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ACESSIBILIDADE, PATRIMÓNIO E PROJETO. RE-ARQUITETURAS PARA TODOS
ACCESSIBILITY, HERITAGE, AND PROJECT. RE-ARCHITECTURES FOR EVERYONE
ACCESIBILIDAD, PATRIMONIO Y PROYECTO. RE-ARCHITECTURES PARA TODOS

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RESUMO

Introdução: Projectar para proporcionar ao Património Cultural novos ciclos de vida requiere que este seja dotado de novas funcionalidades, que seja capaz de assegurar conforto e segurança, e que também seja melhorado e facilitado o seu uso por parte de todos os seus utentes. Esta última questão da acessibilidade é entendida actualmente como uma condição básica de carácter transversal que deve estar presente no processo de projecto do início ao fim.

Objetivos: No ensino da Arquitectura as questões ligadas à acessibilidade são geralmente tratadas como matérias colaterais, ou como um assunto acessório; contudo se se considerarem como um verdadeiro tema projectual, talvez se obtenha um maior compromisso e engajamento por parte dos futuros profissionais.

Métodos: Análise do *estado da arte* a partir de vários estudos publicados e dos problemas relacionados com a sua aplicação. Serão também analisadas as experiências dos estudantes na sua aprendizagem académica. Neste sentido trabalhou-se com base na intervenção nas ruínas do Mosteiro de San Antón em Castrogeriz, situadas no caminho de Santiago.

Resultados: Quando a acessibilidade é tida em conta desde o princípio do projecto, como um mais um requisito, obtém-se melhores soluções arquitectónicas.

Conclusões: Aprofundar a aprendizagem das problemáticas do uso ao alcance de toda a população do nosso Património Cultural permite abordar um dos ingredientes mais significativos da arquitectura: a sua percepção sensorial. As reflexões à volta dos trabalhos em Castrogeriz permitem extrair algumas ideias capazes de contribuir para o debate disciplinar acerca da acessibilidade.

Palavras-chave: Acessibilidade; Património Cultural; Projecto Arquitectónico; Aprendizagem; Percepção sensorial.

ABSTRACT

Introduction: Designing to bring new cycles of life to Cultural Heritage requires providing it with new functionalities, making it appealing and safe, and also improving its conditions of use for all individuals. The third issue, accessibility, currently has to be a basic, cross-sectional requisite incorporated in the project process from beginning to end.

Objectives: In Architectural schools, the matter of accessibility is usually treated as a collateral issue or as a secondary subject. However, if it is considered to be an authentic project substance, future professions will probably be more committed to it.

Methods: Analysis of the *state of the issue* based on various published studies and of the problem areas involved in applying it. The students' experiences in their training were also analyzed, based on their work on the ruins of the San Antón Monastery in Castrogeriz, on the *Camino de Santiago* [The Way of St. James].

Results: When accessibility is considered from the beginning of a project, as just another requisite, better architectonic solutions are achieved.

Conclusions: Focusing on learning about the problem areas involved in the use of Cultural Heritage by all people makes it possible to dig deeper into one of the most significant ingredients in architecture: sensory perception. Reflecting about the work in Castrogeriz can be a source of ideas that contribute to the architectonic debate on accessibility.

Keywords: Accessibility; Cultural Heritage; Architectural Project; Learning; Sensory perception.

RESUMEN

Introducción: Proyectar para poner al Patrimonio Cultural en nuevos ciclos de vida requiere que sea dotado de nuevas funcionalidades, conseguir confort y seguridad, y también mejorar las condiciones de su uso por parte de todas las personas. En nuestros tiempos esta última cuestión, la accesibilidad, debe de ser un requisito básico de carácter transversal que tiene que estar presente en el proceso del proyecto desde el principio hasta el fin.

Objetivos: En la enseñanza de Arquitectura las cuestiones de accesibilidad se suelen tratar como temas colaterales, o como materias auxiliares; sin embargo si se consideran como auténtica sustancia proyectual probablemente se consiga un mayor compromiso de los futuros profesionales.

Métodos: Análisis del *estado de la cuestión* a partir de varios estudios publicados y de las problemáticas de su aplicación. También se analizaron las experiencias de los estudiantes en su aprendizaje. En este sentido se trabajó en la intervención en la ruinas del monasterio de San Antón en Castrogeriz, en el Camino de Santiago.

Resultados: Cuando la accesibilidad se considera desde el principio del proyecto, como un requisito más, se obtienen mejores soluciones arquitectónicas.

Conclusiones: Profundizar en el aprendizaje de las problemáticas del uso por todas las personas de nuestro Patrimonio Cultural permite ahondar en uno de los ingredientes más sustanciales de la arquitectura: su percepción sensorial. Desde las reflexiones alrededor de los trabajos en Castrogeriz se pueden extraer algunas ideas que contribuyan al debate arquitectónico sobre la accesibilidad.

Palabras Clave: Accesibilidad; Patrimonio Cultural; Proyecto Arquitectónico; Aprendizaje; Percepción sensorial.

INTRODUCTION

Traditional architectonic concepts like recovery, reuse, regeneration, or even repair, have become surpassed by a new contemporary attitude: reactivate obsolete architectures and prepare them for a new cycle of life. Among such structures are the buildings, or parts of them, that have survived past life stages, as well as infrastructures and even landscape. Needed are new design perspectives, with a good dose of creative and reinventive capacity, proposals for appropriate uses, and work incorporating sufficient liberty and respect for what has been inherited. Within this sphere of reflection lies, by its own nature, actions on cultural heritage.

A powerful, modern requisite is embedded in this architectonic panorama: providing accessibility. Our building, cities, and landscape have to allow the best use and enjoyment for the greatest number of individuals. Since the end of the 80s in the 20th century, the idea of *Universal Design*, or *Design for Everyone*, has gradually become ever more extended. This universal approach, led by Ron L. Mace, an American architect and designer who was a wheelchair rider, has been sinking in little by little. The objective of this movement is to attain products and environments usable by all people without having to resort to costly adaptations or specialized designs, or specific solutions for concrete groups, to benefit any single individual no matter their age or level of ability, whether physical or intellectual (Mace, 1990).

1. DISABILITY AND ACCESSIBILITY.

When we architects design, we have to recognize that we generally do so thinking about mainstream individuals. We normally think about people similar to ourselves, with all their capabilities available, in both physical and mental terms. This opinion is less than substantiated by even a glance at an environment wider than the usual. We immediately find that there are many people who find it hard to carry out activities in the spaces we build, and we tend to think, *Well, the difficulties arise because they have a disability due to physical, mental, or emotional problems.*

Traditionally, *disability* has been understood from a medical point of view, given that it was considered an endogenous condition of the individual, whether permanent or temporary. This viewpoint has gradually changed to a wider vision that includes the social context and the environment in which our actions are performed. It now tends to be defined as “the expression of a functional, cognitive, or emotional limitation in a social context” (Puga, 2004, p. 21). From this perspective work on architectonic projects needs to try to provide a setting in which individuals with disability can “continue to be *normal*, to continue carrying out the activities needed for the development of a *normal* life” (Puga, 2004, p. 25). If the conditions that generate disability are found in the setting, due to difficult access for some individuals, then we have to improve the venue to make it easier.

In this framework we can understand the appearance of the term *accessibility*. The Royal Spanish Academy Dictionary defines it as: the quality of being accessible. And accessible means: having access; being easily accessed or treated; easily comprehended, understandable. In the sense that interests us, accessibility can be defined as the quality of easy access to the surroundings and to the spaces so that any person --even those with a disability-- can reach a place, an object, or a service.

Accepting the existence of this problem to approach and solve its consequences involves an even greater advantage. If the functional demands of settings could be reduced, this would mean an improvement for anyone with a limitation and also for the rest of the population: everyone would benefit from the results. That is how this demand arising from the needs of some social sectors has become a “resource-basic requirement of a *cross-sectional nature*” (Moral, 2011, p. 159).

2. REGULATIONS VERSUS ARCHITECTURAL BARRIERS

In the past decade or so various regulations instituted requirements for architects, among others, to face and solve these problems that affect wider and wider sectors of our society. In those times references were to *architectural barriers*, a negative term that to a certain extent invoked being “a question of charity, of welfare, of sensitivity, of mere good will” (Pérez, 2011, p. 236). Soon concepts such as accessibility became involved. New terms like handicap and disability arose, while measures to eliminate the barriers that distinguish some individuals from others, the able from the disabled, were adopted; always with the intention of favoring the possibilities of those who did not have full use of all faculties. The legislation of that moment was set within this framework, and its enforceability led to establishing actions; that is, trying to eliminate architectural barriers.

However, this approach is extremely limited, given that it seems to affect a very small part of the population, it does not consider the design of spaces from the beginning, it does not attempt to analyze the causes generating barriers so that they are not created again, and it did not bring about the internalization of the problem by numerous protagonists: the planners. The thing is, if the planners are only involved due to the application of a regulation, the response tends to be reductive, produced by the impulse of an obligation. This means that accessibility is generally seen as a factor outside of the set of decisions making up the project process; such factors are considered in some way unconnected, imposed obligations, to be incorporated in the final stages and usually tackled by looking for special solutions to specific problems, or simply based on technology.

Projects solved from these approaches satisfy the regulations --they eliminate architectural barriers-- but there is a paradoxical consequence: they are generally discriminatory because they end up constructing a parallel setting for people with disability, the able over here, and those who are not, over there.

3. DIVERSITY AND DESIGN FOR EVERYONE

As we said before, we architects tend to think about prototype individuals when we tackle projects, but we could ask ourselves: what would happen if we considered that those of us who make up our society are much more diverse; that our society also includes children, expectant mothers, the overweight, the ill, and also those affected by a handicap (whether temporary or permanent), and those who have a disability (physical or mental) as well? If we believe that we are a tremendously diverse collective, we should design so that our spaces and cities can be enjoyed by everyone. To understand these requirements, a new sensitivity is also required.

It is surprising how the designer's perception changes if, instead of talking about disabilities, we refer to different degrees of ability; if, instead of thinking about solving some problems in regulations, we internalize accessibility as just another point of the project. And if facilitating access in projects is also considered a factor that improves conditions of use for everyone, even for those without limitations to their abilities.

Accepting diversity, and the fact that there is room in it for the existence of many groups that necessarily require appropriate environments for their full participation as citizens, leads to the approach that it is better to design for any individual, without distinction. This brings up the concept of *Design for Everyone*, whose goal is that environments can be used by all individuals, to the greatest extent possible, and with the characteristic that this idea is included from the very beginning of the design process. This concept, appropriately used, becomes the main tool to achieve *Universal Accessibility*, so that all settings are "understandable, useable, and viable for all individuals in conditions of safety and comfort and in the most autonomous and natural way possible" (Spanish Law 51/2003, p. 7).

Although the goal of *Design for Everyone*, and consequently *Universal Accessibility*, attempts to extend their benefits to all the members of society, obviously there are groups that have greater need of the advantages provided. The most important are those made up of people with permanent disabilities, people with temporary disabilities, or the elderly. But they should also include --in the concept of *others*-- the population formed by children, pregnant women, individuals pushing strollers, those carrying heavy or bulky objects, etc. We should also think about new collectives such as immigrants or tourists, about language barriers, or about the progressive aging of our visitors. Consequently, the benefits from applying these measures are of extraordinary scope.

4. NEW PARADIGMS FOR ARCHITECTURAL DESIGN?

At the present time, diversity having been accepted, design projects have to achieve the desired *Universal Accessibility*; that is, that the benefits of the different services offered can be enjoyed regardless of age, sex, cultural origin, or ability. To carry out this commitment, it is necessary from the beginning to be aware of the requirements involved in the actions and basic activities: Access, Circulate, Communicate, Utilize. Really, these are requirements demanded of any project, except for the fact that, for accessibility, the diversity of the users must be considered. If this issue is kept in mind from the initial stages of the project, if it is implicit in the project approach¹, it will be solved naturally like any other project specification. We can even imagine that the result could turn out enriched.

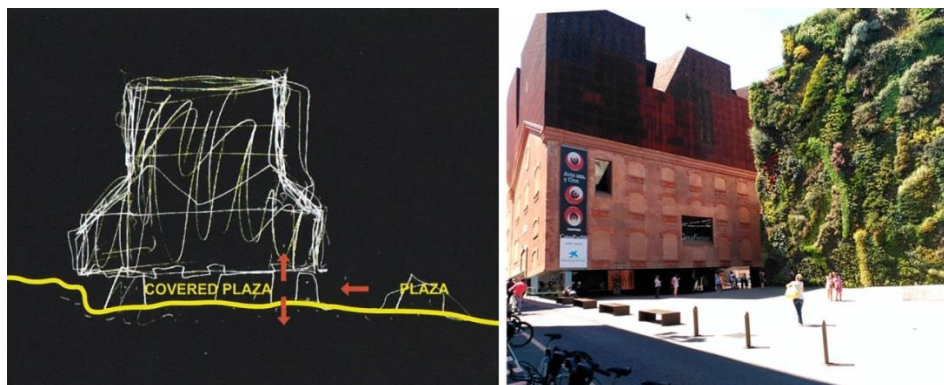


Figure 1. Sketch of the project and view of the CaixaForum.

Source: Drawing: Herzog & De Meuron, *El Croquis* nº 129-130, p. 339. Photograph: Jové Sandoval, José María.

¹ In the debate on the different concepts that describe the person-environment relationships Iwarson and Staehl (2003) affirm. "Only if and when human diversity becomes a natural starting point for architectural design and societal planning, the need for special terms will vanish" (p.63).

From this perspective we can analyze, for example, the CaixaForum in Madrid, a project by Herzog & De Meuron. The solution for access to it is a gentle slope that ascends from the *Del Prado* avenue, leading visitors towards the entrance to the museum. Here the hill, inevitable because of the difference in ground height, has been included from the beginning of the design, as well as the idea of converting the plot that previously held a gas station into a public plaza or square covering various parts of the program underneath [Fig. 1]. One of its most characteristic aspects, the buoyancy of the mass of bricks from the ancient thermal center, is established by both its perception from this space and by the structural solution itself. But this spot could have been solved in various ways. Perhaps by a system of stairs and horizontal platforms that would have given greater prominence to the building --by accentuating the difference from the lower level-- and the requirements for accessibility could have been shifted to the lateral street. However, the choice was made to continue the ground like a slight inclined plane that all individuals could traverse. It was after this initial decision that the regulations to adapt the design and fulfill more specific requirements would come.

That said, the concept of accessibility should not be reduced simply to mobility problems, because we would be shrinking the area of our diversity. We should not allow our perception to be reduced to the merely visual, because we would leave many of our senses untouched. Returning to the example of the CaixaForum, it can be pointed out that this building facilitates perception, of course that of visual perception but also many others: walking on and feeling the slope, being enveloped by the shade (and perhaps by its coolness), becoming aware of the weight of the building. There are also olfactory sensations from the smells that can be appreciated, if our sensitivity makes it possible, from the flowers in the plant wall. And, of course, there are sounds from the different areas in the plaza on our way inside.

These *experiences* require the users to put all their sensory abilities into play, which is why they normally go unnoticed. However, there are many people who have these cognitive capacities very developed, for example, those with problems in vision or hearing. Precisely these individuals will be the most sensitive to these values that pervade the architect's work. We can consequently deduce that if we understand our diversity and work with differing abilities --in positive, not with dysfunctions-- we will obtain better results in addition to solving what the regulations require from us.

5. ACCESSIBILITY IN HERITAGE SETTINGS

Dealing with accessibility in heritage settings requires working with the same tools described previously, and with the same attention to the diversity of the people who are going to use them. However, due to the special characteristics of heritage settings², there are some specific issues that have to be considered.

In these projects acquiring in-depth knowledge of the heritage element is crucial to proposing the most appropriate solution. It is necessary to know "how it was constructed, what its meaning is, and what its symbolism, its essence, and the feeling that permeates it are" (Juncá, 2011, p. 10). Such knowledge will make it easier to work with judgment, optimizing the element of heritage while solving the needs of accessibility.

It is also very important for the means for resolving these needs be carried out with caution and sensitivity to avoid overlaying materials, diverse building systems, support technologies, or assistive devices that could change the inherent characteristics of the monument. And, always, bearing in mind that the work must be reversible; that is, that the original state can be recovered. Another key issue is deciding which parts of the heritage element require accessibility, because including the entire extension of the element might be impossible, depending on its characteristics. This matter is important given that the work could represent a disproportionate action --in measures and cost-- or one that undermines the character of the heritage element. Both balance and pragmatism are thus required: "Let us not propose any intervention on our Heritage unless we are sure that this measure is going to be effective in matters of accessibility. Or said in another way, we have to avoid actions that are superfluous and ineffective, and that might additionally alter the Heritage" (Juncá, 2011, p. 11).

One more issue: It is essential to design an accessible route, especially in the area through which it passes, so that it promotes the greatest user knowledge of the heritage element. This condition has to do with what has been expressed before, especially with the overall project approach. We are not talking about only accessibility, but rather about the fact that the route, if it is well planned, will enable understanding of the monument and will transmit its history and its essence; that is, it will make the visitor feel *relation* and *identification* (Ibañez, 2010, p.125). Over the course of the route, there could be proposals for specific places, observation points, alternate pathways, general views, and partial aspects, all of which might offer numerous experiences and

² Some might ask themselves: What is the difference between action in the matter of accessibility in heritage settings and in other types of settings? The answer is that the rules and regulations on accessibility are really the same in both cases, except for the various sector provisions that may affect them. Design requirements to solve accessibility for our homes, for our workplaces, and for public buildings and spaces are the same as for heritage settings. The difference lies in how difficult it is to act on cultural heritage due to its specific conditions and its historical value, and because inaccessibility is often its very justification (Garcés, 2010). The design requirements established by accessibility regulations are stable and long-lasting, but they undergo constant review from implementation analysis and from research. That is the way it has been since the time of the first studies on providing the disabled access to public buildings (Parrot, 1980) up to the latest studies on strategies for adapting residential buildings (Fänge and Iwarson 2007).

perceptive sensations of every type --not just the visual--linked to the special characteristics of the building, ruins, or landscape. In short, it consists of using all the ingredients typical of Architecture correctly.

Lastly, it is a good idea to remember that Cultural Heritage currently plays a decisive role in territorial development thanks to the increase in interest in culture and to the development of tourism, with all the value-added such Heritage entails. Actions to improve accessibility and promote it will boost these ratios. However, they should always be accompanied by criteria for sustainability, among which the fragility of an element in the face of intense use has to be considered as well.

6. LEARNING, PROJECTS FOR THE SAN ANTÓN RUINS

Going deeper into these concepts requires a process of internalization that has to occur during learning. In Architecture schools, these questions are normally treated as collateral issues, perhaps because they have always been considered complementary subjects. However, if they are regarded as authentic design substance, greater commitment from future professionals will probably be attained.

With this in mind, during the 2015-2016 school year the Projects VIII subject --given in the fifth course of the "Architectural Fundamentals Degree" in the School of Architecture at the University of Valladolid (Spain)-- included a project that consisted of work on the ruins of the San Antón monastery. This is a monastery complex from which only the 14th-century church remains. It is located in the open spaces of Castile in a lovely valley with the Garbanzuelo stream flowing through it, alongside the *Camino de Santiago* [Way of St James]. Its link to the Saint James *Camino* was the geostrategic reason behind its location; its precise, carefully chosen placement, protected from the north and fully exposed on its southern exposure, plus the course of the stream and the availability of other fluvial elements such as springs or groundwater, presented many benefits so it could function autonomously. Nowadays its interaction with the landscape and its symbiosis with it are still evident.

Its most characteristic element is the extremely high arcade that rose over the *Camino*. Located between the Church, as a prolongation of it, and the now disappeared hospital, it is known as the *Puerta de San Antón* [Saint Antón's Gate]. Its mysterious, imposing presence has made it a milestone for the pilgrims that have to pass under its arcade on the stretch to Castrojeriz, during their journey to the city of Santiago de Compostela.

The project objectives consisted of recovering the ruins (understood as another element in the landscape) by adding lodging for pilgrims, tasks that would let the students reflect on criteria for working on a Heritage element, its efficient management, and its accessibility. With these premises, the students' work was based on the documentation existing about the monastery complex, the consolidation projects for its ruins, and a trip to the place. This visit permitted the students to delve in depth into the architectural characteristics of the monument, experience its link to the landscape, discover its potential, etc. The next approach to the architectural, topographic, and landscape characteristics was by means of a scale model of the area of activity.



Figure 2. Scale model of a proposal. The *Camino*, the ruins and the project.

Source: Project on the ruins of the San Antón monastery; Left: Torre Macho, Elena; Right: Cuadrado Señorans, Manuel.

CONCLUSIONS

The result of the work was very interesting, presenting widely varied solutions that covered the requirements posed: to construct lodging for the pilgrims following the *Camino* and to attend other visitors attracted by the monument itself [Fig. 2]. Work was based on the premise that the ruins had been consolidated for two decades, so the students only had to work *with* the monument.

To define the character of the project, the students had to consider that the lodging was a special use, only to provide a place to rest and wash up, and a temporary, night-only residence. For other visitors, those who wished to know the monument, a system of reception and information sites about the monastery, along with the possibility of visiting the ruins, were established. Obviously, both aspects were part of the same project and had to be resolved using the same design criteria.

The exercises worked on the presence of the architectural intervention and the dialog with the preexisting pieces, some from their view at a certain distance, in relation to the landscape, and others in the proximity, by means of their materiality, seeking contact and a tactile quality, even acting subtly on the *Camino* itself [Fig. 3]. Improved overall accessibility was posed jointly with the rest of the issues, as a single project. Decisions were made as to the routes of the pilgrims and of visitors, the placement of the lodging pieces and information sites, all in relationship to the ruins or to the surroundings and the predicted movements of the people.



Figure 3. Work on the *Camino* itself.

Source: Project on the ruins of the San Ant3n monastery; P3rez Fern3ndez, Iago.

The work was hard because of the difference of level between the *Camino* and the interior of the church, as well as the impossibility of knowing the potential of the plot because an archeological excavation would be needed. Many students proposed elevated routes (stilt house-type systems), somewhat distancing themselves from what was happening at ground level; others put themselves at the level of the ground and directly approached the problem of the area, its terrain, and the remains found there. In addition, some students truly worked with the land, searching for its potentialities, sculpting where necessary, constructing where required [Fig. 4].



Figure 4. Stilt house-type proposal. Sculpting the land.

Source: Project on the ruins of the San Ant3n monastery; Left: Murillo Murillo, Sergio; Right: P3rez Bezos, S3lvia.

The solutions proposed generally sought to produce an *experience* for the visitor. It should be remembered that the monastery ruins lent themselves to this quite well; the project elements made it possible to appreciate the magical atmosphere of that spot and to feel the passing of time, the solidity of its truncated form, and the cold and shadow of its historical walls, among other sensations [Fig. 5]. The placement of the project pieces linked with the most ideal routes (those that provided the best spots for observation), together with the proper choice of materials, attempted to help the visitor discover the best multisensorial perception and the most complete *knowledge* of the place.



Figure 5. The experiences on the route.

Source: Project on the ruins of the San Antón monastery; Left: Piedra Dueñas; Rebeca. Right: Torre Macho, Elena.

To achieve this, the projects used color, texture, material, lighting, shadow, sound, smell, acoustics, temperature, and questions such as form and substance, unique shape, volume, and contrast. All these resources are specific to an architectonic project, but, at the same time, all of them are also factors to be taken into consideration to facilitate physical, sensorial or cognitive accessibility (Ávila, 2015). The importance that the land, its strata, its differences in level, and its discontinuities acquire was also revealed. They all interact with the needs and condition of mobility, not as a problem but as an architectonic value. All of these instruments come from and belong to the world of Architecture, just as usefulness --the "*utilitas*" of the great Vitruvius-- does, which is ultimately the fundamental motive behind this endeavor to achieve universal accessibility.

These are certainly matters of use and perception, and attributes of form and space, in essence material concerning Architecture. However, these tasks have become more and more complex, they cover many more specific details (for example, *orienting oneself* and *tracing* the itineraries, or resolving typography, pictography, and furnishings). Consequently, they should be tackled in a multidisciplinary fashion, in reality, just as any other architectural project of a certain importance.

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