landscape as heritage by integrating this concept of landscape in the planning process.

The planning process will pursue a global understanding of the landscape. It will bring to reality the theory of the ‘cultural ecological continuous’, encapsulating it in a highly dynamic and complex landscape mosaic which, besides incorporating the transformational processes potentially affecting it, is also able to restore its dynamic ecological equilibrium.

Through a deep understanding of the land mosaic, the intervention methodology used will allow for the distinction between the ‘compulsory’ natural and cultural traits and values in the landscape, and the expendable supplementary traits which enable a vast number of interpretations and uses of the landscape [5].

This methodology makes possible an understanding of the contemporary landscape and offers the opportunity for adapting the landscape to the needs and strategies of present-day society. It does so by clearly and strategically indicating the natural or anthropic structures, spaces and elements to be preserved, and the ones which conversely can be exploited and used in different ways by the community.

The aim is to find a balanced attitude for integrating and harmoniously articulating distinct and contrasting spaces, highlighting their identity and authenticity and contradicting the hybridisation of its characteristics. The landscapes that are more affected by transformation processes unfamiliar to their richness and singularity would in addition be identified.

By establishing a landscape mosaic in order to spatially and functionally organise the territory, the rural and the natural spaces are considered integral to the culturally inherited heritage sites. In the structural overview of the landscape, the rural and natural spaces are viewed as inseparable from the urban areas. They are no longer liable to be considered in isolation as long as the objective for the preservation of the ecological cultural matrix of landscape prevails.

Landscape becomes an essential resource for local and regional development through the vocational characterisation of its different structures and components in accordance with a sustainability agenda. This approach balances the economic and ecological interests required by the up-to-date needs of society (produce, invent, enjoy, survive) and the respect for the heritage and identity of the landscape. Its alternative transformation is based on the landscape itself and synthesised in accordance with a sustainable development [6].

4 Conclusion

For most of human’s history, the use and exploitation of resources originated beautiful, balanced and productive landscapes. This historic process of landscape construction contributed to the formation of local cultures, increased quality of life, and the affirmation of peoples’ identities, encapsulating finally a fundamental part of national and European heritage.

During the last few decades, the current process of territorial transformation and extraordinary technological development has caused severe environmental and spatial problems visible in fragmented, uncharacteristic and degraded landscapes.

Despite these increased and profound changes inflicted on the landscape by human action, neither its traditional forms of organisation nor the heritage values credited with its identity and character have completely disappeared.

We have today two very different situations. There are a number of landscapes affected by a complex group of actions which ignore the richness and singularity of what we have inherited. On the other hand, there are still landscapes which have maintained their cultural inheritance and spatial equilibrium. Because of these two realities an ecological and cultural reading of the landscape
becomes essential, applied together with an evaluation of its changing dynamics.

The ecological and cultural readings provide an understanding of the logics behind spatial development which may prove useful to the planning process, guiding the establishment of new objectives for both the preservation and transformation of the landscape (Fig. 8). This planning model should base itself in the development of innovative methodologies and intervention strategies. In this way it will be capable of absorbing the unavoidable spatial alterations by conciliating the continuity and appraisal of the natural and anthropic structures which confer authenticity and character to the landscape together with the dynamics of change at the organisational level of the land mosaic.

![Fig. 8- Castro Marim, Reserva Natural do Sapal, Algarve, Portugal (mrc).](image)

The conception of a methodology for landscape intervention as defined above seeks to achieve spatial management, functional organisation and the articulation of different landscape systems (urban, rural, farming, hydraulic, ecologic and travelling). It incorporates concerns about the preservation and transformation of the heritage and natural sites, simultaneously trying to respond to social needs while attempting to create ecologically cohesive and balanced agglomerates.

References: