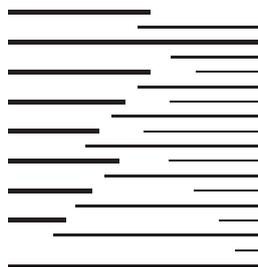


# Habitar en Territorios de Terrazas y Bancales

Conclusiones del IV Congreso Mundial ITLA 2019 y

DECLARACIÓN DE LA GOMERA

# RE-ENCANTAR BANCALES



Este libro contiene las Actas del IV Congreso Mundial ITLA 2019 celebrado en Las Palmas de Gran Canaria y La Gomera además de las “Investigaciones de las exploraciones insulares de las islas-archipiélagos de La Macaronesia” y la “DECLARACION DE LA GOMERA”

Nada es mas angustioso ni nada mas delicado y difícil que iniciar un nuevo “Reto”, una nueva singladura. Siempre son dudosas e inciertas las primeras trazas y signos sobre el papel en blanco o las primeras notas escritas sobre un pentagrama, pendientes siempre en ambos casos de sus ensamblajes inciertos y de la capacidad de gestionar y realizar lo imaginado.

Alberto Delgado conocía esta tesitura. Él, desde la Presidencia de la Fundación CajaCanarias, visualizó e impulsó la necesidad de re-considerar y trabajar sobre una nueva dimensión del Paisaje en Canarias desde una sensibilidad intensa, afinada y aguda, logrando cotas de excelencia contrastada. Una de estas apuestas se impregnó en los eventos y trabajos sobre el Territorio de Terrazas y Bancales en Canarias que sirvieron de plataforma para el Congreso Mundial ITLA 2019 titulado RE\_ENCANTAR BANCALES.

En este libro-documento narra articuladamente todo el proceso de los tres años de su duración y por ello quisimos interrumpir el proceso final de su edición para incorporar estas líneas en su Homenaje y sincero agradecimiento.

A lo largo de este transito se han revelado y desvelado situaciones paradigmáticas de estos territorios y de las personas que lo habitan, desentrañando entre ambos, una simbiosis de extraordinaria actualidad en sus contradicciones y críticas a su existencia. Transitar por estos territorios de Bancales exige además un sentido de respeto a las generaciones que lo construyeron y habitaron en su devenir histórico y temporal. Pero también un compromiso alejado de la nostalgia de los bancales y de sus penurias en el recuerdo, impregnando en su razón de ser una decidida e imprescindible apuesta Futura como lo evidenciaron Alberto, Enrico y Mourik, compañeros de viaje de Territorios de Bancales del Mundo que estarán presentes siempre en este “Reto”.



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***“Faraway, So Close!” The landscapital proof-of-concept applied to the terraced landscapes of the Canary Islands and of the Alps.***

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**Abstract**

The landscape is the resultant perception of the tireless choices of people acting on a territory. In the case of steeply sloping vineyards, the landscape continuously evolves adapting itself to changes of the physical environment, the climate, the culture and the technological innovation. As a primary sector, the wine production must be able to guarantee the income of the winemakers and the vine growers, currently attending global economic and climatic forcings. In this sense, the terraced vineyard landscapes, under great pressure, are experiencing a phase of extreme choices, balanced between conservation and destruction. We will therefore use the “landscapital” tool to identify the formal and plastic variables that define the viticultural landscapes of Vallehermoso (Canary Islands, ES) and Val di Cembra (in the Alps, IT) together with the agronomic, organizational, spatial, architectural, historical and social variables. If analyzed by mean of the landscapital these distant - both spatially, culturally and topologically - productive landscapes, are indeed close if other extremely relevant aspects are taken into account. Our goal is to interpret the effect and the extent of changes in the total landscape capital, identifying the causes and the possible consequences of the current changes that is how the landscape will be perceived by those who create it, by those who exploit it and by those who value it. We will present here how the terraces represent one of the elements that characterize the wine-growing landscape and, as a preliminary result of the ongoing research, we will show how the landscapital approach, with its both a theoretical and formal analysis system, helps to recognize the elements - and their mutual interaction and how this interaction allows the emergence of the terraced vineyard landscape, of which the terraces are one of the compositional elements.

**Introduction**

The landscape is the resultant perception, for both locals and visiting people, of the tireless actions, variable in time and space, taken by those who act on a territory and determined by the cultural, economic, social, environmental context...

In the case of viticulture and wine, the landscape influences the perception of the quality of a wine (Tempesta, 2010) and consequently a part of the value of the wine can be linked to the landscape. The union between wine and landscape can favorably support the territorial identity oriented to the tourist and cultural activity as for the case if the innumerable wine routes. Both Val di Cembra (IT) and Vallehermoso (SP) are well known productive regions for grapes and wines and the promotion of these two territories benefit from the combination of the quality of the wines and of the particular landscape (Figure 1). As reported by Gil & Sanchez (1997), the origin of the wine is the most influential factor in wine choosing: linking the production origin with an unrepeatable landscape could boost even more the perceived value of a product.

Although the examples of valorization of the landscape of the vine-growing areas and wines, we believe that a novel tool should be developed and proposed to the communities that wants to incorporate a value linked to the landscape: this tool should be sufficiently abstracted from the individual features of the landscape and suitable for any territorial product.

A first proposal of the landscapital has been defined by Zottele & Delay (2016, 2017) and then applied by Zottele et al. (2018). The tool was based on two signifiers of a landscape: the intrinsic landscapital related to how a landscape is perceived in terms of values by the autochthonous actors that live and shape a territory (we will henceforth call them “locals”), and the extrinsic landscapital related on how a landscape is perceived, in terms of values, by the allochthonous actors that enjoy a landscape (we will call them “vistings”).

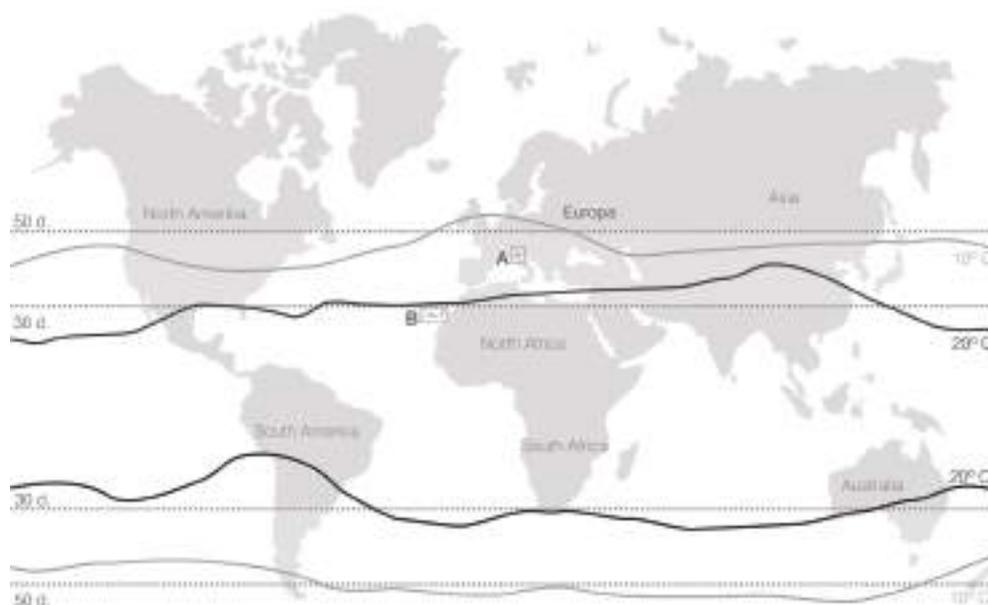


Figure 1. The two wine production regions both located in Europe. Val di Cembra (A) is located in the middle of the Alps and fully inside the temperate climate region (between the 10°C and 20 °C isotherms, solid lines), and the global temperate latitudes (30d and 50d in both hemispheres, dotted lines). In this region are found the vast majority of the world's wine producing regions (Fraga et al., 2016). It is noticeable that Vallehermoso (B), in the Canary Island is outside this expected global grape production strip and it benefits of unexpected and unique climatological, environmental and ampelographic characteristics.

We think that the moment in which both intrinsic and extrinsic capital can be coherently exploited triggers a multiplicity of positive effects both at an economic level and at a social and cultural level, such as a greater identity and awareness of the territory and a greater cultural attachment that can influence the participation of the people in the territorial policies. The landscapital becomes an operative tool to recognize these positive effects because, as already mentioned, the landscape will be interpreted as a phenomenon that emerges from the changing relationship between the populations and the territory and not only focusing on the identification of particular elements of the territory that should be protected.

The landscapital is anyway always based on the identification of those symbols of the landscape, the landmarks, or iconema (as in Fedato et al., 2017) which are important both for the locals and for the visitings. Now, it is important to underline that a landmark - for example a wall that sustains a terrace in the vineyards - can be perceived intrinsically both as a value linked to culture and tradition (identity) and as a dis-value as it increases the working hours per unit of production in a terrifying way. In parallel, the same landmark the intrinsic disvalue could be perceived by the visitings as a value (an heroic viticulture) or as a disvalue (in the case of abandoned terraces or their incoherent distributions). Moreover: the same landmark can be perceived differently at different scales because it plays different roles (a sign, a border, a working tool...). Lastly, these two landscapes are emerging phenomena in different physical, cultural and social contexts: the research objective is to understand how the landmark can act similarly in both the territories as formal support and protection for the viticulture ("so close"), but with adhibition and cultural values (one of them is the agricultural practice) adapted to insular and mountainous viticulture ("so far away"). These similarities and differences can construct a perceived value of the landscape (Figure 2).

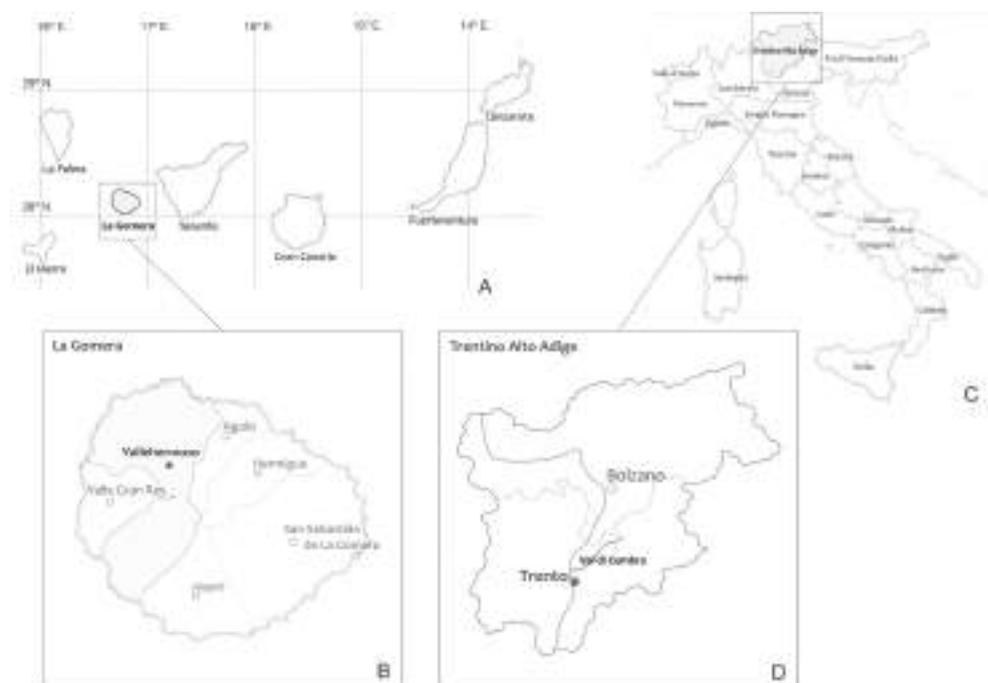


Figure 2. Localization of the two study regions and physical contexts. Vallehermoso is located in La Gomera, Canary Islands (A) in the middle of the Atlantic Ocean. It is a municipality that extends from South to North (B). Val di Cembra, in the Alpine part of Italy (C) and extends from West to East (D).

So, the landscapital should take into consideration the quantity and quality of all the different landmarks present in a landscape and how their presence can build a harmonious or disharmonious perception of a territory. In this work the authors will delve into the elements that contribute to the total landscapital, focusing primarily on the terraces and the drywalls, of two vine-growing areas that are profoundly different from each other by location and geographic features, but similar by type of production, to test whether the landscapital tool is sufficiently flexible to constitute similarities and differences.

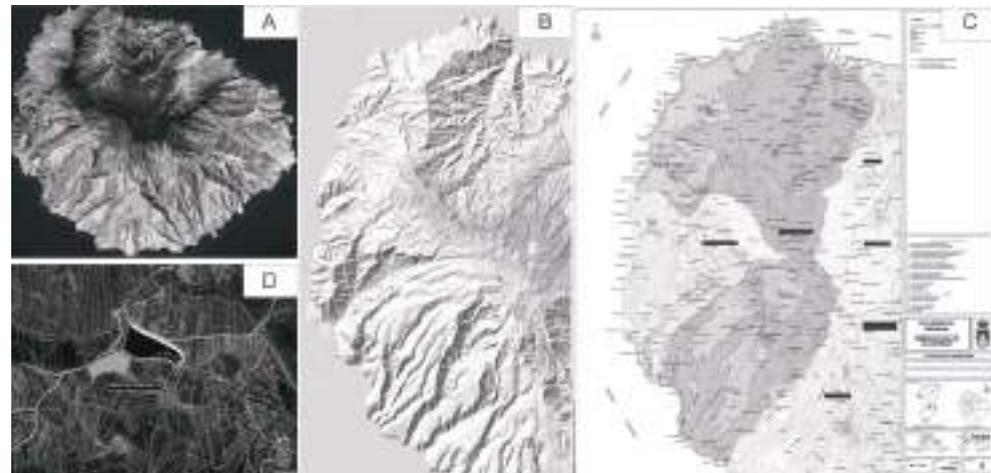
### Materials and methods

Since the landscape definition is linked to perception (Council of Europe, 2000), the landscapital tries to encompass the singular informations (landmarkers) that collectively orient the total value perceived by the locals and the visitors in two contexts that are both faraway (Atlantic/Alpine) and close (both landscapes can be very broadly defined as terraced and viticultural).

For these contexts, and in this preliminary part of the work, the authors will focus on the terraces and on the drywall and how these elements contribute to the formation of the total landscape value basing this approach on one assumption: the origin of the two landscapes is natural, as in the physical sense of the word: the gravity dictates the rules of the human interventions and so the creation of the terraces avails as a support of the human settlements, the agricultural production and the human activities.

The authors will use two approximations to comprehend how the two landscapitals emerge differently from a common physical constraint. The first approximation is formal: three scales of analysis have been used throughout the analyses. The structural scale is related to the dimension of the physical and environmental constraints the human actions can adapt to, while the relational scale is linked to the spatial organization of the human activities (live, work, enjoy...). Lastly, the ergonomic scale measures with the human activity and to their results. At each scale, the same landmark provides us different informations about the perceived extrinsic and intrinsic values and this working method supposes a critical exercise that enriches the understanding of the landscape as a whole (Riesco Chueca et al., 2008). This analysis lays on the interpretation of the cartography (IDECanarias, 2015, Google Maps), consulting the territorial planning documents (ITC & HYDRA 2006a); (ITC & HYDRA 2006b) as it is shown in Figures 3 and 4.

Figure 3. Geographical dataset used to analyze the landscapital of the Vallehermoso municipality across the multiscale approach. The green polygons superimposed to the map of La Gomera Island (A) shows the spatial distribution of the vineyards among the cultivated area. Hillshade (B) has been used to identify watersheds and "barrancos". The General Development Plan (C) shows the spatial rules for the management and the protection of the territory. A detail of the vineyards (D) shows the fragmentation of the viticulture in Vallehermoso.



The second approximation is theoretical: the concept of landscapital is based on the quantification of intrinsic and extrinsic values related to landscape markers as perceived by locals and visitors. In this perceptual process, the process of *artealización* as described by Roger (2007), becomes pivotal: the extrinsic capital is built "in visu" by the scenic representation of the landscape while the intrinsic capital is built "in situ", that is from the process of moulding a territory with technical solutions that respond to needs and with technologies that adapt to the times.

### Results and discussion

The use of the formal approximation, as developed by the authors and applied to the terraces of the Val di Cembra on the Alps and Vallehermoso in the island of La Gomera, allows us not only to describe an agricultural, productive landscape, but to draw deep consideration on the spatial organization of the human activities, how they are linked and how they have shaped a territory. This is possible because we designed the scales linking them to the human activity: in other words we describe the human landscape.

At a structural scale emerges the organization of the landmark: while the Avisio river in Val di Cembra imposes a linear continuity, the mountainous slopes and the "barrancos", the accordant drainage of intermittent streams, impose a fragmentation discontinuity

in Vallehermoso. At this level it is only possible to imagine the terraces as instruments in opposition to the power of the elements and chosen by the locals to favor the steric position of the living spaces, of the working spaces and of the natural spaces. Nature superimposes its rules by influencing the ways of life of the communities present in the territories: the landscape takes on a cultural connotation (Sauer, 1925) and enters the formulation of the landscape capital as potential extrinsic value. At this level the public administration acts with the same power of the nature, setting the rules for the community to manage and protect its territory: in this way the landscape is shaped, modifying the perception firstly for the locals and then for the visitings, thus influencing the total landscapital (Figure 5).

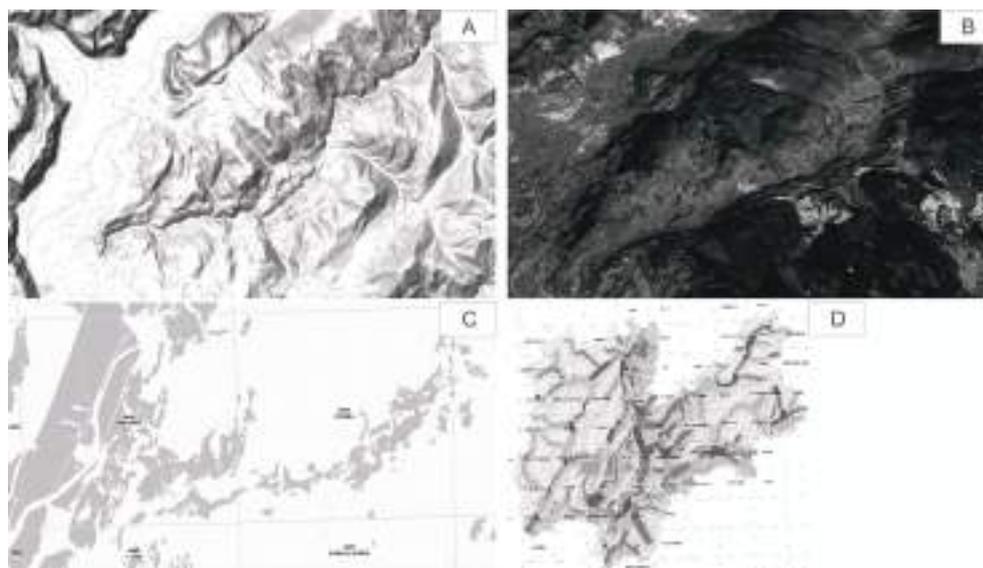


Figure 4. Geographical dataset used to analyze the landscapital of Val di Cembra. The hillshade (A) shows the geomorphological set onto which the human activities coexists (B). The spatial distribution of the vineyards is shown in (C): the green polygons are considered “valuable” while the yellows are defined as “not valuable” by Provincia Autonoma di Trento (PAT, 2018). The “landscape map” (C) has been used in order to consult the legal planning constraints of the territory (PAT 2018).

At the relational scale, the perception of the connection among the human spaces becomes predominant: as explained by Fabienne (2005) the perception of how these spaces are spatially organized becomes fundamental in describing the landscape (Figure 6).

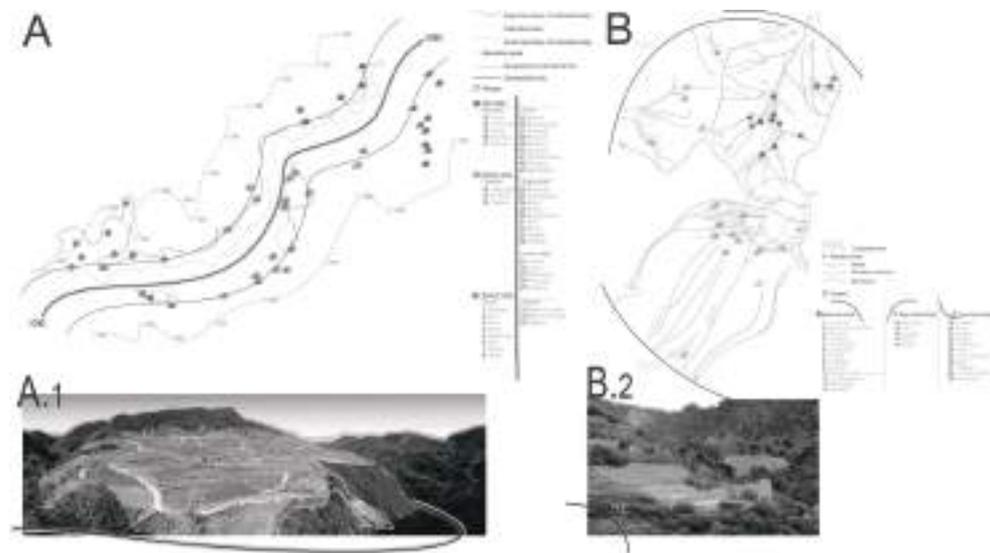
In Val di Cembra the terraced landscape preserves, coherently with what happens at the structural scale, its linear trait: the terraces follow the topographic lines. But, during the vegetative season, most of the dry walls are covered by the vines: what is strongly perceivable here is the planar element that defines a fragmented viticulture.

In Vallehermoso the structure of the landscape, albeit following the topographic lines, appears discontinuous as the organization of the human working spaces with the “escaleras” that becomes powerfully perceptible with the dry walls of the terraces in full view. Using the theoretical approximation, at the relational scale the artealización “in-visu” (the point of view of the artist) meets the artealización “in-situ” (the point of view of those who physically intervene in the landscape) and so the visitings will innately perceive all the intrinsic components of landscapital that the locals have made extrinsics.

At the ergonic scale the terrace becomes the support of the working spaces for the viticulture. The drywall is no more a landmarker, but the materials, the soils and the vine impose themselves for perceptive importance; at the same time they are such detailed elements that their connotation as landmarker should be further investigated (Figure 7). However, being these elements present in the everyday life of the locals, they assume a pure intrinsic values becoming the elements of the cultural and viticultural landscape (as defined by Carbonneau, 2005): this intrinsic value can be easily transferred to the visiting since the value of viticulture is recognized in many cultures of the globe. Moreover, in Val di Cembra it is preserved the coherence between the planar feature of the “pergola” and the surfaces found in the relational scale while the linear feature found in the physical scale reflects itself in the “spalliera”. On the other hand, in Vallehermoso the vine, being a punctual feature, remains a strong intrinsic value, but can hardly be perceived by the visiting so that this extrinsic value should be developed somehow (Figure 7).

So, by using the landscapital concept, we understood how the chain of perceived values (intrinsic and extrinsic) of just one landmarker is preserved or transformed switching from the physical to the relational and to the ergonic scale: the authors identified two mechanisms: by complexity (Kaplan & Kaplan, 1989), and by coherence (Ode & Miller, 2011): the drywall as just unique landmarker give rise to a fragmented, complex landscape in Vallehermoso and a linear, coherent landscape in Val di Cembra, giving to similar landscape two different “landscapital flavours”.

Figure 5. The structural scales shows the physical contextes of both Val di Cembra (A, linear) and Vallehermoso (B, fragmented). The composition and the spatial configuration of the landmarker reflects the physical context into the relational scale (A.1 and B.2) declining the linearity and the fragmentation in the organization of the human and natural spaces.



From this study it emerges that it is simplistic to consider that the terraces are just the response to a physical constraint (preserving the soil from the erosion by gravity): the vine growers pursue a functional utility by the use of materials and technologies, lay down a culture by artisanship and, at the same time, look for the beauty. Moreover, we have seen that, studying the landscape by using the concept of landscapital, it is essential to know the legal rules of planning and management of the territory. In this legal framework, locals legitimately can use the landscapital as a participatory tool to agree on strategies for enhancing its intrinsic and extrinsic components.

Therefore, it results that, to fully understand each landmarker for each scale and their values, a multidisciplinary approach between geography, architecture, economics, sociology and agronomy is strictly mandatory.

### Conclusion

From the work proposed up to now, it is now clear that the landscapital is a sufficiently abstract and extremely flexible conceptual tool that adapts itself to very different landscapes: the declination of the landscapital in the different territories passes through the careful consideration of the extrinsic and intrinsic components of the total landscapital by identifying a set of appropriate landmarkers and understanding how they are perceived by the locals and the visitings.

For example, the terracings, a landmarker present in both Vallehermoso in La Gomera and Val di Cembra, have a comparable intrinsic and extrinsic value for the local population. In fact, it is recognized that this landscape element strongly influences the organization of work in the vineyards increasing the working hours in a terrifying way, but being an element highly recognizable of the territories, the public administrations put in place different “top-down” policies for the protection and enhancement of the traditional terraced viticulture, but with profoundly counterintuitive outcomes that are indeed worthy of in-depth analysis in our future work.

On the other hand, there are differences between Vallehermoso and Val di Cembra in how much the link between the extrinsic component of the landscapital of the natives and the intrinsic component of the landscapital of the visitings has been developed in order to promote a local product. For example the locals in both the study area perceive the impact of the dry stone wall landmarker to promote their wines and so try to convey this particular element maximizing the perceptual experience of such landmarker toward the visitings that perceive intrinsically the value of an “heroic viticulture” (Zottele & Delay, 2017). But while in La Gomera there is a percouse which manifests the extrinsic landscapital to the visitor, in many areas of the Val di Cembra the use of this component is still potential. Thus, the two total landscapitals are profoundly different.

However, the analysis underlines the need to extend the landscapital calculation not only on the principal landmark - the terraces and the dry walls -, but on the all significatives ones: the formal and the theoretical scales helps not only to identify the landmarkers, but to understand why they emerged and why they have been organized, and sometime stratified, in the space to cope with the struggles of the everyday human activities. So, despite the same viticultural context and some physical and environmental similarities, the landscapital concept can include the cultural, social and economic differences between Vallehermoso and Val di Cembra: the landscape emerge similarly in the two distant regions, but the two total landscapitals are different.

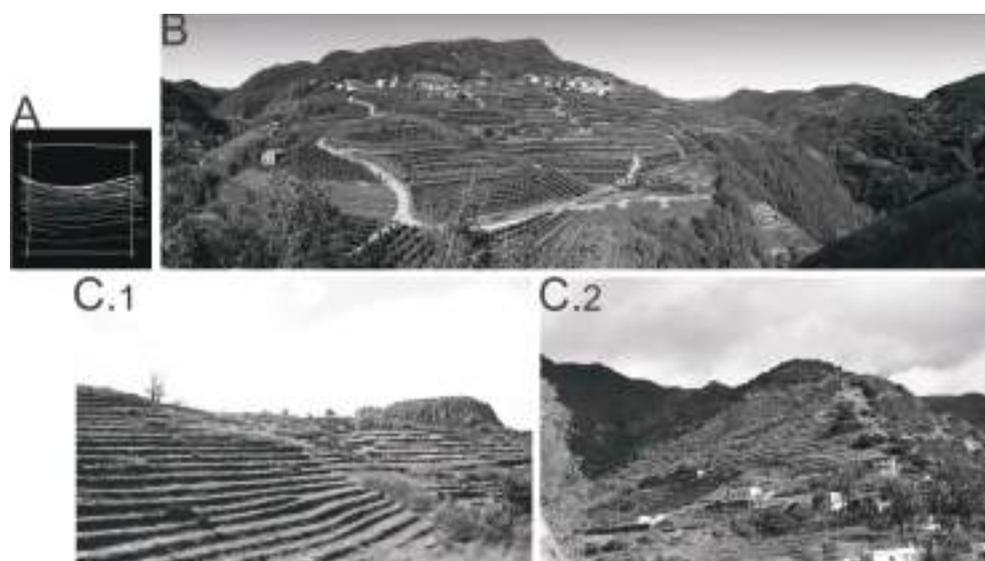


Figure 6. The terraced landscapes at the relational scale with the theoretical approximation (A), as in Fabienne (2005). Both in Val di Cembra (B) and Vallehermoso (C1, C2) the drywall play the same role, with different landscapital values, and they are classifiable in the same way as “terrasse de vigne” or “vigne escalier”.

So and as already said, to effectively use the approach here presented, it is crucial to understand that the scales that we developed are decoupled to the geographical scale, but instead the scale of human activities must be taken into consideration because the locals, in achieving their goals (acting as a single entity or as a community) adapt a territory to both the physical and environmental constraints and to the technological, social, cultural constraints. So, with the decades, while the landscape emerges from the human choice, an intrinsic value of one’s own landscape settles both in the individual and in the community. For this reason the vine grower becomes the fundamental architect of the in-situ “artealización” defining the formal aspects of the landmarks thus affecting the the intrinsic and extrinsic values of the landscape.

The future intention of the authors is to extend the analysis to the other landmarks that emerge from the landscape, so building a more comprehensive value of the total landscapital.

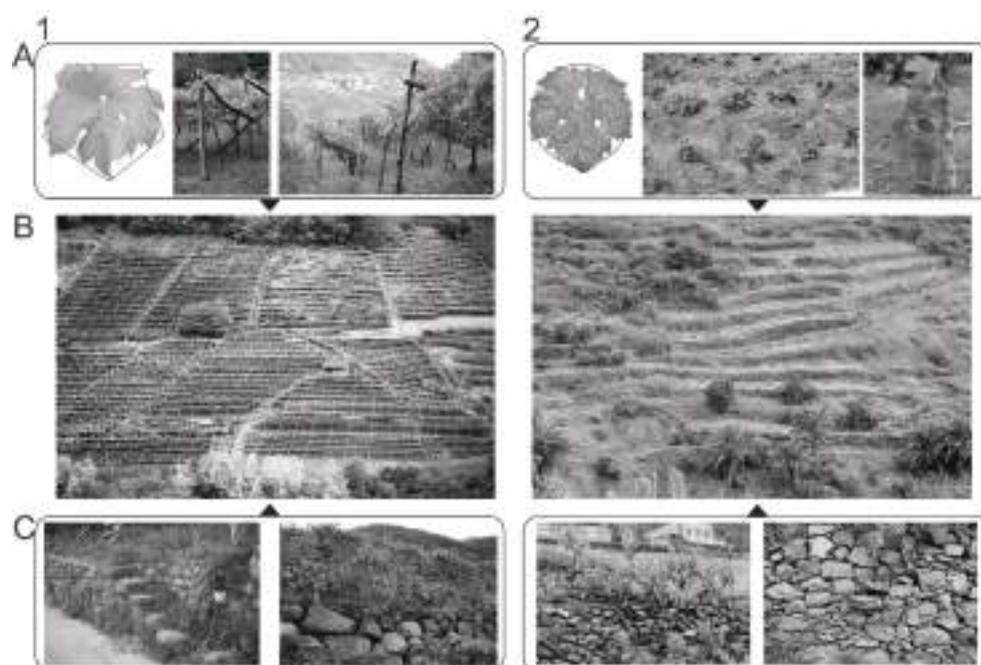


Figure 7. The terraced landscape at its ergonomic scale. Column 1 shows Val di Cembra while column 2 shows Vallehermoso. Row A shows the vine and the traditional agrarian practice of the primary elements that will build the landscape at that will influence the landscapital at the relational scale. We find the Müller-Thurgau (A1) versus Forastera Blanca (A2) as ampelographic landmarks and the “pergola trentina” (A1) that follows an architecture of the vine “Toit inclinè discontinu (F05)44” vs the “rastrera” that follows the Nenuphar (C31)14 as found in the classification of Carbonneau (2005), pag. 37 and 38”. In C we see how the drywall landmarks show the same building process by using different materials (porfido vs. basalt). The combined joint reflects itself at the relational scale: in Val di Cembra the drywall are hidden by the vegetation(B1) while in Valhermoso are fully visible (B2).

Furthermore, the potential of the landscapital concept is not limited to analysis of the de facto: it can be used as a tool: a) to analyze how the local communities unceasingly model the landscape finding a dynamic equilibrium between different social, economic, cultural and environmental forcing; b) to evaluate how this process of adaptation influences and modifies the perceived extrinsic and intrinsic components of the landscapital both for the native and the visiting people and how the value of the products of a territory are affected; and c) to become aware of strategies to make the “intrinsic capitals” more “extrinsic”.

Summarizing, we proved that the landscapital has a strong potential for both the analysis and the understanding of the perceived value of a landscape, but it works only when we consider the landscape as an emerging phenomenon that springs from the choices and the actions that the community performs on its territory and the perception of the landscape for the visitings takes place at different perceptive scales that are not geographic, but human.

Therefore the landscapital, incorporating the understanding of the processes of choice, could be also used by the local communities as a participatory tool to find strategies for both the protection of the natural environment and to enhance the socioeconomic well-being preserving the continuity of the productive activities and adapting them to the new challenges of time, but at the same time respecting the cultural roots and the identity.

Lastly, the authors are convinced that a landscape analysis by using the landscapital could be successfully adapted to other productive landscapes but this will be the focus of our future work.

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