

A Wrinkle in Time. Adaptive Reuse as a Relational Practice

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Introduction: Beyond the Timeline

Adaptive reuse is now one of the central topics of contemporary architectural design, both for its environmental implications and for its cultural relevance. In a context marked by the climate crisis, land consumption, and growing attention to the built heritage, working with existing structures appears not only as a technical choice but also as a critical position with respect to contemporary forms of transformation. Yet, despite the richness of the debate, adaptive reuse continues to be described through largely unchanged interpretive frameworks: as a balance between conservation and innovation, as a comparison between the existing building and the new intervention, or as a transition from an exhausted function to a new use. These interpretations have also been shaped by the assumptions of restoration theory, consolidated after the long theoretical debate of the twentieth century, particularly around the principle of the recognizability of the restoration intervention and the importance of the historical instance (Brandi 1977). Both are fundamental principles, yet they can also lead to a partial reading of reuse and restoration projects.

What largely underlies these interpretations is a linear conception of time. The building is understood as an object placed along an ordered sequence: an initial life, a period of obsolescence or abandonment, and then a second life made possible by the reuse project. Within this perspective, reuse acts as a bridge between past and future: it recovers what remains from a previous condition and projects it toward a new utility. This narrative is effective in some respects, but it is also incomplete. It tends to reduce the temporal complexity of architecture to a succession of phases, as if the past is definitively behind us and the future simply an extension of the present. This paper proposes to question that view by taking as a theoretical point of reference both the current state of knowledge in physics and the philosophical reflections on time that arise from it, together with their broader implications. In his popular essays, Carlo Rovelli explains that time, while commonly perceived as a universal, linear, and homogeneous framework within which events are neutrally arranged, is in fact a relational, local, and stratified phenomenon, inseparable from the interactions that make it perceptible and measurable (Rovelli 2017; Rovelli 2025). Transposed into the architectural field, this perspective allows us to read the building not as something that “moves through” time, but as a node in which different temporalities condense, overlap, and at times conflict.

From this point of view, adaptive reuse does not concern only the extension of a building’s useful life, nor its strict refunctionalization. It may instead be interpreted as a practice that intervenes in the temporal structure of built space, rearticulating relationships among material memories, present uses, social expectations, regulatory frameworks, and future possibilities. This gives rise to a precise research question: what changes in the design of

reuse if time is understood not as linear, but as relational?

Keywords: Synchronisation, Relational Temporality, Adaptive Reuse

Time is not Linear. Implications for Built Space

In Western culture, time has often been understood as a continuous, uniform, and measurable quantity, a neutral background within which events, transformations, and durations take place. This image, still deeply rooted in common sense, derives largely from classical physics and from a worldview in which space and time are stable containers, independent of the phenomena they host. Yet the scientific discoveries of the last century have radically challenged this framework.

Within contemporary physics, developed from the emergence of quantum mechanics and general relativity, absolute time disappears. There is no single time valid everywhere and for everyone, nor a universal present shared identically by every observer. Time appears instead as an effect of relations among processes: not a substance or a container in which we are immersed, but a network of differences, measures, intervals, interactions, and perspectives (Rovelli 2025). Even the order of events, which seems obvious in everyday life, loses its global character and is defined locally through interactions.

A second crucial aspect concerns stratification. Time is not only succession, but it is also thickness, accumulation, simultaneity, and persistence. Processes do not all unfold at the same pace: some are rapid, others extremely slow; some are reversible, others are not; some leave evident traces, while others remain latent. Irreversibility itself, in this perspective, is not an absolute given but an emergent phenomenon, linked to how systems organise information, energy, and memory.

For architecture, the interest of this framework does not lie in mechanically transferring the categories of physics into design, nor in claiming an unlikely “quantum method” of reuse. Its value lies above all in offering a lens of interpretation: a point of view that makes it possible to move beyond traditional interpretive schemes and to open a theoretical space in which architecture can be read as a field of temporal relations.

If time is not a universal container but a relational configuration, then built space too can be read in the same way. A building never coincides only with the moment of its construction, nor with the function for which it was originally conceived. It is rather the always provisional outcome of multiple processes: use, maintenance, decay, adaptation, regulation, appropriation, abandonment, and memory. From this perspective, the building does not “pass through” time as a compact object that remains identical to itself while time flows around it. On the contrary, it is a node of different temporalities. There is the time of materials, made of ageing, wear, resistance, and transformation; the time of practices of use, which may change very rapidly; the time of collective memory, more selective and discontinuous; the time of regulations, constraints, and procedures; the economic time of investment; and the ecological time of life cycles.

Within this reading, the past is not simply what it has been. It is a configuration still active in the present, because it continues to operate in the form of traces, materials, proportions, symbolic values, construction techniques, spatial devices, construction limits, and open possibilities. Architecture does not merely preserve memory; it makes it operative.

To adopt this perspective, therefore, means shifting attention from the idea of linear continuity to that of simultaneity. Architecture then appears as a complex temporal device, in which different times do not simply follow one another, but coexist, overlap, and redefine one another.

Reuse as an Act of Synchronisation

The most widespread reading of adaptive reuse can be summarised in a simple formula: first life, abandonment, second life. This is a useful descriptive model, but a reductive one on the critical and theoretical level. It suggests that a building possesses a unified temporal identity, interrupted by a crisis and then relaunched by the project. In this narrative, reuse assumes the role of a device of continuity: it prevents the end of the building and makes its rebirth possible.

Such a model has at least three limits. First, it oversimplifies the history of the building. Rarely does a structure experience a single coherent life followed by a sharp break and then a new and equally compact existence. More often, its history consists of gradual adaptations, improper uses, additions, removals, temporary occupations, transformations, phases of maintenance, and phases of neglect. Even abandonment, in many cases, is not an absolute void, but a condition dense with processes, like decay, spontaneous appropriation, waiting, suspension, and symbolic redefinition.

Second, the linear model tends to represent the project as the replacement of one temporal order with another. The new use would take the place of the previous one; the present would take the place of the past. Yet this very logic of substitution fails to grasp what is most interesting in reuse: namely, the possibility that different times may remain simultaneously active within the same space.

Finally, this framework ultimately reinforces a strictly functionalist view of architecture. The building seems to coincide with the function it hosts, and its crisis coincides with the loss of that function. Reuse is then conceived primarily as a response to a deficit of use. A more complex temporal reading shows instead that function is only one of the levels at stake.

If the model of linear succession is abandoned, adaptive reuse can be redefined as an act of synchronisation among heterogeneous temporalities. The project does not bring a “dead” building back to life, nor does it simply prolong its duration. Rather, it intervenes in the relations among different temporal layers, modifying the intensity with which certain elements of the past resonate with present needs and future possibilities.

In this sense, reuse does not grant a “second life” but designs a new configuration of coexistences. Some traces are made visible, others attenuated; some permanences are enhanced, others neutralised; some conflicts are exposed, others mediated. The project acts as a temporal montage: it selects, orders, and puts different times into relation without annulling them, in order to arrive at a synthesis.

The role of the architect consequently changes. The architect is not only the author of a new form, nor simply the conservator of a pre-existing one. Rather, the architect becomes a mediator among different times, interpreting what still insists within the building, what can be transformed, what must remain visible, what may be left unfinished, and what may accommodate uses that are not yet fully determined. Understood in this way, the project does not only produce space; it produces a different legibility of time in space.

A New Reading of Three Case Studies

To test the usefulness of this perspective, it is helpful to reinterpret some emblematic cases of adaptive reuse as temporal configurations.

Neues Museum, Berlin

The original temporality of the Neues Museum is that of the great nineteenth-century museum building, conceived as a cultural machine of modernity. Over this first temporality, however, the historical rupture of war is superimposed: the damage suffered during the Second World War transformed the building into a ruin, marking it materially and symbolically. For decades, the museum remained in a suspended condition, in which the past was not concluded but traumatically present. David Chipperfield's intervention chooses neither integral reconstruction nor the romantic preservation of the ruin. Instead, it works on the tension between permanence and integration, between lacuna and continuity. The missing parts are not replicated mimetically, but neither are they simply left as an absence. The project makes legible the plurality of times deposited in the building: the original time of the museum, the destructive time of war, and the contemporary time of the intervention. The resulting temporal configuration is exemplary because it does not seek to dissolve the conflict among these different layers, but to make it inhabitable and intelligible. The museum appears neither as an object restored to an original state nor as a musealized ruin: it appears as a space in which different times coexist without being reduced to a single narrative (Nys 2025; Nys 2009).

Tate Modern, London

In the case of Tate Modern, the original temporality is that of the Bankside Power Station, an industrial infrastructure tied to a specific phase in the urban economy and in energy modernisation. With the decommissioning of the plant, the large industrial envelope lost its primary function, but not its capacity to organise space and the urban imaginary.

Herzog & de Meuron's intervention does not erase the building's industrial character, but takes it on as the generative condition of the new museum use (Herzog & de Meuron 2000). The great Turbine Hall, in particular, is not simply adapted to a different program: it becomes the place where the building's productive past continues to be perceived, even within a radical reconfiguration of use. The new temporal configuration is therefore not based on replacing one identity with another. The building continues to carry the time of industry within itself, but it does so within a new regime of cultural and public use. Reuse here produces a form of coexistence between productive memory and museum present, showing how a decommissioned infrastructure can remain temporally active without being frozen in its origin.

Chiostri di San Pietro, Reggio Emilia

The case of the Chiostri di San Pietro is particularly interesting because it clearly shows how reuse can work not only on conservation and use, but also on the idea of incompleteness. The original temporality of the complex is that of the monastery, marked by a long religious use and by a clearly defined spatial structure. Over this are layered subsequent transformations, changes of use, phases of abandonment, and a progressive redefinition of its relationship with the city.

The contemporary interventions in the Chiostri do not aim to restore a compact and definitive image of the complex. On the contrary, they embrace the open, fragmentary,

and stratified character of the site, turning the “unfinished” not into a defect but into a design condition (Zamboni 2022). It makes it possible to maintain the differences among the historical layers while at the same time opening the complex to contemporary cultural and public uses.

The resulting temporal configuration is a space in which continuity does not coincide with completion, but with the capacity to remain open to further transformations. The project does not close the building’s time into a concluded form; rather, it preserves its porosity, making reuse a practice of activation rather than of final definition.

Implications for Contemporary Design

Reinterpreting adaptive reuse in relational terms has not only theoretical consequences but also entails several operational implications for contemporary design.

The first concerns the way the existing is read. If the building is a node of different temporalities, then the preliminary analysis cannot be limited to geometric survey, state of conservation, and functional compatibility. What is needed is a true temporal map of the building: the times of materials, construction techniques, uses, social memories, regulations, maintenance cycles, and transformations that have already occurred. To design means, first of all, to recognise which times are active and how they interact.

The second implication concerns the character of the intervention. In a non-linear logic, the project should not simply aim at replacing the old with the new, or at adding new layers as such, but at the critical synchronisation of heterogeneous elements. This means selecting what should remain, distinguishing what may be transformed, and accepting that not everything must be brought back into unity. The value of an intervention therefore depends neither on the degree of invisibility of the new nor on its emphatic difference, but on the quality of the temporal relations it is able to build.

The third implication concerns representation. If reuse is a methodological moment of synchronisation, then its design tools should be capable of showing not only forms and functions, but also durations, phases, permanences, and possible evolutions. In this sense, drawing may be understood not as the mere description of a final state, but as a tool for making stratifications and scenarios of transformation legible (Lechner et al. 2025). The most recent reflections on the relationship between temporality and drawing move precisely in this direction: representing architecture as process, not only as a finished product.

From this perspective, three design principles may be derived.

First: to read the existing as a field of times. A building is not only material to be preserved or a container to be refunctionalized, but a system of temporal relationships to be critically interpreted. Second: to intervene through intensity, not by substitution. A reuse project does not necessarily have to erase or reproduce, but rather to calibrate visibility, permanence, gaps, and transformations. Third: to conceive sustainability as a continuity of processes. Cultural as well as environmental sustainability does not consist in freezing the past, but in keeping open architecture’s capacity to accommodate different times and future transformations. In this perspective, to design means renouncing, at least in part, the idea of a definitive and self-sufficient form. The project comes closer to a device capable of orienting processes, leaving margins for adaptation, and constructing non-linear continuities. This does not weaken the design act, but rather acknowledges its necessarily relational and temporal nature.

Architecture as a Temporal Device

Adaptive reuse is often described as a practice that prolongs the life of buildings, preserving their memory and making them useful again in the present. This definition captures an important aspect of the phenomenon, but it does not exhaust its scope. If time is not linear, absolute, and uniform, but relational, stratified, and local, then adaptive reuse too can be understood and practiced differently.

The decommissioned building is not simply what remains of a concluded past. It is a condensation of times that are still active, and the reuse project therefore acts not only on form or function, but on the relationship among these times. It selects, synchronises, makes certain permanences visible, and transforms others, producing a new temporal configuration of built space. In this sense, adaptive reuse coincides neither with conservation nor with innovation understood in isolation. Rather, it is a critical act that makes the coexistence of different times inhabitable. More than prolonging the life of buildings, it redefines the way time itself becomes manifest in architecture. Architecture thus appears not as a fixed object placed along a chronological line, but as a temporal device: porous, relational, and open.

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