Memory and Place

John Sutton, University of Stirling: email john.sutton@stir.ac.uk

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john.sutton@stir.ac.uk
https://johnsutton.net/

Abstract

The places in which we live play powerful roles in a range of processes of remembering. Relations between memory and place are addressed variously in cognitive neuroscience and in the social sciences, but only rarely by philosophers, save some in the phenomenological tradition. New ideas about spatial cognition, place, and memory can fuel productive enquiry and catalyse novel connections. Deploying distributed cognition as one useful framework, this chapter addresses first the different forms of memory involved in remembering places, then the different ways that places influence or contribute to memory. It applies the approach to representative practical domains of independent philosophical interest, examining problems about memory and spatial technologies, and about remembering places with troubled or difficult pasts. Introducing a wide array of interdisciplinary research of potential philosophical significance, the chapter aims to encourage sustained attention to place and spatial cognition in the next phases of the philosophy of memory.

Keywords (5-10)

Place; spatial memory; navigation; wayfinding; distributed cognition; cognitive ecology; place memory; technology; city

1. Introduction: memory and place

I have recently moved back to Scotland, to the country and the region in which I grew up. It is no surprise that in spending time now in some of the places and with some of the people I knew well back then, I remember more of and about those earlier periods. This is in marked contrast with the nature and dynamics of the memories that derive from a recent year I spent living in Paris, with regard both to the influence or effect of places on my memory in general, and to the specific features of my memories of places. In Scotland again, not only do I now access or reconsider specific events and attitudes, but I also sometimes feel afresh certain ways of being in this land and these neighbourhoods. Dimensions of sensory, affective, and bodily experiences that connect past to present become available or in focus now, in addition to episodes of my earlier life.

Although the roles of place and space in memory are many and powerful, only a few philosophers – mainly in the phenomenological tradition – have explicitly focussed on relations between memory and place (Casey 1993; Donohoe 2014; Malpas 2018). Casey complained 40 years ago that 'memory of place … is one of the most conspicuously neglected areas of philosophical or psychological inquiry into remembering' (1987, 183), and there has been no dramatic expansion since as there has been in other corners of the philosophy of memory. But there is abundant rich material in work on both topics to fuel productive enquiry into a range of intriguing issues, and shifting approaches in other areas should help philosophers find fertile new ideas and connections. So, this chapter surveys foundational and applied questions about relations between memory and place. While building on these phenomenological ideas, its starting point is the compatible but distinct framework of situated, distributed, or '4E' cognition in the philosophy of mind (Clark 1997; Newen et al 2018). This broad approach directs attention to the many roles that place and space take in our activities and practices of remembering. Philosophers unconvinced by the idea that cognition is embodied, enactive, and/ or extended in significant ways can still raise and consider all of the topics covered here, in their preferred alternative terms. But, I argue, new impetus is given to philosophical discussion of place and memory if we allow that remembering – like feeling or decision-making – can sometimes spread beyond the bounds of skull and skin to incorporate heterogeneous environmental resources (Sutton 2010).

I adopt an initial working distinction between 'space' and 'place' as follows, matching standard usage in phenomenology and the social sciences. 'Space' is unmarked geometric space, the encompassing volume in which objects are positioned, sites are located, and events occur. 'Place', in contrast, is dependent on and entangled with human activity, the lived domain of embodied subjects, actually or potentially experienced as inhabited or uninhabited, inhabitable or uninhabitable. This makes 'place' a matter of actual or potential interaction and relation, something to be made, 'something felt, sensed, undergone' (Casey 2011, 208). Any place, experienced or remembered or imagined at any spatiotemporal scale, is then composed in turn of many places that can situate and orient our embodied experience (Casey 1996, 2001).

Next, while noting that there is little consistency in usage across distinct disciplines, I adopt a further, rough but related initial distinction between two broad domains of what in the broadest sense we can call 'spatial memory' and 'spatial cognition' (see also chapter X). On the one hand we enquire into processes of remembering that track or relate to places at a meso-scale or beyond: this includes the role of memory in navigation and wayfinding, the various ways that we remember places (such as landscapes and regions, streetscapes or cities), and the role of places in remembering (for example) episodes, facts, or skills. These are our main topics in this chapter. On the other hand – not our primary concern here – are our capacities to track or to manipulate objects in space, capacities which have distinct evolutionary roots and neural bases (Newcombe 2018).

In the cognitive neurosciences, the terms 'spatial memory' and 'spatial cognition' are often used to label either the capacity to navigate, to find a way around the world, or the putative neurocognitive bases for this capacity (Ekstrom et al 2018). Clearly, relative to the conceptual distinction suggested above, these fields are – at least in the study of human cognition – therefore intended to address relations between memory and *place,* even if they do so by

seeking to show how those relations are built on or out of the ways we locate ourselves in *space*. Extraordinary advances in contemporary neuroscience show how what are (confusingly) called 'place cells', which – to a first approximation – fire selectively only when an organism is in a particular *spatial* location, combine with 'grid' and other specialized cells in dynamic, selective information arrays across hippocampus and entorhinal cortex, to represent relations between elements of a target domain. In their most ambitious mode, these research programs describe the resulting 'cognitive maps' in the brain as coding social and abstract spaces as well as physical spaces (Epstein et al 2017; Behrens et al 2018; Whittington et al 2022). Philosophers of neuroscience are contributing directly to debates about the nature and properties of such neurocognitive maps (Rescorla 2009; Shea 2018; Camp 2021; Robins, Aronowitz, & Stolk 2022; see also chapter X). Here I address the prior and broader challenge of *situating* these neuroscientific advances, which are sometimes pitched in both reductionist and individualist terms, in relation to the richer conception of 'place' outlined above.

Experienced voices within the neurosciences call for methods to embrace the multicausal complexity of the ecosystems in which cognition and behaviour unfold (Krakauer et al 2017; Ibanez 2022; Vigliocco et al 2024), and for better mobile systems to tap embodied cognition and navigation in action (Park, Dudchenko, & Donaldson 2018). They also call for better *theory* to go decisively beyond study of compartmentalized cognitive processes in unrealistically static conditions (Gomez-Marin & Ghazanfar 2019; Grasso-Cladera et al 2022). The hope is to situate 'cognitive maps' among dynamic, interacting neural systems, and to ground them firmly in embodied worldly action, showing how they are incorporated into the complex ecologies in which animals move (Horner et al forthcoming).

Such optimistic integration might be further motivated by considering the roles of navigation and spatial memory in the history of 4E cognition. Hutchins' *Cognition in the Wild* (1995) revitalized the cognitive sciences in an extraordinary study of maritime navigation among Pacific islanders, early modern explorers, and on a modern US Navy frigate. Kirsh's case for the ubiquity and significance of 'epistemic actions' was built on his groundbreaking study of 'the intelligent use of space' (Kirsh 1995), when people set up arrays of objects and features of local environments to hold information or instructions for action, leaving large parts of the mnemonic work out in the world rather than constantly trying to upload it into their brain. And what both Inga and Otto were trying to do, in Clark and Chalmers' notorious argument for the extended mind (1998), was to *find their way* to a museum, using neural or notebook resources respectively.

Over subsequent decades, research on memory, emotions, and creativity was slowly but firmly transformed by distributed cognition (Sutton 2009a; Griffiths & Scarantino 2009; Sawyer & DeZutter 2009). But cognitive studies of navigation itself have been less heavily touched by the anti-individualist shift. Gaps remain glaring between much mainstream experimental neuroscience and more phenomenological, social, or ethnographic work on navigation: laboratory research on spatial cognition research, one paper lamented, studies 'only the pared-down, asocial, context-free, and indirectly accessible mental comprehension of a lone map reader' (Brown & Laurier 2005). While noting that some enactivist and ecological theorists follow a more pessimistic or divisive path, rejecting cognitive maps and the neuroscience of spatial memory entirely (Ingold 2000; Heft 2013; Segundo-Ortin & Hutto 2021), here instead I pitch philosophy in constructive, catalytic mode, seeking both to connect place and memory

on their own terms and to mend broken bridges between neurocognitive and social sciences, helping neuroscientists show how open neural systems are not only to the densely interactive brain, but also to diverse forms of internal and external influence, *situating* the entangled brain in its vast and uneven cognitive ecosystems (Hutchins 2010; Pessoa 2022).

I proceed by first considering the varieties of memory involved in remembering places (Section 2). Then section 3 shifts perspective slightly to discuss the various ways that places are involved in memory. In section 4 I apply the ideas introduced thus far to some representative applied domains of independent philosophical interest in which relations between memory and place have central importance.

2. Remembering places

Many forms of memory are involved in remembering places. If I remember Paris well, I have rich episodic or autobiographical memories of events and experiences in that city, networks of semantic memories and beliefs about the city, and practised embodied, practical, or procedural memories of how to navigate it and cope with its changing features – to inhabit it. Each of these forms of memory might survive more or less intact in the kinds of unusual and tragic case in which neural systems are severely damaged or degraded (Corkin 2002; Sutton 2009b; Craver & Rosenbaum 2026). But in their ordinary operation, they complement and interact with each other in complex and poorly understood ways.

This section addresses three forms or aspects of memory for places, which are typically meshed. In turn we look at the *embodied,* the *dynamic,* and the *social* aspects of place memory, where 'place memory' is a useful umbrella label, rather than a putative kind term. Not only do these forms of memory constantly interanimate each other in practice, but they may also overlap or interact with other cognitive processes. Within the general holism of everyday cognition, remembering is a particularly porous activity, often tightly and mutually connected with (for example) perceiving, imagining, and feeling as well as with our efforts at orienting ourselves in space and place. On the one hand, in navigating the streets of Paris now, I am often not only experiencing present sights and sounds but also remembering events, people, or feelings of the past, and sometimes doing so in order to guide my current wayfinding. On the other hand, in recollecting episodes from periods of Paris life, I am often not only constructing sequences of discrete events, but also engaged now in emotional and bodily ways as I express, gesture at, or otherwise re-enact features of those past trips or experiences (Sutton & Williamson 2014; Perrin 2021). And all of these kinds of connection between past and present, further, may sometimes involve resources and processes beyond skull and skin, when other people, technologies, or indeed places themselves play vital roles in grounding or shaping memory experience.

Embodied remembering of places

I remember how to find my way from where we lived in the 14th arrondissement to the Île Saint-Louis, and back, and between many other familiar Paris landmarks and locations. I remember how thus to get around both on foot and by public transport, in each case by way of a range of different possible routes, and even after I have long forgotten the names of many of the streets or metro stations along the way.

This is one paradigmatic form of spatial or navigation memory, which does not appear to require an allocentric representation or richly integrated survey knowledge. It is thus a form of 'procedural memory', to use the term preferred in the cognitive neurosciences. Holding such standard yet ecologically realistic cases firmly in mind, however, makes it clear that these ways of remembering places are not only complex and culturally embedded, but also flexible and highly cognitive. I can adapt and adjust my well-practised routes and navigational habits to changing circumstances such as extreme weather, a disruption or delay on a metro line, or crowds heading to a *manifestation*. It is an open question whether, to do so, I *must* be actively drawing also on separate declarative knowledge or engaging in explicit deliberation, or whether such strategic control is itself a feature of certain forms of embodied or procedural memory (Christensen et al 2019; de Brigard 2019). But such phenomena at least put pressure on the widespread assumptions that procedural memory is 'a-noetic' (Tulving 1985) in the sense that it is non-cognitive (Michaelian 2011). It is true that sometimes when walking on highly familiar streets we are thinking or talking about quite other abstract or remote matters, 'paying no attention at all' (as we might say) to our route. But this does not mean that we are cognitively cut off from our surroundings. Various distinctive forms of embodied monitoring are characteristic of skilful activities like wayfinding (Christensen et al 2016), which remain open to real-time influence and are not restricted to the kind of navigation that is done so 'automatically and without thinking' that it can survive severe damage to the hippocampus because it 'does not require much flexibility of thought' (Jeffrey 2019, p.858).

Alongside the resulting challenge of better unpacking terms like 'implicit' or 'tacit' in the context of embodied memory of places, we also need richer positive characterizations of the deep embodied knowledge that arises as individuals or groups inhabit neighbourhoods or territories over time. The procedural aspects of such fine-grained and seamless familiarity with places are not merely matters of rote wayfinding, but encompass diverse forms of spatial agency as people remember how to work or relax in, tell tales about, and interact with the built and natural and social environments in question (Brown & Laurier 2005; Wood 2013; Kukla 2021; Sutton 2024). What people typically lack if they have never lived in Paris but still know a lot *about* the city – from books, movies, or testimony, for example – includes not only the bodily and affective aspects of belonging or attachment, but also highly attuned perceptual, spatial, and social or socio-cognitive capacities. The forms of bodily agency that in a sense bring remembered places with us into the present orient us in an ongoing way to the personal, cognitive, and cultural histories and affordances of these places.

Dynamic and declarative remembering of places

What I knew *of* and *about* Paris increased and changed over the period I lived there. I acquired relevant semantic knowledge (and, no doubt, false beliefs too) by many channels, including personal experience and embodied interaction with parts and features of the city, as well as learning from people and other authoritative sources. It is hard to pin down just what kind of declarative knowledge is involved here, going in some sense beyond mere book learning to include or to be further shaped by both episodic and embodied memory. Place poses helpful tests or challenges to the epistemology of expertise. In one original contribution, Kukla (2023) argues that knowledge of places is a form of experiential knowledge of particulars, or a kind of 'objectual' knowledge, which is an 'embodied, active, and aesthetic' experiential engagement with a city, and requires us 'to have a feel for what it is like to negotiate its rhythms and its dynamic patterns' (cf. Openshaw 2022; Lopez-Cantaro & Robb 2023). Though such

knowledge, for Kukla, is more specific than standard forms of 'knowledge-how', and thus remains firmly in the declarative realm, this is a thoroughly dynamic or relational conception of what it is to know a place. It may fit well with skill-based epistemologies (Hetherington 2020) where the abilities that are in play in gaining, maintaining, and updating knowledge of certain facts may depend, for their effective exercise, on the available environments (Millar forthcoming).

The interconnected forms of knowledge that underpin these forms of place memory are also dynamic, even while resting on or reflecting more or less stable long-term cognitive and affective comfort in particular places. Individuals or groups who are not permanently settled in one place can develop rich memories in patterns of movement over time (Kelly 2015; Sutton 2020a). On other occasions, familiar places can be partly reconstructed or reimagined after migration or dislocation, for there is cognitive, affective, and imaginative resilience in the ways we use past experience for present and future purposes. Beliefs, stories, and practices involving places in the past are open to renegotiation and re-evaluation, especially in contexts of disruption or conflict, when questions of legitimacy or custom arise with fresh force or in new places (Wood 2013, pp.188-200; Sutton 2020b). Places and the past alike often hold or leave many traces, relating to many different events: it is then often productive in the present to be open to constructing or debating different memory claims, acknowledging or celebrating the multiplicity of potential ways we can engage with those various events, trying to do so faithfully or well (Campbell 2006; Sutton 2024).

Collaborative remembering of places

Just as we sometimes walk together (Gilbert 1990) or navigate together (Fernandez Velasco 2024), so we sometimes remember together places we have previously visited and experiences we have had there. Our original actions may have been undertaken alone or jointly, and our current memories may be retrieved individually or collaboratively. A range of familiar socio-cognitive phenomena involving place, memory, and collaboration are therefore ripe for sustained investigation, even though spatial cognition and wayfinding, like remembering, have typically been studied as primarily individual capacities in the cognitive sciences and in many quarters of philosophy. While a developing interdisciplinary research program on collaborative recall has integrated '4E' cognitive philosophy of memory with experimental psychology (Sutton et al 2010; Meade et al 2018), work on collaborative wayfinding in its early phases (Dalton et al 2019; Curtin & Montello 2023) has not yet in similar fashion taken a situated or distributed approach. There are at least five natural paths forward for further research here, in directions to which empirically-engaged cognitive philosophy can directly contribute.

First, one tactic is to work carefully by analogy, seeking lessons for the study of collaborative navigation from research on remembering together, such as the importance of shared history and the significance of the microstructure of communicative interactions between group members (Harris et al 2014). Another path is to add dimensions to existing experimental paradigms: collaborative conditions can be added to existing methods for studying individual wayfinding (Castilla et al 2022; Penaud et al 2022), and memory tasks added to the few existing methods for studying collaborative wayfinding (Yassin et al 2021; Mavros et al 2022; Bae et al 2024). A third is to seek better descriptive understanding of how people actually use GPS and other navigation technologies together, a surprisingly neglected topic to which I return in

section 4. Integrative theoretical work on collaborative remembering of places, fourthly, can apply to the cases of navigation and wayfinding ideas from social ontology (Tollefsen 2006; Sutton 2008; Blustein 2022) and transactive memory theory (Wegner 1987; Theiner 2013) as well as phenomenology and distributed cognition. Finally, in the most direct path, we can seek cases in which collaborative wayfinding simply *is* a matter of collaborative recall. In one such mode, people might later together retrieve information about routes or places that they have previously explored, in standard collaborative recall tasks where the material learned and retrieved happens to be spatial (as in one suggestive study by Quesnot & Guelton 2023). In another mode, the form that collaborative retrieval itself takes will be not sketching or listing or saying the landmarks or spatial relations that have previously been learned, but rather simply finding the way again together (which can of course be attempted together whether or not the previous learning experiences were shared or not). While research on remembering together suggests that the conditions for collaborative benefits or process gain in such a scenario might be fragile and context-sensitive (Harris et al 2019), studies of navigating together are as yet too rare to ground any firm assessment.

3. Place memory

So far, I have considered various forms of memory that can be involved in remembering places. I can remember Paris by remembering how to navigate around it, or by recalling relevant events or facts; and, in either case, I can be remembering individually or alongside others. Now I address the complementary topic of the various roles of places in activities of remembering. The power of real and remembered places to evoke or shape memory and emotion in the present is familiar but puzzling, tapping in not only to cognitive but also to significant affective dimensions of our lives. It is apparent, for example, in the violent disruption caused by forced displacement of individuals and groups, when removal from homelands undermines deep features of identity as well as economic and political stability, and when new or adapted practices, skills, and narratives have to be constructed or forged in new and unfamiliar places (Nine 2018; Iskander 2019; Piredda 2020).

Real and remembered places are, firstly, often the objects or contents of my memories (Knez 2006). I recollect the streets around the construction site at Notre Dame and the Île de la Cité, for example during the garbage strike of 2023. In this cognitive role, places operate like other possible objects of memory (or thought, or emotion). Places and arrays of spatially organized objects may have particular features as objects of memory, perhaps being for many people or in certain circumstances easier to remember than other objects. And in this role places at distinct and nested scales can be involved in different forms of remembering: I viscerally shiver in recalling the smell of the streets on those hot spring days, or work hard to remember who I was walking with there one morning, debating the politics of the protest, while being able if needed to set these specific memories of particular streetscapes and episodes within larger spatial, temporal, and semantic frames. When places and their relations are deeply familiar, to the extent that memory of their layouts or sequences is so well entrenched that it needs minimal cognitive effort to retrieve, further cognitive operations become available, chunking or reusing these contents for different purposes. This is the basis of the long-established practices known as the arts of memory, which have specific ancient histories in the Western world (Yates 1966, Carruthers 1990), but which are arguably widespread in various forms across many cultures (Kelly 2015). While in principle any well-ordered set can function as the

basis or ground onto which experts in these techniques fix distinctive items to recall, in practice places are well-suited to fill this role, in the form of sets of locations or landmarks, whether deriving from buildings or streetscapes or natural landscapes.

In a different role, places are often stimuli or cues to remembering. Whether in actually returning to an old familiar place, or in happening across a photo of it, I can find intense or surprising feelings and forgotten episodes triggered or evoked by real and remembered places. In this second mode, again, the memories that arise may be either specific or generic, focussed or diffuse, memories of experienced events or of embodied practices. Again, they are often multisensory or span modalities, with sounds or music for example either cuing specific past events and emotions, or being elicited by re-encountering or re-imagining the places in which they were once familiar. In this role, places are *influences* on memory, or on occasion 'a fillip to the task of remembering' (Walsham 2011, 618), one particular form of *context* for what has been called place-dependent memory (Eich 1995; Smith & Vela 2001). This is one of the most pervasive ways that place and memory interact, and the power of places as cues is the topic of fascinating lines of research on memory in identity, relationships, and cognitive decline. It is also exactly what the art of memory techniques are exploiting, reliant as they are on the flexibility of associations that locations, for example in memory palaces or theatres, or on well-designed memory artifacts (Evans 2012; Kelly 2015), can gather for later controlled release (Sutton 2010; Robins 2022).

In some cases, these associations may be particularly strong, for example when the coupling between places and memories is so tight that remembering either would not occur in the absence of the places, or would take substantially different shape. This can be the case whether the places are internal or internalized, as in the art of memory techniques, or external, such as buildings, neighbourhoods, or landscapes. Our memory experience can be striking, unexpected, and intense when driven by or grounded in particular places, such as locations in which significant past events have happened, or environments we have not been in for some considerable time. In these cases, the broadly situated approach suggests that it is fruitful to see places as not only objects of and cues to memory, but also as partial constituents of distributed activities of remembering. This idea needs careful exposition.

The point is not that places 'have' memories on their own, or engage in activities of remembering that are somehow intrinsic to their nature or dynamics. Even where human (and non-human) activity has created, marked, degraded, or strongly shaped places over time, those places have real properties of their own, and change over timescales that are often different from those of our lives and concerns (Basso 1996; Turkel 2007). Rather than turning to panpsychism in attributing full-scale participatory sense-making to places (Candiotto 2022), the distributed approach highlights the very different but reciprocal and complementary roles of place and remembering agent. It is in interacting with the real characteristics of particular places, in bringing something of our selves and our histories to bear in our engagement with them now, that we are cognitively and affectively open to them as parts of (distributed) vehicles of memory and emotion that span brain, body, and world, complementing our neural and biological resources in expanded mnemonic place-people ecosystems. Some of my memories may perhaps thus 'belong as much to the place as to my brain or body' (Casey 1996, 25). Again, this is not to suggest that places remember, feel, or think on their own: but then neither does the isolated or disconnected brain. One further

originary source for 4E cognition was Haugeland's 'Mind Embodied and Embedded'. For Haugeland, it was not that the road to San Jose knows the way there on its own, but that the road and I collaborate: not all the structure of intelligence is 'external', but some or much of it may be, 'in a way that is integral to the rest' (Haugeland 1998, 233-235).

This approach to place and memory illustrates two key features of the distributed view of remembering in general. Firstly, the primary aim is methodological or explanatory rather than metaphysical: we want to characterize a range of dimensions of interaction between agents and particular places, dimensions which will typically vary by degrees, rather than identifying sharp criteria for when places may have such constitutive roles. Likewise, finding the most fruitful temporal scale will depend on our explanatory purposes: sometimes the focus will be on occurrent processes of interaction and remembering, while other cases may demand study of specific enduring states of the world that can operate as vehicles or material traces over time. Secondly, there is no danger in work on this topic of highlighting only smooth and positive relations between agent and environment, a focus for which other distributed and extended views have been criticized (Aagaard 2021). The memories which emerge in and through our interaction with particular places span a full affective range, and, as I note further below, at individual and cultural levels alike must often negotiate or engage with pasts which are in one way or another taxing or troubling to retrieve.

4. Domains of place memory

If memory is a challenging topic for philosophy in this catalyst mode, seeking to connect and then integrate and apply tools, methods, and theories from the cognitive neurosciences to the social sciences (Sutton 2009), place is harder still. As I noted above, advances made in laboratory research on individual spatial cognition operate at some distance from fields where the focus is on social and cultural practices of place-making. One promising path for philosophical work is to synthesize ideas in broader circulation about popular but sometimes loosely defined place-related concepts, aiming to pin down tighter analyses of (for example) 'place attachment' or 'belonging', in the spirit of recent treatments of the puzzling concept of 'atmosphere' (Fernandez Velasco 2025; Fernandez Velasco & Niikawa 2025). Here, though, I mention some other applied domains in which place matters for theory, policy, and practice, where adding the proposed focus on relations between place and memory can test and potentially improve our approaches while also offering a new lens on issues of independent interest. I address questions about memory and spatial technologies, and about memory of places with difficult pasts. First, however, in the hope of encouraging philosophers to engage with one other area in which memory vitally shapes how places are experienced, and noting that similar recipes for future work on memory and place could be cooked up in relation to displacement and mobility (Creet & Kitzmann 2014; Nine 2018; Erll 2020) or dementia (Chaudhury 2002; Ward et al 2018; Heersmink 2022), I briefly sketch natural lines of enquiry into memory and urban places.

Memory has not yet been fully incorporated into lively recent work in philosophy of the city (Lehtinen 2020; Varzi 2021). Kukla's (2021) brilliant analysis of the microprocesses of spatially embedded urban agency, for example, highlights 'ecological ontologies' and the active immanence of the past in the city without enquiring into the forms or modes of individual or social remembering involved. Embodied and affective memory as well as skills and habits are

addressed in work on the cognitive politics of urban space and design (Krueger 2021; Crippen 2022; Habets et al 2024), while material and social aspects of urban memory are discussed by Mattern (2021) and by Bader and Bader (2016) respectively. The difficult development of expert memory for cities is a topic of research on taxi drivers (Maguire et al 2000; Griesbauer et al 2022; Fernandez Velasco et al 2025), parkour (Højbjerre Larsen 2021), and tourism (Lopez-Cantaro & Robb 2023), and could also be studied in relation to couriers, delivery riders, and the gig economy (Chappell 2016). The practices and materials of urban remembering are central to much artwork of considerable aesthetic and psychological interest, from novelists like Patrick Modiano to multimedia works that tap superposed mnemonic and imaginative layers of urban settings, like Janet Cardiff's site-specific audio walks (Pinder 2001; Cardiff 2005) or Norman Klein's investigations of the ways that past events can bleed through into contemporary streets (Klein 2003, 2008; Mattheis & Gurr 2021; Gurr 2023).

Memory and spatial technologies

Alongside smartphones, social media, and large language models, satellite-mediated digital wayfinding technologies are eliciting significant concerns with regard to their impact on our cognitive processes. Noting that Google Maps and other systems using GPS technology are 'more accessible' than any previous mapping artifact, *The Guardian* warns that 'they are as much a tyranny as a liberation' and are degrading our sense of direction (Brotton 2024). Some headline results do suggest that prolonged reliance on navigation technologies may disrupt or fragment spatial memory (Ruginski et al 2019; see Hebblewhite & Gillett 2021 for review and discussion), and the historical lineage of GPS in military and surveillance encourages the sense of a stark discontinuity between earlier maps and navigation practices, and these new systems. Bray, for example, writes that 'the pervasive use of multiple location-aware technologies makes it difficult to imagine a world in which your whereabouts are a secret to everybody but yourself' (2014, 225).

Even acknowledging the pace and pervasiveness of our uptake of satellite-mediated wayfinding systems, it is worth noting again that many significant new technologies – from writing onwards – have elicited moral panics, as concern at the initial imposition of striking transformations in many spheres of our lives typically gives way – if often gradually and unevenly – to eventual more or less seamless incorporation (Clark 2003; Tribble & Keene 2011; Orben 2020). GPS devices, like other technologies, can of course be used well or badly. Even at an affective and phenomenological level, before we consider effects on memory and cognition, there are obvious pros and cons. Perhaps some of us now feel less anxious about losing our way, and are less stressed about complex advanced route planning. But perhaps, likewise, we are more vulnerable to the dysfunction of our devices – out of battery! out of range! – and maybe some ways that we are over time coupling to, relying on, and establishing interdependence with them are bringing trouble – not only for the few aberrant users who blindly follow the device's directions off a cliff, but perhaps for all of us.

The mechanisms by which spatial memory might be thus degraded over time are not yet entirely clear. We divide our attention unhelpfully between environment and device; our spatial learning remains fragmented without development of allocentric survey knowledge (Willis et al 2009; Ishikawa 2016); and we become overly passive consumers of GPS outputs, failing to interrogate, monitor, or even notice spatial alternatives or environmental features beyond the system's immediate instruction (Dahmani & Bohbot 2020; Miola et al 2024). This is

an intriguing, rapidly developing scientific field: but one concern here, as with other studies on how 'offloading' information onto artifacts might erode memory, is that the implicit contrast with an unaided control condition may invoke an unrealistic picture of a wholly internal, uninfluenced, bio-internal neural capacity (cf. Finley et al 2018; Heersmink & Carter 2020).

There are reasons to be cautious about more extreme concerns about technologies degrading spatial learning and our memory of places. Firstly, spatial cognition and place knowledge are multifaceted and variable, with significant individual differences in strategies and capacities, and are unlikely to be influenced in any uniform way across contexts. Secondly, it takes expertise, formed by way of experience, enculturation, and effort, to deploy memory effectively in wayfinding, whether individually or collaboratively. Perhaps it is not the technology itself but the novice or naïve use of it, succumbing passively to the tool's transparency-in-use rather than maintaining circumspect engaged attention, that might bring trouble (Wheeler 2019; Clark 2025): one recent study shows that experts do continue to use GPS technology in planning and navigating, though in different ways and for different purposes than novices (Topete et al 2024), while others suggest that relatively minor modifications to GPS instructions, such as providing extra incidental landmark or semantic information alongside basic turn-by-turn guidance, can sustain or promote better spatial learning (Wunderlich & Gramann 2021). If we are creatures who exhibit significant cognitive and affective interdependence with resources outside skull and skin, it should not be surprising that we are therefore vulnerable to both manipulation and occasional unintended negative consequences. It is not optional but structural that our memory capacities thus integrate with and rely on tools as well as on places and on other people, and we need a mix of research methods to tap the dynamic, precarious but often resilient ecologies in which people skilfully incorporate technologies to track and manage places and the past (Mingon, Gillett, & Sutton in press).

Memory and places with difficult pasts

Just as one place may have seen many quite different events, so it may elicit many quite different memories, and invite or generate many quite different political, emotional, or aesthetic responses. One reason for the intensity of our current crises of commemoration is that standard liberal modes of engagement with historically burdened heritage are increasingly inadequate for acknowledging or negotiating extreme or prolonged past violence and injustice (see also chapter X). Where denying or suppressing difficult past events is no longer possible or acceptable, the mere juxtaposition of counter-narratives alongside a dominant but troubling history also fails to satisfy (Marschall 2019; Archer 2024). Part of the challenge here is to assess how much memory to bring to bear, so to speak, and of what forms: different memorial practices can focus more on encouraging affectively-saturated forms of mental time travel, bringing the past to life, or instead on providing extra factual detail to enhance our semantic knowledge of past events. While it is natural to want to bring the past to life in some way, neither in memory in or commemoration do we seek full-scale re-enactment: remembering is neither perceiving nor hallucinating, and effective practice often highlights the gap or the seam between past and present (Lucas 2020; Kukla 2021, 144). In looking for examples of alternative modes of engagement with places with difficult pasts, we find artists and practitioners deploying different mixes of memory and imagination, in ways that might relate to issues elsewhere in the philosophy of memory about how we can allow for both genuine causal links

between present and past and richly constructive processes in the present (Sutton & O'Brien 2022).

First consider site-specific interventions by Rietveld Architecture-Art-Affordances (RAAAF), an Amsterdam-based interdisciplinary studio at the crossroads of visual art, experimental architecture and philosophy. With regard to difficult places, Rietveld (2022) argues that it is not ethically or politically responsible in our burdened world to 'leave this kind of inhumane heritage untouched'. RAAAF rechannel our embodied and sensory responses to and in particular sites, buildings, objects and practices, engaging emotions and senses and provoking productive bewilderment and imaginative engagement. Their dissected monument *Bunker 599* is a World War II concrete bunker which they have sliced open, turning lumpen, seemingly indestructible war architecture into a strange, highly visible, reinvigorated place. A new wooden boardwalk extends into a watery nature reserve, striking and spookily beautiful, attracting attention and visitors from the nearby highway, engendering debate about the history and potential uses of other bunkers and vestiges of war.

RAAAF's proposed *Luftschloss* project also aims at a distinctive way to 'deal meaningfully with historically burdened heritage':

> *Luftschloss* imaginatively and deliberately destructs a Nazi bunker that nowadays still towers over Vienna. In 1942 Hitler himself gave the orders to erect several 55m tall Flak towers to protect the historic city of Vienna. These colossal concrete castles were meant to become symbols of a victorious Third Reich. The way Europe deals with such historically burdened heritage has paradoxically led to the conservation of its original intention. The seemingly indestructible castles still tower over the city. Until today. (Rietveld 2022, pp. 33–38)

The Rietvelds envision hydro-demolition technology blasting to pieces the concrete remains of the Nazi tower', leaving behind only 'a fragile, elegant and unfolding skeleton' of steel.

As a magnificently violent proposed intervention, conceived in collaboration with local communities and architectural historians, *Luftschloss* is one of RAAAF's 'material playgrounds' aimed at the imaginative reinterpretation of history 'toward the future, rather than being stuck in fixated narratives from the past' (Rietveld & Rietveld 2017, p. 2). The Rietvelds know that the past is not easily washed, blasted or sliced away: and it is not their intention or wish to do so, or not wholeheartedly or consistently at least. This counter-preservationist impulse, refusing to leave the past alone, brings remembering very close to a way of imagining the past, perhaps less of a memory practice at all than a construction of fresh meanings on old ground.

In contrast, Lola Arias's production MINEFIELD/ CAMPO MINADO, first performed in London and Buenos Aires in 2016, is anchored very firmly in specific and painful personal memories. Arias built a performance event around the experiences of three Argentine military and naval veterans and three English veterans (including a Nepalese-born Gurkha) of the Malvinas Islands war, the Falklands war of 1982. These men who had fought against each other, who had killed in their country's service, shared their memories over a long rehearsal period, longer than the war itself. In this bilingual theatrical assemblage, these six 'amateur' performers together narrate and reenact on stage each other's different war stories, fears, and angers, their subsequent struggles and traumas and recoveries. They confront each other and their

different audiences in England and Argentina with renderings of personal histories which are playful and heartbreaking at once. Remarkably, the men chose to continue touring the show for years: somehow, working with each other and with Arias produced strong enough bonds between them to overcome or at least manage the still-unsettling emotions of their past war experiences and their aftermaths.

In production, MINEFIELD uses music, sound, and multimedia evidence with collaborative precision, and with uncanny aesthetic and bodily skills, to elicit intense but uncertain responses in their audiences. Rather than staging the veterans as war heroes, Arias's experiment exposes both groups of men on common ground of fragility and vulnerability (Sosa, 2017). Repetition and authenticity are among the central themes of the self-consciously theatrical staging with its choppy rhythms. One traumatic and transformative experience is retold three times, differently on each occasion, twice on stage and once in a replayed clip from a TV interview soon after the war. The autobiographical format of MINEFIELD promises us access to 'real' past emotions, but constantly frustrates that desire as mediating devices and multiple versions proliferate, and the way that certain episodes went is disputed and renegotiated on stage (Maguire 2019). Some events, such as the surrender of Argentine soldiers, are approached repeatedly and then curtailed or bypassed, often with explicit acknowledgement of the affective complexities they had evoked in rehearsal.

The imagined or recreated places that the MINEFIELD veterans forged in collaborative rehearsal, and perform repeatedly together, carry more re-embodied emotion and significance, they note, than the actual return journeys they had all made to the remote islands themselves. Relations between memory, place, and emotion are dynamic and highly flexible. If the places elicited and then shared in dramatic performance are imaginatively produced, so too in different ways do real and remembered places, all having to be filled in or filled out (Rzepka 2015). It is by avoiding any pretence of documentary-style immersion, of 'really' taking us back there, back to that desolate real place then, that MINEFIELD so powerfully overlays past and present perspectives, provoking emotion and reflection and sorrow and bewilderment at once. MINEFIELD exemplifies a counter-preservationist mode of confrontational memory practice, bringing very difficult histories to its imagined stage landscapes, on which we can feel the traces and ghosts of these men's experiences alive and aching but transformed in their collaborative performance practice.

These are just two powerful approaches to the challenge of letting the past have some weight in current engagements. Perhaps more standard debates in the philosophy of memory can draw something from artistic responses that acknowledge the complexity of holding causal-historical and constructive processes together (Gibson 2015; Sutton 2024).

5. Conclusion

Section 4 of this chapter has covered issues in the applied philosophy of memory, seeking mutual benefit between theory and technological or artistic practice in addressing policy or political challenges about memory and place. In applying the broadly situated or distributed approach to understanding relations between memory and place, it treats places as in certain circumstances parts of wider ecologies of remembering that incorporate neural, bodily, social, and environmental resources in dynamic balance. The chapter's earlier sections examined, in turn, the various forms of memory that we use in remembering places, and the different ways

that places are involved in remembering. On all of these topics, and more, place is likely to be a significant topic in the next phases of the philosophy of memory.

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