

Caring for human diversity and built heritage through design: a multiple case study enquiry

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Abstract

Inclusive design aims to accommodate as many people as possible by considering the diversity of human abilities and conditions during design. This raises challenges in relation to built heritage: proposals to make it more inclusive may encounter objections from conservation authorities. Our research aims to (1) explore this tension between the conservation of built heritage and the ambition to make the built environment more inclusive and (2) identify strategies that allow addressing it. Based on existing research, we first examined how the domains of inclusive design and built heritage conservation are related, where they conflict and strengthen each other, as well as how researchers with different backgrounds suggest to address them. Second, we studied six building projects, all located in Flanders, where built heritage and inclusive design meet. Due to the Covid-19 pandemic, we relied mainly on desk research. We identified challenges and issues that came forward in the development of these projects as well as strategies adopted to address them. Two cases – the focus of this paper – illustrate how built heritage can be an asset to provide high-quality care. Confronting them with four cases located on a historic university campus makes clear that built heritage can be made more inclusive, and might even contribute to inclusive design, and that this involves a time consuming process with transdisciplinary input.

Author keywords

built heritage; conservation; inclusive design

Introduction

Human abilities considerably differ, both across the population and within the course of a person's life. *Inclusive design* can be described as a design approach that aims to accommodate as many people as possible by being mindful of this human diversity (Heylighen et al., 2017). Understanding disability as a consequence of mismatched interactions between a person and the surrounding environment rather than a personal attribute, makes clear that such design approach raises challenges in relation to the built environment. If the built en-

vironment is to reflect and contribute to an inclusive society, major challenges lie in adjusting existing (historic) buildings to make them more inclusive (Heylighen et al., 2017).

Historic buildings may indeed have heritage values that are important to protect and preserve. In practice however, interventions in the historic fabric aiming to make a historic building or site more inclusive often face objections from heritage authorities. This may frustrate, discourage and confuse owners and managers of heritage sites and/or designers who are willing to contribute to a more inclusive built environment. Thus, a tension seems to exist between the conservation of built heritage and the ambition to make the built environment more inclusive. The research we report on focuses on this tension and how it is addressed.

Architects as spatial mediators have gathered experience in negotiating with different stakeholders and experts and mediating their different needs and advice in the design process. When built heritage is concerned, heritage authorities are typically one of the stakeholders architects negotiate with. In doing so, they might develop strategies in order to overcome tensions between built heritage conservation and other stakeholders' interests. Besides architects/designers, other parties may gather experience and develop strategies in dealing with such tensions on their own account. In this connection, we set out to investigate which challenges and issues arise when making a historic environment more inclusive; and what strategies are adopted to address these.

Approach

In a first stage, exploratory research and literature review allowed us to delineate the existing context and frameworks of the areas of inclusive design and built heritage conservation. In a second stage we studied six cases in two different settings, based on an extensive document analysis. This paper focuses on two case studies – *De Korenbloem* and *Karus* – that illustrate the challenges when redesigning built heritage to accommodate a care program. Both projects were designed by leading architecture firms in Flanders and Europe and reviewed by renowned agencies, e.g. the Flemish Gov-



ernment Architect¹ team or the jury of an international architecture award, which testifies to their architectural quality. The available documentation on these cases includes design material and presentation graphics, publications in (international) architecture magazines or books, texts written by the designers during or after the design process, and, in one case, scientific literature. The four other case studies provide insight into KU Leuven's approach towards making its historic university campus more inclusive. More information on these can be found in (Van de Bemdt, 2020).

The final stage of the research entailed a cross-case analysis and a confrontation of the findings with insights from the literature study. Note that this research was conducted during the Covid-19 pandemic. As a result, the insights gained through document analysis could not be verified by users' experiences.

Towards a more inclusive historic environment: a literature review

Historic buildings were often constructed long before inclusive design approaches started gaining interest. As a result, interventions may be needed in order to adapt the buildings to contemporary standards, so that they can be used and their conservation is ensured. Interestingly, research suggests that some elements in historic buildings better suit the needs of diverse users than contemporary interventions (Heylighen, 2012). Identifying where interventions are needed is thus an important step in making a historic built environment more inclusive. The major challenge, however, lies in balancing the needs of diverse users and the needs for the conservation of built heritage when they are in conflict (Heylighen et al., 2017). Interventions aiming to make a historic building more inclusive may raise objections from built heritage authorities when these interventions are thought to compromise heritage values. The accessibility legislation in Flanders, for example, makes an exception for a historic building if it is protected (Gewestelijke stedenbouwkundige verordening Toegankelijkheid, 2009). In this way, the accessibility of such a building becomes dependent on the professional judgement of the heritage expert, who has to weigh interventions for inclusion and heritage values. According to Foster (1997), conservationists sometimes object to alterations because of 'moral and ethical issues', as alterations may affect the building or site's historic interest adversely. One could, however, consider interventions to make a historic building or site more inclusive as a new layer, which would allow future generations to derive that our current society aspired to be more inclusive (Neyt, 2008). Solutions to do so are often proposed either by experts in built heritage conservation or by experts in inclusive design. Research by the latter suggests that political and financial support can be a successful motivator for addressing the need to render built heritage more inclusive (Nielsen Ask, 2015). The framework *Built Heritage for All* (Neyt, 2008) delineates a strategy to develop a heritage-accessibility plan, focusing on the multidisciplinary input of experts in built heritage and accessibility. Research from these sources also highlights the contributions of user/experts² (Heylighen, 2012; Heylighen et al., 2017; Neyt, 2008; Nielsen Ask, 2015).

Built heritage experts tend to focus on specific solutions for creating a more inclusive built environment. Two types of solutions are proposed: management solutions rearrange use and organization, facilitating navigation and communication (Van den Bossche, 2012); other solutions physically alter the historic fabric (Foster, 1997).

Creating a care environment in a built heritage context

Due to growing medical knowledge in the second half of the 20th century, hospital buildings became focused on providing care efficiently, rather than creating an agreeable environment for patients (Wagenaar, 2006). This led to care architecture with a uniform and institutional character, dominated by norms and standards and of questionable architectural quality, sometimes referred to as 'bedhouses' (Boie & Vandamme, 2015). Some care institutions want to address this lack of environmental quality for their patients (De Bruyn & De Vleeschouwer, 2014a). As research points out, inclusive design can contribute to creating qualitative care environments (Heylighen et al., 2017). The two following cases illustrate that (adaptive) reuse of historic buildings could contribute to creating a higher quality care environment.

De Korenbloem is a residential care facility for older people based in Kortrijk, located near a historic park site with two villas: the 19th-century neoclassical *Villa Landhuis*; and *Villa Portiek*, built during the interbellum. The design task was to extend the villas with residences for people with early-onset dementia and people who have had a stroke, as illustrated in Figure 1.

This project confronted the architects with several major design challenges. On the one hand, it required insight into the situation of people with early-onset dementia. How to introduce a feeling of home while ensuring that care can be provided efficiently? On the other hand, the villas needed to be conserved and restored, while their spatial organization did not allow reusing them as residential care facility. The architects proposed a 'network of little worlds', based on an ethnographic case study about Mary, a woman with early-onset dementia (Van Steenwinkel et al., 2014), and a spatial concept of networks based on the architects' experience and architectural background (Van der Linden et al., 2016). This concept was visually presented by the architects through a sketch of a resident's mental map (see Figure 1, left).

While the ethnographic case study offered insight into the experience of people living with early-onset dementia, the architects were able to translate the research findings to a spatial concept based on their architectural design experience. Retrieving knowledge through scientific research findings can be considered as a strategy to identify the needs of future users of the site. The translation of the research findings into a usable spatial concept is the merit of the architects, and using their professional experience and architectural background can be considered as a complementary strategy. The team of the Flemish Government Architect thus titled the project of *De Korenbloem* very accurately "Built heritage and reconversion

1 The Flemish Government Architect team aims to promote the architectural quality of the built environment. It advises public patrons in designing and realizing buildings, public space, landscape and infrastructure, and it stimulates the development of visions and reflection, with an emphasis on interdisciplinary and cross-sectoral initiatives.

2 "A user/expert can be anyone who has developed natural experience in dealing with the challenges of our built environment. User/experts include parents managing with toddlers, older people with changing vision or stamina, people of short stature, limited grasp or who use wheelchairs. These diverse people have developed strategies for coping with the barriers and hazards they encounter everyday." (Ostroff, 1997)



Figure 1. (left) Sketch of a 'mental map of a resident' (Studio Jan Vermeulen et al., 2013); (right) View of Villa Landhuis and the extensions housing residents with early-onset dementia, situated in a historic park (Müller, 2019).



Figure 2. Kanunnik Petrus Jozef Triest Square (Dujardin, 2017)

as carriers of care", referring to the role of the villas as built heritage in creating a feeling of 'homelikeness' by appreciating its qualities, and in using it as a means to draw external people to the site in order to acquire social inclusion.

The second case is the *Kanunnik Petrus Jozef Triest Square* in Melle (Figure 2). This project is situated on the historic site of the Psychiatric Center Caritas, currently known as *Karus*. However, many of the site's heritage values have been lost due to former interventions. The ambition to design 'the psychiatric center of the future' directly reflects the need for a higher quality in the care environment, not only because the buildings on site were considered outdated, but also because it acknowledges that it is not clear what the psychiatric center of the future should look like. Identifying and addressing the needs of future users is considered as a crucial aspect in this matter by Boie and Vandamme (2016) and by the management of the center.

As a strategy to identify these needs and ensure that the design solution reflects and meets these needs, BAVO initiated a working group with the current patients, staff, nurses, doctors and management. The approach to adopt a participatory design process resonates with the indication that user/experts could bring valuable information to the design table. This way, the user/experts are really involved in the design process, not merely as a stakeholder or an advisor with valuable information, but as co-designers (Boie & Vandamme, 2016).

While top-down financial incentives and management assumed that the historic buildings should be demolished, the working group soon revealed an appreciation for one of the buildings that had already been partially demolished. The work-

ing group argued to preserve this building as a 'monumental outdoor space' and to integrate it in the future of the center. This proposal posed an unprecedented design challenge, spatially and architecturally translated by architecten de vylder vinck taillieu. Their approach towards the building was to intervene cleverly and minimally, to only make spatial and material interventions where it is absolutely necessary.

While the building is not really inclusive because the architecture would not allow it to be used by all people, the use of the historic building as a monumental outdoor space in the context of a psychiatric center does promote social inclusion: the building contributes to removing stigma about psychiatric patients by drawing visitors to the site.

The renewed building raised awareness of the qualities of other buildings on site as well. Boie and Vandamme (2015) mention the perception that the open floor plan of the historic pavilions makes them easy to rearrange. Pavilions from the end of the 20th century, characterized by endless and dead-ending corridors, seem to offer less possibilities for adaptive reuse.

Challenges

In the case of adaptive reuse, built heritage conservation policy demands that a building's function matches its capacities. In this regard, care functions in historic buildings tend to raise objections from built heritage authorities because such functions often require thorough interventions. Care institutions on the other hand, are not always keen on implementing such interventions as they may not recognize the potential opportunities of historic buildings. This came forward in both cases, where it was initially planned to demolish the historic buildings.

Both cases show that it can be very difficult to adapt a historic building with respect for its heritage values and at the same time accommodate a high-quality residential care function.

Furthermore, literature review shows that financial support can be a major factor to invest in making historic buildings inclusive. For *Karus*, building anew turned out to be better supported by care authorities than thoroughly renovating the existing building. Additionally, the financial support for care infrastructure is granted per bed, often resulting in the so-called institutional 'bedhouse'. Because of this, integrating built heritage in a care environment is financially discouraged, regardless of its qualities or opportunities.

Besides functional mismatches and financial issues, analyzing cases on the KU Leuven campus illustrates that authenticity of materials often complicates interventions towards accessibility (Van de Bemdt 2020). In several cases (historic) cobblestones are considered as an important aspect of the heritage site. However, they are hard to navigate, especially for people with an impairment, and have a major influence on overall accessibility and usability of a historic site.

Strategies

Bottom-up and top-down

In Flanders, both built heritage conservation and accessibility are regulated top down through spatial planning regulation. Without this regulation, many historic buildings would not be conserved and many public buildings would never be made accessible. In the case of *De Korenbloem*, the management wanted to replace the historic villas with a new structure but was not allowed to do so because the villas were listed as protected built heritage.

However, to determine which functions heritage buildings can accommodate, or which interventions are most suitable to make them accessible, a bottom-up approach seems inevitable and preferable. Inevitable, as there is no clear and detailed legal framework regarding inclusive design, let alone inclusive design of built heritage; preferable, as the case studies illustrate that users may deliver valuable contributions. In the case of *Karus*, consulting the users even led to the conservation of more buildings than originally planned.

Transdisciplinary input

The challenges faced with when creating a more inclusive historic environment, are very complex. Therefore, it is preferable to unite knowledge, insights and skills of experts in various disciplines. Architects and building clients' insights and ideas are enhanced by consulting several experts in fields related to a certain project. An invaluable contribution across several cases came from user/experts. The case studies as well as literature show that they can be involved in different ways. For one, an on-site audit with user/experts may reveal difficulties as well as qualities of a historic site (Heylighen, 2012). In the case of *Karus*, user/experts were involved into the design process as co-designers. For *De Korenbloem*, architects gained insight into the living world of user/experts through a scientific study (Van der Linden et al., 2016).

Taking time

Selecting and contacting (user/)experts and agencies takes time, gathering and processing their input even more. First, it takes time to identify the heritage values and needs for their conservation as well as the needs of future users of a historic site. Second, conflicting needs should be balanced during the design process. Based on these considerations, different solutions should be proposed, tested and evaluated by the different stakeholders.

Furthermore, as illustrated in the university campus cases (Van de Bemdt, 2020), valuable solutions might be rejected for invalid reasons. For example, the choice for concrete pavers to make a courtyard more accessible raised objections from built heritage experts, who preferred a pavement with a more historic look. Taking time for research turned out to be useful to make a strong argument about why the proposed intervention was nevertheless acceptable.

Opportunities

Historic buildings as incubators for inclusion

The projects for *De Korenbloem* and *Karus* both started from the assumption that historic buildings were not suited to ac-

commodate contemporary care. Gradually, the insight grew that these buildings could be used to organize functions that are complementary to residential care. Using built heritage as a more public part of the care environment invites people who are unfamiliar with the residents or patients to pay a visit. Facilitating social inclusion this way may help reduce and avoid stigmatization of residents and patients and contribute to their quality of life.

Built heritage as a means to improve mental well-being

A careful conservation, restoration or renovation can reveal and enhance the existing quality of a heritage site. In the case of *De Korenbloem*, for example, the architects associate the villas' rich interiors and spatial organization with the feeling of 'homelikeness' they want to introduce, with the aim to contribute to mental well-being (De Bruyn & De Vleeschouwer, 2014b).

Conclusion

The case studies reported on in this paper illustrate that the aim to create a high-quality care environment in a built heritage context may conflict with the conservation of heritage values. Through a multiple case study enquiry, we have attempted to identify the challenges and issues related to this aim, as well as strategies to overcome them.

A first challenge may be a functional mismatch between the historic site and the desired functions. Secondly, authenticity of materials may complicate interventions towards accessibility and inclusion. A third challenge relates to financial support for interventions in historic sites, either encouraging or discouraging inclusive interventions. Both literature and the case studies suggest that consulting various experts, including built heritage experts and user/experts provide a valuable contribution towards identifying the needs for built heritage conservation and inclusive design. Evidently, elaborate research takes time, but has been proven necessary for the cases we studied. The case studies also illustrate some unforeseen opportunities: by caring for built heritage and human diversity, we can preserve built heritage for future generations and contribute to the inclusion of human diversity in the process.

However, due to the Covid-19 pandemic, the scope of this research was limited to document analysis. Future research is necessary to determine to what extent findings from our document-based research correspond with how users experience the resulting environments. In this way, additional challenges, strategies and/or opportunities may come forward.

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