

Article

Where Memory Settles: Terroir, Material Memory, and Practice of Place

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Abstract

This article examines how memory, knowledge, and lived experience become embedded within material environments and continue to shape engagement with historic wooden neighbourhoods. Drawing on the WoodiSH project (Wooden Cities: Memory, Sustainability and Craft in Historic Neighbourhoods), the article develops the concept of *terroir* as a framework for understanding historic built environments as material ecologies of memory. The analysis combines perspectives from material culture studies, phenomenology, Tim Ingold's concepts of meshwork and wayfaring, and theories of embodied cognition. While the WoodiSH project provides the empirical context through studies of historic wooden neighbourhoods in Trondheim, Pori, and Vilnius, the article is primarily conceptual and uses observations from heritage environments and craft education as analytical entry points. The article argues that memory is not located solely in individual minds but remains materially present through traces of repair, maintenance, adaptation, and everyday use. Observations from the WoodiSH project and educational activities in traditional building crafts suggest that such traces enable residents, craftspeople, and students to recognise how previous actions and practical knowledge remain embedded within materials and places. Historic wooden neighbourhoods are therefore understood as *terroirs* of memory: environments in which knowledge and experience continue to be enacted through ongoing engagement with material traces. The article contributes by extending *terroir* beyond its traditional association with viticulture and by demonstrating how material memory becomes accessible through embodied engagement with historic environments. It further proposes a pedagogy of material sensitivity in which learning develops through observation, participation, repair, and practical involvement with heritage environments.

Keywords: *terroir*; material memory; wooden built heritage; embodied cognition; craft knowledge; meshwork and wayfaring; material culture; cultural landscapes



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1. Introduction

This article emerges from the research project WoodiSH (Wooden Cities: Memory, Sustainability and Craft in Historic Neighbourhoods) and from the panel Remembering the Old and Questioning the Future [1]. The project investigates how memory, knowledge, and identity are embedded and enacted within historic wooden neighbourhoods in Finland, Norway, and Lithuania. Rather than treating these environments as passive remnants of the past, we approach them as living cultural landscapes in which material practices, tacit knowledge, and everyday routines continue to shape social continuity.

Methodologically, the article combines conceptual analysis with interpretive reflections informed by heritage research, field observations, and craft practice. While the WoodiSH project provides an important empirical context through studies of historic wooden neighbourhoods in Svartlamoen in Trondheim (Norway), the Old Town district of Pori (Finland), and Šnipiškės in Vilnius (Lithuania), the article does not present comparative empirical findings from these sites. Rather, selected examples, observations, and personal encounters are used as analytical entry points for exploring how memory becomes embedded in materials, tools, buildings, and everyday practices. The discussion is situated at the intersection of material culture studies, phenomenology, heritage research, and embodied cognition, and seeks to develop a conceptual framework for understanding place as a material ecology of memory. The three neighbourhoods that form the empirical context for the WoodiSH project are shown in Figure 1.

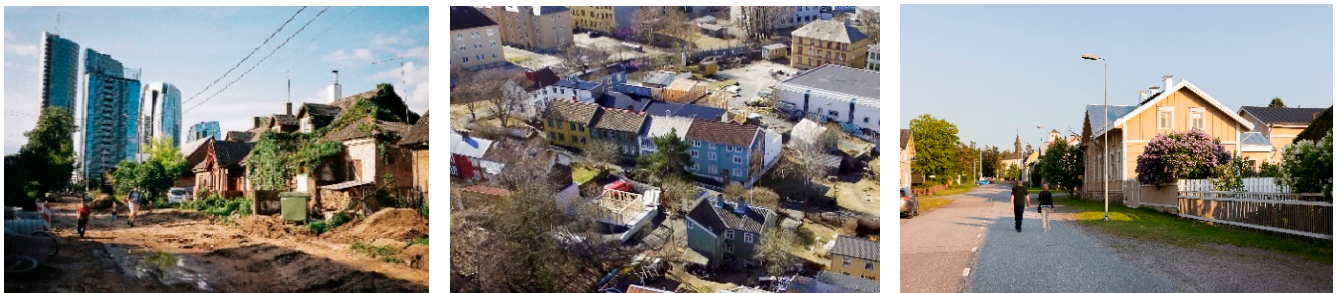


Figure 1. Historic wooden neighbourhoods in Trondheim (Norway), Pori (Finland), and Vilnius (Lithuania), illustrating different urban forms, building traditions, and material histories examined within the WoodiSH project (photos: H. B. Høgseth 2024).

The three historic wooden neighbourhoods differ in architectural form, urban history, and local traditions, yet all illustrate how knowledge, memory, and everyday practices become embedded within wooden built environments. In the present article, however, these locations function primarily as examples within a broader conceptual discussion rather than as individual cases in a comparative analysis.

In recent years, increasing attention has been directed toward how cultural heritage environments contribute to learning, sustainability, and place-based knowledge. Historic wooden environments are often discussed in terms of architectural history, conservation policy, and urban development [2,3]. While such perspectives are important, they frequently overlook the sensory, embodied, and practice-based dimensions through which knowledge and memory become embedded in place. Wooden houses, workshops, and neighbourhood structures are not simply objects of preservation; they are environments where gestures accumulate, repairs unfold, and traces of lived experience remain inscribed in materials.

This article therefore explores how memory may be understood as distributed across materials, practices, and environments. The analysis examines how traces of knowledge and lived experience emerge through the ongoing relations between people, materials, and place. The analysis builds upon concepts from material culture studies, craft research, and embodied cognition, and draws particularly on the notion of *terroir* as a framework for understanding how knowledge and memory become grounded in specific environments. The aim is to develop *terroir* as a conceptual framework for understanding how memory, knowledge, and lived experience become embedded within material environments and continue to shape engagement with historic places. An example of such a material environment, in this case a traditional workshop marked by long-term use and accumulated traces of practice, is shown in Figure 2 below.

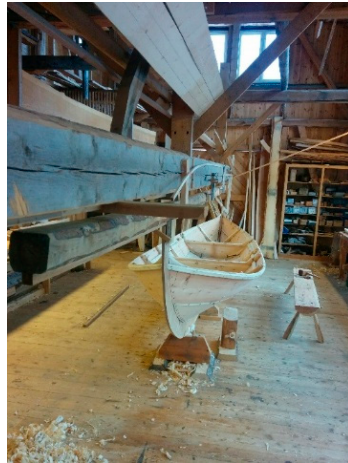


Figure 2. Workshop interior showing traces of long-term use, maintenance, and everyday practice. Such material traces form part of the article’s discussion of memory, place, and embodied experience (photo: H. B. Høgseth, 2016).

The argument is introduced through a personal encounter with material memory.

Following the death of my father several years ago, I returned to his workshop to sort through his belongings. The smell of his clothes remained faintly present. Tools lay where he had last used them. The space felt suspended in time. What unfolded in that moment was not simply recollection in the cognitive sense, but an encounter mediated through material surroundings. The objects did not merely remind me of him; they provided access to practices, routines, and forms of everyday life that had shaped the workshop over time. Through their continued presence, they seemed to invite participation in a shared past.

This experience suggests that memory is not confined to individual recollection. Traces of knowledge and lived experience may also persist within things, gestures, and environments. The workshop did not function as a symbolic reminder but as a material field of presence, where memory emerged through sensory engagement with tools, space, and atmosphere. It is precisely this form of place-bound memory that this article approaches through the concept of *terroir*.

In this article, memory is not understood primarily as individual recollection or subjective remembrance. Rather, the term refers to traces of knowledge, practice, and lived experience that become sedimented within materials, buildings, tools, and cultural traditions over time. The focus is therefore not on memory as a psychological phenomenon, but on how places may be read through the material traces of past actions, repairs, routines, and forms of dwelling.

The contribution of this article is twofold. First, it extends the concept of *terroir* beyond its traditional association with viticulture and develops it as a framework for understanding historic wooden neighbourhoods as material ecologies of memory. Second, drawing on observations from the WoodiSH project and educational practices in traditional building crafts, it demonstrates how memory becomes accessible through embodied engagement with material traces. In doing so, the article contributes to ongoing discussions in heritage studies, material culture research, and craft pedagogy by showing how knowledge and memory are not only preserved in places but continually enacted through practice.

2. Objective and Research Question

This article develops *terroir* as a conceptual framework for understanding how memory, knowledge, and lived experience become embedded within material environments and embodied practices.

The central research question is: How can the concept of terroir, informed by perspectives from embodied cognition and material culture studies, contribute to understanding memory, knowledge, and lived experience within historic wooden neighbourhoods?

More specifically, the article explores three related questions:

- How do traces of knowledge and experience become embedded in material environments and everyday practices?
- How do people come to perceive and interpret such traces through embodied engagement?
- How might terroir, meshwork, and wayfaring contribute to understanding historic neighbourhoods as living archives?

By integrating perspectives from anthropology, archaeology, craft research, and cognitive theory, the article argues that historic environments should not be approached solely as objects of preservation. Instead, they can be understood as material ecologies of memory in which knowledge develops through ongoing engagement with tools, materials, practices, and places. From this perspective, terroir provides a framework for analysing how memory and knowledge become grounded in particular environments and sustained through everyday practices.

3. Terroir as Conceptual Framework

The French term *terroir* is most commonly associated with viticulture, referring to the combination of soil, climate, landscape, and local cultivation practices that shape the distinctive character of wine. Beyond viticulture, however, terroir has also been used to describe the ways in which environments, traditions, and human practices become intertwined in the formation of place. The relationships between environment, practice, and place that characterise terroir are illustrated schematically in Figure 3.



Figure 3. Conceptual illustration of terroir as the interaction of environment, practice, and place. Vineyard landscape in southern France, a historic neighbourhood, and craft in a typical cultivated landscape (illustration by Høgseth 2026).

During periods of fieldwork and professional collaboration with winemakers in southern France, I came to understand that terroir extends beyond natural conditions such as sunlight, soil composition, or humidity. Terroir also encompasses human practices, seasonal rhythms, inherited knowledge, and culturally shaped ways of inhabiting and maintain-

ing a landscape. Stone walls, vineyard paths, cellar temperatures, seasonal routines, and inherited craft knowledge all contribute to the character of place.

In this sense, terroir represents a relationship between environment, practice, and continuity over time. It refers not only to what grows in the soil but also to how people dwell, cultivate, repair, and inhabit their surroundings. In the present article, terroir is extended beyond its traditional association with viticulture and used to describe the relations between environment, practice, and continuity over time.

When extended beyond its viticultural origins, terroir offers a useful framework for understanding historic built environments and cultural heritage settings. The value of terroir as a conceptual framework lies in its ability to bring together material conditions, human practices, environmental processes, and historical continuity within a single analytical perspective [4,5]. Rather than treating these dimensions as separate domains, terroir highlights how they become mutually constitutive within particular places. A wooden house, a workshop, or an urban neighbourhood may therefore be approached as a cultural terrain in which material traces, everyday practices, and environmental conditions continually shape one another.

Seen through this lens, historic wooden neighbourhoods may be understood as material libraries in which traces of previous practices, repairs, and everyday routines remain accessible through the built environment. Time is written into surfaces: in weathered wood, in repaired beams, in replaced boards, and in the gradual layering of paint and use. These traces do not merely represent history; they are material expressions of lived time. Repairs, modifications, and patterns of wear make past practices visible and provide points of connection between present activities and earlier forms of dwelling and work.

Terroir thus directs attention to the distinctive material, historical, and cultural character of place. Yet understanding how such environments are experienced, inhabited, and learned requires additional perspectives. While terroir helps explain the conditions through which memory becomes embedded in place, Tim Ingold's concepts of *meshwork* and *wayfaring* provide a framework for understanding how people come to engage with, interpret, and learn from such environments through practice. In this respect, terroir resonates with Ingold's understanding of environments as continually formed through the interweaving of materials, practices, and ways of dwelling [6] (pp. 63–94) and [7] (pp. 1–14).

4. Meshwork and Wayfaring

Tim Ingold's concepts of meshwork and wayfaring provide a useful framework for understanding how knowledge, memory, and place become interconnected through practice. Meshwork refers not to a network of fixed points, but to a web of interwoven lines of movement, activity, and relation [6] (pp. 71–73). Within historic neighbourhoods, houses, people, repairs, materials, tools, habits, and traditions can be understood as part of such an ongoing weave of connections.

In Šnipiškės, Vilnius, traces of repairs, reused boards, improvised structures, and everyday gardening practices reveal how knowledge becomes embedded within ongoing patterns of habitation. Seen through Ingold's concept of meshwork, such traces are not isolated historical remains but interconnected lines of practice that continue to shape how residents inhabit and understand the neighbourhood.

Wayfaring describes a form of knowing that develops through movement, participation, and practical engagement [6] (pp. 148–188). Buildings are not fully understood through documentation or visual analysis alone. Understanding emerges through inhabiting, repairing, observing, and working with them over time.

Knowledge arises not before movement, but in and through it. Craftspeople, residents, students, and researchers gradually discover relations, possibilities, and meanings through

sustained engagement with materials and places. In this sense, meaning does not precede action but emerges through practice. As Ingold [6] argues, knowledge does not precede movement but emerges through ongoing involvement in the world.

To understand a building solely through documentation or visual analysis is insufficient. Knowledge arises through inhabiting, repairing, and working with structures—through following the grain of wood, examining tool marks, or tracing the wear of doorframes.

In this perspective, meaning does not precede movement. It emerges through engagement with materials and places. Craftspeople, residents, and researchers alike enter into such environments not by following predefined scripts but by gradually discovering relations through practice.

Through wayfaring, historic environments become more than settings for memory. They become participants in ongoing processes of learning, inhabitation, and cultural continuity. Memory is therefore not encountered as a fixed record of the past, but as something that emerges through movement, attention, and engagement with material traces.

While terroir directs attention to the distinctive material and historical character of place, meshwork and wayfaring help explain how people come to know, inhabit, and learn from such environments through practice [6,7]. They describe the movements, relations, and engagements through which material traces become meaningful. In this sense, meshwork and wayfaring may also be understood as perspectives that set the dimensions of 4E cognition in motion, as illustrated in Figure 4 below [8,9]. Learning emerges through embodied movement, situated participation, engagement with tools and materials, and ongoing involvement in the environments people inhabit.

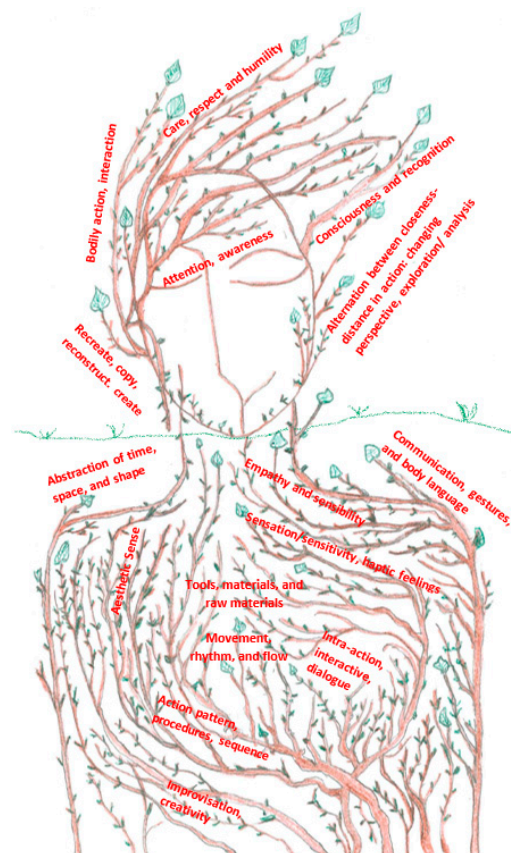


Figure 4. Conceptual illustration of meshwork and wayfaring, showing how movement, relations, materials, and practices become interconnected through ongoing engagement with place (adopted from [10]).

Meshwork and wayfaring help explain how knowledge develops through movement, participation, and engagement with place. Yet such engagement is always mediated through material surroundings. Buildings, tools, surfaces, and objects are not merely passive backdrops to experience but form part of the conditions through which memory becomes accessible. This shifts attention from movement through environments to the material presence of things themselves, a perspective explored in the following section.

5. The Phenomenology of Things

The archaeologist Bjørnar Olsen offers a complementary perspective for understanding how memory becomes entangled with material environments. In his book *In Defense of Things* [11], Olsen argues that objects should not merely be treated as passive carriers of symbolic meaning but should be approached as entities with their own material presence [11] (pp. 1–15). Through their durability, resistance, and persistence, material things continue to shape human experience long after their original makers and users have disappeared. A weathered wooden wall, for instance, does not simply represent time; it is itself a material expression of time passing. The significance of material presence and traces of habitation is illustrated by the domestic interior shown in Figure 5.



Figure 5. Domestic interior containing traces of previous habitation. Personal objects, furnishings, and material details illustrate how environments may evoke presence and support experiences of memory and continuity (photo from Vilnius by H. B. Høgseth 2024).

Olsen proposes a phenomenological approach that encourages us to attend to the textures, surfaces, and resistances of material culture. This emphasis on sensory engagement resonates with Pallasmaa's [12] argument that architecture is experienced not only visually but through the entire body. Materials, textures, sounds, and atmospheres contribute to how places are perceived, remembered, and inhabited. Wooden houses, workshops, and domestic spaces can thus be understood as material environments in which traces of previous practices remain present through continued use, repair, and adaptation.

This insight resonates strongly with the concept of *terroir* introduced earlier. Olsen's perspective shifts attention from what objects signify to how they persist within everyday life. The significance of material environments lies not only in what they represent, but in how they continue to shape perception, action, and experience.

Rooms, tools, and buildings do more than evoke memories of past lives. Their significance lies in their continued presence within the world. A bedroom containing worn furniture, faded textiles, and personal belongings may shape how visitors perceive and move through the space, even when they have no direct connection to its former occupants. Material environments therefore matter not only because they represent the past, but because they continue to structure encounters between people, places, and histories. Their importance lies not in functioning as symbolic reminders alone, but in providing conditions for perception, engagement, and experience in the present.

If meshwork and wayfaring help explain how people move through and learn from environments, Olsen's perspective draws attention to the material things that make such engagements possible. It shifts the focus from movement through place to the enduring presence of objects, surfaces, and structures through which memory becomes accessible.

6. Tacit Matter and Embodied Memory

Building on this phenomenological perspective, Olsen introduces the notion of tacit matter. The concept refers to forms of knowledge that remain embedded within materials, surfaces, and traces of practice rather than being fully captured through written documentation or verbal description.

Tacit matter becomes visible in tool marks left on wooden beams, in the wear of doorframes touched repeatedly over time, or in the layered surfaces of repaired walls. These traces reveal decisions, gestures, and forms of knowledge embedded in practice.

While Olsen helps explain how traces of knowledge remain present within material environments, the framework of 4E cognition helps explain how such traces become meaningful through engagement and learning. At this point, insights from 4E cognition become particularly relevant. The 4E framework—embodied, embedded, enactive, and extended cognition—emphasises that thinking and knowing do not occur exclusively within the brain. Rather, cognition emerges through the dynamic relations between body, environment, action, and material artefacts [9,13]. From this perspective, knowledge is embodied in bodily skills, perception, and movement; embedded within particular environments and cultural contexts; enacted through practical engagement and activity; and extended through tools, artefacts, and material surroundings. Drawing on Varela, Thompson, and Rosch [9], cognition is understood here not as the representation of a pre-given world but as something that emerges through active engagement with the environment. Learning develops through ongoing relations between perception, action, and material surroundings. The significance of tacit matter therefore lies not only in its persistence within objects and buildings, but in how such traces become meaningful through embodied participation. Historic buildings therefore function not merely as architectural structures but as cognitive environments where knowledge and memory are distributed across materials, tools, and practices. This perspective resonates with Malafouris' [14] theory of material engagement, which argues that thinking does not occur independently of material action but emerges through ongoing relations between mind, body, tools, and environment. From this perspective, materials do not merely store knowledge; they participate in shaping how knowledge develops and is enacted through practice.

In Trondheim, for example, students, craftspeople, and restoration practitioners work directly with historic buildings and objects as part of educational and conservation activ-

ities. The example draws particularly on teaching and fieldwork undertaken within the programmes in Traditional Building Crafts, but also in Art and Craft, at Norwegian University of Science and Technology (NTNU). Within these programmes, students, craftspeople, and researchers work directly with historic buildings and objects as part of educational and craft related activities. The students learn not only from drawings or surveys, but through direct engagement with buildings themselves. Their task is not primarily to construct or restore, but to understand the building through its material traces. Joints, tool marks, repairs, and structural details are approached as expressions of earlier actions, decisions, and practical judgements embedded within the fabric of the building itself. Examples of such educational activities are shown in Figure 6 below.

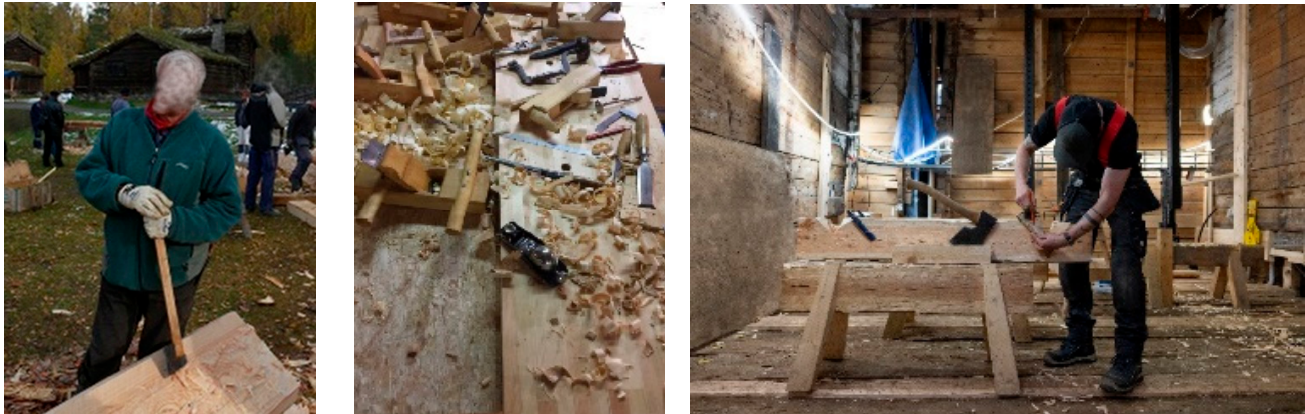


Figure 6. Learning through engagement with historic buildings. Students, craftspeople, and researchers examining material traces, construction techniques, and evidence of past practice (Courses in Traditional Craft, NTNU. Photo: H. B. Høgseth 2016).

From this perspective, the building functions as a material archive. Knowledge is not encountered primarily through written documentation, but through traces preserved within materials and construction techniques. Students learn to observe, measure, reconstruct, and compare. Through such activities, they gradually develop the ability to recognise patterns of work, sequences of action, and forms of practical reasoning embedded within the structure.

Field observations from teaching activities at NTNU suggest that students gradually begin to recognise material memory as traces of human judgement preserved within the building itself. Tool marks, repairs, adjustments, and irregularities are no longer perceived as technical details alone, but as evidence of decisions made under particular material and historical conditions. In this sense, learning involves a shift from seeing buildings as static structures to understanding them as accumulations of previous actions. Material memory becomes visible through the ability to read traces as expressions of practice rather than as isolated physical features.

Similar processes of embodied apprenticeship and sensory formation in craft learning have been described by Marchand [15] (pp. 250–261), who emphasises how practical judgement develops through bodily participation and sustained engagement in craft practice. Through this engagement, students develop what may be described as a form of material empathy: an ability to attend to traces of previous actions embedded within materials and to respond to them through informed practical judgement in the present.

From this perspective, heritage management faces a particular challenge. Conservation efforts often focus on preserving visible structures and material authenticity, while the practical knowledge embedded in maintenance, repair, and everyday use receives less attention. When heritage is understood primarily through appearance or architectural

form, important dimensions of embodied practice and material memory risk becoming less visible. A polished surface may satisfy regulations, but it can betray memory. When memory is reduced to images or style alone, we lose the feel, the friction, the truth of lived space.

This illustrates *terroir* in practice. Knowledge develops through sustained engagement with places and material traces rather than through abstract information alone. Understanding emerges through encounters with buildings, tools, and environments shaped by previous generations. Tools, beams, and structural elements contribute to shaping the conditions through which learning develops. They guide perception, influence action, and provide forms of feedback that become integral to practical understanding. The hammer striking wood, the grain of a timber surface, or the fit of a joint are not passive elements but part of the material conditions through which understanding emerges. From the perspective of 4E cognition [9,13], such encounters illustrate how knowledge develops through embodied and situated engagement with materials rather than through abstract instruction alone.

7. Natural Imperfection and the Aesthetics of Time

Reflections on the aesthetic qualities of ageing materials can be traced back to classical philosophy. In *Meditations*, the Roman emperor Marcus Aurelius observes how natural processes often produce forms of beauty that arise precisely through imperfection. Cracks in baked bread, the splitting of ripe figs, or the weathering of natural surfaces may appear appealing because they reveal processes unfolding over time. Marcus Aurelius suggests that what is often perceived as decline may also possess a particular form of beauty because it makes visible the continuous processes of becoming that characterise both nature and human life [16].

This perspective provides a useful lens for understanding historic wooden environments. Weathered timber, uneven walls, repaired surfaces, and visible traces of use are frequently interpreted within conservation discourse as signs of deterioration requiring intervention. Yet they may also be understood as material records of ongoing relations between climate, maintenance, use, and time. Rather than diminishing authenticity, such traces contribute to the historical depth and experiential richness of place.

Seen in this way, weathering becomes part of what might be called the *terroir* of time. Surfaces record exposure, repair, adaptation, and everyday use. Such traces do not merely document the past; they contribute to the distinctive character through which places are experienced and remembered in the present. Nature and culture are therefore not separate forces acting upon buildings, but co-authors of material landscapes. Weathering may thus be understood not simply as deterioration, but as a form of material memory.

In historic wooden neighbourhoods, wear and repair become part of the environment's material narrative. The gradual transformation of surfaces reflects ongoing interactions between human activity, climate, and time.

A useful analogy may be found in the well-known casts from Pompeii. What appear to be preserved human bodies are in fact plaster casts created from voids left behind in hardened volcanic ash after organic material had disappeared. The casts do not preserve the bodies themselves, but traces of human presence. In a similar way, tool marks, worn surfaces, repaired structures, and altered details preserve traces of actions and practices that are no longer directly accessible, yet remain materially present. Such traces provide access not to the past itself, but to the enduring imprint of human activity within materials. A well-known example of such material traces is provided by the plaster casts from Pompeii shown in Figure 7.



Figure 7. Plaster cast from Pompeii illustrating how traces of human presence may be preserved through material impressions rather than bodily remains (photo: H. B. Høgseth 2019).

Human activity leaves material traces. Hands leave marks, tools leave characteristic rhythms of work, and surfaces accumulate evidence of repeated use. In this sense, materials may be understood as carriers of memory, preserving traces of actions and practices across time. Historic buildings and objects therefore become more than physical structures or artefacts; they function as repositories of lived experience through which past actions remain materially present. Through such traces, memory becomes accessible not only through representation or recollection, but through continued engagement with the material world itself.

8. Wooden Neighbourhoods as Living Archive

Within the WoodiSH project, historic wooden neighbourhoods in Trondheim, Vilnius, and Pori have been studied as examples of such living material archives. Memory within these environments does not exist solely in museum exhibitions or historical documentation. Instead, it unfolds within everyday structures: doorways, courtyards, sheds, fences, and workshops, as well as in living traditions and material culture.

Although Trondheim, Vilnius, and Pori differ in architectural character, urban history, and local building traditions, they share a common quality: each neighbourhood preserves traces of long-term interaction between materials, people, and practices. These traces remain visible not only in buildings themselves, but in the everyday processes of maintenance, adaptation, and continued use.

Observations from the WoodiSH project suggest that material memory is often recognised not through monumental heritage features, but through ordinary traces of maintenance and everyday use. Across all three neighbourhoods, participants repeatedly drew attention to repaired boards, reused construction materials, tool marks, improvised solutions, and weathered surfaces. What made these traces significant was not their aesthetic value alone, but their ability to reveal previous actions and practical decisions. Material memory was therefore recognised less in formally preserved heritage objects and more in traces of maintenance, repair, adaptation, and everyday use. What participants identified as memory were not isolated objects, but material traces that revealed how people had interacted with buildings and materials over time.

These may be understood as relational heritage sites, where people continue to build, repair, argue, decorate, and dwell. Each modification leaves new traces while preserving older layers of material history. These neighbourhoods therefore cannot be understood as static relics frozen in time. They are dynamic environments shaped by cycles of care, neglect, and renewal. Individual building elements reveal these processes. The replacement

of boards, the reinforcement of joints, or the reuse of construction materials reflects practical decisions made by residents over generations. Doors, boards, tool marks, joints, and repairs all preserve traces of practical decisions made over time. Together, they provide insight into material availability, craft traditions, maintenance practices, and everyday forms of dwelling.

Understanding such environments requires forms of engagement that extend beyond documentation and visual analysis alone. To read such environments is therefore not simply to interpret historical information. It requires participation in the practices through which knowledge becomes visible: walking, observing, repairing, and working with materials over time.

Understanding these environments requires a shift in perspective. Rather than reading buildings as symbolic representations of historical styles, researchers must learn to approach them as fields of interaction between materiality, practice, and memory.

This is where the concepts introduced earlier—terroir, meshwork, wayfaring, and phenomenology—intersect. Terroir directs attention to the distinctive material and historical character of place. Meshwork highlights the interwoven relations between people, materials, practices, and environments. Wayfaring emphasises how understanding develops through movement, engagement, and participation. Phenomenological perspectives draw attention to the enduring presence of material traces within everyday life.

Taken together, these perspectives suggest that historic wooden neighbourhoods may be understood as living archives and, more specifically, as terroirs of memory. Memory is not stored in a single location or preserved solely through documents and monuments. It remains embedded within materials, buildings, routines, repairs, and forms of dwelling. Knowledge and experience therefore persist not only through representation, but through continued engagement with places shaped by generations of human activity.

If such traces remain present within material environments, an important question follows: how do people learn to notice, interpret, and respond to them? The answer lies not only in historical knowledge or technical expertise, but in the development of particular forms of attention, sensitivity, and practical judgement. This shifts the discussion from memory embedded in places to the educational processes through which such material traces become meaningful. The accumulated effects of weathering, maintenance, and repair in historic wooden neighbourhoods are illustrated in Figure 8.



Figure 8. Weathered surfaces in a historic wooden neighbourhood. Wear, repair, and material transformation illustrate how traces of use and maintenance contribute to the historical character of place. From Vilnius (photo: H. B. Høgseth 2024).

9. Toward a Pedagogy of Material Sensitivity

Recognising the role of material environments in shaping memory also has implications for heritage education and research practice [17]. If historic neighbourhoods may be understood as living archives and terroirs of memory, then an important educational

question follows: how do people learn to perceive and interpret the traces embedded within such environments?

The analysis presented in this article suggests that such learning develops through forms of embodied engagement rather than through observation alone. Historic buildings are not encountered simply as objects of study, but as environments that invite investigation through movement, attention, repair, and practical involvement. Learning therefore depends on opportunities to engage directly with materials, surfaces, tools, and traces of previous activity. The educational processes involved in developing material sensitivity are summarised schematically in Figure 9.



Figure 9. Conceptual illustration of material sensitivity in practice. Through observation, documentation, touch, repair, and reconstruction, learners engage with traces of previous actions embedded in historic buildings. Such encounters illustrate how memory, knowledge, and lived experience remain accessible through materials and craft practices (illustrated by H. B. Høgseth 2026).

From this perspective, heritage education involves cultivating what may be described as material sensitivity: an ability to notice, interpret, and respond to material traces within the built environment. Such sensitivity develops gradually through participation. It requires time, repeated encounters, and forms of guidance that help learners attend to features that might otherwise remain unnoticed.

To understand a building's history is therefore not merely to decode architectural plans or historical documents. It also involves following repairs, examining tool marks, observing material transformations, and participating in practices of maintenance and care. Through such activities, learners begin to recognise how knowledge, memory, and experience become embedded within materials and places.

Learning in this context becomes both experiential and relational. It involves developing practical judgement, sensory awareness, and attentiveness to the ways in which human activity leaves traces within the material world. In practice, such an approach may involve guided observation of historic structures, documentation of repairs and material transformations, reconstruction of traditional techniques, and collaborative work with craftspeople and local knowledge holders. Learning develops through direct engagement with materials and through opportunities to compare present actions with traces of earlier practices. Her-

itage environments thus become learning environments in which interpretation, practical experimentation, and reflection are closely intertwined.

Experiences from building conservation courses at NTNU suggest that material sensitivity develops when learners are encouraged to compare present actions with traces of earlier work. Rather than focusing exclusively on technical reconstruction, students are asked to identify evidence of previous decisions, repairs, and adaptations embedded within the building. Through observation, documentation, and practical experimentation, they gradually learn to interpret tool marks, material wear, and construction details as traces of earlier craft practices. What emerges is an ability to recognise material memory not as something contained in objects themselves, but as evidence of human judgement, skill, and activity preserved within materials. In this way, heritage education becomes not only a process of acquiring technical skills but also a practice of learning to recognise and interpret material memory. Similar learning processes may also be understood through the concept of affordances. Rietveld and Kiverstein [18] argue that environments offer possibilities for perception and action that become visible through skilled engagement. From this perspective, developing material sensitivity involves learning to recognise affordances embedded within historic buildings, materials, and craft practices. What initially appears as wear, irregularity, or technical detail gradually becomes meaningful as evidence of previous actions, decisions, and ways of working.

Such approaches resonate with contemporary educational perspectives that emphasise participation, cultural heritage, and experiential learning [19]. They also suggest that heritage environments are valuable not only because they preserve the past, but because they provide opportunities to learn how past and present remain connected through material practice. This perspective is reflected in educational contexts such as the building conservation and craft programmes at NTNU, where students learn to interpret historic buildings through observation, documentation, repair, and practical engagement. While the present article has focused on how memory and knowledge become embedded within places, related studies of craft pedagogy explore how learners develop the sensitivity required to recognise and respond to such material traces [20].

10. Conclusions

This article has explored how memory may be understood as emerging through the relations between material environments, embodied practices, and cultural landscapes. Rather than approaching memory primarily as individual recollection, the analysis has examined how traces of knowledge, experience, and human activity become embedded within buildings, materials, tools, and everyday practices.

The central argument has been that the concept of *terroir* can be extended beyond its traditional association with viticulture and used as a framework for understanding historic wooden neighbourhoods as environments in which memory, knowledge, and lived experience remain materially present. Through examples, mainly drawn from Trondheim, Vilnius, and Pori, the article has shown how such environments preserve traces of long-term interaction between people, materials, and practices. These traces are not confined to monuments or historical documents but remain accessible through repairs, tool marks, ageing surfaces, and ongoing acts of maintenance and use.

By bringing together perspectives from material culture studies, phenomenology, Ingold's concepts of meshwork and wayfaring, and theories of embodied cognition, the analysis has suggested that historic neighbourhoods may be understood as living archives and, more specifically, as *terroirs* of memory. Memory is not located in a single place or preserved in a static form. It persists through the continuing relations between materials, environments, and human activity.

The article has also argued that understanding such environments requires more than visual observation or historical interpretation alone. Knowledge develops through forms of engagement that involve movement, attention, participation, and practical involvement. This points toward what has been described here as a pedagogy of material sensitivity: an educational approach that cultivates the ability to perceive, interpret, and respond to material traces embedded within places.

More specifically, observations from the WoodiSH project and educational activities in traditional building crafts suggest that material memory is often encountered through traces of repair, maintenance, adaptation, and everyday use. Such traces enable practitioners, residents, and students to recognise how previous actions remain materially present within buildings and environments. The article therefore contributes not only a conceptual framework, but also an empirical perspective on how material memory becomes visible and meaningful through embodied engagement with historic places.

The significance of historic wooden neighbourhoods therefore lies not only in what they preserve, but in what they make possible. They provide opportunities to encounter how memory becomes material, how knowledge is carried through practice, and how relationships between people, materials, and environments continue to shape the present. Through this perspective, heritage emerges not simply as something to be protected, but as something to be engaged with, learned from, and sustained through ongoing participation. In this sense, memory becomes not only something we study, but something we encounter and negotiate through continued engagement with the material world.

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References

1. WoodiSH Project Consortium. *Wooden Cities: Memory, Sustainability and Craft in Historic Neighbourhoods*; Internal Project Documentation; Vilnius Academy of Arts: Vilnius, Lithuania, 2023.
2. Harrison, R. *Heritage: Critical Approaches*; Routledge: London, UK, 2013.
3. Smith, L. *Uses of Heritage*; Routledge: London, UK, 2006.
4. Paxson, H. Locating Value in Artisan Cheese: Reverse Engineering Terroir for New-World Landscapes. *Am. Anthropol.* **2010**, *112*, 444–457. [[CrossRef](#)]
5. Trubek, A.B. *The Taste of Place: A Cultural Journey into Terroir*; University of California Press: Berkeley, CA, USA, 2008.
6. Ingold, T. *Being Alive: Essays on Movement, Knowledge and Description*; Routledge: London, UK, 2011.
7. Ingold, T. *Making: Anthropology, Archaeology, Art and Architecture*; Routledge: London, UK, 2013.
8. Newen, A.; de Bruin, L.; Gallagher, S. (Eds.) *The Oxford Handbook of 4E Cognition*; Oxford University Press: Oxford, UK, 2018.
9. Varela, F.J.; Thompson, E.; Rosch, E. *The Embodied Mind: Cognitive Science and Human Experience*; MIT Press: Cambridge, MA, USA, 1991.
10. Høgseth, H.B. Craft as rhizomatic learning. *IAFOR J. Cult. Stud.* **2023**, *7*, 63–78. [[CrossRef](#)]
11. Olsen, B. *In Defense of Things: Archaeology and the Ontology of Objects*; Rowman & Littlefield: Lanham, MD, USA, 2010.
12. Pallasmaa, J. *The Eyes of the Skin: Architecture and the Senses*, 3rd ed.; Wiley: Chichester, UK, 2012.
13. Gallagher, S. *Enactivist Interventions: Rethinking the Mind*; Oxford University Press: Oxford, UK, 2017.
14. Malafouris, L. *How Things Shape the Mind: A Theory of Material Engagement*; MIT Press: Cambridge, MA, USA, 2013.
15. Marchand, T.H.J. Muscles, Morals and Mind: Craft Apprenticeship and the Formation of Person. *Br. J. Educ. Stud.* **2008**, *56*, 245–271. [[CrossRef](#)]
16. Aurelius, M. *Meditations*; Hammond, M., Trans.; Originally Written ca. 170–180 CE; Penguin Classics: London, UK, 2006.
17. Hooper-Greenhill, E. *Museums and Education: Purpose, Pedagogy, Performance*; Routledge: London, UK, 2007.

18. Rietveld, E.; Kiverstein, J. A Rich Landscape of Affordances. *Mind Brain Educ.* **2014**, *8*, 57–72. [[CrossRef](#)]
19. UNESCO. *Reimagining Our Futures Together: A New Social Contract for Education*; UNESCO Publishing: Paris, France, 2021.
20. Høgseth, H.B. A Craft Pedagogy in Practice: Embodied Learning, Heritage Environments, and Material Engagement. *Crafts* 2025, *in press*.

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