Critically Engaging The Past To Build A More Just And Sustainable Future

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ABSTRACT: As the effects of the climate emergency and dwindling planetary resources force a paradigm shift within architecture away from demolition and new construction towards renovation and adaptation of existing sites and buildings, it is becoming clear that both architectural practice and education will have to evolve and adapt to a context in which the vast majority of our built environment already exists. Any approach to designing with the past, however, cannot ignore how buildings embody both material and immaterial heritage as products of the processes of exploitation and extraction that led to the current crises, meaning that our built heritage represents part of both the cause of and solution to the situation in which the practice of architecture, and society in general, now finds itself.

This paper identifies and explores the intersecting challenges faced by contemporary students and practitioners of architecture through the prism of a practice no longer premised on tabula rasa but grounded in adaptation and reuse. In order to bridge the perceived gap between historic preservation and creative adaptation, the paper undertakes a critical analysis and re-evaluation of the concept of heritage. It posits that unlinking heritage from traditional associations with strict conservation can emancipate the architect, allowing an understanding of buildings not as artefacts frozen in time, but living structures that can evolve and adapt to changing needs. By way of illustration, the paper looks to a number of projects by hybrid practitioners currently active across research, education, practice and legislation whose work rethinks what it means to engage with the existing. A critical discussion and comparison of these case studies offers new perspectives on adaptive reuse theories and practices, thereby helping to ensure that current and future practitioners are equipped with the necessary skills and knowledge to work successfully in this changed – and continually changing – reality.

KEYWORDS: Adaptive reuse, heritage, architectural education, architectural practice, climate crisis

INTRODUCTION

This paper was inspired by a convergence of questions and themes that continued to arise during conversations with students, educators and practitioners of architecture on how to deal with the challenges faced by our discipline in the early 21st century. As the effects of the climate emergency and resource crisis continue to unfold around us at an ever-quickening pace, a broad consensus is finally being reached within architectural circles acknowledging that acts of large-scale demolition are no longer justifiable, accompanied by a recognition that instead, existing buildings should be adapted and reused (*Common Ground: Making the Renovation Wave a Cultural Project* 2021). This shift is already palpable in the EU construction industry, where renovation and adaptation currently account for 50% of all activity (The Architects' Council of Europe 2023, 8). Given that up to 95% of existing buildings are expected to still be standing in 2050, it is clear that both architectural practice and education will have to evolve and adapt to a context in which the vast majority of our built environment already exists (*EC Renovation Wave Strategy* 2020).

Designing with the past presents its own set of challenges. While the demise of the default 'blank sheet' approach in architectural education is to be welcomed, students can feel intimidated when asked to intervene in existing buildings or engage with the work of others. The questions this raises with regard to originality and authorship are difficult to navigate, especially for those with little practical experience. Likewise, when heritage is viewed as sacrosanct, creativity can be hampered as students or practitioners question their right or doubt their justification to make changes to protected buildings. On top of this, recent surveys of students, educators and practitioners in architecture and urbanism reveal that many students feel paralysed by the sheer scale of the challenges faced by society, and the burden of responsibility they have inherited (Adapt, Reuse 2024). In order to fully grasp and confront the challenges faced by contemporary practitioners and students of architecture, it is imperative to understand the history, background and causes of these challenges, and the role that architecture and the construction industry has played in creating them.

1.0 A PRECARIOUS PRESENT

1.1. Architecture's material complicity in the planetary emergency

According to UN statistics, the built environment is responsible for 37% of global CO^2 emissions, 10% of which represents embodied carbon (UN Environment Programme 2024). In the European Union, the built environment consumes 50% of all extracted materials, produces 35% of all waste and emits up to 12% of total national greenhouse gas emissions (European Commission 2020). Clearly, the role of architecture and the construction

industry in causing, exacerbating and perpetuating the climate emergency and the depletion of the earth's finite resources is both historical and ongoing.

As architect, scholar and urban designer Charlotte Malterre-Barthes points out, "(e)very element of the built environment is the product of extractive processes":

> Far from being abstract and removed objects, construction commodities are embedded within economic and ideological systems of extracted energy, materials, and labor. At a staggering scale, capital accumulation and the corresponding brutal and exploitative processes at work in the transfer of raw materials to the built environment have long been perceived as detached from the discipline, the education, and the practice of design and architecture. (Malterre-Barthes 2021, 87).

1.2. Architecture's immaterial legacies

In the 2023 Flanders Architecture Institute exhibition *Intersections: Invisible in architecture*, curators Hülya Ertas and Luce Beeckmans similarly highlight the fact that the labour, energy and knowledge of those involved in the production of architecture

> are not equally valorised and the extraction of materials and natural resources often involves obscured processes of exploitation, precarization and marginalization, as well as environmental degradation (Ertas and Beeckmans 2023).

Confronting architecture's material history and legacy must therefore go hand-in-hand with an examination of its immaterial consequences, including its continuing role in perpetuating injustices and inequalities. In *A Manual of Anti-Racist Architecture Education,* Cruz Garcia & Nathalie Frankowski argue that this involves questioning the invisible labour behind architecture, avoiding depoliticised concepts of sustainability, and recognising and centring the social, political as well as historical contexts of architectural movements (Cruz and Frankowski 2023).

1.3. What is our inheritance?

It becomes clear that any approach to designing with the past cannot ignore the fact that buildings, as embodiments of both material and immaterial heritage, also embody the processes of exploitation, extraction and oppression that have led to the current global crises. It is also important to note that the majority of this built inheritance doesn't consist of monuments and listed buildings, but rather a whole host of unspectacular, even mediocre buildings, many of which are undervalued, neglected and vulnerable to dereliction or demolition. At the same time, we have also inherited a planet that is rapidly becoming uninhabitable (Intergovernmental Panel on Climate Change 2023), alongside levels of global inequality that match those seen at the peak of Western imperialism in the early 20th century (Chancel 2022, 12). Taken together this might seem to represent a toxic legacy, but it is one that nevertheless presents an opportunity.

Malterre-Barthes contends that, "a truly sustainable architecture would concern itself instead with the maintenance of what already exists" (Malterre-Barthes 2021, 87). The renovation and adaptive reuse of existing buildings minimises the need to extract new resources, reduces construction waste and can cut embodied carbon by up to 68% compared to demolishing and rebuilding (Foulkes 2023, 9). In this context, our built heritage represents not just the (partial) cause of, but also the solution to the challenging situation that the practice of architecture now finds itself in.

2.0 ENGAGING THE PAST

2.1. Heritage as a discursive practice

Laurajane Smith begins the first chapter of her book *Uses of Heritage* with a surprising statement: "There is, really, no such thing as heritage." Setting out her aim to demonstrate the discursive nature of heritage, she goes on to elucidate that heritage

> is not so much a 'thing' as a set of values and meanings. 'Heritage' is therefore ultimately a cultural practice, involved in the construction and regulation of a range of values and understandings (Smith 2006, 11).

Later in her critique, Smith introduces a concept she terms 'Authorized Heritage Discourse' (AHD), referring to a hegemonic understanding of heritage based on "monumentality and grand scale, innate artefact/site significance tied to time depth, scientific/aesthetic expert judgement, social consensus and nation building" (Smith 2006, 11).

Smith's theories echo those of Stuart Hall, who in *Un-settling 'the heritage', re-imagining the post-natio*n similarly argues that:

> We should think of The Heritage as a discursive practice. It is one of the ways in which the nation slowly constructs for itself a sort of collective social memory (Hall, 1999, 5).

Like Smith, Hall identifies the exclusionary nature of traditionally-accepted and authorised discourses about heritage:

> Like personal memory, social memory is also highly selective, it highlights and foregrounds, imposes beginnings, middles and ends on the random and contingent. Equally, it foreshortens, silences, disavows, forgets and elides many episodes which — from another perspective — could be the start of a different narrative. This process of selective 'canonisation' confers authority and a material and institutional facticity on the selective tradition, making it extremely difficult to shift or revise" (Hall, 1999, 5)

The work of architectural historian Johan Lagae follows Hall and Smith in developing an understanding of heritage as a social construct, one "to which multiple values are ascribed in dynamic processes of (re-)appropriation and negotiation" (Lagae 2008, 15).

2.2. Heritage as a cultural process

Architectural and urban historian and theorist Françoise Choay describes how over the last hundred years, heritage has come to encompass not just historic monuments but also vernacular and industrial architecture (Choay 2001), further illustrating how definitions of heritage are continuously evolving and expanding. Karina Van Herck, a

specialist in built heritage, insists that heritage and architecture should not be thought of as being in opposition, but rather represent a dialogue, since conservation practices and new interventions need not be mutually exclusive (Van Herck, in debate during the As Found colloquium on Adaptive Reuse, Hasselt University, September 2023). Both Choay and Van Herck seek to expose and dismantle a commonly-held misconception that Hall had previously drawn attention to, namely:

> the emphasis given to preservation and conservation: to keeping what already exists — as opposed to the production and circulations of new work […] which takes a very definite second place.

Rather than viewing heritage primarily in relation to the past, Hall advocates instead for understanding it as:

> the active production of culture and the arts as a living activity, alongside the conservation of the past" (Hall, 1999, 3-4).

3.0 MATERIAL AND IMMATERIAL HERITAGE

3.1. Historic preservation versus creative adaptation – coexistence or conflict?

While architectural practices that engage with existing buildings through adaptation as opposed to mere preservation fully embrace more open understandings of heritage as a dynamic cultural process, those responsible for safeguarding built heritage are not always quite so enthusiastic. One example is the case of *Open for Maintenance*, the project for the German Pavilion at the 2023 Venice Biennale of Architecture. Here, the team of Büro Juliane Greb, ARCH+ and Summacumfemmer chose to work with the existing material, social and urban conditions, retaining the space "as found" as much as possible. This included keeping the existing installation created by Maria Eichhorn for the 2022 Biennale of Art, entitled *Relocating a Structure*. Eichhorn had revealed how the current pavilion actually consists of two structures, the Bavarian Pavilion built in 1909, and a radical reconstruction and extension undertaken by the Nazis in 1938 (Declercq 2022). She excavated foundations and removed layers of plaster to expose the outline of the original pavilion, contrasting its more human scale with the intimidating, monumental character of the present structure. Using only materials salvaged from the previous year's art biennale, the *Open for Maintenance* team saw an opportunity to subtly subvert this architectural ideology of domination and exclusion, "in a political and cultural sense, but in a physical one as well" (Femmer et al 2023, 3). One key intervention was to add a wide curving ramp to the massive columned entrance portico which had previously been separated from the Giardini by five steps, thereby

> facilitating access not only to visitors with reduced mobility, but also to cleaning personnel, guards, and technicians with heavy equipment (Femmer et al 2023, 3).

Although the German ministry of culture was open to making the ramp permanent, the Italian heritage authorities responsible for the site would not allow it, despite the fact that the building had already undergone various changes throughout its history. As a result, the ramp was removed and the pavilion returned to its Nazi-era state, representing a wasted opportunity to correct a historic wrong. As Hélène Frichot reminds us, sometimes by preserving such infrastructures, we maintain the status quo (Frichot 2023, 27), which in this case meant perpetuating the marginalisation of "groups and bodies disadvantaged by ableism" (Femmer et al 2023, 3).

3.2. Existing qualities, existing elements: Théâtre des Variétés, Brussels

Taking a different approach, architects Flores & Prats write that

> The idea of heritage has nothing to do with what is valuable or monumental, but arises from time and experience [...] this condition is present in ordinary architecture, accumulated in an infinite number of layers, latent in every detail, ready to reawaken in our memory (Flores & Prats 2023).

They refer to their project to transform the former Théâtre des Variétés in the centre of Brussels into a cultural centre and creative laboratory, undertaken in collaboration with Belgian practice Ouest architecture. This building, which first opened in 1937 but has lain derelict for almost four decades,

> was deeply rooted in the memory of the city's inhabitants: it had formed part of the cultural life of Brussels throughout the whole 20th Century. It had gone through several different usages and occupations, some of them quite aggressive, such as the squatters who partially burnt it down in the late 1980s. But we still came across some lingering 'ghosts' of the former theatre (Flores & Prats 2023, 48).

The proposal by Flores & Prats and Ouest aims to create two new concert halls, a café bar, a foyer and a new public street inside the existing volume. Because the theatre had originally been designed by renowned Belgian architect Victor Bourgeois in collaboration with Maurice Gridaine, the heritage administration had classified the existing façade, roof and stage. However, after a preliminary feasibility study was commissioned by the new owner, it became clear that due to contemporary acoustic regulations, it would be impossible to reuse the stage and concert hall in their current form. The existing metal roof likewise represents a safety hazard according to contemporary fire prevention regulations.

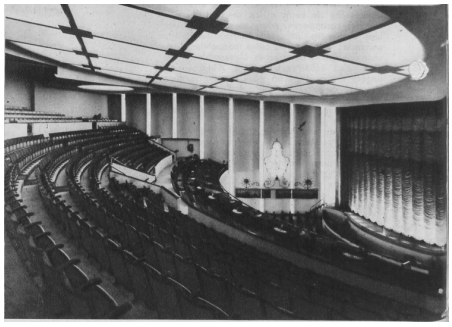

Figure 1: Magazine article photograph showing the original chequerboard rooflight. Source: (BATIR 61, December 1937)

This roof originally incorporated a huge, retractable glass and metal skylight in the shape of a circular chequerboard, which could be opened to bring daylight into the space below, or lit artificially with integrated neon lights when closed (Figure 1). Unfortunately it was plagued with problems from the beginning – the opening mechanism kept getting stuck, and water started to infiltrate almost immediately. The retractable rooflight effectively stopped operating only one year after the theatre opened, and was eventually covered over with roofing felt.

In this particular case, the architects benefitted from a constructive relationship with the heritage authorities, who were very enthusiastic about the prospect of a project that would return the building to a use and state very close to what was originally intended. The Royal Commission for Monuments and Sites (CRMS), an advisory body that advises the Government of the Brussels-Capital Region on matters of protection and conservation of built heritage, noted that since the roof and the stage area no longer met contemporary requirements for acoustics or fire safety, they would be open to the architects finding a way to preserve the existing *qualities* of these elements, rather than insisting that they preserve the original material *elements* themselves. For this reason, they recommended delisting the roof and stage, meaning only the façade remains classified (CRMS 2016, 5-6).

Figure 2: Visualization of the proposed new rooflight above the stage. Source: (Flores & Prats / Ouest Architecture 2023)

This decision permitted the team to set about answering the question of how to work with the existing *quality* of bringing daylight in through the roof, despite the fact that the original *element* designed to achieve this quality never quite worked. Since in the new proposal an additional concert hall is being inserted above the existing roof (which needs to be removed for the aforementioned safety reasons), it is no longer possible to install a rooflight over the audience seating as per the original 1930s design. By way of solution, the architects have looked to the existing fly tower over the stage. While this will be retained, its roof structure is not compliant with contemporary fire regulations and needs to be upgraded. Ouest and Flores & Prats propose to use this opportunity to install a glazed rooflight that will once again bring daylight into the centre of the main space (Figure 2).

During a conversation with project collaborator and lead architect at Ouest Stéphane Damsin, he describes how placing more emphasis on immaterial heritage qualities as opposed to material elements shows an understanding on the part of the heritage authorities

> that classifying too much would be against the reuse and rebirth of the building. To me, that demonstrates a progressive attitude (Stéphane Damsin in conversation with the author, Brussels, July 2023).

3.3. A gradient from protection to safeguarding: Royale Belge, Brussels

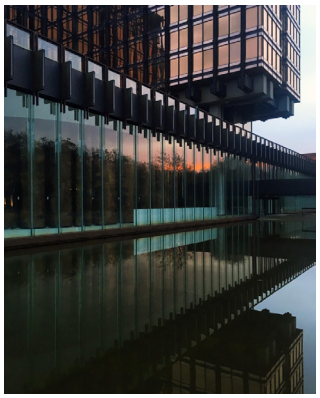

Figure 3: The original façade of the Royale Belge building. Source: (Author 2017)

The evolving relationship between preservation and adaptation similarly proved to be a deciding factor in the fate of the Royale Belge, a former office building on the outskirts of Brussels that in 2023 was renovated and adapted by Caruso St John Architects and Bovenbow Architectuur to become a hotel, food hall and leisure centre. Originally designed by architects René Stapels and Pierre Dufau, it was inaugurated in 1970 as the headquarters of the insurance company La Royale Belge. The most distinctive feature of this building is its external bearing CorTen

steel façade, resting on exposed concrete elements and supporting a glazing system of golden-orange tinted glass, which can seem either transparent or reflective depending on the light and the angle of view (Figure 3).

In 2017, the building was threatened with demolition when the government of the United States agreed to purchase it, intending to tear it down and build their new embassy on the site. These plans were thwarted when, at the request of the local municipality, the Brussels regional government intervened. The US had presented demolition and reconstruction as the only viable future for the site, arguing that if the region listed the building (as they were considering to), it would prove impossible to reuse because the necessary modifications would never be accepted in a protected building (RTL Info 2017). However, this reasoning failed to take into account the gradient of approaches that urban.brussels, the government agency responsible for regional policies related to urban planning and cultural heritage throughout the Brussels Capital Region, has developed with regard to the recognition and safeguarding of heritage. Harry Lelièvre from urban.brussels outlines the two main instruments involved:

> The Inventory (of Immovable Heritage) involves cataloguing significant heritage objects and sites, while the Register (of Safeguarded Heritage) serves as a record of safeguarded and protected heritage objects and sites (Lelièvre 2024, 53).

He goes on to explain that

> While both are legally binding, an important distinction exists between safeguarding and protecting. This distinction does not hinge on the intrinsic value of the heritage, but rather on their approach: protection seeks the strict preservation of heritage, whereas the status of safeguarded heritage allows for more flexibility (Lelièvre 2024, 57).

The US eventually abandoned their embassy plans – and the site – when the Royale Belge was added to the Register of Safeguarded Heritage. This meant that while the building could not be demolished, a range of interventions proposed by the team of Caruso St John and Bovenbouw that normally wouldn't have been possible in a protected building were in this case permitted, including the insertion of new vertical circulation that necessitated the partial demolition of the interior. Similarly, while the steel façade was retained, the glazed exterior skin was completely replaced with visually similar glass, the original being unable to meet contemporary energy and thermal performance requirements. Lelièvre see this as a reflection of

> evolving preservation practices: the preservation efforts aimed at maintaining the aesthetics of the appearance rather than the historical integrity of the materials (Lelièvre 2024, 57).

4.0 FROM DUALITY TO DIALOGUE

4.1. Hybridity and adaptive reuse

The examples of Variétés and Royale Belge bear out Katrina Van Herck's assertion that the relationship between architects and heritage authorities – in Belgium at least – appears to be changing. They prove that historic preservation and creative adaptation can coexist, and even complement one another, when both are approached holistically in a pragmatic manner that balances heritage considerations with the practicalities of continued use. "It's not a duality," remarks Stéphane Damsin of Ouest, "It's more of a dialogue". Such refusals to recognise or accept a strictly dichotomous or binary relationship between existing heritage and proposed interventions substantiate the theories of Stuart Hall, who maintains that across generations, traditions can coexist with

> …the emergence of new, hybrid and crossover cultural forms of tremendous vitality and innovation […] This is a new kind of difference — the difference which is not binary (either-or) but whose 'différances' (as Jacques Derrida has put it) will not be erased, or traded (Hall, 1999, 9).

Hybridity is a common feature found not only across adaptive reuse projects and practices, but also in the practitioners themselves. In the case of projects, it reflects how the new use of the building is grafted onto its previous lives without the need to erase or prioritise a given era over another, reminding us again that architecture, much like heritage, does not remain static but represents a process of continuous evolution. With regard to hybrid practitioners, it refers to those whose work spans practice, education and theory, as well as individuals and organisations active across research, design and construction.

4.2. Architecture as an ongoing process: Charleston in Lewes, UK

Figure 4: Stripped back interior with exposed brickwork, Charleston in Lewes. Source: (Material Cultures / Henry Woide 2023)

A case in point is Material Cultures, a UK-based multidisciplinary, not-for-profit design and research organisation set up in 2019. Their recent project for the Charleston Trust in Lewes, UK, demonstrates how the concept of an architecture that is still in process was central not only to gaining the trust of the client, but also to completing the project on an impossibly tight schedule and budget. Tasked with turning former council offices into a gallery and cultural space for an arts and culture charity with limited funding, the architects and client together took a pragmatic decision not to try to achieve all of the works initially envisioned. Instead, they agreed on a strategy of minimal intervention and material economy that would reveal the potential of the building with a view to possibly carrying out a more comprehensive renovation at some point in the future, should funds become available. This permitted

quick decisions and compromises to be made, allowing some features to be kept that ordinarily might not have been, such as the irregular brick finishes (Figure 4).

Stripping back not only revealed the original structure of the building, it also exposed the various ad hoc interventions that had been made during the building's lifetime by various inhabitants. Rather than try to restore the building to some imagined ideal state or cover up these often messy interim solutions, the architects left visible the traces of each phase of the building's history. The client was able to accept this raw aesthetic, partly because they knew it would not necessarily always remain like that. This quality of unfinishedness was even leveraged as a strategy to raise funds and support for a possible next phase, by revealing the potential of the building while simultaneously highlighting that it is very much still a work in progress.

4.3. Establishing architectural quality through adaptive reuse: Karreveld, Brussels

The project for Charleston in Lewes differs from those for Variétés and Royale Belge in that the building was not listed, meaning the architects faced fewer restrictions with regard to how it could be adapted and reused. However, by the same token it represents an example of how acts of transformation can produce architectural and cultural value, even when the building in which they intervene is not viewed as having any established heritage value. Such cases strengthen the argument that heritage need not be restricted to listed buildings (such as those aligning with Smith's 'Authorized Heritage Discourse') by proving that the quality of an architectural intervention of reuse is not dependent on whether or not the existing building is perceived to possess any architectural merit.

Figure 5: Interior of Karreveld school. Source: (AgwA / Séverin Malaud 2021)

The Karreveld project by AgwA in Brussels likewise shows how interventions of adaptive reuse can transform even somewhat mediocre buildings with no discernible heritage value into interesting and purposeful architecture. Involving the transformation of a former factory into a school, this project was intended as a temporary first phase in a longer term evolution, as was the case at Charleston. Here again, the project featured a very short timeframe and an almost non-existent budget, which forced the architects to work with the existing elements that were already on the site, dismantling very standard, run-of-the-mill modular interior systems and reinterpreting them, adding new elements where necessary (Figure 5). The result demonstrates that just as heritage is created through a continual process, architectural quality – and along with it, cultural and social value – can be created through the various interventions that occur during the ongoing life of a building.

5.0 LESSONS FOR CURRENT AND FUTURE EDUCATION AND PRACTICE

5.1. Challenges in architectural education

A recent survey conducted by research and knowledge-sharing platform Adapt, Reuse set out to investigate the challenges faced by both students and educators in contemporary architectural education (Adapt, Reuse 2024). While it is encouraging to see that when asked about their design studio projects, a majority of respondents (84.2%) claimed to have worked to some extent on the adaptive reuse of existing buildings, with only 15.8% designing new buildings on a cleared site, many students also indicated that in projects of adaptive reuse they find themselves posing questions such as 'How far can I intervene in an existing building?' (89.5%), 'What changes to the building am I allowed to make?' (68.4%), and 'How can I justify my proposed interventions?' (63.2%). Interestingly, when asked what they thought represented the main challenges currently faced, the joint top responses (at 68.4%) from the students surveyed were the climate emergency and the loss of skills and knowledge. Asked to elaborate, most students claimed that they didn't feel equipped with the necessary design tools or skills to solve the real life problems they would face in their professional working life. Many complained of insufficient focus on future-proof materials and sustainable construction methods, others pointed to a lack of practical knowledge, while still others called for more engagement with and exposure to the world outside the studio environment (Adapt, Reuse 2024).

5.2. Adapting to reuse: addressing the skills gap required for a post-carbon built environment

These are precisely the types of issues that Material Cultures, mentioned earlier, set out to address. Alongside a focus on hands-on approaches and bio-based, locally-sourced materials, one of their central missions is to address the significant skills gap in our current architecture and construction industry as a way to counteract the lack of technical knowledge and skills required for a low carbon transition. As well as undertaking architectural design work as a way to apply the principles and knowledge developed in their research, Material Cultures are also active in the educational sphere, teaching design studios at different academic institutions where the emphasis is on learning through making. They have also set up a learning platform, MAKE, that foregrounds practical and accessible construction skills. In collaboration with a range of partners, MAKE organises practical, hands-on workshops that

give students the opportunity to co-construct buildings through on-site experimentation with timber frame construction, insulation, cladding, plastering and other techniques (Material Cultures 2024).

5.3. From linearity to circularity: reuse and regenerative building materials

De Pastorie, an ongoing live project by the students of the postgraduate course Building Beyond Borders at the Faculty of Architecture and Arts in Hasselt University follows a similar pedagogical approach. Undertaken in collaboration with Living Lab Leemsteen, BC materials, and local actors from the non-profit community association de Pastorie, it involves the restoration and reuse of a former rectory in Helchteren, Limburg, which had lain abandoned for many years. Unable to find a buyer for the building, the local municipality decided to give it a public function by turning it into a hub and resource centre for the local community. According to Hanne Kellens, councillor for youth, culture and heritage, while the project respects the "authentic historical appearance of the building", the aim is not to deliver a "classic" renovation but rather a "practical" one that will ensure de Pastorie can adapt to multiple arrangements and layouts (Nelis 2024). This further corroborates a pattern already discussed, whereby local authorities increasingly demonstrate a more progressive attitude towards heritage that seeks to balance preservation with pragmatism by taking into consideration the ecological, social and cultural dimensions.

Figure 6: Students working on site at De Pastorie. Source: (Building Beyond Borders / Nijs de Vries 2024)

The students from Building Beyond Borders have recently completed the first phase of this participatory, self-designed, self-build project, using only hyperlocal, sustainable building materials to construct a garden pavilion and outdoor oven (Figure 6). Resolving not to purchase any new materials, the students set up a workshop on site which allowed them to hand produce unfired earth bricks and wooden roof shingles sourced from a local forest. They also engaged in urban mining to salvage and reuse materials such as tiles, bricks, sand and gravel from houses in the vicinity that were being demolished to make way for a new infrastructure project.

The hands-on approach of live projects like these helps students overcome their paralysis by encouraging them to think through doing. This teaches students invaluable practical skills, which in turn gives them confidence to become capable designers who understand the materials and processes of building. As the projects presented here illustrate, such approaches dovetail neatly with practices of adaptive reuse. They take existing sites, resources and know-how as starting points from which to explore the possibilities offered by craftsmanship to develop inventive solutions using regenerative materials, with a shared goal of fostering a more sustainable and inclusive society.

CONCLUSION - INHERITING THE FUTURE

The theories, practices and projects explored in this paper all seek in their own way to untangle the seeming dichotomies of then and now, past and present, tradition and innovation, thinking and doing. As actors who combine pedagogy with practice and design research with construction, all of the practitioners examined actively strive to break down knowledge silos, transgressing disciplines to enable ways of working with both the existing built environment and the work of others. Unafraid to engage with recent buildings, no matter how banal or ordinary they might be, their work helps broaden the scope of what can be considered heritage, thereby freeing it from restrictive definitions that perpetuate artificially-constructed divisions between conservation and intervention. They share an understanding that, at its core, adaptive reuse is not just about preserving the past, but rather engaging it with a critical eye. This point is crucial: if we are to avoid repeating the same processes that brought us to the current emergency of the Anthropocene, we must change the way we build. Transforming buildings therefore needs to go hand-in-hand with transforming the practice and education of architecture, and society in general.

While the theme of this conference is 'Architecture into the Unknown', we have lately moved much more quickly into uncharted territories than we ever could have imagined only a year ago. In her opening address which reflected on architectural education as an agent of change, Dr. Oya Atalay Franck stated that being an agent of change means not only caring, "it also means taking action" (Atalay Franck 2024). Over the past few months, we have witnessed students across the world step up and take action to kick-start the most widespread, co-ordinated protest movement of the 21st century. These actions have been precipitated by a sense of extreme urgency: the same lack of will that has seen politicians and governments fail to adhere to either the Paris Agreement or the recommendations of consecutive IPCC reports is mirrored in the apathy and political inaction they continue to show in the face of ongoing ecocide, urbicide, educide, ethnic cleansing, and genocide around the world (Peters 2024), in Palestine, Congo, Sudan, Ukraine, the Amazon… the list goes on. Not only are we facing climate and biodiversity breakdown, spiralling inequality, and unprecedented population displacement, we are also witnessing the breakdown of international law and the rules based order (Callamard 2024). But just as live projects encourage

students to take what they've learned and apply it to the real world, these intersectional protest movements represent a similar transdisciplinary approach to the problems at hand. As Ertas and Beeckmans state,

> Architectural production does not happen in a void but is shaped by the social, cultural, economic and political structures of power that define our society (Ertas and Beeckmans 2023).

If we are to have a future to inherit, it is essential to have an understanding of the context in which architecture is produced, including how it has the potential to contribute to the climate crisis, growing inequality, and the many other issues and injustices facing our societies today. Acknowledging this will empower students and all current and future practitioners of architecture to tackle the many and crosscutting challenges that lie ahead.

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