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## Refurbishment, vernacular architecture and invented traditions: the case of the *Empordanet* (Catalonia)

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### ABSTRACT

In the recent past, processes of urbanisation related to gentrification have been observed in some rural areas. This article analyses the role of the rehabilitation of vernacular architecture and mainly addresses social groups with high levels of income in the territorial dynamics of the *Empordanet* in Catalonia (Spain). This case is particularly relevant for two reasons. On the one hand, the *Empordanet* is under particularly intense and socially selective pressure because of its proximity to Barcelona. On the other hand, this demand for housing is partially related to the reclamation of a kind of tradition associated with a component of strong regional identity. This article explores the various ways in which tradition is reclaimed, recovered, and reinvented, insisting particularly on agents' behaviours framed in the broader context of governmentality. This is done through a pluralistic research methodology based on the dialogue between architecture and the social sciences. One of its main conclusions is that the rehabilitation of vernacular rural buildings generates a type of housing completely different from traditional constructions in its conception, functionality, design, materials, and construction processes. Furthermore, rehabilitation is closely associated with the generation of a new form of tradition.

### ARTICLE HISTORY

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Vernacular architecture; rural gentrification; traditional knowledge; expert systems

## Introduction

Rural areas have been broadly affected by the migration of new social groups. Until the 1990s, those processes were mainly observed in English-speaking countries (Phillips 1998a, 1998b). However, since the 2000s, there has been increasing evidence of this phenomenon in broader territorial contexts, with Spain among them (Solana 2010; Alonso González 2017). Processes of rural migration are frequently associated with touristic development and class issues. Thus, the new settlers have frequently been depicted as creative, middle-class urbanites (Cloke, Phillips, and Thrift 1995).

Additionally, rural urbanisation is closely related to the vindication of heritage and with the refurbishment of the existing stock of historical buildings (Phillips 1993; Alonso González 2017). Heritage, particularly in the case of vernacular architecture, is a complex issue that has material elements as well as strong discursive features (Tuñçoku et al. 2015; Donovan and Gkartzios 2014). In discursive terms, three main elements must be highlighted: tradition, identity, and, in some cases, nationalism (Turkun-Erendil and Ulusoy 2002; McNeill and Tewdwr-Jones 2003). Those elements are changing, and disputed issues have experienced slow but deep transformations in terms of erosion, invention, and hybridisation (Barke and Parks 2016; Hobsbawn and Ranger 1983; Jones 2006, 2009; Maudlin 2010).

Such discursive devices are related to agents' behaviours. There is a wide variety of agents involved in contemporary building processes: traditional builders, architects, regulators, final clients, and the like. Governmentality understands agents' behaviours as a result of the confluence of multiple processes, particularly, the visibilisation and invisibilisation of certain facts and dynamics, the social construction of knowledge, the unequal distribution of discursive capabilities, and 'the conduct of the conduct'. In this way, the concept of governmentality allows a contradictory issue to be approached. On the one hand, agents enjoy high levels of autonomy. On the other hand, they undergo complex processes of social modelling (Dean 1999; Foucault 2000; Jessop 2007).

In such a way, rehabilitation can be regarded as the invention of architectural forms by autonomous and widely modelled agents in the context of the asymmetrical distribution of power. In this context, the objective of this article is to analyse the role of the rehabilitation of vernacular architecture in a Catalan peri-urban region (the *Empordanet*), inquiring into the relationship between rehabilitation, heritage, tradition, and identity as well as insisting on agents' behaviour and governmentality. The main purpose of this article is to contribute to the deconstruction of the changes in architectural practices and the materiality of the processes of rehabilitation of vernacular architecture. Thus, this article can be included in the wider academic literature about heritage, tradition, and vernacular architecture while providing a more focused view on strictly architectural factors, such as materials and construction techniques (Alonso González 2017; Barke and Parks 2016).

In this sense, we try to answer questions such as the following: Does the refurbishment of singular buildings maintain some pristine architectural traditions and forms? Or, on the contrary, does it have to be understood as the result of the erosion, invention, and hybridisation of various traditional and modern elements? Has the vernacular architecture of the *Empordanet* been colonised by global expert knowledge and building practices? Does the refurbishment of the *Empordanet's* vernacular architecture contribute to the generation of a new and socially differentiated space? Are local agents empowered as a result of the rehabilitation processes? Is traditional knowledge recovered, and, if so, who recovers and controls this knowledge?

The case of the *Empordanet* is especially well-suited to the analysis of these issues for two main reasons. On the one hand, it is an area with a relevant and distinctive architectural tradition, associated with specific architectural forms, such as the *masía*. Such dwellings are also related to a certain idea of the Catalan identity and nationalism (Martí 1990). On the other hand, in recent years, the *Empordanet* has undergone an intense process of urban migration linked with the rehabilitation of the existing stock of buildings (Solana 2010).

This article will be organised as follows. In the next section, it will present the theoretical framework that focuses on the interactions between tradition, heritage, and identity in the broader context of governmentality. In the third section, the specific features of the area of study will be exposed. In the fourth section, the methodology used in the research, which is based on a pluralistic approach supported by dialogue between distinct kinds of research techniques, will be explained. The fifth section will focus on the analysis of a case study of the *Empordanet*, presenting the structure, functionality, construction processes, and materials associated with traditional buildings in their original context. In the sixth section, the processes of the rehabilitation of vernacular housing in the *Empordanet* will be analysed, with a special focus on changes in materials and construction processes. Finally, in the seventh section, the main conclusions will be presented.

## **Urbanisation, rurality, and the social construction of tradition**

In recent years, rural areas have experienced significant migratory processes, which have significantly transformed their distinctive features. Initially, these phenomena were observed in English-speaking countries and were associated with a pastoralist vision that emphasised the environmental, anti-urban, and community-related elements associated with the idea of the rural idyll (Bell 2006). Thus, rural areas were presented as bastions of heritage and tradition and considered more

authentic, natural, innocent spaces (Lagerqvist 2014; Shucksmith 2018). Afterwards, these processes were expanded to other spatial environments observed in such diverse contexts as continental Europe, Turkey, Russia, and Latin America (Mamonova and Sutherland 2015; Cardoso 2013). In any case, these processes featured a strong class component, with new rural immigrants typically urban and middle-class in origin and included in the so-called creative classes (Cloke, Phillips, and Thrift 1995).

In rural areas, heritage is strongly associated with the conservation of vernacular architecture (Selman 2010; Donovan and Gkartzios 2014). Such representations are related to perceptions of vernacular architecture as an original expression of ancestral, naturalised values (Jones 2006). Architecture is, therefore, considered an essential element of the landscape. It is also socially constructed as the manifestation of a common cultural legacy expressed in a set of traditions. Thus, architectural forms are often seen as the mode in which these traditions are embodied as a set of pristine and immanent elements (Handler and Linnekin 1984; Sağıroğlu 2017).

However, traditions tend to assume increasingly fluid forms, adopting new elements slowly but continuously (Briggs 1996). In this sense, processes of hybridisation between tradition and modernity can occur from various starting positions. There may be a relatively egalitarian dialogue between traditional and expert (modern) knowledge. In this case, some 'traditional' agents may become socially recognised and empowered (Agrawal 1995; García-Esparza 2015). On the contrary, there can also be a strong preponderance of the modern component that tends to maintain only some formal aspects of traditions, generating processes of colonisation and instrumentalisation of heritage (Spivak 1988; Lagerqvist 2016). In both cases, but quite differently, agents' actions can promote some processes of the invention of tradition, which are often influenced by identity issues and even by nationalism (Hobsbawn and Ranger 1983; Turkun-Erendil and Ulusoy 2002).

Governmentality insists that such processes cannot be approached without considering a wide set of agents' behaviours. Governmentality stresses that agents have high levels of autonomy. Thus, the conservation of vernacular architecture is considered the result of a broad set of autonomous decisions made by various agents as homeowners, regulators, architects, masons, local artisans, developers, and so on. However, governmentality simultaneously emphasises that agents' behaviours are also deeply modelled by social features related to the micro-social distribution of power (Dean 1999; Foucault 2000).

Such features are expressed in various ways. Firstly, there is the visibilisation and invisibilisation of specific events and processes. For instance, some forms of tradition are reinforced and others neglected, or there may be a social dispute over their meaning (Apaydin 2017). Secondly, discourses about 'authentic' traditions and the meaning of the vernacular are produced. Some of them become prevalent and are socially validated, turning into 'authorized heritage discourses' (Smith 2006). Consequently, they may be reflected in various texts, like laws and regulations, for instance (Del Mármol 2017; Dines 2018). Sometimes they are also closely connected with the social construction of (national) identities (Jones 2006; McNeill and Tewdwr-Jones 2003). Finally, 'authorized heritage discourses' have a prevalent role in the processes of agents' self-limitation, that is, in the so-called 'conduct of the conduct'. Agents limit themselves for various reasons, some of which include components of conviction or self-interest, often in an effort to avoid possible social sanctions. Therefore, in the expressions of agents' self-limitation, there are relevant, but not exclusive, ethical factors. Such a process of modelling of the agents' actions can generate various architectural practices (Graham, Ashworth, and Tunbridge 2000; Smith 2006).

In this context of a growing claim to tradition and heritage associated with the dynamics of governmentality, the phenomenon of rural gentrification has become particularly intense in the recent past (Solana 2010; Mamonova and Sutherland 2015). Gentrification is a concept with a broad genealogy that has mainly been applied to urban environments but also has a long tradition in rural contexts (Phillips 1993). Gentrification is understood in multiple ways. However, in the debate

about gentrification, there is an increasing emphasis on the relationship between socio-economic processes (such as class dynamics and uneven circulation of capital) along with elements of aesthetic and physical changes in the stock of housing, transformation of the national heritage, searches for specific lifestyles, identity creation, and even affective and emotional issues (Phillips 2014). Thus, the meaning of the term is far from univocal, having been generated by variegated geographies of gentrification (Phillips 2004; Lees 2012).

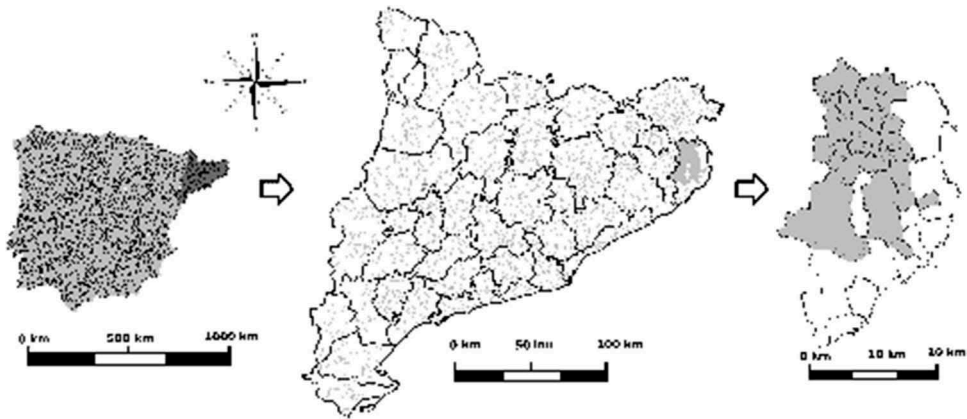
The Spanish state has been strongly affected by the processes of rural gentrification. However, rural restructuring has taken on some distinctive features in Spain. On the one hand, the modernisation of the Spanish economy during the 20th century started much later than in other European countries. Even in 1959, Spain was still an essentially agrarian country, with the majority of its population living in rural areas (Barciela and López 2003). From 1960–80, it underwent a process of massive agrarian modernisation, industrial development, and rural-urban migration (Naredo 2004). Consequently, many areas became depopulated (Hoggart and Paniagua 2001). Thus, there was a large stock of rural dwellings without any economic function. On the other hand, alternatives to agriculture were generally poorly developed in rural settings, at least until the mid-1990s. Therefore, ideas such as the rural idyll were quite unrelated to the Spanish rural context (Hoggart and Paniagua 2001). Rather, the problem was the opposite: how to conserve a huge stock of buildings with obvious cultural value in which few people seemed interested (Agudo Torrico 1999). In any case, this is a general description, with strong regional differences existing inside Spain. In the case of Catalonia, for example, there was more development of non-agrarian activities in rural environments, resulting in enhanced levels of social diversity (Hoggart and Paniagua 2001).

In any case, the situation in Spain changed radically from the mid-1990s onwards for three main reasons. First, there was hypertrophy of the real estate sector, especially before the burst of the housing bubble and the financial crisis of 2007. The real estate bubble was so intense that it affected a large part of the rural territories, often allowing the valorisation of the existing stock of underutilised or poorly maintained rural properties. Second, there was a massive investment in infrastructure that was strongly associated with the quantitative increase in, and increasing complexity of, mobility patterns (Marquet and Miralles-Guasch 2017). Third, there has been a growing trend in tourism to bypass the traditional model of ‘sun and beach’, which has spread its effects over much of the territory (Cuadrado-Ciuraneta, Durà-Guimerà, and Salvati 2017).

The idea of the rural idyll in Spain has been related to active strategies of real estate valorisation associated with a context of partial and selective migration from the city to the countryside as well as the intense development of tourism (Paniagua 2002). Catalonia, as a territory included within the Spanish state, shares these dynamics, and, in some cases, such as that of tourism, it reflects them in an especially pronounced way (Cuadrado-Ciuraneta, Durà-Guimerà, and Salvati 2017). The existence, since the 19th century, of a discourse associated with the ‘*Renaixença*’ movement has also contributed to the idea that rural environments should be considered the best custodians of ancestral Catalan culture based on the idea of a typified, idealised village (Sala 2016). The *Empordanet’s* case must be considered in this socio-territorial context.

### **Area of study and socio-economic features of the refurbishment clients**

The area of study is in what is locally known as the *Empordanet*: that is, municipalities located in the northern part of the Baix Empordà (Map 1). Specifically, the municipalities included in this work do not exceed 1,500 inhabitants: Albons, Bellcaire d’Empordà, Colomers, Corça, Cruïlles, Monells, Sant Sadurn de l’Heura, Foixà, Fontanilles, Forallac, Garrigoles, Gualta, Jafre, Palau-sator, Parlavà, La Pera, Regencós, Rupià, Serra de Darò, Tallada d’Empordà, Torrent, Ullastret, Ullà, Ultramort, Verges, and Vilopriu i Vall-llobrega.



**Map 1.** Location of the Baix Empordà in Catalonia/Spain and detailed map of the area of study (*Empordanet*).

The Baix Empordà is one of the regions of Old Catalonia (*Catalunya Vella*), characterised since the Middle Ages by a strong distribution of land ownership. In turn, this fact has been associated with the prevalence of smaller buildings. The emergence of the first hints of Catalan nationalism in the 19th century led to the identification of these elements with the essential values of a tradition understood in a pristine sense (Ripoll 1983; Camps i Arboix 1969). These were good conditions for the valorisation of heritage because of the confluence of tradition, identity, and a pristine, idealised concept of the nation. The *Empordanet* is a highly humanised area in which landscapes are strongly related to cultural elements and are particularly associated with vernacular architecture. Thus, the landscape is considered a scenario in which aesthetics, picturesque views, and romantic perceptions of nature play an essential role. For this reason, it has become very attractive to tourists and those looking to buy second homes in the recent past (Solana 2010).

In contrast to the coastal areas, in the interior of the Baix Empordà (which corresponds to the *Empordanet*), the type of vernacular building associated with traditional landscapes has been maintained (Cuadrado-Ciuraneta, Durà-Guimerà, and Salvati 2017). A strong authorised heritage discourse has become embodied in specific legislation that has significantly aided in containing the effects of peri-urbanisation. Territorial planning is mainly a consequence of the regional administration that has been developed through Catalonia's 2005 Urbanism Law (*Llei d'Urbanisme de Catalunya*). This law requires that each municipality have an Urban Development Plan that defines all the actions that may take place within its territorial limits. These plans must be approved by the regional administration. At present, many of these plans have not been definitively approved. Therefore, the approval of rehabilitation and new buildings on undeveloped land (which are not in a catalogue of farmhouses and rural houses) is subject to reports from various administrative agencies (Gifreu 2012). As will be seen below, this regulation and its associated discursive constructs are the foundation of a micro-power game between multiple agents (developers, architects, homeowners, and so on) in the broader context of governmentality (Dean 1999). In particular, legal requirements lengthen the process and make licencing difficult, preventing dramatic transformations of the landscape. Therefore, a specific institutional design is observed that responds to authorised heritage discourses and that tends to activate the 'heritage machine' in specific ways (Smith 2006; Alonso González 2015).

The urban pressure on the *Empordanet* has been particularly intense due to its proximity to Barcelona (approximately 115 km), which, like other Mediterranean cities, has undergone strong processes of peri-urban expansion in recent years (Catalán, Sauri, and Serra 2008; Chorianopoulos et al. 2010). The massive building of infrastructure (motorways, suburban trains, the Gerona-Barcelona high-speed train) has contributed to such processes, which have substantially modified the patterns of mobility and residence around Barcelona (Marquet and Miralles-Guasch 2017).

An indicator of the attractiveness of the *Empordanet* is the average price of the houses, refurbished or not. Old buildings, and even ruins, situated on plots of undeveloped land can reach prices ranging from 1,000 euros/m<sup>2</sup> to 1,200 euros/m<sup>2</sup>. If, according to the current comfort parameters, the houses are finished and ready to be inhabited, their average price is approximately 2,500 euros/m<sup>2</sup>. Therefore, a refurbished house of approximately 100 m<sup>2</sup> has an average value of approximately 250,000 euros. These prices are well beyond the local purchasing power, particularly that of young people. The average personal annual income in the *Empordanet* was 13,400 euros in 2014, according to the Statistical Catalan Institute. Therefore, one of the consequences of the increase in housing prices is that many of the local young people have been forced to live in nearby municipalities with less aesthetic and scenic appeal. Thus, there are, in the *Empordanet's* case, relevant class features that could be associated with processes of rural gentrification (Solana 2010).

## Methodology

In the present research, an architectural-social integrated approach has been used, in which a dialogue has been established between various quantitative and qualitative research techniques. The quantitative part of the analysis is supported by a compilation and statistical analysis of the projects approved by the College of Architects between 1997 and 2012. A total of 732 rehabilitation projects were identified, of which 623 were for single-family housing and 57 for hotel uses, mainly rural tourism. Subsequently, 44 of those 732 cases were selected for analysis, specifically of the following types of documentation: descriptive memories, construction reports, measurements, and construction drawings. Graphic information and descriptive reports provided information about the previous state of buildings and the solutions proposed for their recovery.

The qualitative phase was based on three main elements. On the one hand, 63 semi-structured interviews with relevant agents in the context of refurbishment were conducted, specifically with 28 architects, 21 builders, and 14 materials distributors, masons, and other professionals. The criterion for conducting the interviews was the saturation of the sample. In other words, we conducted interviews until the answers became repetitive. As will be described, the greatest variability of responses occurred among the architects. In this sense, they proved to be a fundamental type of agent in the definition of the content of the projects.

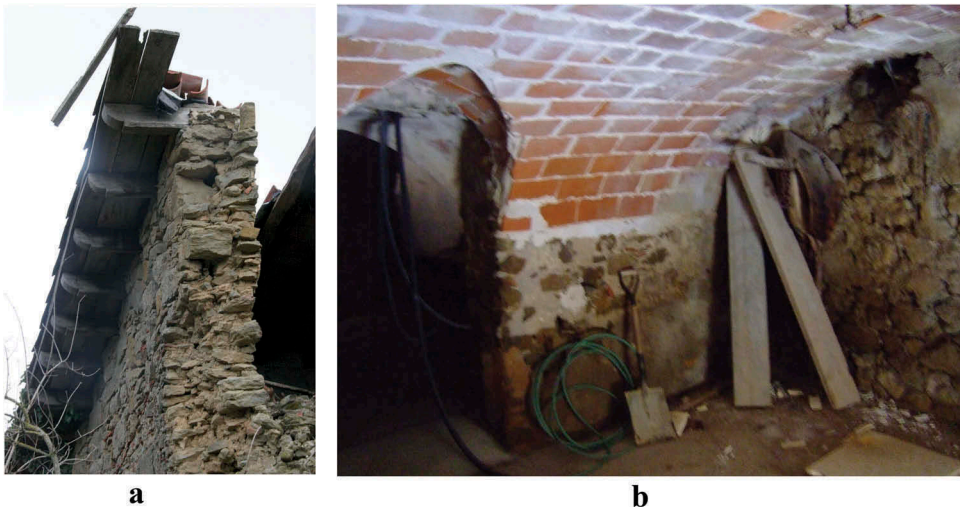


Figure 1. Examples of the houses before and during the intervention (*Empordanet*).



Figure 2. Examples of refurbished houses (*Empordanet*).

On the other hand, in situ observation of projects (some of which had been completed and others that were in the process of execution) has been another essential part of the qualitative phase. This is another mode of documentary analysis with a relevant architectonic element in which the object of analysis is the building itself. Finally, the relevance of participant observations made as a result of the professional career as an architect of one of the authors of this article must be highlighted. In this capacity, she has participated in the management of 25 rehabilitation projects (Figures 1 and 2). This professional experience has provided her with an intimate knowledge of the activities of agents, such as local developers and masons. This experience has also allowed a deeper investigation of the complexity of the construction solutions commonly used in rehabilitation.

In any case, the complementarity of the various research techniques used must be stressed. In this sense, the search for connections between the agents' speeches, the architects' designs, and the reality that can be seen in the finished works and the ensemble of constructive processes that explains those results has been of central importance.

## Uses, structures, and materials in the vernacular architecture of the *Empordanet*

### *The traditional structure of vernacular housing in the Empordanet*

The traditional architecture of the *Empordanet* must be framed in a socio-economic context based on the exploitation of the local natural resources, mainly through agricultural and livestock-raising activities. In this sense, both in country houses (*masías*) and houses located in population centres, the ground floor was used for agricultural or livestock-raising activities, frequently as a stable. In the case of *masías*, the ground floor was organised around a large but underutilised hall in the central bay, at the end of which was a staircase that connected to the first floor. The rooms dedicated to the family residence used to be located on this floor. The lower deck was used for food storage and allowed the isolation of the main floor from external conditions during the winter. Similarly, it acted as an air chamber that prevented the house from overheating in the summer.

Therefore, the traditional structure of the *masía* is characterised by two elements of limited utility at present. On the one hand, a large portion of the space was destined for agricultural and storage activities. On the other hand, the actual residential space was relatively small. Additionally, '... as far as the *masía* is concerned, one of the factors that make it even more difficult to establish its typology is, at the same time, one of its main characteristics: its capacity for growth' (Martí 1990,



515). Thus, as in many types of vernacular construction, such houses could be enlarged according to the productive needs of the neighbouring lands. Therefore, such structures must be understood as temporary and open to change.

### The original materials of the vernacular architecture of the *Empordanet*

The vernacular house of the *Empordanet* is directly associated with the materials used in its construction, among which three are particularly relevant: stone, lime, and wood. The walls of such vernacular buildings were built using ordinary masonry with stones from the surrounding area. Such stones were normally of low quality (Figure 3).

*'Every municipality or place has a stone . . . the stone that was not so good was used to make masonry.'*

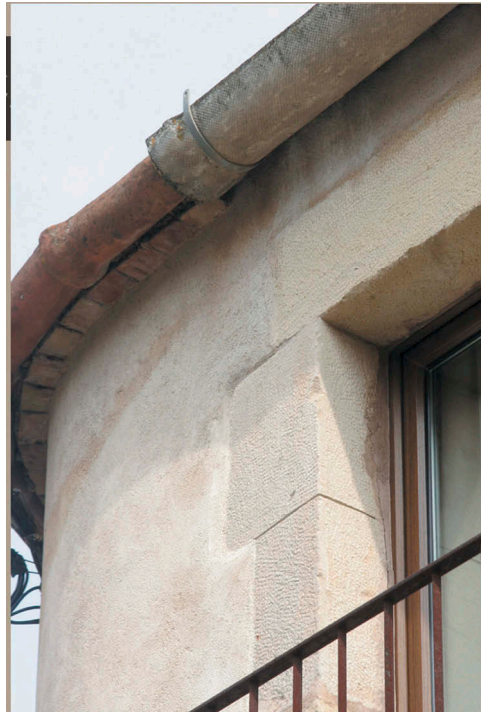
Stones did not have a specific aesthetic meaning in the past. For this reason, it was common to coat them. Only a lack of means or maintenance prevented this procedure from being carried out. In this sense, covering the walls with an outer layer ensured greater durability because it protected the stones from weathering processes and it ensured greater interior impermeability of buildings. As can be seen below, the presence of dampness is one of the main characteristics of such buildings.

Lime was an essential material for coating surfaces; thus, the architecture of the *Empordanet* was like the predominant style in other Mediterranean areas (Figure 4). Lime could be manufactured at any point because of the abundance of raw material (limestone) and the ease of construction of furnaces in the area. Normally, furnaces were situated to take advantage of the unevenness of the surrounding terrain, fed by the fire produced by the branches of the low forest at a relatively low temperature (900°C). The limestone of this area generates an impure form of lime.

Finally, wood also played a key role. It was mainly used for structural purposes in the beams of the intermediate slabs as well as in the roofs (Figure 5). It was also used for non-structural elements, such as interior joinery and exterior finishing. In the case of wood with structural functions, the species used were white and black poplar (*Populus alba* and *Populus niger*). Both species grow close to a river in the immediate environment; however, they differ in many respects. White poplar growth is significantly slower than that of black, but it has greater resistance. However, many vernacular buildings were subject to budget constraints at the time of their construction, and builders had to use the materials that were available without much regard for the relatively less favourable characteristics of black poplar.



Figure 3. Wall enclosures.



**Figure 4.** Lime coating.



**Figure 5.** Wood structure.

### ***Dominant construction practices in traditional vernacular architecture***

The traditional uses of the buildings, their structures, and their materials explain the set of existing construction practices. For instance, this type of building is associated with a model of slow construction, which allowed the land to gradually acclimate to mass stresses. Thus, the movements made during construction had no serious consequences because they were slowly assimilated into the environment. In the words of a local developer, *'good wine needs quietness.'*

On the other hand, the rise of the water by capillary action was not prevented. Consequently, continuous humidity was generated because the foundations were mere extensions of the walls, with a little widening of the base. However, at the time, this was not a problem due to the agricultural and livestock-related uses of the ground floor. In this respect, the absence of rough plastering favoured ventilation and evaporation of the water from the walls, preventing high levels of dampness.

The construction of the walls also required high levels of skill, as their stability was based on the ability of masons to accurately place their pieces. Technically, it was a question of achieving a homogeneous transmission of the forces through the wall and, thus, of avoiding the concentration of local tensions that could split the pieces. This was particularly complex because the stone-bonding material was made using clay mortars (with little binding capacity) or, occasionally, lime mortars. In the latter case, the wall had to be stable enough to stand on its own until the mortar strengthened. Therefore, this was a model based on wisdom and local knowledge, mainly that of artisans and masons.

## **Uses, structures, and materials in the rehabilitation of the vernacular architecture of the *Empordanet***

### ***Transformations in structure: from farmers' houses to second homes for urban families***

In the current context, vernacular buildings must often be adapted to a rather different environment, characterised by new economic activities, new forms of social organisation, and the growing relevance of the technical standards and criteria frequently introduced in legal texts and regulations. In other words, there are prevalent new rules and discourses that orient agents' actions in new directions. The first consequence is that the ground floors, which were originally intended to be used as storage or animal barns, must become habitable. This has several effects on the design and structure of buildings. It also implies an improvement in the finishing work, such as the use of cement washes (or those made of another highly impermeable material) or interior paving that includes a concrete bed and airproof cloth. Therefore, the structure, materials, and functionality of the ground floors have been modified in a demonstration of erosion of knowledge and invention of tradition.

Such changes have the undesirable effect of reducing the volume of ventilation, which is also worsened by changes in the surrounding urban environment. Thus, all streets in the *Empordanet* are now paved, whereas before many of them were dirt roads, which were associated with greater surface sealing. This means that the outlet points of water are concentrated almost exclusively on the ground-floor walls. This leads to the paradox that, in the presence of more elaborate finishing work, there is simultaneously an increase in the interior humidity of buildings. Therefore, controlling dampness has become a central impediment to achieving housing comfort.

Such new structures are more adapted to the idea of the rural idyll because they produce spaces oriented towards the enjoyment of moments of family leisure and repose. This element of family and intimacy, particularly in a community context, is also associated with tradition. Undoubtedly, it is an 'invented' tradition, since the historical agrarian family worked, as has been pointed out in the previous epigraph in a very different way. Finally, it is also justified by socio-economic transformations. In this sense, it is demanded by homeowners because it allows for an increase in the space and monetary value of the properties. Thus, in the game of micro-powers that characterises the actual operation of such refurbishment, the demands of the final clients have an important capacity to influence the results.

### ***Adaptation or radical transformation of materials?***

Rehabilitation also promotes major modifications in the building materials. This affects the three main materials used in the vernacular architecture of the *Empordanet*: stone, lime, and wood.

### *Stones become great travellers*

There has been a sharp decline in the use of local stones because most local producers cannot afford the costs of commercialisation, considering their small local markets. Therefore, 'masonry stone is very difficult to find'; namely, it is no longer accessible in commercial circuits. The basaltic rocks extracted from two specific quarries located in Foixà and Castefollit de la Roca provide an example. In these cases, the characteristics of the rocks are different from each other. In the first case, the rocks had relatively low levels of quality (in particular, high levels of weathering) so they could hardly compete commercially. Production was also relatively small in scale and was usually reserved for the refurbishment of the rural houses in the area.

There has been a different reality in the case of Castefollit. The quality of the rock is higher, and the quantities extracted are larger. Consequently, commercialisation has been relatively easy, making it possible to cover larger markets and, therefore, to ensure economic viability. However, the stone traditionally used in native vernacular buildings has characteristics in terms of textures, colours, and so on that do not always allow its substitution with Castefollit stones. In rehabilitation projects, considering the dominant discourses, the prevalence of expert knowledge, and the processes of agents' 'conduct of the conduct' (particularly strong in this case among architects, public employees, and homeowners), it is often important to respect the chromatic and textural conditions of the original stones. In such cases, a frequent solution is the use of stones from remote places, usually through the dominant marketing circuits.

Thus, the maintenance of the local character of the stone is more a projected image than a reality, and heritage is becoming a global machine supported by global suppliers. In many cases, foreign stones with similar chromatic or textural characteristics are used. In other cases, a limited range of local stones (coming from Castefollit) is used, which have also become industrially produced and which serve markets far outside the local area. Stone is not only becoming increasingly difficult to obtain, it is also becoming socially valued in a very positive way. Therefore, the exhibition of such stones has become a prestigious sign that denotes the nobility of buildings. Simultaneously, this preference for stone is closely related to the disappearance of the traditional practice of covering outer walls with lime.

### *Lime is dressed up*

Additionally, lime can be difficult to incorporate into new construction models. Despite the preference for stone, most of the interiors are still roughly plastered. However, cement has generally replaced lime. This is associated with several problems that have arisen over time:

- The stiffness of the mortar pastes has increased, which has led to the emergence of increasing incompatibilities with other existing materials. This has also induced an accelerated deterioration of the rough plastering because of reactions with sulphates.
- There are sometimes evident chromatic dissonances between restored houses and untouched vernacular buildings. In contrast to the historically dominant earthy colours, a type of finishing with a steel texture and greyish colour, typical of cement washes, is becoming increasingly common.
- The problem of dampness inside such houses has worsened, since the cement restrains the transpiration of the walls.

Therefore, the substitution of lime for cement has produced a series of effects that has distanced the rehabilitation of vernacular heritage from the techniques of traditional architecture. It is unsurprising that these practices have become invisibilised because such distancing is against the philosophy of refurbishment. Namely, new forms of knowledge have been generated in a superficial attempt to traditionalise the modern materials associated with modern construction techniques. Thus, new surface materials such as 'yellow lime' have appeared. Its masking element can be seen even in its name. Even though it is popularly known as lime, it is not truly lime (calcium oxide), but the raw

material from which lime is obtained (calcium carbonate). In other words, it has not been subjected to the cooking process at 900°C that is necessary to obtain lime, and it does not have any binding function. Its sole purpose is to act as a colouring agent for the pastes obtained from cement, surrounding the cement particles and providing the traditional earthy colour of the local construction. The search for chromatic affinity is a way of re-personalising and avoiding the de-anchoring caused by the homogenisation of the materials.

### ***Industrialised wood is laminated***

Finally, wood has also undergone significant changes in its use as a building material. The traditional nearby trees, white and black poplars, are no longer used in construction for three main reasons. The first is related to the reduced availability of nearby trees that cannot be regularly harvested because of their scarcity and new environmental regulations. The second and third reasons are eminently technical. For example, it is difficult to optimise their trunks because their twisting is difficult to deal with mechanically. Specific knowledge is needed to maximise the exploitation of their material. Informants have also described the difficulty of ensuring the correct drying of the wood and an increase in the risk of pathologies. Additionally, Spanish regulations consider black poplar unsuitable for structural use, and it is not currently used in the beams of the top slabs of buildings. What kind of dialogue between traditional and modern knowledge could be asserted in this case?

Therefore, it is very difficult to rehabilitate structures using local woods. The commercially supplied wood comes from the wetlands of Northern Europe, which are better adapted to existing technology for efficient cutting. In this sense, various agents (distributors, carpenters, and architects) share the opinion that, when there is not enough recycled wood from their own refurbished buildings, the best option is to purchase laminated wood – that is, wood cut into small pieces of homogeneous length and joined with resins. They cite its higher reliability as the reason for its use. They also believe that the possibility of suffering pathologies caused by hygroscopic movements and the risk of suffering biotic attacks are substantially lower.

In summary, there is a clear preference for standardised materials of industrial origin in both binders and wood, in contradiction to the overall rehabilitation discourse. In the same way, local stones frequently are not commercially available. The trends above can also be discussed from the broader perspective of governmentality. In the three cases, there is a process of invisibilisation of the basic elements of vernacular architecture, prioritising an ‘aesthetic’ approach. The case of lime is especially suggestive in this regard. In turn, such an invisibilisation has been facilitated by the prevalence of ‘authorized heritage discourses’ that have favoured a strong modification of the building materials. Finally, these changes cannot be understood without considering a series of transformations in the agents’ ‘conduct of the conduct’, as will be analysed in the next section.

### ***Expert knowledge and dominant construction practices in the rehabilitation of vernacular architecture***

There are two kinds of agents with particularly important micro-powers in the building practices associated with vernacular architecture. On the one hand, the role of architects must be highlighted, which, in turn, is strongly conditioned by the prevailing academic conception of refurbishment. Although architects have some degree of autonomy in proposing building solutions, in most cases, there is a predominance of naturalisation of the use of materials and codes generated by expert systems associated with their profession. As a result, architects have enhanced their bargaining power, and many refurbished buildings are mostly regarded as the result of the creative genius of selected authors. In this way, in most cases, many traditional solutions are left behind. Some traditional knowledge related to artisan ways of understanding construction also becomes strongly eroded, weakening the role of some traditional agents. For instance, traditional carpenters are no longer employed in the production of the beams of the slabs because of the prevalence of laminated

and industrialised wood. In this context, as the building processes of rehabilitation also have an important discursive dimension, the possibilities of proposing alternatives outside the limits established by the dominant discourse are limited (Foucault 2000; Jones 2006).

The transformation of the knowledge and practices of masons, construction managers, and developers, who also have relevant micro-powers, is no less significant. Those agents have also shown a strong preference for the use of industrial materials and building methods that are considered not only more reliable but easier to work with. Additionally, there is often resistance to a return to traditional forms of construction that require much more concentration and are considered more laborious. Namely, considering the present micro-power distribution and its associated monetary income, it is unattractive to be trained in a collection of traditional techniques that, indeed, are not sufficiently recognised in labour markets. For instance, there is a slow but continuous process of substitution of traditional masons using strong artisanal methods with modern masons more adapted to using industrial building techniques who can change their occupation in increasingly flexible labour markets. This phenomenon also has a strong generational component.

*'The youth of today, just like you (the architects), are little prepared...'*

In conclusion, the internalisation of the use of expert systems is produced by a slow process of sedimentation that distorts the original structural behaviour of materials and the local and traditional knowledge associated with vernacular building practices. In this way, it also prioritises the use of remote and decontextualised materials in a highly global way. However, simultaneously, rehabilitation promotes recognition of the value of local building traditions. The result is a confusing pattern of ignorance/recognition of the cultural logic associated with the native conception of vernacular architecture.

## Conclusions

The *Empordanet's* case is an example of the strength of rural gentrification in Spain. These processes can also be observed in other Spanish regions (Alonso González 2015, 2017; Barke and Parks 2016). In this sense, the *Empordanet's* case shows that the search for specific forms of rural idyll is closely associated with factors like the rehabilitation of traditional vernacular architecture, the effect of new (architectural, territorial, and environmental) regulations, the area's proximity and easy access to Barcelona, and the increasing mobility of, and strong socio-economic pressure from, high-income groups (Solana 2010; Mamonova and Sutherland 2015). Thus, the idea of the rural idyll has generated a strong demand for refurbished buildings, affecting specific features of them, like the actual structure of the dwellings, the construction methods and materials used, and so on.

Such changes are essential for generating a stock of building assets that are increasingly valued in real estate markets. In this sense, the ownership of vernacular (but refurbished) dwellings constitutes a relevant element of distinction. It is also functional in the context of the economic, social, and cultural capital accumulation of certain privileged social groups (Bourdieu 1984; McNeill and Tewdwr-Jones 2003; Jones 2006). For this reason, despite the complicated real estate situation in Catalonia and the whole of the Spanish state in recent years, refurbished houses have been protected from depreciation. Thus, as in other cases in Spain, investing in rural vernacular houses has proven to be an effective means of protecting monetary assets in times of widespread depreciation (Alonso González 2015).

The relationships between tradition, heritage, identity, and even nationalism are also relevant to achieving an understanding of the *Empordanet's* case. Although tradition has been a central element in this case, it is far from a pristine or static one, derived from the idea of a rural idyll and some forms of nationalism (Handler and Linnekin 1984; Lagerqvist 2014). Tradition is also a complex issue with several dimensions. On the one hand, this phenomenon can be easily observed, as many of the old building traditions and practices have not only become eroded and hybridised but also partially

colonised by modern pressures. Over a period of approximately 50 years, the main elements of the area's vernacular architecture have been substantially modified: namely, the structure and functionality of the dwellings, the materials used, the prevailing building practices, and how architectural knowledge is generated. On the other hand, in the effort to avoid a loss of identity, peripheral solutions focused on visual harmony and material contextualisation have prevailed.

However, the *Empordanet's* vernacular architecture retains a differentiated identity that is simultaneously maintained and transformed. In this sense, the strength of the association between vernacular architecture and tradition has not been weakened in the collective imagination. This ductility of tradition is essential to the processes of capital accumulation. In other words, the vernacular is a category that is strongly constructed from a social perspective, and it synthesises many tensions and makes compromises between them. To understand such tensions, applying the governmentality approach is particularly useful. Governmentality has several relevant dimensions. Firstly, significant processes of visibilisation and invisibilisation of some of the typical elements of vernacular architecture can be observed. For instance, aspects like the practical disappearance of the practices of slow construction and the sharp reduction in the use of local materials essentially become invisible. Secondly, a range of 'authorized heritage discourses' has been generated concerning different aspects, many of them essentially formalistic, like the chromatic and textural conditions of the original stones, for instance. Simultaneously, relevant processes of creation can also be observed, along with the destruction of knowledge. The loss of artisanal methods and standardisation of masons' knowledge is an example of this phenomenon.

Finally, there have been important processes in agents' 'conduct of the conduct'. Agents' modelling processes can be observed particularly in the activities of architects, regulators, and masons. The architects' role is particularly relevant, as they have increasing legitimacy as objectifiers who can reject and dissolve 'traditional' alternatives in many aspects of building processes (Alcindor 2019). In any case, consideration of the changing relationships between agents is essential to any attempt to influence the dynamics of refurbishment and rural gentrification. For this reason, we must give deeper ethnographic attention to how rehabilitation policies are realised in practice and how they frequently overlook essential features of heritage because of the prevalence of neoliberal forms of subjectivity.

## Highlights

- (1) In some cases, the refurbishment of vernacular architecture is associated with the activation of some cultural circuits related to the recovery of certain forms of tradition with a strong discursive component.
- (2) The refurbishment of vernacular architecture often acts as an essential element in socially differentiated processes of peri-urbanisation, contributing to generating specific forms of gentrification. In this sense, it can be also related to the existence of forms of territorial and environmental protection.
- (3) The refurbishment is far from maintaining pristine architectural forms. On the contrary, it is aimed at reinventing and reinterpreting existing traditions.
- (4) The refurbishment does not invalidate many of the global construction logics but only makes them invisible.
- (5) Traditional knowledge is not always recovered, nor are local actors always empowered.
- (6) The element of invented tradition of refurbishment has a major impact on the structure, uses, materials and construction techniques of traditional buildings.

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No potential conflict of interest was reported by the authors.

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