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# Mapping atmosphere

## *Approaches to the specificity of landscape cartography*

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**Abstract.** *This paper explores embodied experience as a vehicle for the enrichment of the cartographical interpretation of the landscape, through the concept of atmosphere. This paper is structured in two parts: The first hosts a proposal for a methodological approach towards making atmosphere accessible to cartography and thus to parameterisation and geo-localisation. In the second part of the paper, this approach is exemplified through a series of mapping exercises elaborated for a case study situated in Catalonia, Spain. The try-outs included in this paper illustrate the activation of alternative approaches to scale in landscape analysis, through the incorporation of atmosphere as a structural filter of the cartography.*

**Keywords:** *atmosphere, landscape analysis, mappings, scale*

The intrinsic duality of embodied experience as a phenomenon, oscillating constantly in-between the physical/biological dimensions of space and body, activates enriching thoughts on the variety, the variability and the complexity of both agents that integrate this equation, being a subject of constant interest in the discipline of landscape architecture. Nonetheless, a considerable gap exists as far as the landscape analysis of the embodied is concerned in the **scale of the territory**<sup>1</sup>: Embodied experience, along with other “intangible values”, are considered as highly “subjective”, impossible to geo-locate or to parameterise and consequently unapproachable through cartography, the tool by excellence of landscape analysis. There is no culture, a shared one at least, of approaching these specificities of the landscape at this scale and through cartography. Why should we anyhow submit embodied experience to the laws of two-dimensional representation and to this scale of work? The working hypothesis is that the introduction of concepts that “exceed” the tangible and traditionally “parameterised” variables upon which landscape analysis has been traditionally based provide access to alternative

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*1. We mainly refer to the contemporary “official” landscape analysis cartography, as defined after the 2000’s European Landscape Convention where landscape has been defined as “an area as perceived by people, whose character is the result of the action and interaction of natural and/or human factors” (Council of Europe 2000). At least in the territory of Catalonia and in the landscape catalogues developed following the Landscape Convention, the analysis of the landscape has been centered in the identification of the character of the landscape as an identifiable structure rather to the acknowledged as significant but almost impossible to map, intangible values of the landscape.*

narratives of the specificities of the landscape. What is more, considering that **landscape, as a construal, cannot be detached from the sense of its embodied experience**, the arguments developed in this article trace the possibility of an approach to **cartography specific to landscape analysis**.

### *Atmosphere as a filter*

The subject is certainly of an immense complexity; nonetheless, this article emphasises in a partial dimension of the embodied experience of the landscape, through the concept of **atmosphere**. We refer to atmosphere through one of its more mediated meanings, pointing to a resonance between the properties of environment and patterns of feeling or emotion. Atmosphere reflects specific levels of the intelligibility of the environment **rarely treated in landscape theory and practice**: it positions the body **within a field of sense and experience prior to the retrieval of intellectually sustained interpretations**.

More specifically, our objective is to enhance the transfer of the theorisation of atmosphere into the professional practice and discourse of landscape analysis through the agency of mapping, **in a scale of work that has systemically neglected the embodied experience as an operative variable**. The potential methodological consequences activated by this transfer are multiple (Spanou 2014). Among the most significant, we **highlight the possibilities of restructuring the sense of scale in the cartography of the landscape**.

### *A working definition*

An important body of knowledge has been collectively constructed regarding the definition of atmosphere (Böhme 1993, among others). Nonetheless, these definitions cannot provide a clear point of departure for the cartography of atmosphere in the scale of the territory, since their objective is neither this scale of work nor cartography. What is more, this research aims fundamentally at mapping the properties of the landscape that activate atmosphere and not at representing its effects to our emotional sensibility. To do so, we turn to references coming mainly from the ecological or/and situated perspective of cognition in search for inter-subjective patterns of perception that define at least some of the aspects of the intelligibility of the environment that atmosphere brings together. The selected help to define atmosphere as spatially situated and therefore activate the process of its cartography:

**At a first level, we relate atmosphere** to the orientation, the attribution of importance that underlies the embodied perception of environment. At this level, atmosphere finds its resonance with the theory of **affordances as possibilities of action**, as defined by J.J. Gibson (Gibson 1989) and further explored by the situated perspective on cognition.

At another level, the work of Lakoff and Johnson (Lakoff, Johnson, 1999) and the definition of image schemas as non-propositional patterns embodied at a pre-conceptual level, influence the interpretation of atmosphere also in terms of **spatial patterns of containment** that metaphorically extend and project the embodied experience towards the configuration of abstract/symbolic meaning. Accordingly, the properties of the landscape can be potentially interpreted according to the precise manner through which they support our presence and "contain" our body.

In a parallel level, we relate the perception of atmosphere to the quality of the patterns of the information that the landscape conveys, in terms of their **complexity** as defined by Kaplan (Kaplan 1979, Kaplan&Kaplan 1989). Following Kaplan, **complexity** is a basic component of "involvement"<sup>2</sup>, a basic purpose of the perceptual process.

**Affordances, spatial patterns of containment and complexity in the landscape are thus defined as activators of atmosphere.** This three-fold definition enables the cartographical identification of the spatial **patterns** that potentially function as activators of atmospheres and as such enhance a specific approach to the cartographic analysis from the perspective of the landscape.

### *The case study*

The preceding argument takes as point of departure the landscape unit of Secano de Belianes i de Ondara, as delimited in the landscape catalogue of the region of Lerida, Catalonia (Nogué i Font J; Sala i Martí P; Departament de Política Territorial i Obres Públiques (eds.) 2010). It is a plain agricultural landscape, essentially ordinary, whose particular "beauty" is far distant from archetypal prototypes linking atmosphere to sublime landscapes. What makes this landscape different from any other plain rainfed mediterranean landscape? As it will be argued, the specificity of this landscape can be, at least partially, identified when cartography interprets its properties through the embodied experience.



Figure 1. Situation of the landscape unit and representative images

The length of this text only permits a short review of the manner that the "activators" of atmosphere find their resonance with the morphological properties of the landscape. In any case, it is worth stressing that this approach<sup>3</sup> is not based on the invention of new variables but on the reflection on the methodological effects derived by mapping common variables in a different manner, as the mappings of the perceived complexity exemplify (Fig.2). This layer of perception is initially

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2. "...In a sense, the affordances for involvement entail the raw materials for thinking about and coming to understand. The issue here is having what is required to be challenged, to have to call on one's capacities in order to process the information successfully". (Kaplan 1979:243)

3. As far as the databases used for the elaboration of the cartography is concerned, apart from the 5.000 scale topographic layer, we would like to highlight the importance of the layer of the habitats (50.000 scale). Although the term habitat refers mainly to an ecological function, it simultaneously offers accurate information about the quality of the morphological properties of the landscape. What is more, the linkage between atmospheric qualities derived by the morphological configuration of the habitats and the ecological perspective is of a doubtless methodological interest. As far as the software applied, the cartographic essays assume GIS for reinforcing the objective for the configuration of a methodological process that might be shared through a commonly used cartography tool in the field of landscape architecture.

interpreted through the elements that configure the complex geometry of this landscape, as for example the parcelary and the irrigation channels, extracted from the 5,000 topographic database and the agricultural margins, the geometrical configuration of the agricultural crops and the drystone walls, mapped manually based on the observation of the ortophoto. The innovation of the approach lies in the interpretation of these elements according their contribution in the sense of the embodied experience in terms of their density, orientation and rhythm.



Figure 2: The perceived geometry

These same elements are further reinterpreted in terms of their physical and visual accessibility and the manner that they involve our body, an analysis that offers an approach to the spatial patterns of containment (Fig.3).

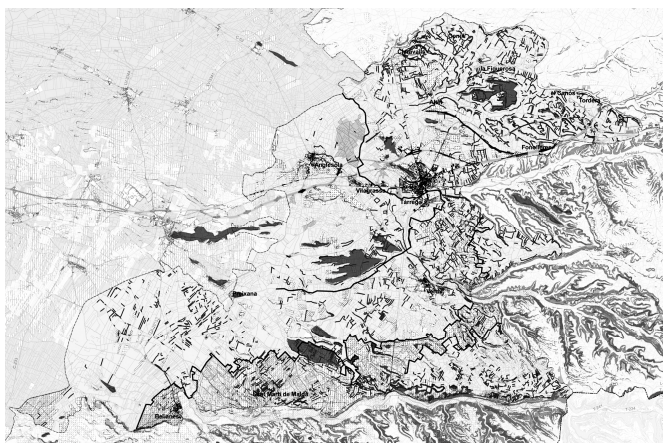


Figure 3: Spatial patterns of containment

This layer classifies this agricultural landscape in terms of the affordances of the visual and physical accessibility permitted by the morphological properties of the habitats. The metaphor of "room" is applied as the main category of the spatial patterns of "containment" of this landscape, emphasising its three-dimensional character and its possible "domestic" use. The limits of these "rooms", mainly vegetated margins, lines of trees and drystone walls are accordingly processed in terms of their opaqueness or transparency, functioning as the principal three-dimensional lines of activation of the gaze in this flat landscape.

The forms of the topography on the other hand offer an additional approach to the qualification of these "activators" of the perception (Fig.4). The analysis reveals that the "plain" of this particular landscape oscillates from 0.5 to 1.5% of the slope, marked through a series of slight lineal topographic accentuations. Most probably, these accentuations would have been ignored from a common approach to topographic analysis that generically includes the plain in a 0-5% of slope. Nonetheless, these topographic elements, although minimum, provoke significant changes in the prevailing geometrical configuration of the agricultural pattern of this landscape while having a direct effect in the local scale of perception, as the visibility studies reveal.

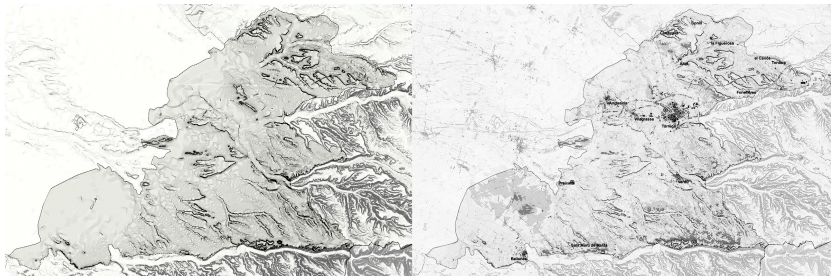


Figure 4: The "limits" of the topography and visibility study illustrating their effects to perception

### *Questions of scale*

As may be deduced from the previous descriptions, a significant effort has been dedicated in mapping elements not included in the available "official" cartographical databases, either because they are considered of an extremely detailed analysis for this scale of work or of a non-distinguished value of the territory. Nevertheless, the approach to the spatial experience of an agricultural landscape cannot be conceived without the incorporation of elements that work as insignia of the specificity of the experience of the plain. By crossing data from databases of disparate scales, mapping data manually, these mappings seem to move beyond the typical cartographical constraints of precision in the scale of the territory towards the scale of the embodied experience of the landscape.

Could we thus think of these cartographical exercises as mappings with multiple, overlapping scales of interpretation, intrinsic and necessary for a cartography specific to the analysis of the landscape? By crossing two traditionally detached scales, the cartographic representation slides towards a form of dense notation, in which, following Goodman (1976), the sense expressed lies on both the morphologi-

cal configuration of the discreet elements and the relations of these elements in space. The cartography still functions as an analogy of geographical space. Nonetheless, we might think of these cartographic interpretations as exemplifications that trace associations between domains of two traditionally detached meanings: the atmosphere and the morphological properties of the environment that activate it. In other words, alternative narratives through which we potentially gain access to a spatial sense specific to the landscape.

## References

- Böhme G. (1993), *Atmosphere as the Fundamental Concept of a New Aesthetics*, in *Thesis Eleven*, 1993: 36: 113
- Gibson J. J. (1986), *The Ecological Approach to Visual Perception*, Lawrence Erlbaum Associates, London
- Goodman N. (1976), *Languages of art*, Hackett Publishing Company, Cambridge
- Kaplan R.; Kaplan S. (1989), *The experience of nature: A psychological perspective*, Cambridge University Press, New York
- Kaplan S. (1979), *Perception and Landscape: Conceptions and Misconceptions*, *National Conference on Applied Techniques for Analysis and Management of the Visual Resource*, Incline Village, Nevada, April 23-25, 1979
- Lakoff G.; Johnson M. (1999), *Philosophy in the flesh*, Basic Books, New York
- Nogué i Font J; Sala i Martí P; Departament de Política Territorial i Obres Públiques (eds.) (2010). *Catàleg de paisatge. Les Terres de Lleida*. Barcelona : Generalitat de Catalunya. Departament de Política Territorial i Obres Públiques. Available at: [http://www.catpaisatge.net/cat/documentacio\\_coedi\\_1.php](http://www.catpaisatge.net/cat/documentacio_coedi_1.php)
- Spanou I, Peponis J. (2003), *Architectural atmosphere and the spatially situated body*, Fourth International Space Syntax Symposium, University College London (ed Julienne Hanson), London UK, 60.1-60.14
- Spanou I. (2014), *Mapping atmosphere: rehearsals on rural mediterranean landscapes*. (Universitat Politècnica de Catalunya. Available at: <http://hdl.handle.net/10803/279252>)

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