

#### Embodiment and meaning-making: interdisciplinary perspectives on heritage architecture

Staničić, A.; Jelic, Andrea

10.1080/13602365.2022.2132769

**Publication date** 

**Document Version** Final published version

Published in The Journal of Architecture

Citation (APA)

Staničić, A., & Jelic, A. (2022). Embodiment and meaning-making: interdisciplinary perspectives on heritage architecture. The Journal of Architecture, 27(4), 473-484. https://doi.org/10.1080/13602365.2022.2132769

#### Important note

To cite this publication, please use the final published version (if applicable). Please check the document version above.

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights. We will remove access to the work immediately and investigate your claim.

## Green Open Access added to TU Delft Institutional Repository 'You share, we take care!' - Taverne project

https://www.openaccess.nl/en/you-share-we-take-care

Otherwise as indicated in the copyright section: the publisher is the copyright holder of this work and the author uses the Dutch legislation to make this work public.



## The Journal of Architecture



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rjar20

# Embodiment and meaning-making: interdisciplinary perspectives on heritage architecture

#### Andrea Jelić & Aleksandar Staničić

**To cite this article:** Andrea Jelić & Aleksandar Staničić (2022) Embodiment and meaning-making: interdisciplinary perspectives on heritage architecture, The Journal of Architecture, 27:4, 473-484, DOI: <u>10.1080/13602365.2022.2132769</u>

To link to this article: <a href="https://doi.org/10.1080/13602365.2022.2132769">https://doi.org/10.1080/13602365.2022.2132769</a>



### **Fditorial**

## **Embodiment and meaning-making:** interdisciplinary perspectives on heritage architecture

This article introduces the special issue — 'Embodiment and Meaningmaking: Interdisciplinary Perspectives on Heritage Architecture' which aims to incite a dialogue across different disciplinary approaches to understanding how heritage architecture is experienced, registered, and produced. Here, heritage architecture is investigated by taking an interdisciplinary lens to questions of meaning-making, place, memory, and culture. The article explores how these are shaped at the intersection of spatial design, human embodiment, and modes of cultural production. First, it situates the special issue's theme by introducing the notions of affect, atmosphere, embodiment, affordances, and politics of meaning-making. This positioning comes through an overview of the three influential yet still separate strands of scholarship — affective and more-than-representational approaches to heritage; the politics and agency in meaning-making in places of memory; and the emerging embodied and experiential turn in architectural scholarship driven by the knowledge from embodied cognitive science. The second part outlines the special issue contributions and explores the common threads in how collected papers have addressed the relationship between embodiment, meaningmaking, and political agency in the context of heritage architecture. Finally, in this introductory article, we discuss the emerging perspectives and research agenda for interdisciplinary investigations on how heritage architecture is produced, registered, and experienced.

#### Situating the interdisciplinary dialogue: embodiment, meaning-making, and heritage architecture

Recent attempts to challenge institutionalised and traditional views on heritage — such as 'Future Heritage', 1 'Hardcore Heritage', 2 and 'Experimental Preservation'<sup>3</sup> — have moved away from static and mono-dimensional understandings, and instead, advocate for multiplicity of possible readings. The shared aim of these new approaches is to bring together multiple actors often with opposing views and of different individual and cultural backgrounds — and to reveal the hidden layers of meaning to ponder on. They also acknowledge that meaning-making is a continuous process, which

#### Andrea Jelić 🕒



Department of Architecture Department of Civil Engineering Katholieke Universiteit Leuven Belgium andrea.jelic@kuleuven.be

ORCID 0000-0001-7372-522X

#### Aleksandar Staničić 🕕



Faculty of Architecture and the Built **Environment** Delft University of Technology Netherlands a.stanicic@tudelft.nl

ORCID 0000-0001-8208-9595

involves a deep understanding of material properties of the environment, considering the affordances, atmospheres, attunement, attentionality, situatedness, cognitive abilities, movement, rituals, symbols, values, historic and cultural layers, and language, that it is dependent on both individual and collective thinking. (Future) heritage, then, is understood not as 'one heritage or meaning fits all'; it is not an attempt to erase differences and nuances, but on the contrary, it is understood as a platform for conversation and exchange of ideas.

This special issue explores the elements and conditions that make such a platform possible. It aims to elucidate how heritage architecture is experienced, registered, and produced, by focusing on the interplay between aspects of human embodiment and meaning-making processes. The special issue's theme of interdisciplinary perspectives on heritage architecture is grounded in three complementary yet mostly independent research areas.

- (1) Affective heritage, affective atmospheres. In recent years, scholarship and praxis dedicated to thinking and designing of heritage architecture has undergone an affective and more-than-representational turn.<sup>4</sup> This perspectival shift, primarily occurring at the interface of heritage studies, cultural geography, and contemporary memorial and museum design, emphasises the potential of affective and embodied experiences to act as a medium in the production and communication of meaning.<sup>5</sup> From more-than-representational heritage theories, 6 to the growing literature on atmospheres in architecture, 7 there is a shared recognition that affect, atmosphere, visceral responses, and materiality are central to visitors' experience of place, space, and time in memorials and museums as part of the meaning-making process and remembering in the present. These ideas are reflected in the general shift from the static 'site' or 'artefact' understanding to more dynamic conceptualisations of heritage in terms of body, experience, practice, and performativity. 8 Such 'affective architecture' approach to creating interactive heritage spaces assumes a negotiation between the processes of experiencing affective atmospheres and conceptualising meaning, shaped by the broader socio-political context.
- (2) The politics and agency of meaning-making. Arguably, this affective turn corresponds to — and in some instances is even a direct result of — the politicised destruction of symbolic architecture and places of heritage, which has intensified in the recent conflicts. Performative and mediated destruction of art and architecture is a powerful tool for changing and/or creating meanings, so much so that some scholars proposed to blur the line between violent and common cultural production of spatial artefacts, as both serve as a tool for selfdiscovery and identity-building. 10 Furthermore, it can be argued that the most recent tendencies in the design of memorials, museums, and places of heritage recognise and even use the power of affect to influence the creation of meaning. 11 This raises many ethical issues, such as the inseparability of designed affective atmospheres and underlying political connotations, which are often the main aims of various mnemonic practices and architectural design through which they are materialised. Consequently, there is a growing recognition of the need to address the implications of politics and power for the ongoing efforts to redefine, understand, and design heritage

architecture.<sup>12</sup> Failing to understand these mechanisms may lead to political abuse of various meanings that are intentionally — or even worse, unintentionally — created by architects engaged in designing heritage sites.

(3) Embodiment, affordances, cognitive science, and the built environment. A parallel stream of scholarship — inspired by the growing scientific and philosophical field of embodied cognition 13 — has started illuminating the neural and bodily mechanisms behind architecture's ability to affect our perception, memory, and imagination. 14 In this emerging field, the concept of affordances has gained particular prominence for its potential to describe the relationship between embodied experiences (at psychological and neurophysiological levels) and how spaces are shaped as possibilities for action; the built environment can thus be understood as a 'landscape of affordances'. 15 Moreover, what the embodied cognition research brings forth is the understanding that all our engagements with the world and, thus, with the built settings, is always imbued with material, social, and cultural meanings. 16 In this sense, spatial affordances are always cultural affordances — they provide a material scaffold for our embodied experiences while encoding and even reinforcing sociocultural patterns, practices, and meanings. <sup>17</sup> The value of this novel interdisciplinary perspective on architecture and human embodiment resides in offering new insights on why and how the design strategy behind affective architecture — i.e. invoking in the visitor intense emotional and bodily experiences through particular spatial scenarios and atmospheres — plays a role in making meaningful and memorable places.

However, despite conceptual alignments and similarities across these research fields and disciplines, thus far there has been little exchange of methods, theories, and concepts across the respective research communities. Although it is a growing field in both architectural theory and practice, architects' approaches to designing affective spaces of heritage remain mostly intuitive while theories and knowledge that could feed their designs are not systematised and largely remain confined within separate disciplines.

Building on this background, the special issue aims to formalise and catalyse an *interdisciplinary dialogue* to understanding how heritage architecture is experienced, registered, and produced. Here, heritage architecture is investigated in a broad sense by taking an interdisciplinary approach to questions like meaning-making, place, memory, and culture. Furthermore, interdisciplinarity in heritage architecture explores the intersection of *spatial design* (understood through affordances as designed possibilities for action as well as the notion of staging atmospheres), *human embodiment* (understood through the body as a biological system, with its embodied and affective experiences), and *modes of cultural production* (understood through socio-political factors, shared atmospheres, collective memory, temporality, and political agency). In this way, assembled contributions are grounded in theoretical and methodological approaches that dismiss the clear boundaries between subject and object; instead, they highlight the relational and co-emergent nature of experiences, atmospheres, and meanings through body-material environment interactions.

The theme and aims of this special issue emerged from a one-day international colloquium, 'Architectural Heritage: Affordances, Affect, Politics', co-organised by us at the Faculty of Architecture and Built Environment, Delft University of Technology, on 18 October 2019, its theme based on the intersection of our past research. 18 The colloquium gathered speakers from different fields — architecture, cultural geography, and philosophy of cognitive science — as a way to incite interdisciplinary discussions on the links between cultural affordances, embodied experiences, affective tonalities, shifting politics, and collective memory, reflected in the relation between experience and design in heritage architecture. The special issue capitalises on this trajectory and the many fruitful discussions initiated at the colloquium, some of which are further elaborated in the contributions from the same group of scholars and practitioners. With this issue, our intention is to provide a valuable source of information to inspire new research questions and theoretical frameworks, within and across different disciplines, for future studies on embodiment and meaning-making in heritage architecture.

#### Outlining the common threads: special issue contributions

The collected contributions in this special issue offer critical perspectives on the relationship between embodiment and meaning-making through specific modes of experiencing, registering, and producing heritage architecture. These 6 journal articles, an interview article, and a visual essay, with contributions from 20 authors, ranging from architects, cultural geographers, philosophers of cognitive science, artists, architecture preservationists to cultural psychologists, provide diverse perspectives that highlights the relevance and potential of an interdisciplinary dialogue. In this section, we first provide an outline of the special issue by presenting the eight contributions, followed by a discussion on the common threads across the different (inter)-disciplinary perspectives on the role of embodiment and meaning-making in heritage architecture.

The special issue opens with a contribution by Alberto Pérez-Gómez. In his article 'Some Reflections on Atmosphere and Memory from the Perspective of Enactive Cognition and Neurophenomenology', he emphasises the fundamentally embodied, affective, and action-oriented nature of our engagement with places — and designed spaces — in the fullest sense (a context that is both natural and cultural). By drawing on insights from the enactive approach to cognition, neurophenomenology, and twentieth-century phenomenology of embodiment, he argues for an understanding of atmosphere, memory, and architectural meaning as grounded in the 'articulation between embodiment — in the form of habits — and language'. Creating life-enhancing atmospheres thus entails offering the possibility of attunement, of revealing the existential meanings through 'the full range of awareness, from pre-reflective habits to reflective wonder'. The second contribution, 'Watermarks of Architecture' by Angeliki Sioli, explores the potential of literary language to shed light on the bodily, spatial, and affective experiences in the city of Venice, as a place

of paramount cultural and historical heritage. Through Joseph Brodsky's account of Venice in the wintertime, a season less often associated with the city's unique atmosphere, she provides a compelling argument for considering the affective, intangible, and ineffable layers of urban experiences as an essential aspect of Venice worth preserving, as a place of memory and heritage. The third contribution 'Generalised Chromaticism: The Ecologisation of Architecture' by Andrej Radman examines the role of architectural heritage in the process of exo-somatic evolution of architecture as a discipline. In the context of transdisciplinary architectural research and education, his article calls for the 'ecologisation of architecture' as a way to understand that 'its object-hood has always been just a fraction of what constitutes the becoming of architectural heritage'. In his view, the discipline of architecture entails raising the question of what might be as a way of creating the space of practical and conceptual possibilities, in which heritage serves as a mnemo-technology. The fourth contribution, 'Choreography as a Tool to Understand Architectural Situatedness: a Mediating Intervention at Hiedanranta Industrial Heritage Site, Finland' by Klaske Havik and Alberto Altés Arlandis, presents the insights from an experimental educational project at a former industrial site in Tampere, Finland. Together with 24 students, the authors explored the potential of creating situated and meaningful architecture by foregrounding the bodies' capacity to 'make space' through a combination of spatial investigations, movement classes, and on-site building interventions. The fifth contribution 'Approaching Heritage Sites Atmospherically' argues for an atmospheric research of heritage sites as a way to highlight the role of 'spatial, temporal, affective, imagined, and discursive qualities in how heritage sites feel and become meaningful to the people who visit them'. Through the notions of atmospheres, attunement, and attentionality, Shanti Sumartojo's article emphasises the importance of accounting for 'experiential meaning-making' in heritage sites. Rather than being understood as a static set of built forms and references to the past, architectural heritage and its meanings are to be seen as a dynamic, fluid environment subject to change, which emerges in the experience of people who visit them based on their understandings, predispositions, and previous experiences. The sixth contribution by Christos Kakalis titled 'Tracing Conflict: Remembering and Forgetting during the Pilgrimage to Saint George Koudounas' highlights the centrality of practices (such as walking, weaving, and praying) and objects (small bells, threads, and candles) in the processes of remembering and forgetting during the pilgrimage to the Greek-Orthodox Christian monastery of Saint George Koudounas on the island of Prinkipos (Büyükada, Istanbul). In this article, he explores how, in an event celebrated by both Muslim and Christian pilgrims, the sacred and bodily practices of pilgrimage allow 'a space for a performative negotiation of memories from the violent transformation of the country'.

The last two special issue contributions, an interview article and a visual essay, examine two unique practices in thinking and making heritage. In a conversation with Ronald and Erik Rietveld of RAAAF (Rietveld Architecture-Art-Affordances), we discuss their studio's approach as a unique marriage of

architecture heritage design and fundamental philosophy. Based on the field visits to three of their built works — *Bunker 599* (2013), *Deltawerk II* (2018), and *Still Life* (2019) — in this interview, 'Designing Affordances of Future Heritage', we explore the potential of affordance-based approach for rethinking and creating built heritage as (re)activation of past, present, and future. The special issue is rounded off with 'Ethics of Dust' — a visual essay on the artistic works of experimental preservation by Jorge Otero-Pailos. This visual essay includes contributions from artists and scholars across disciplines: Tenna Doktor Olsen Tvedebrink, Federico De Matteis, Michael Hirschbichler, Jovana Popić, Maria De Piedade Ferreira, Uta Pottgiesser, Marcus Weisen, and Brady Wagoner (in order of appearance), with an epilogue from the artist himself, Jorge Otero-Pailos. Through short captions in reaction to Otero-Pailos' artistic installations, the visual essay's particular format enabled the investigation of the power of images and experimental heritage to provoke imagination through atmospheric and embodied experiences.

#### Meaning-making through the singular and plural body (common thread 1)

The body — with its sensory and affective experiences, habitual actions, capacity for movement, pre-reflective awareness, imagination, and reflective wonder — plays a central role in the processes of meaning- and memorymaking in heritage architecture. While the collected contributions take different lenses to this question — from affective and embodied cognition (Pérez-Gómez), literary language (Sioli), educational experimentation (Havik and Arlandis), affective atmospheres (Sumartojo), to ethnographic study of pilgrimage practices (Kakalis) — they highlight the co-emergence of meaning in the ongoing interactions between the body and the material environment of heritage spaces. Such centrality of embodiment, manifested as embodied experiences and practices, highlights that the represented meanings of the past in heritage architecture are, as Sumartojo elaborates in this volume, 'continuously renegotiated and remade through experience'. Besides an individual's sensory and affective experiences of spatial structures in the present moment, these encounters call on visitors' imagination and memories as building blocks of emerging meanings. As Erik and Ronald Rietveld capture in their works, such as Bunker 599, the experiences of the past are 'partly created by the history of the object, but also by the history of each person'.

Yet, heritage architecture is more than the meanings of the past experienced in the present moment by a singular body. According to Sumartojo:

[A]n atmospheric understanding of heritage sites allows us to attune to the minor alongside the monumental, the felt alongside the material, treating these different registers as relational, and showing how such places remain with us in terms of both our personal memories and our collective political understandings, now and into the future.

In Kakalis' investigation of the pilgrimage to the monastery of Saint George Koudounas, this link between the individual and the collective dimension of meaning-making comes to the fore. Here, the memory and even the part of the heritage site itself emerge from the collective practice performed by the

bodies of participants as they engage in the embodied acts of walking, weaving, and praying. Through these acts, the conflicting discursive narratives due to the pilgrims' religious backgrounds and country's political history are challenged. Instead, the embodied pilgrimage practices and the colourful fabric of woven tensile threads as a material manifestation of co-existence create the space for 'stories of forgetting and remembering'. Similarly, in her contribution, Sioli highlights the value and potential of literary language as 'a means of articulating the intersubjective experiences of heritage sites'. Thus, understanding the meaning-making processes in heritage architecture requires attentiveness to both the singular and plural body.

#### Meaning-making and temporality (common thread 2)

A shared idea across collected contributions is the understanding of heritage architecture as a 'memory of the future'. In their articles, Radman and Pérez-Gómez, following Bergson and Husserl respectively, highlight the understanding of the 'thick' present moment of our lived experiences as simultaneously referring to the past and the future. In the context of an atmospheric approach to heritage sites where the person and their experience is placed at the centre of the meaning-making processes, this temporal arch presents a source of open-endedness and futurity of architectural meaning. As Sumartojo argues, 'atmospheres frame the inherent uncertainty of the weaving together of object and perceiving subject; the weight of historical representation against the precarious forward motion of experience; and the discourse of collectivity alongside distinct and ongoing individual sense-making'. At the same time, RAAAF's works are directly inspired by the possibilities of imagining future heritage — through spatial interventions, their goal is to provide affordances for 'surprise, wonder, and trying to incite people to reflect on the practice of cultural heritage conservation'.

Oftentimes, it is by taking things away, by 'articulations of the void' that they create space for this reflection, for interpreting 'the history toward the future'. 19 This approach resonates closely with Sioli's analysis of Brodsky's descriptions of Venice in the wintertime — in particular the presence of fog, as 'a temporal, fleeting, short-lived, but a characteristic condition in the city during winter that strongly changes the place and its perception'. Through the heavy fog, the city's presence is reconfigured. Yet, paradoxically, the memorability of its atmosphere is born through such obliteration. Accordingly, as Sioli argues, 'what needs to be studied and understood are the spatial experiences and atmospheres that city [of Venice] can offer' since by 'preserving buildings, streets, and monuments alone, Venice itself will not be fully preserved'. The ephemerality of the heritage site and its spatial expression as closely intertwined with embodied practices is evidenced in Kakalis' analysis of the pilgrimage as 'an embodied topography, an embodied palimpsest', written in the landscape. Similarly, artistic works of Jorge Otero-Pailos, like 'The Ethics of Dust', which are explored in the visual essay, challenge the objects worth preserving. Seen in this light, heritage architecture may be best understood as a reflection of past and future, simultaneously tangible and intangible, an object and an experience.

#### The ethics and politics of meaning-making (common thread 3)

Environment in general, and especially built environment, has a significant impact on human health, emotions, and behaviour, which is why the work of architects comes with a heavy ethical responsibility. As discussed previously, this capacity of architecture to cultivate meaning through our bodily engagements with it in spaces of heritage is often (mis)used to politicise the (memory of the) past, especially by official national institutions. Discussing the role of architects in these processes, Sumartojo argues in this volume that an ethics of [designing] atmospheres should step beyond design intent and insist that architects, designers, curators, and visitors alike attend to their roles in coconstituting not just the spatial experience of heritage sites, but their ongoing effects as their atmospheres' affective excess unfolds into the world.

Even here architects should be aware of their limitations in terms of the inevitable temporality of buildings or objects, and the ever-changing cultural lenses through which we observe and make sense of them.

This then begs perhaps the essential question: since heritage architecture is about projecting values of the past into the future, how can we make sure that this future is commonly *shared*? In this volume, Havik and Arlandis argue for the 'compassion as a crucial skill for architects to engage with atmospheres', as they make the case for empathy and care in architectural education as well. Similarly, Sioli emphasises the importance of using literary language in architectural training to 'cultivate a design sensitivity open to the ephemerality of spatial moods for architects and designers'. This continuous working with multiple social layers and perspectives requires constant (re)imagining of shared futures, developing skills in social tolerance, and, as work of RAAAF testifies, an effort to 'find the common ground'. Cultivating responsible spatial practices might even allow multiple visions of the futures to co-exist.

## Concluding remarks: future perspectives for interdisciplinary dialogue on heritage architecture

The complexity of the field that is still in its infancy prevents us from drawing any final positions. Instead, this special issue is imagined as a conversation-opener that would bring the disciplines of architecture, embodied and affective cognitive science, phenomenological philosophy, affective geography, and heritage and memory studies, among others, to the same table. Its aim is to probe and capture the multiplicity of interdisciplinary perspectives on embodied meaning-making through design and spatial encounters of heritage architecture. While it is our hope that a reader will recognise in these pages a framework for further interdisciplinary investigations, some key questions emerging from this new perspective continue to persist. Here we wish to underline just a few, related respectively to: design implications; political

agency; individual/collective meaning-making; and the encultured body as a biological system:

- (1) What implications for architectural design does the understanding of heritage architecture as permanently unfinished, experientially open-ended bring? How can we respond through design to the fluid, dynamic, and ongoing transformations of these spaces and their meanings shaped by our experience, time, and socio-political context? What lessons can we draw for architectural education?
- (2) Who is designing and for whom? How are embodied, affective experiences, and performative practices used as an alibi to legitimise politically motivated architectural and urban interventions? How can design of heritage architecture act as an agent that brings burdened histories to life in a critical way? How can it help to imagine and show such as through new affordances the ways that we could live differently?
- (3) What is the relation between the individual and collective meaning- and memory-making in our experiences of heritage architecture? What is the role of shared emotions in how we think and experience heritage sites? In what ways do the processes of staging and sharing affective atmospheres underpin the creation of individual and collective memory in spaces of heritage?
- (4) The growing body of knowledge from cognitive science to biology, such as embodied cognition and niche construction theory, indicates that architecture and built settings affect us psychologically and neurophysiologically. If changing our physical and social environments means that these, in turn, alter the genetic, cognitive, and cultural patterns of who we are, then what are the implications of such understanding for the conception and design of heritage architecture? How can measures of (neuro)physiological responses to different spatial affordances contribute to understanding the role of the body in the meaning-making processes? How can we investigate the affective and embodied experiences of heritage architecture by integrating first-person, experiential methods with third-person methodologies?

In the starting phase of what — we would like to believe — will be a long-term investigation, this special issue outlines the insights into the concepts of embodiment, affect, atmospheres, affordances, and political agency, and in their explanatory value for unpacking the question of how meaning is experienced, registered, and produced in heritage architecture. In particular, the contributions gathered in this volume highlight the open-endedness of the meaning-making process, by virtue of embodied experiences and agency of the body, while simultaneously creating opportunity for designerly acts to increase our openness to different possibilities and to imagine new histories, new meanings — and possibly, new future heritage.

#### **Acknowledgements**

We would like to thank the 'Architectural Heritage: Affordances, Affect, Politics' colloquium presenters Erik Rietveld, Lucia Allais, Harry Mallgrave, Giovanna Colombetti, Shanti Sumartojo, Klaske Havik, Andrej Radman, Tom Avermaete, and Angeliki Sioli for their valuable contributions and, together with audience participants, for engaging discussions. We would also like to thank all special issue contributors, journal editors, and reviewers for their thoughts, time, and effort invested in preparing this issue.

#### **Funding**

Supports that enabled the 'Architectural Heritage: Affordances, Affect, Politics' event were: the grant from the European Union's Horizon 2020 research and innovation programme [grant agreement no. 798115] to Aleksandar Staničić; the support from the Department of Architecture, Design and Media Technology at Aalborg University to Andrea Jelić; and the grant from the International Ambiances Network 2019 to Andrea Jelić and Aleksandar Staničić.

#### **Notes and references**

- See, for example, MIT's Future Heritage Lab <a href="https://www.futureheritagelab.com/">https://www.futureheritagelab.com/</a>
  [accessed 24 September 2022]; and UCL's Future Heritage research project <a href="https://www.ucl.ac.uk/bartlett/heritage/research/future-heritage/">https://www.futureheritagelab.com/</a>
  www.ucl.ac.uk/bartlett/heritage/research/future-heritage/
   [accessed 24 September 2022].
- Erik Rietveld and Ronald Rietveld, 'Hardcore Heritage: Imagination for Preservation', Frontiers in Psychology, 8 (2017), article 1995 (p. 2) <a href="https://doi.org/10.3389/fpsyg.2017.01995">https://doi.org/10.3389/fpsyg.2017.01995</a>>.
- Jorge Otero-Pailos, 'Experimental Preservation', Places, September 2016 <a href="https://placesjournal.org/article/experimental-preservation/">https://placesjournal.org/article/experimental-preservation/</a>> [accessed 5 July 2022].
- 4. Some of the seminal texts are Divya P. Tolia-Kelly, Emma Waterton, and Steve Watson, Heritage, Affect and Emotion: Politics, Practices and Infrastructures (Oxon: Routledge, 2017); Brady Wagoner, Ignacio Brescó, and Sarah H. Awad, Remembering as a Cultural Process (Cham: Springer International Publishing, 2019) <a href="https://doi.org/10.1007/978-3-030-32641-8">https://doi.org/10.1007/978-3-030-32641-8</a>; and Jacque Micieli-Voutsinas and Angela Person, Affective Architectures: More-than-Representational Geographies of Heritage (London: Routledge, 2020).
- See Danielle Drozdzewski, Emma Waterton, and Shanti Sumartojo, 'Cultural Memory and Identity in the Context of War: Experiential, Place-based and Political concerns', International Review of the Red Cross, 101.910 (2019), 251–72 <a href="https://doi.org/10.1017/">https://doi.org/10.1017/</a>
   S1816383119000110>; Jacque Micieli-Voutsinas, 'An Absent Presence: Affective Heritage at the National September 11th Memorial and Museum', Emotion, Space and Society, 24 (2017), 93–104 <a href="https://doi.org/10.1016/j.emospa.2016.09.005">https://doi.org/10.1016/j.emospa.2016.09.005</a>; Juhani Pallasmaa, 'Museum as an Embodied Experience', in The Multisensory Museum: Cross-disciplinary Perspectives on Touch, Sound, Smell, Memory, and Space, ed. by Nina Levent and Alvaro Pascual-Leone (Lanham, MD: Rowman & Littlefield, 2014), pp. 239–50; Emma Waterton, 'A More-than-representational Understanding of Heritage? The "Past" and the Politics of Affect', Geography Compass, 8.11 (2014), 823–33 <a href="https://doi.org/10.1111/gec3.12182">https://doi.org/10.1111/gec3.12182</a>; and Emma Waterton and Jason Dittmer, 'The Museum as Assem-

- blage: Bringing Forth Affect at the Australian War Memorial', *Museum Management and Curatorship*, 29.2 (2014), 122–39 <a href="https://doi.org/10.1080/09647775.2014.888819">https://doi.org/10.1080/09647775.2014.888819</a>>.
- See, for example, Shanti Sumartojo, 'Commemorative Atmospheres: Memorial Sites, Collective Events and the Experience of National Identity', Transactions of the Institute of British Geographers, 41.4 (2016), 541–53 <a href="https://doi.org/10.1111/tran.12144">https://doi.org/10.1111/tran.12144</a>; Micieli-Voutsinas, 'An Absent Presence'; and Waterton, 'A More-than-representational Understanding of Heritage?'.
- See Mikkel Bille, Peter Bjerregaard, and Tim Flohr Sørensen, 'Staging Atmospheres: Materiality, Culture, and the Texture of the In-between', Emotion, Space and Society, 15 (2015), 31–8 <a href="https://doi.org/10.1016/J.EMOSPA.2014.11.002">https://doi.org/10.1016/J.EMOSPA.2014.11.002</a>; Gernot Böhme and others, 'Atmospheres, Art, Architecture: A conversation between Gernot Böhme, Christian Borch, Olafur Eliasson, and Juhani Pallasmaa', in Architectural Atmospheres: On the Experience and Politics of Architecture, ed. by Christian Borch (Basel: Birkhäuser, 2014), pp. 90–107; Tim Edensor and Shanti Sumartojo, 'Designing Atmospheres: Introduction to Special Issue', Visual Communication, 14.3 (2015), 251–65 <a href="https://doi.org/10.1177/1470357215582305">https://doi.org/10.1177/1470357215582305</a>; Peter Zumthor, Atmospheres: Architectural Environments Surrounding Objects (Basel: Birkhauser Architecture, 2006); and Elisabetta Canepa, Architecture Is Atmosphere: Notes on Empathy, Emotions, Body, Brain, and Space (Milan: Mimesis International, 2022).
- 8. Waterton, 'A More-than-representational Understanding of Heritage?'.
- Pamela Karimi and Nasser Rabbat, The Destruction of Cultural Heritage: From Napoléon to ISIS (The Aggregate Architectural History Collaborative, 2016).
- 10. Andrew Herscher, 'Warchitectural Theory', *Journal of Architectural Education*, 61.3 (2008), 35–43 <a href="https://doi.org/10.1111/j.1531-314X.2007.00167.x">https://doi.org/10.1111/j.1531-314X.2007.00167.x</a>.
- 11. Micieli-Voutsinas, 'An Absent Presence'.
- See Azra Akšamija, 'Future Heritage', in *Experimental Preservation*, ed. by Jorge Otero-Pailos, Erik Fenstad Langdalen, and Thordis Arrhenius (Zurich: Lars Muller, 2016), pp. 116–17; and Lucia Allais, *Designs of Destruction: The Making of Monuments in the Twentieth Century* (Chicago, IL: The University of Chicago Press, 2018).
- See Giovanna Colombetti, The Feeling Body: Affective Science Meets the Enactive Mind (Cambridge, MA: MIT Press, 2014); Shaun Gallagher, Enactivist Interventions (Oxford: Oxford University Press, 2017); and Francisco J. Varela, Eleanor Rosch, and Evan Thompson, The Embodied Mind: Cognitive Science and Human Experience (Cambridge, MA: MIT Press, 1991).
- 14. See Andrea Jelić and others, 'The Enactive Approach to Architectural Experience: A Neurophysiological Perspective on Embodiment, Motivation, and Affordances', Frontiers in Psychology, 7 (2016), 1–20 <a href="https://doi.org/10.3389/fpsyg.2016.00481">https://doi.org/10.3389/fpsyg.2016.00481</a>; Harry F. Mallgrave, Architecture and Embodiment: The Implications of the New Sciences and Humanities for Design (New York, NY: Routledge, 2013); Alberto Pérez-Gómez, Attunement: Architectural Meaning After the Crisis of Modern Science (Cambridge, MA: MIT Press, 2016); and Sarah Robinson and Juhani Pallasmaa, Mind in Architecture: Neuroscience, Embodiment, and the Future of Design (Cambridge, MA: MIT Press, 2015).
- 15. See Zakaria Djebbara and others, 'Sensorimotor Brain Dynamics Reflect Architectural Affordances', Proceedings of the National Academy of Sciences of the United States of America, 116.29 (2019), 14769–78 <a href="https://doi.org/10.1073/pnas.1900648116">https://doi.org/10.1073/pnas.1900648116</a>; Erik Rietveld and Julian Kiverstein, 'A Rich Landscape of Affordances', Ecological Psychology, 26.4 (2014), 325–52 <a href="https://doi.org/10.1080/10407413.2014.958035">https://doi.org/10.1080/10407413.2014.958035</a>; and Erik Rietveld and others, 'The End of Sitting', Harvard Design Magazine, 40 (2015), 180–1.
- Ludger van Dijk and Erik Rietveld, 'Foregrounding Sociomaterial Practice in Our Understanding of Affordances: The Skilled Intentionality Framework', Frontiers in Psychology, 7.1969 (2017) <a href="https://doi.org/10.3389/fpsyg.2016.01969">https://doi.org/10.3389/fpsyg.2016.01969</a>>.

- 17. See Andrea Jelić and Aleksandar Staničić, 'The Memory in Bodily and Architectural Making: Reflections from Embodied Cognitive Science', in Affective Architectures: More-than-Representational Geographies of Heritage, ed. by Jacque Micieli-Voutsinas and Angela Person (London: Routledge, 2020), pp. 187–203; and Erik Rietveld and Ronald Rietveld, 'Hardcore Heritage: Imagination for Preservation', Frontiers in Psychology, 8.1995 (2017) <a href="https://doi.org/10.3389/fpsyg.2017.01995">https://doi.org/10.3389/fpsyg.2017.01995</a>.
- 18. The international colloquium, 'Architectural Heritage: Affordances, Affect, Politics', coorganised by Andrea Jelić and Aleksandar Staničić, TU Delft, 18–19 October 2019 <a href="https://ambiances.net/seminars/delft-2019-architectural-heritage-affordances-affect-politics.html\_2">https://ambiances.net/seminars/delft-2019-architectural-heritage-affordances-affect-politics.html\_2</a> [accessed 24 September 2022]. For examples of our previous work, see Jelić and Staničić, 'The Memory in Bodily and Architectural Making'; Jelić and others, 'The Enactive Approach to Architectural Experience'; Andrea Jelić, 'Designing "Pre-Reflective" Architecture: Implications of Neurophenomenology for Architectural Design and Thinking', Ambiances: International Journal of Sensory Environment, Architecture, and Urban Space (2015) <a href="https://doi.org/10.4000/ambiences.628">https://doi.org/10.4000/ambiences.628</a>; Aleksandar Staničić, 'Media Propaganda vs Public Dialogue: The Spatial Memorialisation of Conflict in Belgrade After the 1999 NATO Bombing', The Journal of Architecture, 26.3 (2021): 371–93 <a href="https://doi.org/10.1080/13602365.2021.1897645">https://doi.org/10.1080/13602365.2021.1897645</a>; Elisa Dainese and Aleksandar Staničić, War Diaries: Design After the Destruction of Art and Architecture (Charlottesville, VA: University of Virginia Press, 2022).
- 19. Rietveld and Rietveld, 'Hardcore Heritage'.