

Editorial

Space and Time

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In 1972, the urban designer Kevin Lynch concluded the book *What Time Is This Place?* by suggesting that “these thoughts about how our environment represents or might represent the past, the present, and the future can be brought into better order if we look at how our bodies and our minds experience time—how time is built into us and . . . how we ourselves have created it” [1]. This Special Issue of *Architecture* is intended to be part of an effort to extend that project by identifying more specific design strategies for connecting building occupants to the past, present, and future [2].

It is intended, then, as essentially an examination of how built space can evoke temporal responses. In the scientific world, these dimensions are often presented as broadly equivalent. Yet we think and talk about time far more often than we do space in our everyday lives, and this is reflected in the written usage of the two words (Figure 1).

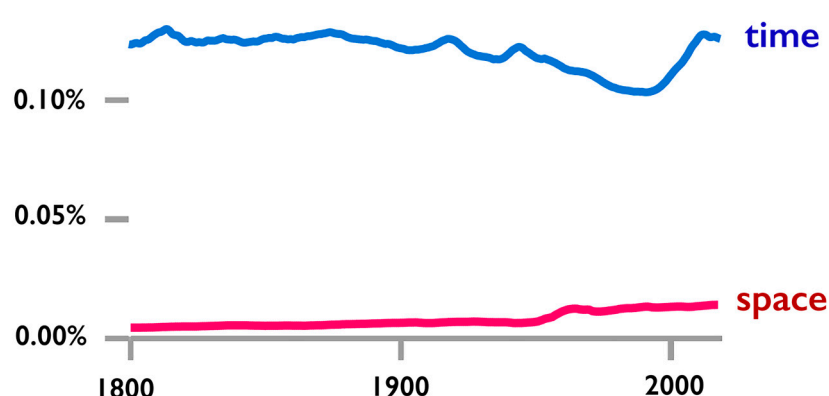


Figure 1. Frequency of use of the words “time” and “space” in English-language books between 1800 and 2020 (image source: Google NGram Viewer).

The knowledge that our personal allocation of time is not only finite but has also been diminishing from the moment we entered the world dominates our being in a way that our allotment of space does not. Space can be acquired, but we may only “spend” our time [3] ¹. In the design of built environments, however, these real-world priorities are strangely reversed, with spatial considerations generally dominating and time often little more than an afterthought. As Juhani Pallasmaa affirms, “architecture’s . . . second task, to mediate our relation with the frighteningly ephemeral, mysterious, and fleeting dimension of time, is usually disregarded” [4].

One reason for this relative neglect of time in building design is that while we can readily simulate space, time is far more elusive. Indeed, this is why spatial analogies have shaped many of our notions of time [5–8] ². The past is often understood as “behind” us, for example. Now is commonly paired with here, and the future lies “in front” of us. Spatial metaphors of this kind are common in most languages, and recent discoveries in neuroscience suggest that spatial and temporal processing may even be linked in the brain [9–13] ³.



Citation: Nute, K. Space and Time.

Architecture **2023**, *3*, 593–595.

<https://doi.org/10.3390/architecture3040032>

Received: 22 September 2023

Accepted: 25 September 2023

Published: 28 September 2023



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Yet there are actually profound differences between our conceptions of space and time. Space—at least since the time of Descartes—has been thought of as having three dimensions, while time is usually treated as having only one [14]⁴. It is common to imagine time as moving past us, rather than ourselves moving through it, as we do through space. Our lived experiences of space and time are also fundamentally different. There are no bodily organs dedicated to the perception of time as there are to space, although certain areas of the brain and many cells do have the capacity to measure durations [15]⁵. As Marc Wittmann reminds us, then, we cannot perceive time directly, as we do space. We can only experience its apparent *effects*, primarily in the form of perceptible change, which is often taken as evidence of the temporal, on the simple grounds that change “takes time” [16].

Our relationship with time has been described by Oliver Burkeman as “the defining problem of human existence” [17] (p. 4). Burkeman recounts how, with the development of clocks and industrialization, time has gradually been turned into a commodity. The result is summed up for him by Marilynne Robinson’s bleak description of life in many developed countries today as “a state of joyless urgency” [17] (pp. 23, 26).

Our attitudes to time also reveal a deep ambivalence. On the one hand, it is valued as a precious personal resource, and its passage is tacitly feared as a harbinger of our own eventual passing. As Herbert Spencer pointed out, we may attempt to “kill time,” but ultimately it is time that kills us [18]. For this reason, time has been described as both a “trauma” and a “terror” [19,20]. However, paradoxically, the slow passage of time, which one might imagine would be welcome given our existential angst, is also often a source of discomfort to us. A common human response to the relentless march of time has been to attempt to transcend it through the notion of the eternal. Yet the opposite reaction, of actively embracing the passage of time as part of being, is also evident in celebrations of the ephemeral and the aesthetics of age.

Beyond being arguably our most precious personal resource, time also matters to us in other important ways. The past contains the events that define who we are. The present is the one place where we can physically interact with the world, and the future is the source of our hopes. Recalling past experiences, reacting to events in the moment, and anticipating potential scenarios would all have been critical to the survival of our early ancestors, and they remain essential to our psychological well-being today. While it is our bodies, by sensing and effecting change in our surroundings, that connect us to the present, our minds are constantly exploring past experiences and future possibilities as the basis for our decisions in the moment. Take the simple act of making our way somewhere. This involves repeated switching between recollection of the location of our destination, anticipation of what we need to do next in order to get there, and bodily movements in the here and now.

Rather than discussing abstract concepts of time, the papers in this Special Issue are intended to focus on lived experiences of the temporal in the built spaces where we now spend most of our lives. This is in line with Augustine’s description of lived time as consisting of memory (*memoria*), perception (*contuitus*), and anticipation (*expectatio*) [21], as well as Heidegger’s notion of existential or subjective time, which begins and ends with our own being.

Conflicts of Interest: The author declares no conflict of interest.

Notes

- ¹ As Michael Inwood explains, for Martin Heidegger, for example, “Dasein’s awareness that it will die, that it may die at any moment, means that ‘dying’, its attitude to or ‘being towards’ its own death, pervades, and shapes its whole life.” See [3].
- ² The mapping from one to the other is by no means consistent, however. See, for example [5–8].
- ³ On relationships between spatial and temporal processing, see, for example [9–13].
- ⁴ Many cultures have treated time as cyclical, however. See [14].
- ⁵ The idea of a “body clock” has been around since the 1920s. Although no single temporal nexus has been identified, there is evidence that many cells in the body have their own internal clocks that keep them on approximately twenty-four hour or

“circadian” cycles, and that these are regularly resynchronized by a “master clock” in the brain comprising photoreceptive retinal ganglion cells at the back of the eye that control melatonin in the blood via the supra chiasmatic nucleus (SCN). On this topic, see [15].

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