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# CULTURAL LANDSCAPE AND INFRASTRUCTURE DEVELOPMENT: WAYS OF COEXISTENCE

#### **AUTHORS**

#### Fernández Raga, Sagrario

LABPAP Reasearch Group -Architectural, Heritage and Cultural Landscape-. School of Architecture. University of Valladolid, Spain

#### Rodríguez Fernández, Carlos

LABPAP Reasearch Group -Architectural, Heritage and Cultural Landscape-. School of Architecture. University of Valladolid, Spain

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#### **ABSTRACT**

The complex nature of the cultural landscape has been discovered as its most valuable source.

It generates large synergistic forces around, giving rise to new forms of landscape with many added values. The social reluctance to incorporate new transport systems into cultural landscapes has led to the acceptance of those projects that are sensitive to the environment. In addition to giving a service, these examples enable an educational and an aesthetic approach of man to landscape.

There are coexisting landscapes, which have managed to evolve admitting the incorporation of new elements without suffering any damage, retaining each one their own identity. It can be summarized into three different ways to carry out this situation from the most controlled aptitudes with landscape, to more interventionists ones.

The first one can be illustrated with the subtle introduction of Millau viaduct over the Tarn River, where infrastructure is integrated seamlessly into a landscape of established values.

Sometimes, infrastructure can be at the service of the cultural landscape on a clearly way, as we can see in the design for the access to Mont Saint Michel in France by Dietmar Feichtinger Architectes. It is established an active dialogue between the bridge and the cultural landscape, leading visitors across an almost initiatory path. Other times, the landscape has to evolve to adapt to a new situation developing new ways of understanding their own existence. A representative sample is Bernard Lassus project for Autoroute-837 as it passes through Crazannes, in the south of France. At the end, it could be confirmed the possibility to adapt these models of intervention to nearest cases. LABPAP footbridge for Camino de Santiago in Puente Villarente, Spain, is a good

example in which the pedestrian is offered to have a ride with a high cultural landscape content.

#### NEW LINEAL INFRASTRUCTURE IN CULTURAL LANDSCAPE

Human process of adaptation to the presence of new lineal infrastructure is a very complex process. On the one hand, there is a clear social reluctance to territory transformations at all those places that have some sort of landscape value. On the other hand, it is indisputable that human fascination by progress of industrialization advances exists, and it goes back far back in time. Landscape painting history demonstrates it, as we can find images of various infrastructures since ancient times, above all we find it in the romantic painters of s. XIX as in the case of Carl Blechen or largely in William Turner work. It can be said that these great transformations of man have artistic and aesthetic interest.

There is no landscape without the action of man, as the French writer Alain Roger said, "there is no natural landscape" (Roger, 2007) so it requires of human appreciation and artistic mediation. In this respect, France is an excellent example of state that has protected and made possible the conjunction between landscape and development of road infrastructure. In 1998, the Ministère des Transports et du Tourisme, established a group of diverse professionals: landscape architects, sociologists, philosophers, historians and politicians, led since 1990 by the landscaper Bernard Lassus, Coordinator of the College of Experts Landscape and Environment. The common intention of all interventions was to optimize routes and integrate new pathways in the territory healing the "wounds caused in the landscape" (Roger, 1994: 34). Thus, the impact of new infrastructure turns into project material you can use to get new benefits.

Thanks to early inquisitiveness and the extensive subsequent development, it can be said that France is a country leader in landscape studies integration of new infrastructure in the territory. In order to analyze their strategies, they have been chosen three examples of French landscape architectural projects that facilitate the integration of new infrastructures in cultural landscapes in three very different levels of impact, from the most controlled aptitudes with landscape to more interventionists ones.

Each example chosen shares three aspects that helps dealing with cultural landscape: a correct choice of their location, providing the most integrate way to create a new line in the territory; a studied promenade given to the visitant in order to understand the landscape around; and finally, they all bring a discovery moment to make time and heritage present into the intervention.

# SLIGHT INTERVENTION FOR THE BIGGER INFRASTRUCTURE. MILLAU VIADUCT.

Despite the wide range, it is commendable the subtlety exercise developed by Foster and Partners and the structural engineer Michel Virlogeux when designing the Millau Viaduct on the A75 motorway in France.

The most important and successful decision taken was to define the exact altitude and location to cross the valley, prioritizing the integration of the infrastructure in the valuable landscape against other concerns like economy or constructive simplicity. The bridge is incorporated like a beautiful background of the River Tarn valley, providing a solution that allows cultural landscape not to be radically modified to incorporate a new infrastructure.

The most impressive facet of the itinerary occurs while you are coming into the bridge. The great infrastructure turns up beside a hill, graceful shape, hung lightly on the landscape. It becomes an element that seeks its fading with the clouds of French sky, coming to belong to the air environment rather than the terrestrial one.

The discovery moment happens when the visitant of the valley face the bridge for the first time, beside the cultural landscape, like a background that measure the hugeness of the gorge.

The road deck crosses the valley at high altitude, on top of the tallest cable-stayed, masted structure ever built in Europe (2.46 km long and 245 m maximum height). These slender columns are broken into two to make a flexible joint with the road. At the same time it reminds us the image of large sewing needles (Foster and Partners, 2009: 72) as if it were a huge sculpture of Claes Oldenburg, which helps to emphasize the lightness of the infrastructure. The bracing structure continues to rise into the sky, increasing the slenderness of the assembly and giving a gesture that takes us on cloudy days to a second metaphor as a structure reminiscent of naval candles. (Figure 1)



Figure 1: Millau Viaduct. View taken from the village of Peyre. It can be observed how the viaduct appears into the valley as an integrated element more. Photography: www.donchristophe.be

# MEDIUM INTERVENTION. DIALOGUE BETWEEN INFRASTRUCTURE AND MONT SAINT MICHEL.

The project designed by Dietmar Feichtinger Architects to restore free access to Mont Saint Michel in the estuary of the Couesnon River in Lower Normandy, is a clear example of interventions where it is inserted a new element in active dialogue with the heritage into the landscape.

The Mont is an amazing heritage landscape listed by UNESCO as World Heritage since 1979 and it is composed by the medieval town of Mont Saint Michel topped by its ancient abbey, both constructed over the rock inside the bay. The site is neither an island nor a peninsula because of the severe tides effect that makes it a very special place.

In 1880, the site was connected to the mainland through an access dam built which seriously damaged to the natural ecological environment of the bay by the heavy sedimentation. The project to solve the situation required on the one hand removing this artificial barrier and sand accumulation and on the other, solving the access back to the island. The architects proposed to create a curved longitudinal pier over a large number of light pillars to prevent clogging of the bay. (Shannon et al., 2010: 134-35). The chosen point to cross is the previous one, guaranteeing the service but understanding it in a new way.

The promenade of arrival at Mont Saint Michel changes from the ancient perpendicular road through the old dam to a new one by tracing a tangentially path. In a certain way, a scenic tour very attractive for visitors is generated, accentuating the shape of envelope curve of the pier.

The vision is separated from the axis of the tour at all times to discover the beauty of the site specially when Saint Michel is an island, while the image is continuously silhouetted against the sky and the bay, apparently free of any link with the continent.

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The viewer makes a real initiatory journey through all the different points of view that gives you access, discovering the cultural landscape guided through the design of the infrastructure itself. (Figure 2)



Figure 2: View of Crazannes Quarries crossed by 837 Highway in France. The route brings us the heritage image. Photographer: Cobber, 2010.

# STRONG INTERVENTION. CRAZANNES QUARRIES DISCOVERED BY THE HIGHWAY

The project developed in 1995 by Bernard Lassus in the A 837 as it passes through Crazannes, southwest of France, between Santes and Rochefort sur-Mer, constitutes a situation where the landscape is forced to reinvent itself to achieve integration of new infrastructure.

The route coincided with the presence of stone quarries active since the times of the Roman Empire until 1955 and many historic buildings were built with this stone, such as the Germanic Arc de Triomphe (Conan 2012: 349). These circumstances far to make Lassus change the itinerary of the route, changed the possibilities for

the project becoming a vital determinant: to deal with pre-existing and its relationship with the landscape. Lassus decided to come across some of the structures (never damaging the ancient ones) to let the motorist have a real approach to this special territory.

The main objective was to rescue motorists from the monotony of the road and to offer them a promenade to become part of the intervention. In this way, full and empty spaces of the quarries were enhanced to compose an attractive landscape from a mobile point of view, estimating their average speed around 100 km/h. Outcrops, with its presence and absence of cut mass, generated chiaroscuro of great chromatic beauty. Lassus interventions by cutting, insulation, shells, etc., generated an attractive spectacle from the highway.

The traveller now has discovered the presence of this cultural landscape and is tempted to stop at rest areas, linked to the quarries to see the compound space. This situation is adequate, but for Lassus it is not the purpose of his project. The landscape is nature transformed through human experience and begins to be understandable by a wide range of experiences. That is why landscape emphasizes its own presence thought this highway. (Figure 3)



Figure 3: Mont Saint Michel and its new pier for high tide. The curved line allows the free contemplation heritage. Photographer: Mathias Neveling, 2014

### COMPRESSED LANDSCAPE EXPERIENCE IN CAMINO DE SANTIAGO

LABPAP project to build a footbridge to the Camino de Santiago in Puente Villarente (León, Spain) arises from the need to offer pilgrims a safe alternative to cross Porma River, because of the narrowness and the volume of traffic registered on the existing medieval bridge.

Like our first example, the most important and successful decision was the choice of the exact altitude and location to cross the river, prioritizing the integration of the infrastructure in the valuable landscape before other concerns like economy or constructive simplicity. It was decided to go across downstream because it was the better location to see the bridge and on a lower level, in order not to introduce an element in visual competition.

With the new footbridge, it is established an active dialogue with cultural landscape around, leading visitors across an almost initiatory path, like it happened in our second example. Vegetation has been preserved almost entirely in the riverside so as the route brings a complete shelter to visitor as the pilgrim descends to the river. He approaches the water to walk the first section of the

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bridge, which takes place in parallel to river movement. After that, a first change of direction occurs and the pilgrim discovers unexpectedly the presence of the medieval bridge at the back of the footbridge. The tour continues axially, approaching the heritage element, enjoying his encounter with water from a vantage point of view, the bridge is observed near the water in all its magnitude and scale. The current is crossed almost entirely to reach the last turn, leading the pilgrim again to look towards the village, heading back the direction of the next stage of route to Santiago de Compostela. A global landscape intervention is designed to transform the act of crossing the river into a broken line course that integrates the landscape potential of the riverbank with the presence of the old bridge of great heritage value.

The late motive of the footbridge is not only to cross but to discover the presence and the magnitude of the ancient bridge. In this way, it is chosen the construction of a ford capable of flooding, a timber and prefab concrete element, silent and poetic at the same time. It's a line that breaks gently playing with the horizontal planes and slopes to accompany the movement and the spectator, gliding across the landscape of the place. (Álvarez, 2010: 100).

This broken pass over the river Porma builds a metaphor. When descending towards the river, pilgrims get away from the real world, focusing on the path they are going through. They are abstracted along a stretch of nature to discover at one point the great experience of all the memories of the place (Álvarez, 2010: 100). On the one hand, they find out the previous history of the path, the bridge where pilgrims have made their way since at least medieval times. On the other, it is reopened before them, the continuity of their route to Santiago. The different breaks introduced on the catwalk are actually living the condensed metonymy of all Camino de Santiago, they conform a part of the journey where we can reconstruct the entire route. (Figure 4)



Figure 4: Footbridge for pilgrims of the Camino de Santiago in Puente Villarente. The broken line gives us way into the landscape. LABPAP, 2010.

#### COEXISTENCE THROUGH SENSITIVE INTERVENTION

There have been presented different aptitudes leading with integration of line infrastructures into cultural landscape, from the more controlled and subtle strategies, that are present but in a more distant way from the heritage elements, to the more interventionist ones, changing with care and sensibility, some aspects of the heritage landscape.

To conclude, it has been demonstrated that it is possible, with a wide and deep study of each situation and a sensitive approach, without forgetting the responsibility we have to take care of the environment and heritage landscape, to come to good solutions far from the determination of the gradient of intervention in heritage. Cultural landscapes have their own characteristics that are the most important aspect to be considered.

Finally, the cases studied had three strategies in common: the reflective choice of the exact location, an attractive and complex promenade and the

intention to discover something new for the visitant. They are not the only causes involved in these good practices cases studied, but have demonstrate that are very important strategies to consider to provide better solutions for the integration of new line infrastructures into our cultural landscape.

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