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Zaid, I.Z.; Kaan, C.H.C.F.

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A Critique of Issues Affecting Life in Cities



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BUILDING ADAPTABILITY AND URBAN REGENERATION: A DISCOURSE ANALYSIS IN THE BUILT ENVIRONMENT

Author:

INES ZAID, KEES KAAN

Affiliation:

DELFT UNIVERSITY OF TECHNOLOGY, NETHERLANDS

INTRODUCTION

As the world population continues to grow,¹ cities face unprecedented challenges in accommodating their spatial needs in a context of climate and social crisis. Recognising that urban areas are complex networks of buildings, services and infrastructures that evolve over time,² plagued by obsolescence, there is a growing interest in adaptability in both academic and professional discourse. Yet, the link between spatial adaptability in architecture and urban sprawl impacting city liveability remains unclear, as the predominant focus remains on component reuse rather than addressing obsolescence holistically within the urban realm.

This study proposes to examine the discourse on adaptability within professional literature to understand its meaning among design-decision makers in the built environment, including designers, financial stakeholders, and policymakers, and its connection to urban regeneration. Using a mixed-method approach, the study captures insights and challenges shared by these professionals, uncovering trends in this evolving area and the vocabulary used to advocate for adaptable practices. By providing a nuanced understanding of how architects and other professionals conceptualise spatial adaptability, the study aims to offer practical insights and guidance for planners, designers, policymakers, and stakeholders at large.

The dynamics of adaptability and obsolescence in the urban realm

The rapid pace of urbanisation exacerbates the shortage of available space in cities, intensified by urban sprawl.³ This phenomenon is particularly evident in Europe, where the growth of urban areas has outpaced population growth. In parallel, cities are plagued with the obsolescence of buildings at a time of increasing demands placed on them. In Britain alone, approximately 50,000 buildings are demolished annually, further emphasising the rapid transformation of urban landscapes,⁴ and creating an additional challenge to urban regeneration.

Adaptability appears therefore as a potential catalyst for addressing both material and spatial scarcity, as demonstrated by the growing interest in the academic field to investigate, understand define and measure adaptability in the built environment.

However, these poses issue for practitioners, as scholars themselves question its meaning, and definition from both a quantitative and qualitative perspective, as they are on the quest for a framework to measure adaptability in the built environment.

Set within the scope of urban regeneration, it is therefore through the lens of obsolescence that we approach adaptability in the present research, as adaptability fits into a life cycle process.⁵ This life

cycle is thus challenged by obsolescence, defined as the process of declining performance resulting in the end of service life. In this research, a distinction is made between the buildings that web the urban fabric as "relevant", "obsolete" and "abandoned/fallow" (Fig.1), recognising that obsolescence is in fact a process, occurring overtime and is therefore a spectrum nested between abandonment and use.

Adaptability, in contrast, serves as an active response to the passivity of obsolescence. It is a continuous process aimed at maintaining the relevance of structures by dynamically adjusting to shifting demands and addressing the uncertainty that contributes to obsolescence.

The focus of this paper lies in the decision-making process involved in optimising buildings in view to salvaging them from suboptimal functioning and preserving their utility integrated in urban settings over time.

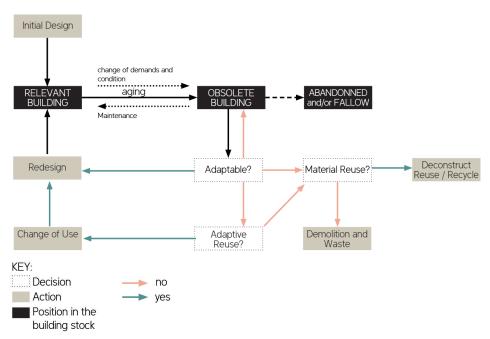


Figure 1. The building stock of urban areas, shift in the spectrum. Adapted from Rockow et. al⁷

Adaptability, a potential catch-all phrase

The literature investigates at length adaptability in the built environment to understand how to measure it from regulatory and design perspectives, through the establishment of frameworks and design measures to help meet the criteria defined in research settings. Interestingly, it widely however recognises the challenges posed by understanding the meaning of adaptability, and that very little research has been done to comprehend the meaning of "adaptability" amongst stakeholders in the build environment. Some researchers also warn of the risk of the word becoming "a buzzword" associated with this gap. Furthermore, it is acknowledged that since there is not one specific understanding of adaptability discourse amongst scholars there is not one specific way to grasp its meaning to define it, thus, to measure, identify and observe its mechanisms. This presents, in turn, a major obstacle for the implementation of design decision that favours adaptable design solutions.

A discourse analysis to elucidate the meaning of adaptability in the Built Environment

In this context, it appears fundamental to study the meaning of adaptability amongst practitioners. In this study, the word practitioners encompass professionals making decisions about the built environment, including designers (architects, engineers, planners) but also the decision-makers that regulate the production of the built environment. Indeed, the later participate in the design process via the creation and enforcement of laws, fiscal policies, incentives that often go unnoticed in the study of design. The term stakeholders, defined as an entity expressing a need¹² is also used interchangeably in the present research.

The quest for a definition of adaptability from a stakeholder's perspective, through a semantic standpoint as well as its qualitative qualities, has previously been attempted by several scholars. ¹³ Indeed, it is widely recognised that architectural discourse is a science based on linguistics and definitions, as explored by Adrian Forty on "Words and Buildings", ¹⁴ which Leupen insists requires clarity. ¹⁵

Askar for instance examined the requirements for adaptability currently proposed by multiple adaptability and circularity assessment models. However, the lack of understanding amongst both scholars and practitioners illustrated by the, often conflicting, frameworks is paired with the issue of semantic debate amongst practitioners. This was for instance studied by means of coded interviews of multiple stakeholders, which shed a light on the lack of consensus but set the stage for grasping motivations. Indeed, the field of architecture, a sub-category of the built environment domain, is parcelled by a complex array of discussion, context paradigm, sometimes disconnected from real life. This, in turn can weaken the value of knowledge gathered through the investigating method of the interview process proposed by scholars investigating practitioners.

Furthermore, the various statements that make up a discourse create connections and shape the context based on specific frameworks. Different types of discourses—such as professional, technological, social, representational, and environmental—govern the context by setting boundaries and defining concepts. They assert their priorities and principles through the selective dissemination of certain statements, while suppressing others.

The present research offers an analysis of discourse in the British context, focusing on the concept of adaptability amongst stakeholders working in the Built Environment industry. Utilising periodicals as the object of the study as they are anchored in a contemporaneity due to their short shelf life.¹⁹ Schwarzer indeed highlights that whereas books take a long time to publish, periodicals are released quickly, making their information current and relevant, capturing and reflecting the changes and trends in architectural practice and profession. They also have a promotional value that is evident, and valuable to understand the trends. It further acknowledges that interviewees and journalists shape a part of the discourse on architecture, but also their marketing value that highlights visions and aspirations that form a part of architecture. Indeed, recognising that architecture is the sum of the building, its image and its discourse,²⁰ this research will therefore analyse the images and texts in a systematic fashion, to sharpen the understanding of adaptability in the built environment, with a particular focus on the relationship between architectural adaptability and the urban realm from a professional perspective.

MAPPING THE DISCOURSE ON ADAPTABILITY

Scoping review Framework

To gather the data for this study, journals relevant to studying the discourse on adaptability in the built environment were required. Their selection was underpinned by several factors. Firstly, the publications had to be vetted by the Association of Architecture School Librarians which sets the standards for periodical literature in schools of architecture and leading to professional settings, ensuring they met

criteria of relevance to the field as a whole, by means of a series of lists called *Core*. Also, a further analysis of their list of criteria supported the selection of journals relating to and presenting characteristics of engaging with trade and professional discourse in affaire. The sub-list relevant to the present research, namely the Core *Recommended Periodical* list²¹ was selected due to the high access worldwide to its publication, the value of the journal presented in the industry, and its multidisciplinary.²² Finally, a practical access to the publication articles and linguistic was preferred, selecting British journals their scope goes beyond national borders.

Data was therefore collected from leading British architectural periodicals, namely the Architects' Journal and RIBA Journal. These sources were selected for their historical significance and wide readership within the architectural community, as well as belonging to the top three architectural journals distributed in the UK,²³ and their online readership. The RIBA Archive online library (Fig. 2) aided the search for articles within their large database, due to its cataloguing methodology that supported the identification of relevant literature, as the database serve as a future archive, tagging and organising the articles. The filters applied were the name of the journal and key words such as adaptable, adaptability and adaptation (Fig. 3) Articles were subsequently retrieved and screened manually to ascertain their relevance, obtaining a total of 31 articles used for this study.

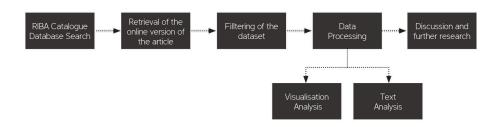


Figure 2. Data extraction and analysis protocol, by authors

Analytical Techniques

The articles were then extracted and simplified, converting their texts and images from a website source into standardised text. This approach aimed to eliminate the bias of the layout, intrinsic to architectural magazine and their appreciation, thereby allowing an evaluation independent of the visual narrative constructed by the graphic design of the layout. Subsequently, a textual and image analysis was conducted (Fig 2).

Due to the navigating nature of webpages, only the first image was selected as it serves as the introduction to the article. Whereas in the print version, the reader interact with a series double spread layouts to make the choice to engage with the article, the first picture alongside a title and a short description of the articles inform the reader on the context of the writing, which is also the flagship of the article when shared on social media.

These images were then coded and clustered into categories. In the case of articles featuring multiple case studies, only the first image of each case study was selected. This was motivated by the visual narrative it provides, as these were set to construct an article to showcase multiplicity.

Similarly, the texts were screened, evaluated and coded by themes identifying key areas, mapping their occurrence to rate their prevalence, but also visualise their proximity in relation to one another (fig. 4).

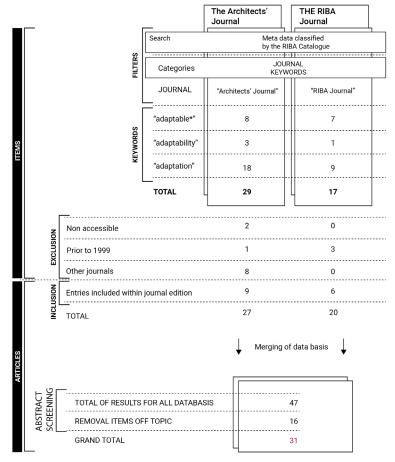


Figure 3. Data screening protocol, by authors.

INSIGHTS FROM THE PROFESSIONAL LITERATURE Textual and Image clusters:

The results of this studies revealed a broad range of generic themes, which were systematically grouped into subcategories to establish the purpose of the statement. For instance, a statement on a topic (heritage, environment) could be associated with a goal, or a constraint for instance. To test the coding of the excerpts and ensure none was omitted, keywords were employed to further screen the data, their occurrence, and proximity to other subtopics to establish a relationship in the narrative. This approach facilitated, in turn, a deeper understanding of the thematic association, by way of providing a narrative through supporting the mapping of a narrative through their proximity (Fig 4). Moreover, it enabled the examination of the prominence of certain keywords associated with the general key themes at a granular level, thus contextualising what might otherwise be a mere simplification of a theme. For example, the theme of "environment" was subsequently split in two sections: "environmental impact" (GOAL) and "environmental concern" (MOTIVATION), by understanding the vocabulary associated with this topic, that is often conflated in discourse through shortcuts.

The image clusters were organised according to their composition and their association with the theme described in the text, also using their legend to understand the aim of their placement, a. More visual by nature, they supported the interpretation of the texts that they accompany.

Visual representation and professional discourse on adaptability as a time-capsule

How do stakeholders convey visually adaptability in architectural discourse? The largest proportion of the images greeting the readers depict the buildings from a temporal perspective, by way of snapshots evoking a before-and-after-approach (Fig 5). The typical visual language of the before snapshot often applied (black and white, dull) evoking archival knowledge to highlight the time stamp before a design intervention was made. This also serves to contrast with vibrant colours of the after representations of the building. In some cases, only one time period was illustrated. All were devoid of human presence, highlighting the materialistic characteristic of the adapted building and prioritising the intervention of the designers, portraying a conversation between them and heritage assets.

Interestingly, this temporal perspective demonstrated by snapshots of time was paired with descriptions of "what used to be", including anecdotical features of the buildings that were connected to their use and the heritage realm that it seeks to salvage, enhance or update. Indeed, like in renovation work, the themes of appliance update was often quickly evoked, and its impact on the environment.

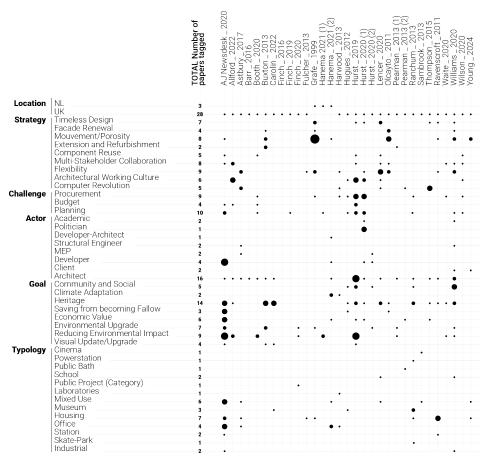


Figure 4. Textual mapping of the discourse, clustered and weighed paragraph mentions, by authors.



Figure 5. Mapping of the visual discourse, by authors.

The professional takes on the strategies for adaptability

The majority of the interviewee or contributors to this journalistic work were mostly architects (17), while 12 interviews and contributions were attributed to other professions, such as engineers, developers, clients and, in some case, professional with dual role such as architect-developers. More abstract knowledge was provided in two instances by academics.

The vocabulary associated with adaptability was closely linked to the specialist's field when pertaining to explaining the process of design interventions, and the occurrence of teams work reflect the need for expertise and multidisciplinary knowledge to addressing adaptability to avoid neglect²⁴. However, no difference was noted when describing the concept of adaptability itself.

Instead, the typologies gathered more similarities of language and measures pertaining to the specific areas of knowledge intrinsic to their complex nature. Adaptability is therefore, as revealed by Thomsen,

involving expertise²⁵, based on the complex requirements placed on these buildings, which makes it typology specific²⁶. It is worth noting that many of the case studies belong to the civic building category (Fig. 6), and are therefore more likely to attract journalistic coverage, contrasting with the academic scope of adaptability which focuses on domestic buildings and office that belong to the private sector. The challenges in relating to field knowledge were however highlighting fiscal measures unfavourable to adaptability, heritage constraints limiting the scope of intervention on listed assets and pointing directly to a lack of knowledge amongst planners, who are not represented in this sample, showing a disconnect, but noticed by many.

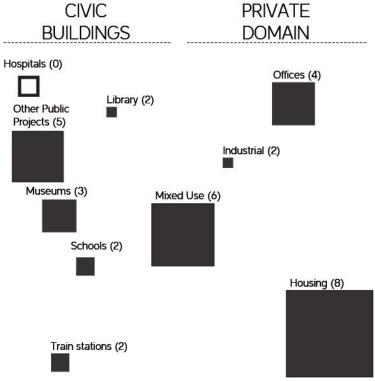


Figure 6. Typologies examined in the case studies examined in the 31 trade journals articles on adaptability in the Built Environment.

Heritage and environmental impact and opportunities in the urban scope

Both environmental and heritage concerns were at the forefront of the motivations for adapting buildings that form part of the urban network.

Firstly, the environmental discourse around adaptability is the leading motivation described by practitioners (Fig.4). This contextualises the design intervention into a larger scope that transcends the boundaries of the site, as it places it within the pressing issues of climate change related to global initiatives such as the Paris Agreement and assert their relevance and importance with the Building industry itself. Indeed, mentions of market-based tools such as LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method) serve as both motivation and evidence of the environmental virtues of the scheme, as they serve as quantifiable evaluation of the qualities of the design.

In this context, carbon appears as the most cited evidence by practitioners of these qualities, which is supported by the primary focus of environmental impact of the building during its use, surpassing the material footprint of architecture. This was for instance critiqued by Sunand Prasad²⁷ in 2019. Our study

observes however (Fig. 8) that subsequently to the launch of the Retrofirst²⁸ campaign by the Architect's Journal in 2019, there is a shift in the narrative.

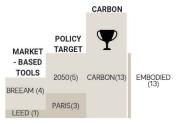


Figure 7. Evidence of environmental impact concepts displayed in the corpus (number of articles mentions), by the authors.

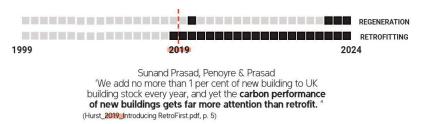


Figure 8. Occurrence of regeneration and retrofitting discourse, (number of articles mentions), by the authors.

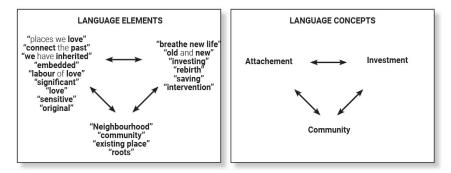


Figure 9. Elements of language correlated to urban heritage, and their concepts, by authors.

Secondly, the heritage concern show that this is a leading cause of both motivation and constraint, the current system favouring new built from a fiscal perspective, but also from the regulatory and planning framework, putting in jeopardy the urban regeneration and missing on a paradigm shift that the call for actions (Fig 5) does not correlate with heritage. Interestingly, heritage is mostly discussed by architects, using vocabulary pertaining to the emotional register, connecting the attachment expressed to a reason to invest and care about buildings that belong to the community. This further is ascertained by the proximity of long description of the experience of the building asset, through a promenade nearby, towards of within the buildings, making a direct but subtle correlation between the building, its adaptability and its connection to the urban realm. It describes the senses, the transition between threshold and the views, evoking the porosity that supports these assets and their integration in the community.

DISCUSSION

This research into building adaptability and urban regeneration presents several key findings. Firstly, adaptability emerges as a complex and multifaceted concept, often hindered by fiscal constraints, regulatory frameworks, and heritage-related challenges. The discourse analysis underscores the crucial role of practitioners in defining and implementing adaptability, particularly in relation to how buildings are integrated within the urban network—a promising area for further exploration. Additionally, the strong connections communities have with heritage buildings highlight the importance of porosity, where the seamless integration between a building and its urban environment fosters greater community engagement and a stronger impetus for preservation. Notably, the study reveals that adaptability is not profession-specific but rather typology-specific, with various professions working together in a multidisciplinary way to address the unique challenges posed by different building types. Ultimately, incorporating urban design measures that ensure seamless connections between civic buildings and the urban realm could significantly enhance the long-term relevance and value of buildings within the urban landscape.

NOTES

- ¹ UN DESA, 'The Sustainable Development Goals Report 2023', 34.
- ² Batty, The New Science of Cities, 79–80.
- ³ UN DESA, 'The Sustainable Development Goals Report 2023', 35.
- ⁴ Hurst, 'Introducing RetroFirst'.
- ⁵ Rockow, Ross, and Black, 'Review of Methods for Evaluating Adaptability of Buildings', 275–76.
- ⁶ Thomsen and van der Flier, 'Understanding Obsolescence', 353.
- ⁷ Rockow, Ross, and Black, 'Review of Methods for Evaluating Adaptability of Buildings', 275.
- ⁸ Askar, Bragança, and Gervásio, 'Design for Adaptability (DfA)—Frameworks and Assessment Models for Enhanced Circularity in Buildings'; Ross, 'The Learning Buildings Framework for Quantifying Building Adaptability'; Shahi et al., 'A Definition Framework for Building Adaptation Projects'; Conejos, Langston, and Smith, 'Designing for Better Building Adaptability: A Comparison of adaptSTAR and ARP Models'.
- ⁹ Pinder et al., 'What Is Meant by Adaptability in Buildings?', 6.
- ¹⁰ 'Flexibility: Beyond the Buzzword—Practical Findings from a Systematic Literature Beview Jane Carthey, Vivien Chow, Yong-Moon Jung, Susan Mills, 2011'.
- ¹¹ Forty, Words and Buildings: A Vocabulary of Modern Architecture.
- ¹² Olander, 'Stakeholder Impact Analysis in Construction Project Management'.
- ¹³ Schmidt III, Eguchi, and Gibb, 'What Is the Meaning of Adaptability in the Building Industry?'; Pinder et al., 'What Is Meant by Adaptability in Buildings?'; Askar, Bragança, and Gervásio, 'Adaptability of Buildings'.
- ¹⁴ Forty, Words and Buildings: A Vocabulary of Modern Architecture, 11–16.
- ¹⁵ Leupen, *Design and Analysis*, 132.
- ¹⁶ Askar, Bragança, and Gervásio, 'Analysis of Adaptability Requirements Against Their Implementation in Level(s) Framework'; Askar, Bragança, and Gervásio, 'Design for Adaptability (DfA)—Frameworks and Assessment Models for Enhanced Circularity in Buildings'.
- ¹⁷ Pinder et al., 'What Is Meant by Adaptability in Buildings?'
- ¹⁸ Basa, 'Environmental Discourse of Architecture', 273.
- ¹⁹ Schwarzer, 'History and Theory in Architectural Periodicals', 342.
- ²⁰ Forty, Words and Buildings: A Vocabulary of Modern Architecture, 13.
- ²¹ 'Association of Architecture School Librarians Core Periodicals List'.
- ²² Orcutt et al., 'Core or Not', 277.
- ²³ 'Advertise with Us The Architects' Journal'; 'Advertise With Us | RIBAJ'.
- ²⁴ Thomsen and van der Flier, 'Understanding Obsolescence'.
- ²⁵ Thomsen and van der Flier.
- ²⁶ Pinder, Schmidt III, and Saker, 'Stakeholder Perspectives on Developing More Adaptable Buildings'.
- ²⁷ Hurst, 'Introducing RetroFirst'.
- ²⁸ Hurst.

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