Abstract
This paper is the result of a research carried out in 2006 in a partnership between the Universitat de Barcelona and the Universitat Politècnica de Catalunya which was aimed to define guidelines to recover the architectural and scenic values of villages in almost abandoned Pyrenean valleys in Catalunya. The research studied at different levels (geographical, urban and architectural) the villages of several valleys in order to find out the factors more determinant to explain their degree of revitalization or decay. As a result of the research, the paper presents some conclusions on how to intervene on those pyrenean valleys: to work at the level of geographical units rather than with singular villages or individuals; to establish degrees of priority of intervention between the valleys in order to increase the efficiency of the actions; to ensure high quality infrastructure levels on the selected valleys; to fix strict limits to the construction of new vacation houses in high mountain villages in order to orient the real state demand to the rehabilitation of existing buildings; to create a program of subsidies to help the permanent population working on the primary sector to rehabilitate their dwellings; to promote the display of the natural and cultural richness of the valleys as a main factor for their revitalization; to support private and civic actions oriented to the recover of the valleys.

Keywords:
Habits; habitants; Catalan Pyrenees; transformations; development policies.

Introduction
The basis of the social and urban structure of the small settlements split on high mountain valleys in the Catalan Pyrenees have been undermined since the beginning of the XXth century because of the continuous decay of the old agricultural and live-stock economy. The consequence of this situation is the abandon of a large amount of other time human laboured landscapes, areas particularly rich on scenic and natural values and cultural heritage.

This research is the result of a commitment of the Catalan government aimed to set up urban, regional and social policies able to recover the built heritage in these almost abandoned Pyrenean valleys. Originally, the politicians had a very precise question: if we wished to create a program of subsidies for rehabilitate houses in high mountain villages, what should be the criteria to assign such funds? We proposed to enlarge the question to a reflection on helpful
guidelines for policies in order to recover the architectural and scenic values of these villages. Anyway, this original commitment explains the practical approach of our work. The objective was neither to build a theory on the socio-urban situation of Pyrenean valleys nor an exhaustive inventory of villages, but useful guidelines for decision-makers.

Another main feature of this research is its multidisciplinary approach. The partnership between two universities (the Universitat Politècnica de Catalunya, UPC, and the Universitat de Barcelona, UB) made possible to combine the know-how on architecture and urbanism of the first and the know-how on social-environmental psychology of the second.

The practical approach also guides the structure of this paper, organized in four parts: the presentation of the area of study, the methodology built up for the research, the results of our work and the conclusions in terms of policy guidelines.

High Mountain Valleys in Catalunya

The high mountain Catalan Pyrenees, located on the north-west part of Catalunya (fig.1), constitute, altogether with the area of the low section and mouth of the Ebro river, the region with slowest developing trends, and it even shows some signs of stagnation compared to the other areas of Catalunya, all of them under expanding metropolitan dynamics.

The High Catalan Pyrenees are organised on six counties. Two of them (la Cerdanya i la Vall d’Aran) are experiencing high rates of economical activity related to winter sport activities and real state and construction sectors. In the other four counties the development trends don’t manage to counteract the regression of the historical socio-economical structure of most of the valleys. The research has focused on these four counties: el Pallars Jussà, el Pallars Sobirà, l’Alt Urgell i la Ribagorça.

The rough topography explains the main features

Figure1: The Pyrenean Counties within the Administrative Organisation of Catalunya (Source: Authors).
of these counties. First, the communication infrastructures have been historically deficient, reduced to the corridors of the main rivers, and as a consequence the economy of most of the villages was essentially self-sustained. Second, the structure of the settlements has followed the geography, establishing a clear distinction in each county between the towns located in the main valley and a myriad of small villages on the side-valleys.

However, for centuries, the high mountain valleys, cradle of the Catalan identity, were integrated in a balanced system with the more dynamic economy of the planes and coasts. This balance between very different socio-economic realities ended at the beginning of the XIXth century, when agriculture in high mountain valleys stopped to be competitive and new urban centres started to attract population flows. It was the end of a socio-economical structure that had created and maintained for centuries the landscape and the way of life in the high mountain counties. Along the XX century these counties have experienced a non-stop economical decay and a continuous lost of population. If the creation of power production plants (the first one in 1912) or winter sports resorts later revitalized the economy of some particular valleys, they were unable to shift the general trend of decay. In 1900 many of the small villages on the secondary valleys had more than 500 inhabitants and most of them had between 200 and 500. In 2001, there is any village left with such population on the side valleys and the towns on the main valley concentrates almost the whole inhabitants of the county (fig.2).

Figure 2: Population’s Diminution on High Mountain Villages Between 1900 and 2001 (Source: Authors).
Nevertheless, the analysis of last years statistical data and the talks with representative people of the political, social, cultural and economical life of the counties through which we started the research show some changes on current trends compared to the last two centuries:

a) Investments on infrastructures have been very important on the last decades. Nowadays, the high mountain counties have the best road system they have never had along history. In this context, infrastructures are a double edge sword. The villages are more accessible, but good roads also enable inhabitants to move to a dwelling in the near towns, while they continue to work on the fields and farms around the villages.

b) While the traditional family and social models broke definitively down, new social forms appear on the mountain villages. Among them, the neo-rural settlers play an important role. They are individuals or groups of people that decide to live in the rural world, those developing handicraft activities appealing tourism having replaced over the years the counter-cultural groups of the beginning of the eighties. Neo-rurals don’t have any social or economic impact on the whole, but, as we will show later, they can constitute a helpful factor in the revitalization of particular villages.

c) Tourism and leisure activities, reduced to winter sports some decades ago, have nowadays extended towards new domains (from adventure sports to cultural tourism) and to the whole year. The rise of vacation houses is another effect of the increasingly appreciated values of these regions. The construction sector has become the core of the economy of many mountain counties, and while vacation houses can contribute to recover some villages, they represent also a clear threat of urban sprawl.

d) The consciousness of the need to act in order to preserve the landscape of Pyrenean valleys is pervasive, not only because of their beauty, but also because of their symbolism as witness of crucial historical periods on the history and for the cultural identity of Catalunya.

Construction of the Research Methodology

Confronted to this historical, socio-economic and urban context, our work started with the analysis of the existing data and bibliography on the study area (particularly, it existed an exhaustive work committed by the Catalan itself at the beginning of the nineties collecting information about the inhabitant and buildings in almost all the villages). It was a very useful starting point for our research, which was not oriented to update this information, but to use it to conceive intervention guidelines.

The second step of the research was to establish a series of meetings with representatives of all the county councils, the agencies responsible for proximity policies in the counties. All along the study we tried to maintain a strong relationship with the agents and stakeholders of the territory in order to orient our work on the basis of a panoramic view of the problem grounded on the perceptions and views of its inhabitants.

An important result of this first glimpse on the situation of high mountain valleys was to realise that rather than focus directly on the villages, we should work with geographical units, mainly the valleys, grouping several villages that had developed historical and structural links. We had the intuition that some important factors
of revitalization depended on the synergies between villages within such geographical units.

Then a main step of the methodology was to define these geographical units and to select those to be studied. In order to define the geographical units we grouped the villages that shared a common topographical, historical and cultural background (fig.3).

Secondly, in order to select the valleys that we were going to visit we chose geographical units representative of different degrees of development: valleys with clear ongoing development trends, valleys with symptoms of starting development, valleys sinking on a permanent decay... Doing so it was possible to compare different factors and consider their impact on the different levels of development.

On the whole 18 valleys and 96 villages where visited through this research (fig.4).

The analysis through field work of the geographical units and villages selected was the core of our study. The analysis was based on in situ observation complemented with interviews with inhabitants. A filing card was elaborated both for each geographical unit and for each village.

The observational grids and the filing cards were conceived with the objective to find out which were the factors more determinant to explain the degree of revitalization or decay of the different villages. The final aim was to be able to set up guidelines to enhance the positive factors and measures to avoid the negative ones.

For the observational grid we took into account...
many factors at different levels. At the scale of the county, we considered the relationships between villages and valleys. At the urban scale, the quality of infrastructures and facilities and the kind of inhabitants and activities were key factors to consider. At the level of buildings, their degree of conservation was the main aspect (fig. 5).

If the filing cards for villages organised the information collected by the field work, the filing cards for geographical units where already oriented to find out the influence of several factors on the degree of development of the valleys. They were structured in five sections:

- Geographical conditions
- Accessibility and quality of infrastructures
- Socio-economic life (population and activities)
- Degree of conservation of buildings
- Potential of revitalisation

The comparison of the analysis of the geographical units and villages made possible to set up the results and conclusions of the research. Figure 6 summarizes the methodology employed in this research.

**Results of the Study**

A first result of the study was a perception of the general situation of high mountain valleys someway different from that we had when starting research. The continuous lost of population that had decimated these valleys on the last centuries is no more the main trend. The few permanent inhabitants that continuous to live in those valleys constitute a reduced but quite stable population. At the same time, starting dynamics of recovering related to the tourist and leisure sectors suggest an eventual period of development for the mountain counties. However, the main results of the research where the correlations that could be established between the degree of conservation of the villages and the different factors analysed. It was possible to set up four main correlations.
Good infrastructures are a necessary but not sufficient condition.
The network of roads has enormously improved (and continues to do so) in the mountain counties on the last two decades. The study shows that all villages with starting revitalization processes have good road accesses and that villages with very bad accessibility are almost completely abandoned. Therefore, good infrastructures are a necessary condition for the recovery of villages. Nevertheless, we also found some villages very well connected that were very degraded. It is the case of villages located near important connection roads between mountain counties, which channel important passing flows that have no positive influence on the villages’ dynamics. Therefore, good infrastructures are not a sufficient condition for revitalization.

The existence of few permanent populations is a key factor.
The remaining population in the high mountain villages is very little. In most villages we can be talking about two or five people. However, the permanence of this population is important to avoid the complete abandon of the village and they can support other revitalization factors,
like attracting vacation housing and leisure activities. Among the permanent population in the villages is important to distinguish different kinds:

The peasants and farmers. More and more they complement their agricultural works with rural tourist activities (rural hostels, horse riding, rent a bicycle...). Even if they are few, they continue to play a major role in the maintenance not only of the villages, but mainly of the rural landscape surrounding them. In that sense, even if profiting from the improvement of infrastructures some farmers decide to move to the towns in the main valleys, as while as they continue to work in the villages' fields, their contribution to preserve the territory is clue.

People working in the near county capitals. If some peasants move to the main towns for better services, the villages located near these towns experience the opposite phenomena. People working in urban activities in such towns move to the small villages to benefit of the better geographical conditions (scenic view, peaceful ambiance, better weather...). They introduce to these villages social and cultural diversity.

Neo-rural settlers tend to play an active role in the recovery of villages. By developing handicraft activities, they contribute to the tourist attractiveness of the area. In other cases, they promote directly the rehabilitation process of the village. They usually help to increase the consciousness of the values of the villages and landscapes among the peasant autochthon population, which often are not aware or underestimate such values.

Vacation housing is the only opportunity to completely rehabilitate the villages.

Vacation housing, with very high rates in Catalunya, is often considered a cause of non sustainable urbanism and a threat for the territory. And it is so. The negative effects of the new low density developments having on the scenic beauty of the rural landscape has already arrived to the mountain counties. But at the same time, in the context of our research,
the possibility to rehabilitate the abandoned existing buildings in order to transform them into vacation houses is an opportunity for the small high mountain villages. The study shows that a good geographical location (scenic views and sun conditions), the existence of a permanent population avoiding the village to remain completely abandoned, and the development of the tourist sector (with rural hostels or leisure activities that attract visitors) are three factors that promote the appearance of vacation houses in the villages.

**A developed tourist and leisure sector has positive effects.**

The development of a new tourist sector valuing the many values of the mountain counties (scenic views, open-air leisure activities, cultural heritage...) is becoming an important pillar for the economies of the Pyrenean region, and one of the most sustainable in the future. Such tourism dynamics help the revitalization of small villages as they support the creation of new economic activities (like rural houses) or increase their attractiveness for vacation housing and visitors.

The valleys as geographical units grouping several villages play an important role on the consolidation of a tourism sector, as it depends not on the existence of singular natural or historical landmarks on particular villages, but on a critical mass of natural and cultural resources that only the whole valleys can offer. Besides, very often the valleys also share a cultural identity. The display of this cultural identity through the way the resources of the territory are treated and valued appears as a powerful mechanism to strength the attractiveness of an area.

Figure 8: PVacation House in Cabó (Source: Authors).
Figure 9: Historical Heritage in Ars (Source: Authors).
Conclusions

Based on these correlations between urban and socio-economic conditions of the villages and their degree of development it has been possible to conclude some guidelines for the revitalization policies of high mountain villages.

The first conclusion was that the policies should focus on interventions for the geographical units rather than programs for individuals (like the original idea of subsidies programs for rehabilitation of houses) or for particular villages. To work with entire geographical units makes possible to benefit from the synergies between villages. To concentrate the efforts on a geographical unit is the surest way to produce a recovering effect important enough to start self-developing revitalization dynamics.

Then, what should be the criteria to choose the geographical units in which concentrate the efforts and the priorities? A second contribution of the research was to propose a system to classify the valleys in four groups depending on the situation of the different factors considered (excellence of geographical conditions, quality of infrastructures, existing socio-economic dynamics and potential resources for development). By analysing these factors in different valleys, the county councils could classify them as:

- High priority units (where it was proposed to concentrate efforts as they presented an important potential of revitalization)
- Secondary priority valleys (with a lower potential of development)
- Valleys with ongoing developing dynamics (in which it was not necessary for the moment to increase the investments)
- Sinking valleys (completely abandoned or -almost and where it was not realistic to pretend reintroduce urban population and activities).

This classification system was conceived as a flexible tool, as it permits to review periodically the priorities (after five years of investments, a high priority valley can become a valley with ongoing development, a secondary priority valley can become a high priority one, or an ongoing developing unit can need some investment and be classified as a priority one, and so on). To integrate the factor time in the conception of the policy is a key aspect.

Once established a system to establish priorities of intervention, the study proposed guidelines for such interventions:

a) the government should ensure high quality infrastructures on the selected geographical units (not only concerning the road network, but also on telecommunications and proximity to a transit system).

b) the regional and urban plans should fix limits (and almost avoid in the small high mountain villages) to the construction of new vacation houses as a measure to orient this real state demand to the rehabilitation of the already existing houses in the villages.

c) to create a program of subsidies to help the permanent population working on the primary sector (agriculture and livestock activities) to rehabilitate their dwellings. Usually these inhabitants, those who really contribute to maintain the territory working the fields and taking care of the hems, have a lower economic capacity than the temporary visitors and owners of vacation houses. When the development
of the vacation market raises the prizes the autochthon inhabitants very often can’t afford the maintenance and rehabilitation costs of their dwelling. Therefore, a subsidy program should be useful not in a general way for any owner but for this specific permanent population.

d) as a sustainable tourist sector based on the display of the natural and cultural richness of the valleys is a main revitalization factor it should be promoted. The tools explored in the cultural landscape parks on the last decade (identify the main resources of a territory, organise them in a structure that offers to the visitor an interpretation of these resources, design a legible network of routes within the valley, locate strategically small nodes of services integrated to this network...) could be very useful to elaborate plans to display the values of the valleys and increase their attractiveness.

e) to support private and civic actions oriented to the revitalization of the villages. For instance, county councils could create updated data bases of houses to rehabilitate in small villages available to real estate developers or particulars interested to buy them. County councils could also drive participation processes in the villages to increase the awareness of the permanent inhabitants of the values of their own settlements and landscapes, but also to spread a culture of rehabilitation fully respectful with the environment.
In conclusion, the research on high mountain villages in the Catalan Pyrenees shows that there exist socio-economic trends that could lead to revitalization processes of these areas, that there is room for policies useful to drive such dynamics in order to avoid negative effects (like the creation of new vacation housing developments or some rehabilitation practices harmful for the landscape), and that university research can be helpful to set up the guidelines of these policies.

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