

## **FROM THE STRATIGRAPHIC RECORD TO THE CULTURAL AND TOURISM MANAGEMENT OF ARCHAEOLOGICAL SITES: CHALLENGES AND UNIVERSITY CONTRIBUTIONS**

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### **Resumen**

Conocer el patrimonio, recuperar el patrimonio y aprovechar éste para el futuro son tres retos esenciales en la gestión integral del patrimonio que se vuelven, si cabe, más acuciantes, cuando se trata del patrimonio arqueológico. El creciente desarrollo de paradigmas de interpretación del patrimonio en clave cultural y, también, el desarrollo de nuevas fórmulas de actuación profesional en Arqueología, ofrecen un contexto adecuado desde el que reflexionar sobre de qué modo la Universidad, como institución docente e investigadora, puede contribuir a una adecuada dinamización investigadora, cultural y turística de enclaves arqueológicos. Las reflexiones nacidas de varios años de experiencia en la Universidad de Navarra en el apoyo o liderazgo de los proyectos arqueológicos de Los Bañales de Uncastillo (Zaragoza) y Santa Criz de Eslava (Navarra), dos antiguas ciudades romanas. En las siguientes páginas se concluye sobre de qué modo la Universidad, al liderar proyectos arqueológicos, puede aportar una investigación abierta e innovadora, un empleo del patrimonio, orientado a la eficaz dinamización de aquél, como escenario y pretexto de la formación y una generación de actividad que redunde, desde luego, en la protección y mejor conservación del patrimonio arqueológico y en su mejor promoción.

**Palabras clave:** Patrimonio arqueológico, gestión del patrimonio, arqueología pública, arqueología en comunidad, Universidad, investigación arqueológica.

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## **DEL REGISTRO ESTRATIGRÁFICO A LA GESTIÓN CULTURAL Y TURÍSTICA DE SITIOS ARQUEOLÓGICOS: DESAFÍOS Y CONTRIBUCIONES UNIVERSITARIAS**

### **Abstract**

To enhance cultural heritage, to guarantee its preservation and to leverage it for the future are the three main and essential goals for an integral management of cultural heritage, even more so if what is involved is the archaeological kind. The growing number of interpretative models available for understanding the complex cultural meaning of heritage, plus the development of new formulas for professional archaeological practice, offer an adequate context in which to reflect on how universities, as teaching and research institutions, can contribute to revitalise archaeological sites in terms of research, culture and tourism. These reflections are a result of several years of experience that the University of Navarre has gained in supporting or leading the archaeological projects in the ancient Roman cities of Los Bañales de Uncastillo (Saragossa) and Santa Criz de Eslava (Navarre). Accordingly, this paper inquires into how universities can perform open and innovative research and use heritage in a way that effectively revitalises it, as an educational setting and pretext that, needless to say, goes a long way to protecting, preserving and promoting archaeological heritage.

**Keywords:** archaeological heritage, archaeological heritage management, public archaeology, community archaeology, university, archaeological research.

## 1. INTRODUCTION

At the University of Navarre, in recent years, we have taken part, with more or less statutory responsibility, in two archaeological projects that have begun to leave their mark on the specialised scientific literature and which, by our reckoning, have contributed a certain amount of knowhow that may be of some use to those facing the admirable challenge of revitalising archaeological heritage, in parallel to its recuperation.

Los Bañales de Uncastillo (Saragossa) (Andreu, 2011: <https://www.facebook.com/LosBanales/>)—a classic in the historiography of Roman Spain, after a number of eminent researchers had studied the site in the last century—is an ongoing archaeological project, which over the past 12 years has been led by the Fundación Uncastillo, albeit with the active participation of the University of Navarre, and a benchmark initiative in what has become to be known as ‘public archaeology’ (Skeates et al., 2012; in Spanish, Almansa, 2018b, 2014). In point of fact, it has received outstanding awards and distinctions not only for its research work, but also above all for its commitment to educational and social activities revolving around archaeological heritage. As a result, the educational project that Los Bañales has recently been developing with school children has been acknowledged by the Directorate-General for Tourism of the Government of Aragon as one of the top 25 tourist experiences in the region. Similarly, in 2016, the project picked up the Sísifo Award for researching, protecting and raising awareness about archaeological heritage, which the University of Cordova has been presenting for the past few years now.

The second project in Santa Criz de Eslava (Navarre) (<https://www.facebook.com/SantaCrizdeEslava/>) revolves around an archaeological site, excavated between 1995 and 2015 (Armendáriz et al., 2016). During that period, however, it had not yet been developed scientifically—being all but conspicuous by its absence in the literature—or socially. That stage got underway in 2017, with the signing of a collaboration agreement between the University of Navarre and Eslava Town Council. This agreement has not only gone a long way to promoting the site in terms of visitor numbers and its cultural management, but has also progressively placed it on the peninsula’s archaeological research map (Andreu et al., 2019; Cebrián et al., in press). Additionally, both projects were ‘twinned’ in September 2017, in a joint agreement promoted by Liédena Town Council in the Comarca de Sangüesa—where the Roman city of Santa Criz de Eslava is located—and, therefore, not only share management models, but also the same goal of highlighting the Roman heritage in what were the north-western reaches of the area attributed to the Vascones in the ancient sources.

The first project is of a more comprehensive nature, for it envisages archaeological research without neglecting the site’s cultural revitalisation and tourism promotion (Andreu, 2016, 2019a). While the second is still mainly focusing on social aspects and, apart from implementing several scientific approaches, has yet to include research. The

University of Navarre is firmly committed to both projects in which its archaeology students have also played an essential and central role, since they receive field and heritage management training at both sites. The university, which has been offering an archaeology degree programme for three years now, is located in Pamplona, approximately 100 km away from the first site and 40 km away from the second. Both of these medium-sized Roman cities also share historical elements and features, as well as monumental typologies (Romero, in press). To our mind, that involvement may serve as a model of the way in which a university can take that much sought-after—and key—step from the stratigraphic record towards the knowledge society, which has been lucidly described in some recent publications (Vaquerizo et al., 2017). And all this without neglecting the more social component, involving communication and collective enjoyment, which has recently been called for in contemporary archaeological research not only in Spain but, generally speaking, also in Europe (Almansa, 2018a; Vaquerizo, 2018).

## **2. A DIAGNOSIS OF ARCHAEOLOGICAL HERITAGE**

Although some of these considerations have already been addressed in a previous work (Andreu, 2019), in light of the experience accumulated in both projects it seems appropriate to dwell here on what are, in our view, the main strengths, weaknesses, opportunities and threats (challenges, in short) that archaeological heritage is currently facing in Spain (Querol, 1996). The aim is to highlight the paradigms of action and management pertaining to archaeological heritage which, in this sense, seem to be the most useful of all. By the same token, the intention is to underscore the positive experiences to which both projects have given rise, always from the perspective of the university management of that heritage and always with the objective of leveraging strengths and opportunities and, as far as possible, converting the weaknesses and threats into the former (Andreu, 2018). We believe that it is possible to achieve that aim insofar as we are convinced that universities have sufficient and adequate resources and tools for meeting some of these challenges. But, of course, without this diminishing in any way the work demands or generosity that are so essential in these hard times for archaeological heritage, in particular, and for the cultural kind, in general.

### **2. 1. Weaknesses: the intelligibility and preservation of heritage**

It has often been said that archaeological heritage is, at least in Spain and in the field of cultural heritage, the most protected by legislation, but, at the same time, the most vulnerable of all in its category (Madrigal, 2014; García Calderón, 2016). From an intrinsic, essentialist perspective, perhaps the main challenge, the greatest weakness of archaeological heritage, is how difficult it is to interpret and how hard it is to make it intelligible for the public at large—which is also sometimes the case with the public authorities, who tend to seek refuge in its unfathomable nature. This challenge should be met in order to ensure that society has the chance to enjoy such a heritage without restrictions and that it is adequately valued and, subsequently, preserved (López-

Menchero, 2012). It is also essential to make investment in heritage an attractive prospect for the aforementioned public authorities and private patrons who it is necessary to involve—without qualms—in the sustainability of heritage projects, as is a matter of course in other developed countries.

One of the greatest weaknesses of archaeological heritage nowadays, also related to that challenge, is doubtless its preservation, given its vulnerability, which should always be borne in mind as a basic issue. Any action aimed at the revitalisation of heritage should never endanger the preservation of archaeological materials, whatever these may be (Cirujano and Laborde, 2001).

## **2. 2. Threats: lack of investment and social esteem**

Precisely due to how difficult it is to understand archaeological heritage—which is sometimes the fault of those dedicated to its research and recuperation, for being incapable of making projects of this kind attractive for institutional investment—one of its main social threats is certainly the lack of public awareness raising about its intrinsic value and also sometimes the dearth of adequate policies, with all of their budgetary consequences. It is exactly for this reason that perhaps we should also speak of the need for converting that much sought-after integral archaeology into a truly committed kind on the part of its practitioners, in which communication is, needless to say, the main strategy for sharing cultural products and enhancing their appeal and potentialities (Harding, 2007).

## **2. 3. Strengths: archaeo-appeal and territoriality**

Obviously, it is not all threats and weaknesses in archaeological heritage, for it has an unquestionable social appeal (Vaquerizo, 2018) often compatible—albeit not always from a quantitatively preponderant perspective—with its difficult intelligibility. The practically esoteric character of archaeology, the science of hidden surprises, is to our advantage once it has surrounded archaeological and heritage projects with an aura of seduction for at least some specific sectors of society, who, moreover, find the work of archaeologists and historians of Antiquity appealing (Carvajal et al., 2011). To engage that segment of society is indeed an exciting challenge that should be boldly met by implementing adequate communication or, one could say, ‘popularisation’ policies, as we will contend further on.

Furthermore, the frequent presence of archaeological heritage in rural contexts can become, if managed properly, an element that promotes cohesion and economic development in face of the spectre of depopulation (Vives and Ferrer, 2014). This does not mean to say, however, that any archaeological site is a panacea for this current scourge. Nor should we lose sight of the excessively segmented character—in many cases, minority and select—of those members of the public who are attracted by archaeotourism and archaeology as a cultural product (Ortega and Collado, 2018), however much this may seem to be currently in fashion. On many occasions, it will be up

to those leading archaeological projects to dampen excessive enthusiasm and to implement a suitable resource management policy so as to only undertake those that can ensure the integral archaeological practice under discussion here.

#### **2. 4. Opportunities: training, archaeotourism and development**

Notwithstanding the problems arising from the commodification of archaeology, it stands to reason that archaeological heritage as a tourism product offers many opportunities—due to the public’s growing interest in the aforementioned ‘archaeotourism’ (Pérez-Juez, 2006). It is both a setting and pretext for educating the citizenry and a driving force behind the development of local economies, at least in the sense that it sets in motion diverse aspects of the different dimensions intrinsic to heritage, in general, and to archaeology, in particular.

As will be seen below, it would seem that those archaeological projects that place the spotlight on student education and also on creating, through the adequate transfer and tourism and cultural exploitation of their results, opportunities for territorial development, will be able to hold their own in such a complex field as archaeological heritage research and recuperation—characterised by the uncertain future of projects and the commendable efforts made to ensure their continuity. So as to develop the type of archaeology that leads to development and the commitment of stakeholders to its practice and to revitalising the territory by generating value, it is necessary to implement measures as regards archaeological heritage management. These ‘private sector’ management practices should be capable of administering archaeological heritage in a holistic sense, without neglecting any of its interpretations or implications, and with an entrepreneurial mindset (Andreu, 2019b; Magalhães et al. 2018). Projects should also have sufficient freedom of action to include the contributions of civil society that adequately promote heritage, which is our main concern. Only in this way will it be possible to enable civil society to leverage the results of archaeological research to implement initiatives that may have a greater impact on the territory than our own projects.

### **3. ARCHAEOLOGICAL HERITAGE: CHALLENGES ARISING FROM ITS MANAGEMENT**

In recent years, there have not only been important advances in archaeological thought. A series of paradigms of action relating to archaeology and heritage, which have attempted to place the accent on social issues (Díaz Cabeza, 2010; Díaz-Andreu et al, 2016) and, therefore, on the transfer of the social uses of the discipline and archaeological heritage per se (Vaquerizo, 2018), have also begun to take root. In all likelihood, this has resulted from its maturity as a scientific discipline and the challenges that it has had to face. Thus, also from the perspective of the aforementioned public archaeology, there have been calls for the development of an integral archaeology. Not only because it converts the recuperation of historical documents and information in the line of action of any field activity, but also because it attempts to encompass research and preservation, without, of course, neglecting the transfer of results to society and the economic and

tourism exploitation of the place, if deemed appropriate. As already observed, these aspects are those that, when all is said and done, generate value.

Indeed, this has been the integral archaeological model and the driving force behind the value chain of heritage, which we have been applying in the Roman city of Los Bañales over the past few years (Andreu, 2016; 2019a) and which we are also replicating to some extent in Santa Criz de Eslava. So, not only in this project but also in many others in Spain this type of archaeology has proven to be the best way of integrating field- and laboratory work, focusing on the heritage object itself, in this case an archaeological site, into a comprehensive heritage management project. As has been stressed time and again in manuals and treatises on cultural heritage management (Pérez-Juez, 2010), archaeological excavations should envisage activities that generate knowledge through the application of techniques inherent to the archaeological method—namely, prospecting and excavating. But there is also a need for interventions aimed at better understanding heritage—based on the very efficient methods of studying and analysing materials from ancient excavations and on historiographical review—its adequate dissemination—with the accent on its cultural management, dissemination and socialisation and on the communication that makes it intelligible—and its protection and preservation for future generations, always as an essential challenge. Thus, it is almost mandatory to create entirely multidisciplinary teams with the wherewithal to meet the challenges posed by any archaeological site, as to both research and management, in the twenty-first century. Obviously, this challenge requires investments that are seldom made in current archaeological projects, which practically always have to subsist on shoestring budgets. However, it is true that recourse to the ‘total’ integral management of archaeological sites by teams led by universities and advanced research centres can make an important contribution to the adequate introduction and subsequent implementation of this management model, which has proven to be scientifically and socially successful, in the field of archaeological heritage.

In this proliferation of interpretative paradigms aimed at gaining a better understanding of the current challenges in archaeological research, the so-called ‘community archaeology’ has gone from strength to strength, at least in Spain (Díaz-Andreu et al. 2016; Walid and Pulido 2014). This usually puts the emphasis on the generation of scientific knowledge intrinsic to archaeological and historical research by members of the local communities most directly related to the archaeological site in question. It has been held to be particularly appropriate for allowing communities—especially in the countryside—to identify with archaeological heritage, owing to their proximity. It is therefore these communities, to whom it belongs, to a certain extent, more directly as a cultural heritage, who should ultimately strive to safeguard and promote it.

Besides the problems that may arise from taking this paradigm at face value—with the consequent general overuse of the ‘citizen scientist’ prototype, as has sometimes been observed—it is true that there are few elements with such great potential for identity and community building as archaeological heritage. For this reason, the sustainability of

archaeological projects hinges on striking an adequate balance between them and local communities, namely, their real stakeholders. Certainly, it is essential to take these communities into account in any such project, for it is they, due to their proximity to these sites, who are expected to commit themselves to their future preservation and to transmitting their heritage values. This is especially important at times when archaeological fieldwork is less intense and research teams are thinner on the ground.

In this connection, a paradigmatic experience in Navarre over the past two years has been European Heritage Days (EHD), organised by the Directorate-General for Culture of the Government of Navarre, through its Historical Heritage Service, on a certain date or dates—normally at the end of September. During the celebration of this participatory cultural event, the directorate-general requests the different ongoing heritage projects in Navarre—led by town councils, cultural and neighbourhood associations, foundations, etc.—to put forward original proposals whose objective is to engage the citizenry with their historical, artistic and archaeological heritage by making it more attractive and intelligible to them. One of the thematic seminars revolving around the archaeological site in Santa Criz de Eslava, held two years ago, focused on its epigraphic heritage, also allowing the rural public to familiarise themselves with the value of archaeological materials, which for different reasons had ended up in private collections in the municipality of Eslava, and to understand them as collective assets owned by all.

Understood in the strict sense of the word, we are of the opinion that community archaeology should also be orientated—as has been the case in the work carried out in Los Bañales de Uncastillo over the years—towards involving the younger members of the communities close to the site in recuperating their heritage, insofar as this is the path that should be taken in the future. The collaboration agreements that, in the framework of the projects for innovation in education promoted by the Directorate-General of Education of the Government of Aragon, have been signed between the Los Bañales research team and the Reyes Católicos Secondary School, located in Ejea de los Caballeros, the main town of the district in which the site is located, are a good example of this. Thanks to such agreements, a week has been set aside for humanities students, who have just completed their secondary schooling, during the summer excavation campaigns at the Los Bañales archaeological site, so as to enable them to work hand in hand with the archaeologists responsible for the project. The aim of this initiative is not only to allow them to familiarise themselves with the work patterns inherent to scientific archaeology—thus fostering a vocation to research among collectives usually far removed from the field—but also to engage those who will ultimately be responsible for its future preservation and revitalisation with the archaeological site.

The main virtue of this community archaeology paradigm is perhaps its undeniable capacity to generate consensuses on the intrinsic values of an archaeological site, understood as the shared, almost identity-related, legacy of a community. In Spain, there are obviously already a number of paradigmatic examples of how the potential of

social media can be leveraged to achieve this end, some of which have been theoretically analysed in the literature (Rodríguez Temiño and González Acuña, 2014). To a certain extent, we have attempted to replicate them in the Los Bañales and Santa Criz de Eslava projects, alike, with diverse posts on the Facebook fan pages of both sites.

Furthermore, much has recently been said about Spanish archaeological heritage project sustainability and also that of the country’s heritage per se, which often depends on the former (Rodríguez Temiño and Afonso, 2019; Corbí, 2013). Certainly, and especially in the university system, the funding of archaeological projects has been left to the discretion of the public administrations that, in many cases since the start of the crisis in 2008, have withdrawn it from archaeological research projects, prioritising, at best, those exclusively related to heritage restoration and protection. In point of fact, that crisis has contributed to reduce archaeological research in Spain to the very minimum and has led to quite a few changes in how the profession and its daily practice are conceived. Only some projects, committed to what could be called a ‘sustainable archaeology’, have been able to find additional funding sources, such as crowdfunding, by harnessing the power of communication and, above all, by building community around archaeological heritage.

The Santa Criz de Eslava project, for instance, has been awarded the MECNA seal, with which the government of Navarre has authorised the site to receive private donations—by the way, the region has passed a patronage act that is pioneering in Spain. Through Mecenalia, the body tasked with managing cultural patronage investments, the project has received some meagre, but nonetheless valuable, donations, which, among other things, has made it possible to organise the retrospective archaeological exhibition entitled, ‘Santa Criz de Eslava, reflejos de Roma en territorio vascón [Santa Criz de Eslava, reflections of Rome in Vascon territory]’ (Andreu et al., 2019). Owing to the fact that the exhibition included some of the most representative archaeological materials recuperated from the Roman city, the number of visitors to the site has risen notably over the past few years. This practice, along with others that we have had the opportunity to experiment with in Los Bañales, underscores that, given the multifaceted nature of archaeological heritage, it is possible to encourage the citizenry to collaborate from different perspectives, resulting in what some have rightly called ‘committed archaeology’ (Marcos and Reyes, 2014).

Obviously, there are some companies or individuals who will only become involved in ongoing archaeological projects in which, for example, the educational activities envisaged in them or their economic impact on the territory are tangible, thus making it advisable to continue with fieldwork uninterruptedly. This is indeed the case in Los Bañales, where as a result of the intensive educational activities carried out at the site, several local residents annually contribute sums equivalent to the funding of part of the per diems for the field training of students during the summer excavation campaign.

On other occasions, however, the emotional ties between the donators and the locality in which the site is to be found—or merely their passion for the archaeological

remains in question—will suffice to give rise to the identification described above and to spur the generosity of individuals. Needless to say, an absolutely viral and very close archaeology is necessary to achieve this aim. This type of archaeology should strive to raise public awareness as a way of building community and a shared identity around archaeological heritage (Andreu, 2019a). It should also use communication tools and networks as professionally as possible with an eye to conveying the idea that archaeological sites have a life throughout the year and not only during excavation campaigns. Evidently, this requires more work on the part of research teams, but the rewards are well worth the while.

#### **4. THE ROLE OF UNIVERSITIES: SOME EXPERIENCES**

In light of the foregoing, it is apparent that archaeology, at least in Spain, is currently immersed not only in a process of self-review as a scientific discipline, but also in a much clearer process of greater openness, socialisation and innovation of which it is crucial to make the most (Fernández, 2012; Almansa, 2018a). The lack of resources, the increasingly greater challenges posed by archaeological projects and, in short, the lack of public investment means that it is necessary to implement hitherto unused methods that, as already noted, make archaeological research possible and viable, thus also contributing to the sustainability of the heritage elements comprising its object of study. Furthermore, their fortunate and adequate management has a positive impact on local economies. In this context, and in view of the need to review the statutes—and even the competencies—of professional archaeology, we believe that universities and advanced research centres can remedy some of the shortcoming that, due to a lack of means, are affecting some ongoing archaeological projects.

The experience gained in Los Bañales de Uncastillo and Santa Criz de Eslava in recent years has shown that quality research should be the aim of that ‘integral archaeology’. It is not for nothing that archaeology is, and should continue to be, the generation of historical knowledge and information on past societies (Gutiérrez Lloret, 2001). This type of research, which should endeavour to be transparent and also highly innovative, can often only be conducted efficiently when it involves open and balanced teams. On many occasions, these teams can only be created—or at least with greater ease—at universities, despite the inadequacies and the fact that there is still plenty of room for improvement (Gutiérrez Lloret et al., 2017; Bernal-Casasola, 2018). Notwithstanding the sometimes baseless misgivings that this causes in the archaeological profession, it is true that university research can be, and is often, an excellent way of revitalising archaeological projects. Indeed, universities are normally open to collaborative work, to which end the Spanish Ministries of Universities and Economy and Competitiveness, among other bodies, launch specific funding calls.

The drop in archaeological activity due to the lack of resources has converted university research centres into key spaces for starting up not only more open projects, but also more competitive and international ones. For instance, the available budgetary

resources for our project in the Roman city of Los Bañales would never have allowed us to undertake geoarchaeological work at the site. However, this has been possible thanks to the synergy and collaboration between our team and the Universities of Hamburg and Trier (Germany). During five years, teams from both universities have carried out geomagnetic prospections at the site, whose results are still in the process of being studied before their publication.

On the other hand, given the pedagogical character of this research project, it is not difficult—in fact, it is something that occurs naturally—to encourage the students themselves to perform minor research tasks, which allow for continuous work at the site and for generating significant historical information, a subject broached above. As a matter of fact, it is frequently easier to obtain research grants for student work relating to the site from those institutions awarding them than funding exclusively for archaeological interventions from the different public administrations.

In this work, which is committed to collaborative and innovative research—actually intrinsic to the essence of universities—the creation of open, interdisciplinary teams is also very helpful, for in many neighbouring countries—especially in Northern and Central Europe—archaeologists are looking for projects in Southern Europe in which to train students in field- and clerical work, owing to the fact that they do not have such important archaeological sites as those to be found in the Mediterranean.

A good example of this is the Hispano-French Archaeological workshop organised by the Université de Pau et des Pays de l’Adour in Los Bañales from 2010 to 2014, which enabled French—and some Spanish—students to familiarise themselves with the challenges of research in classical archaeology, thanks to the specific funding for joint Hispano-French projects that it received in the framework of the cooperation agreement signed between Aragon and Aquitania (Andreu and García López, 2012). If, as we have contended for some time now (Andreu, 2018), the aim is to conduct open, plural, hybrid, pedagogical, innovative and transparent research—whose results are also transferred to society via suitable channels—universities are doubtless the most appropriate institutions for applying those principles, converting them into key components in the adequate—or at least integral, as already noted—management of archaeological heritage.

It should be stressed yet again that to revitalise archaeological heritage properly it is essential to make it more intelligible to the public at large. There are many approaches that can be employed in archaeological research. But the most protracted projects that have managed to obtain the largest amount of resources in Spain have been, without a shadow of doubt, those in which archaeology has contributed to education in both the university and school contexts, thus fostering a scientific calling in sectors of society far removed from the challenges of research.

In Spain, the Ministry of Education and, primarily, the Spanish Foundation for Science and Technology (FECYT) currently offer universities and schools funding lines.

In those educational activities, moreover, the involvement of young students, even undergraduates, can be a decisive factor once they have had the chance to experience archaeology—and the site that is contributing to their training—with real passion. They can then transmit that passion to other members of society who, in many cases, end up connecting with the intrinsic values of the site in question. Additionally, there can be no doubt that the new professional profile of archaeologists requires that they develop their communication skills, among others, of which they will have to avail themselves in their future work as archaeologists, researchers or cultural heritage managers.

During these years, we have certainly confirmed the principle that states that ‘parents end up going where their children go’. The archaeological site in Los Bañales has been visited by dozens of students from universities and schools that, each year, have chosen the site as a field trip in the framework of secondary school and baccalaureate modules relating to history, art and heritage and for whom we have published specific education materials that have been a great success. Additionally, in Santa Criz de Eslava—a site that, as already noted, has been excavated, as it were, ‘behind society’s back’—the agreement signed between the University of Navarre and Eslava Town Council, on the occasion of the centenary of the discovery of a milestone in the area in 1917, with a view to revitalising the place, included the design of an educational programme on the Roman city for school children of all ages in the Comarca de Sangüesa. During the programme, which was managed by teacher training and history undergraduates—with the advice of students taking the archaeology degree course offered by the Faculty of Philosophy and Literature of the University of Navarre—there was a great deal of engagement between the young monitors, the school teachers attending the workshops and the students and their families.

If we take into account the public’s growing appreciation for experience tourism, an enthusiastic student, forming an active part of the site’s research team—as has been the case in Los Bañales and in Santa Criz, especially in the past few years—is capable of conveying the crux of the historical and archaeological dilemmas of the site much more clearly than any other stakeholder. Indeed, at the start of the activities aimed at revitalising a heritage object, as we have had the occasion to observe elsewhere (Andreu, 2018), we are of the view that passion and viralisation should form the basis of the communication strategy. This contributes to the success of archaeological projects and, above all—and this is what most interests us—to their sustainability and that of the heritage being researched.

Understandably, promoting educational activities at archaeological sites is not only important because it contributes to socialising a heritage that belongs to all or because it allows—through, for example, the increasingly popular learning-service method (Uruñuela, 2018; Geiger, 2004; Egea et al. 2018)—for obtaining funding for ensuring the continuity of projects, but also because it converts them into cultural centres with an intense activity that contributes to their adequate management.

The cultural management—with the organisation of workshops, talks, seminars, exhibitions, guided tours, etc.—of an archaeological site as a way of revitalising it has become one of the most efficient methods for preventing the plundering and deterioration of heritage sites. Albeit not a foolproof method, the advantages of contributing ‘value’ to an archaeological site in the form of activity do not only lie in keeping plunderers at bay, but also in stressing its importance for the territory and its local communities who, as already observed, will ultimately become committed to its protection. By our reckoning, this type of heritage management should also be creative and innovative, sustainable—these types of activities should, if possible, generate additional resources that can then be reinvested in the project in question—totally proactive—not only testing new models, but also performing benchmarking on the basis of observation and imitating successful archaeological projects in this respect—and, of course, strategic, namely, that they should be central to the project in question, rather than being mere window dressing or occasional initiatives.

In recent years, there has been a proliferation of tools for digitally documenting archaeological heritage, not only for the purpose of research but also for that of dissemination, plus many timely recommendations on how to apply them (López-Menchero et al., 2017). An adequate synergy between those capable of collecting data for generating 3D models in the framework of the so-called ‘virtual archaeology’ and those with the ability to apply post-processing techniques to that material and to analyse it scientifically is yet another of the incontrovertible contributions that universities can make to archaeological heritage management, in which virtual environments are here to stay (Champion, 2014).

Moreover, the use of new technologies has also been fundamental for engaging the public at large with heritage projects. In this connection, the creation of virtual museums has proven to be a valuable resource, thanks to the immediacy inherent to digital formats, for allowing both the general public and specialists, in a sort of collaborative learning and knowledge generation process, access to the archaeological materials that have been recuperated from sites (Santacana and Martínez Piñol, 2010). In our view, the Virtual Museum of Santa Criz de Eslava (<https://sketchfab.com/santacruzmv>) and, especially, that of Los Bañales (<https://sketchfab.com/banalesmuseovirtual>)—both of which have also generated unique resources for heritage management in situ—are good examples of those synergies that university-related activities can of course generate (Andreu and Serrano Basterra, 2019).

## 5. CONCLUSION

Nowadays, between 3,500 and 4,000 visitors participate in guided tours of Los Bañales de Uncastillo every year. Since 2017, the year in which the guided tours began, Santa Criz de Eslava has received a similar number of visitors. Visitors to both sites appreciate the fact that it is the university students participating in research tasks there who receive them as part of their practical training. Their passion and enthusiasm rubs

off on visitors, while also creating a bond of identification that can only redound to the good of archaeological heritage. By the same token, the fact that those students, guided by their professors, who are also the leaders of the research projects in question, are capable of undertaking some of the research tasks required by these sites in pursuit of a truly integral archaeological practice—together with the paradigm offered by Spain, a country in which there are sites, where excavations have been carried out for nearly 100 years, managed by university research teams—justifies the role that universities can play in revitalising archaeological heritage. Similarly, they also contribute to opening up channels between the archaeological record and society, between historical documentation and the transfer of that scientific knowledge to the citizenry, two aspects defining the main endeavour of universities.

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<sup>2</sup> As regards the author's bibliographic references, these are available in his profile on Academia.edu (<https://unav.academia.edu/JavierAndreu>). Similarly, due to the lack of space, photographs of the different activities aimed at the scientific revitalisation and tourism promotion of the sites referred to above have not been included. However, readers are advised to consult the presentation of this work at the International Congress PATTERN/Archaeological heritage, new technologies, tourism, education and social profitability, held in November 2019, a necessary nexus with abundant graphic material and further information on some of these initiatives (<https://bit.ly/2sQe3AK>).

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