

Opinion

On Island Time, in Built Space

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Abstract

This article describes the relationship between spatial perception and temporal experience, emphasizing the limitations of linear frameworks in understanding these phenomena for contemporary students of design. Drawing on recent literature in neuroscience, the author argues for wider recognition of how our brains represent space through an awareness of non-Euclidean geometries, particularly hyperbolic models that more holistically reflect the complexity of lived experience. Through the lens of personal narratives, including reflections on living in a militarized landscape in Hawai'i, the paper emphasizes the importance of various cultural and sensory interpretations of time—such as “Hawaiian Time” and “Turtle Time”—which offer unique perspectives on what it means to exist in these built environments. Ultimately, it advocates for a pedagogical shift in design education that encourages students to embrace and integrate more diverse temporal experiences in their work, fostering a richer awareness of their present as they engage with the conceptualization and design of built space. Three key assertions are described. First, multiple, different perceptions of time coexist in the same universe and reality, offering various sensations and registrations of existence. Second, these diverse views on the passage of time, like Island Time, emphasize a slower, more direct engagement with life's vicissitudes, in contrast to mechanical time, for example. Lastly, by acknowledging the presence of differing states of temporal perception, design students are aided in more holistic and rational conceptualization of built space and therefore in their own movement into complex and indeterminant futures in design.

Keywords: built environment; design education; time perception; temporal experience



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1. Geometry and Perception

There are multiple ways to exist in time. Island Time, for example, gained popularity as a phrase in the mid-nineteenth century during the US military's presence in the Pacific. It signifies a more relaxed pace than that of say, Military Time. It also denotes a slack attitude about Clock Time, or tempos deemed otherwise artificial, in general. Usually in reference to time having been well-spent, and not unique to any one isle, atoll, or islet, Island Time is known to have a unique significance in coastal landscapes around the globe. In writing about the way Caribbean Time “seems to flout the linear Clock Time associated with modernity”, Rudyard Kipling notes how this temporal frame “allows the past and the present to commingle.” [1]. Hawaiian Time, a more familiar phrase, has also been well described. Not merely an anecdote about laziness, author Mitchell Kuga, asserts it as fully “baked into the architecture of the city (of Honolulu) itself: escalators lag, yellow traffic lights dawdle, the seasons stretch into one long eternal summer.” [2]. While some individuals and cultures accelerate, others clearly prefer to pump the brakes and breathe the air from time to time.

The way time is experienced is also a central concern in the built-environments professions. For designers and builders of space, an understanding of time has been described as a critical foundation which precedes an understanding of other subordinate fundamentals including such essentials as the relationship between form and sense of enclosure [3,4]. Despite that, for most, time is a very difficult thing to track. Typically, time is only recognized when it is in direct focus, and that attention generally only lasts about five seconds [5]. In design education, where *Future Time* is the ostensible driver of modern curricula, there exists an earnest potential for the understanding of time as a functional and performative agent, or actant, in the conceptualization of built space [6]. More broadly, how time is experienced in built space depends on innumerable environmental and perceptual factors. Time perception itself differs wildly among individuals according to a diverse range of both environmental conditions and unique cognitive precursors [7]. Environmental boundaries and physical markers such as fences and walls contribute to these distinctions and help define pronounced differences in individuals [8].

To varying degrees of precision, time and (built) space are both concepts that are capable of measurement. Time, like landscapes, can be divided into parts of a larger whole. The experience of passage through time and over land (space) can also be perceived in many different ways and for a host of reasons. Psychologists William Matthews and Warren Meck have argued, that “temporal perception is highly labile across changes in experimental context and task; there are pronounced individual differences not just in overall performance but in the use of different timing strategies and the effect of key variables.” [7]. Other research shows that space perception is also highly flexible but has been shown to operate in some apparent geometric hierarchies.

In a 2023 paper, researchers at the Salk Institute wrote, that “Many aspects of our daily lives can be described using hierarchical systems. As we decide how to spend an afternoon, we may choose to read a book in a coffee shop or go to a shopping mall, which gives rise to a set of new questions: what coffee, which store and so forth, instantiating a decision tree”. Adding that, “Daily experience suggests that we perceive distances near us linearly. However, the actual geometry of spatial representation in the brain is unknown.” [9]. As with inaccurate historical associations of time with abstract linear geometry, or the idea that time only moves in one direction, so too is our limited understanding of the geometries of space perception. Architect Juhani Palassmaa writes that, “the world and the self are “chiasmatically” (crosswise) bound together”. He describes how “space and time are not objective and independent dimensions outside of our consciousness; we are intertwined with the world, in the way of the Moebius strip, which has two sides but only one surface.” [10].

Yet humans tend to dwell [at least cognitively] in the future or past, struggling to place ourselves where we actually seem to be, in the center. This is not to act as a devout geocentrist might, per se, with the self at the nexus of everything, but instead with an awareness of the coming together of those two great parabolas that lay ahead and behind our bodies as we move through space. Some evidence is offered by researchers at Salk, who write that, “Neural networks function along an expanding curve, which can be analyzed and understood using hyperbolic geometry. . .” Rather than the reductive straight line we think we are traveling along, the shape of our perceived experience, or more specifically, the “neurons in the hippocampus essential for spatial navigation, memory, and planning”, have been shown to “represent space in a manner that conforms to a nonlinear hyperbolic geometry”. More simply put, our perception of space may have a discernable shape that surrounds us, and it is likely not a clean straight line.

Instead of an overly simplistic vector that we might stand on, say, the geometry attributable to spatial and temporal perception might be more accurately understood as

an expanding conceptual hourglass, with us at the center, represented by a single grain of sand, and the past and future sensed for mere moments while along a “three-dimensional expanse that grows outward exponentially.” [9]. Evidence of this nuanced, non-Euclidian geometry in our neural network seems to push back against traditional notions of single or double orientations to an environment, like forward and backward, up or down. The moment a thread passes through a needle offers another imperfect analogy. Despite the richness and variety of the sensorial, perception of time and space both share the difficulty of being defined outside of simplistic binaries.

Fortunately, we have better language about how to solve this puzzle. If taken in a broader, more holistic sense, according to philosopher Alva Noë, we see how “relationships are largely responsible for human consciousness”, crediting the “the joint operation of brain, body, and the world” [11]. Rather than conscious perception existing only in the brain of an individual, it may be that our networked external world plays an equal or even greater role in how we perceive internally, from one moment (or space) to the next. Or, in another dualist framework (and to satisfy the reviewers of this paper), according to Juhani Pallasmaa, “environments and architecture constitute our consciousness.” [10]. What else can we say about how time is perceived through space and geometric registration? The subject is replete in unique attitudes and persona. To give some focus, let us go to a physical place we can describe and understand.

2. Paradise Measured

Invited to reflect on the subject of time in built space, I am drawn to several divergent, even contradictory points of reference. Thankfully, the call for this Special Issue of *Architecture* is clear. The collection aims to “focus on lived experiences of the temporal in the built spaces where we now spend most of our lives.” For some context then, I live my life mostly in Honolulu and teach at the University of Hawai‘i at Mānoa. Where, at some point each day, given my best effort to be present—to quietly worship at the ecological monument of O‘ahu’s impressive landmass—I am alerted by the sonic thwapping of Chinooks, Ospreys, Cobra Attack-Helicopters, or the oaring bursts of invisible F-22 Raptors parting Pacific clouds high overhead. All named for mighty predatory animals, they announce an abruptnowness out of the humid vog, asserting that this landscape, a sublime but mostly fictitious Eden, is functionally, operationally, and essentially a military installation.

The US Federal Government controls roughly a third of all Hawaiian land. But stepping back, one only needs to listen to hear how that figure is greatly undercounted. Or try navigating the H-1, 2, or 3 “interstate” highway system. Designed in the 1950s and built in 1960 to connect Pearl Harbor Naval Base on O‘ahu’s Kona (leeward) side with the Marine Corps Base (MCBPP) on the windward side, all the roads, as it were, point to these defensive spaces. The dominant signage along your journey helps you less to find say, the international airport or the Waikiki commercial district, than these acronymic enclaves of national might. The circulation pattern makes sense according to the Defense Manpower Data Center (DMDC), which keeps track of more than 250,000 military personnel and their families who live in Hawai‘i, nearly a quarter of the state’s entire population. (DCMC).

Many other sites, while less integrated with urban Honolulu, claim whole landscapes of beaches, valleys, and hilltops, like the massive inland Schofield Barracks. This 17,725-acre weapons platform was established in 1908, well before Hawai‘i was a US State, and remains active, and alive, even dominant, yet perched hidden behind a tall fence. The base sprawls between two extinct shield volcanoes in the elevated saddle of Oahu’s agricultural heartland. After the military, where generous housing stipends enable whole families to assert otherworldly practices from the American continent into the sensitive Hawaiian ecosystem, Hawai‘i is also home to a world-famous tourism industry. Tourism drives

roughly yet another third of the island's economy. Both integrated parts of a whole which together seem to function as conceptual and yet also very real, built podia, elevated and mostly unconcerned with the shifting infrastructure and rising ecology below.

What remains after the colossal 2/3's share of space and resources affectionately allocated, ceded, or more accurately seized for Uncle Sam and the rest of the family on vacation is roughly a final third. This is where everyone else lives, including me, my students, and just about everyone else. A transplant and something of a tourist here myself since the summer of 2016, I am struck by the many stark divisions in this heavily built and managed landscape. What some call paradise contains the clear physical markers and boundaries of the Great Mahele (to divide or portion) of 1848. Considered "The single most important event in the history of land title in Hawai'i. It essentially abolished the feudal system and gave rise to an allodial system of land tenure." Before that, the land was divided by Hawaiian royalty into ahupua'a, or designations of each unique watershed or valley bounded by mountain ridges as a division of community and agricultural space. In the vertical axis, these extended from the cloud forests above to the coral reefs below [12]. In the twenty-first century, Hawaiian land (or A'ina; meaning that which feeds) has become a palimpsest of too many financial, philosophical, and geopolitical forces to discuss here.

Land divisions exist today as actual fences and borders, demarked abstractions governing and surveilling peoples' varying degrees of access to space. Divisions between the military, tourism, and the rest of Hawai'i's remaining landscapes have evolved into all manner of constituent gaps between classes and strata of Hawai'i's people. And much is possible and even desirable in the remnant or interstitial spaces (Figure 1). Maps further describe the tension between this formal registration of the imposed polygonal and linear, with the underlying natural precondition throughout the archipelago. But there are always opportunities for new relationships to form. How each person here lives and allocates their time within the shared operational field, as well as how each embeds their unique physical traces on the ground amidst such an entanglement continues to concern and excite the design community.



Figure 1. The chain-link fence surrounding Makalapa Neighborhood Park in Honolulu with signage informing park-goers that they are on government property. Several informal openings have been created by insurgents in places where public accessibility was formerly present. The park is the subject of Studio Makalapa [ARCH 652 Site Design, 2023, 2024] at the UHM School of Architecture.

The notion of land division is rooted deep in the human story and inherited from a deeply conceptual place. The word Paradise itself comes from the Persian word *pairidaezas*, meaning, walled garden. This ancient concept of Paradise as an enclosed and curated version of nature predates Islam, Judaism, Christianity, and even the Garden of Eden. According to historians, we can trace the oldest stems of the word back to the Sumerian period around the year 4000 BCE in Mesopotamia [13]. With the wall as its principal built feature, the enclosure and division of space is required for paradise to exist, by definition. The two other primary criteria necessary for paradise, after the wall and the garden itself, are the deliberate inclusion of shade and water. For tourists, as I can attest, time here spent mostly in search of shade and water, seems to pass as an illusion. They enter (as I have many times) into a dream-state the moment this warm yet miraculously cool tropical air and its constituent pheromones enters their lungs. An immediate presence of nowness, or the experience of the proverbial moment I have found here, almost always immediately follows the intense sensation brought about by Hawai'i's equally impressive sunlight.

Tourist Time here is largely perceived by waning sunscreen effectiveness and waxing appetites for poke and Polynesian cocktails. The military keeps it in their own way too. Military Time is rightly measured by the NIST-F1 Cesium Fountain Atomic Clock, housed at the National Institute of Standards and Technology (NIST) in Boulder, Colorado. According to NIST, "the F1 will neither gain nor lose a second in the next 80 million years." (NIST). Here in Hawai'i, for the military brass, officers and enlisted service members, civilian employees and their families, time passes at least in principle like clockwork, in a literal sense. It could be assumed given the footprint of the US military on O'ahu, that sunlight, weather, and other phenomenological forces factor less in weekly schedules than the NIST-F1's unrelenting mechanical tempo. Yet beyond these two admittedly reductive and very different descriptions of typical perceptions of time, that of the well-rested yet sleep-walking tourist, or the meticulously scheduled and caffeinated patriot. A simple, perhaps more biological or ecological reading of relationships also persists. The overly naive or simplistic comparison might appear true at first glance, but on further scrutiny and as one spends real time here, with years and subtle seasonal variations unfolding, a more sincere pattern emerges.

3. Dog Time

Dogs can teach us a lot about time. According to the American Kennel Club, it is said that one day of our adult life is the equivalent of a week of theirs. Despite better numbers emerging more recently, "you can't really kill the seven-year rule," says Kelly M. Cassidy, a curator of the Charles R. Connor Museum at Washington State University, who studies longevity in dogs. As a general guideline, the American Veterinary Medical Association or AVMA states that, "fifteen human years equals the first year of a medium-sized dog's life. Year two for a dog equals about nine years for a human. And after that, each human year would be approximately five years for a dog." [5]. So roughly speaking, every year of ours feels like seven to them. An hour of ours is a little more than a quarter of a day to them. Of course, there will be statistical outliers, but a one to seven ratio persists. That quotient might not strike you as terribly meaningful, but if you have ever loved a dog, you know that profoundly unequal disparity personally. Stripped of any material or earthly attachment, the abbreviated timeframe of a dog's too-short life seems to engender a very real and prescient sense in us as humans. Like all natural things, they possess the capacity to remind us that we are natural creatures too.

In *What Time is this Place?*, renowned urbanist Kevin Lynch describes the artificiality we experience when external or environmental time jars with our internal sense of its passage. The lunch bell rings and we're not hungry, or the stop light that we're waiting

to change seems out of synch with us, the traffic, queued below. Lynch writes under the bifocals of real time (Dog Time?; Island Time?) and artificial or mechanical time. Easy, even pleasurable changes in environment being described by the former, with abrupt, rigid or otherwise unpleasant temporal punctuations in the latter. Connecting these individual or inductive perceptions of time to the composition of external physical space, he goes on to say, “These thoughts about how our environment might represent the past, the present, and the future can be brought into better order if we understand how our bodies and our minds experience time—how time is built into us, and yet also how we ourselves have created it.” [14]. The addition of time perception to the litany of humanity’s existential crises is a cruel one. But owning and recognizing the existence of these two or more states of mind offers a way of rationally moving forward into the unknown future. It is worth knowing on the one hand that time is inside us, and that time is all around us, everywhere, on the other.

In the post-world-war-two period, the United States Army Corps of Engineers (USACE) constructed the Mānoa Valley District Park. Another odd polygon on a map used primarily as a means of upland flood control. Yet it’s here, where I have most intimately understood how time works on this island. I have my old dog Indy to thank for that. You see, while other modes of understanding or perceiving time exist, if you ask her, or most dogs what time it is, they will tell you. And they’ll be correct. There won’t be any words or numbers exchanged. Don’t expect a symbolic abstraction of something more complex. Instead, an abrupt feeling of urgency will overtake you. A slight but noticeable vibration will pulse through the space to communicate and mark the moment. Often felt rather than seen or heard, and without a sound, Dog Time will punctuate the air like an alarm. Even the slightest attention will yield a pronounced sensation. A head twist, a nod or coy smile with 100% eye contact, or maybe a full-body spin move, these will be your likely signals. The time is. . . they will say, most decidedly. . . Now. Right now. This abrupt shift away from the unrelenting mechanical clock can jar even the most flexible among us.

As with the tension between Island and Military Time, or that of other odd spatial or even metaphysical binaries, like Man and Nature, for example, or walled gardens [analogous metropolises that shape societies] and the bewildering chaos beyond. The connections or lack-thereof can seem forced, and yet the necessity for nuance remains. Much of the built space around Indy and I here in Honolulu seems to exist in a framework of these two simultaneous, divergent, and contrasting extents. My students have inherited this context and continue to struggle with its limitations. I know because their work asks questions like “is this ___ good or bad?” Sometimes they even ask such questions out loud themselves. But a better strategy for perceiving time is to live it without prejudice or expectation, unmoored by a-priori assumptions or bias. Instead, by allowing the past and present to cross-contaminate, perhaps Island Time can offer a more suitable (albeit metaphysical) understanding. Space is then afforded to our immediate perception. Enough space is required to allow us, (or a grain of sand through the proverbial hourglass), the past and future continuously expanding outward. Yet more or less space, more or less future or past at any given moment, can be comprehended and rewarded through scrutiny.

The world’s religions nearly all offer an additional yet imperceptible dimension of time. That of Eternity, in Christianity, or the endless horizon which leads to the longest corridor, into the future, drawing ever-forward and upward into farther and more distant realms of consciousness. Buddhists refer to it as Nirvana. Hindus, Moksha. Aboriginal Australians, Dreamtime. Rather than exclusively perceiving an inside-and-outside, before-and-after, or “good and bad (evil)” of something in scope or capacity, the idea of the eternal, the forever across cultures holds compelling but unknowable promise for the fact that it lives outside the boundaries of the finite here and now. Designers with a focus on resilience

or “future-proofing” their work can draw inspiration from the idea that all things return somehow to their source. The Greeks are known to have believed in *kairos*, or sacred time, which described an infinite upward spiral of experience [15]. It’s as if they had access to the Hubble or more recent Webb telescope images of the cosmos. Carrying on in modern language, today’s Webster’s Dictionary defines *kairos* (kai-ros, kī | rās) and its plural *kairoi* as: “a time when conditions are right for the accomplishment of a crucial action; the opportune and decisive moment”.

Many other cultures around the world assign varying symbolic geometries to the eternal. The straight line of an arrow is common, the circle too, but the upward or downward spiral sequence, a bit like that of the Salk Institute researcher’s hourglass theory, resonates because it allows for access to multiple simultaneous trajectories. To many, recognizing the existence of one’s own datum of temporal organization can itself be a powerful sensorial experience. Let us suppose that the trajectory of one’s journey is less in a straight line than in upward or downward swells and troughs, like along a wave, a repetition of waves. Ripples occurring in response to actions, then we might sense climbing or sinking into an outwardly orbiting sequence. It would appear possible then, that other axes of perception are clearly available. This notion recalls the words of Alan Watts who wrote on the subject, that, “We do not ‘come into’ this world; we come out of it, as leaves from a tree. As the ocean “waves,” the universe ‘peoples.’ Every individual is an expression of the whole realm of nature, a unique action of the total universe.” [16]. His description asserts the role of movement and energy in the perception of time. Awareness of existence is perceptible as surges and pauses, gatherings and distributions of energy in space. Sometimes where this energy comes from and where it is going seems to fit into a rational framework, while other times it may seem to defy all logic.

In *Of Time and Turtles*, author Sy Montgomery writes of meeting Percy, a frisky one-hundred-year-old three-toed box turtle at the Turtle Rescue League. On arriving at the shelter for the injured reptiles, “To our astonishment, like a windup toy, Percy instantly runs to Michaela. As she scoots backwards in play, she can barely keep up with the advancing centenarian. ‘Yes he chases you’, Natasha says. ‘He’s a remarkably old turtle. . .and part of his good life lived is to show he’s the man here. He’s still in his prime!’” In a conversation she has with Christopher Raxworthy, associate curator of herpetology at the American Museum of Natural History, he claims that “Turtles don’t really die of old age. The majority of organs of a hundred-year-old turtle are indistinguishable from those of a teenager of the same species.” According to Montgomery’s reflection, “It almost appears as if turtles can stop time. They can indeed slow it down. Their hearts can cease beating for long periods without damage. Turtles can survive buried in the mud for months without taking a breath.” [5]. As with sight, hearing, or touch, each interacting with external stimuli and recording perceptible information, time and our attention to it, also bears resemblance to the wider sensorium of the physical.

Time then, itself, can be argued to serve as a unique human (animal) sense. Less a precise or fussy mechanical measurement than a sort of holistically charged awareness, what we stand to gain from this shift in organic perspective is a feeling and perhaps even an understanding of presence, (pre-sense). Call it Turtle Time, Island Time, or Dog Time if you like. What these alternative lenses offer is more akin to an emotion, if you will, of *nowness*, which conveys the critical intersection of that sense with other multitudes perceived within what landscape architect James Corner calls the ‘sensorium of the tactile’ [6]. The knowing of time and one’s place within it, as with knowledge of place in proxemic or distemic terms, allows for the unraveling of the entanglement we experience between ourselves and our enveloping spatial reality [17]. My hope, and the greater aim of my teaching is that contemporary students of design will somehow along their way, come into a greater sense

of that nowness for themselves; an awareness of the real and present moment (or string of moments) in their work.

4. Optimal [Learning] Speed for Tropical Climates

Island Time mingles together the past with present, like a warm blur. Turtle Time stretches well into the future, beyond human understanding. Dog Time seems only concerned with the now, an idea we can actually grasp. These frames of perception all offer vastly different sensations of what it means to be in time, and all somehow coexist in the same reality. Considering this multitude of timekeeping models, why then do we tend to fit ourselves (in design) into such a narrow slice of the possible spectrum of perception? Why by extension, are so many schools of design holding fast to mechanical or economical tempos of factories and other prisons? Many appear formed in the same spirit of the industrial revolution. Yet a more dynamic and sensorial learning culture is required if we are to describe and understand how time in built space is conceived in the indeterminant years ahead. Who here agrees?

Given the shifting nature of design education and the need to be agile and adaptable despite the great challenges ahead, the following offers a contrary but sensible path forward. I will offer examples from the classroom. All my classes, including two I will mention here, ARCH 381 Landform & Water, and ARCH 652 Site Design Studio, integrate the perceptual and temporal lenses mentioned above, particularly that of Island Time. More intuitive than coded, and more casual than deliberate. The students are noticeably absent when the surf is up, let's say. I have learned how to be in this place from them to a large extent. Rooted in the pedagogical imperative de jour—to train future professionals for careers in design practice—the evolution away from inherited artificiality and toward a more biological and sensorial reading (of now) has been years in the making.

Because of where we are, this altered reality has taken hold on me fully. I have had to ask students and colleagues, frequently wondering to myself, how do we get anything done around here? Or, more generously aimed at pedagogy, how might alternate perceptions of time be understood as a way of working in the design studio? We could discuss which of the conventional processes, workflows and procedures could be altered. We might adjust expectations away from the ringing bells and clicks of the clocks on the walls, toward a more malleable amount of time for learning. We can also remove ourselves at times to the sunny outdoors. Afterall, some if not most students, display a haziness, lacking focus when it comes to working in a traditional classroom or studio setting. They look out yearning for a more direct position to receive and perceive new information, as experienced spontaneously during field study, for example.

Teachers hope to make positive impacts on their students, but in reality, what is aimed for are desired outcomes as described in accreditation standards and curriculum guidelines. We document how successful we are by putting our curricula into organized teaching portfolios with summarized statistics from course evaluations. That is how teaching is measured by administrators. But is that the job? Are we getting our students' attention? Are we inspiring them to want to learn more for themselves? Certain educational structures force teachers to keep a rigorous pace, like a professional architecture program. Often, too much material is required to be covered for a given amount of time. It is like we overbooked the flight, hoping some passengers don't show up. But everyone is present, and they would all like to learn something useful. In this context, a forced lesson plan gets spoken over the class, missing lines of communication, lost in translation. Everything appears fine from a distance. Yet, in some ways, particularly as it relates to perception, comprehension, and cognitive retention, this outdated model of instruction and documentation might reveal an obvious solution.

Comparing two dissimilar things can aid in the clarity of their description. We often get to discover something in the negative space between them. To this day, the notion of internal or inside, and external or outside, like other false binaries, remains a beloved trope of design education. Teachers (like me) use contrasting ideas to study relationships, adjacencies and connections between them. In the design studio, these different concepts are typically communicated through diagrams showing grids or other sets of organizational or otherwise geometric parameters. Moiré and other combinations of such as regular/irregular grids can reveal hidden patterns in the negative space produced by the juxtaposition of these grids or guidelines [18]. “Field conditions and “the logistics of context” in the words of Stan Allen, “reassert the potential of the whole, not bounded and complete, but capable of permutation.” Two distinct sets of constraints can limit thinking, indeed, but like all frames, these contrasting elements can be looked through, helping to inform a potential middle or distant ground beyond: a common, or shared gradient of space-time. So too is the notional juxtaposition of real and artificial time. I would argue that as designers of all ages and abilities, we should aim to consider the simultaneous multitude of possible temporal frameworks in our work.

I had some time to think about this recently. Working for a paycheck since I was about twelve years old, I had the wild opportunity to take my first sabbatical this year. An old academic tradition where some time is spent away on a pathway of personal growth. The thinking, so I’m told, is that the time apart from the drudgery (pleasure) of teaching affords one the chance to rebuild or restore some parts of the soul, (like a rescued turtle) and to return renewed and energized with stories to tell, wisdom to impart, let’s say. In researching the origins of such a strange and exclusive perk of employment, I discovered its Biblical roots. Its right there in the name, sabbat(h). Coincidentally, the idea is based on the same numerical ratio as the aforementioned Dog Time, with seven somethings, like days in the week—or years in this case, to one (7:1). Whether toiling in the mud, academy, or the board room, the ratio manifests as some form of dedicated doing, making, or creating for a rather long period, and then decidedly not-doing for a short while, or at least doing less or perhaps something else, like a diversion. Activity of one sort across a long stretch of development, followed by a well-deserved moment of rest in another.

My old dog Indy does not need a sabbatical. She takes them in regular frequency. An objectively beautiful shepherd mix I picked up at the “Kill Shelter” in Muncie Indiana for \$25.00 USD in 2010, Indy spends her mornings and evenings in the Mānoa Stream. She likes a stretch of it where it passes (somewhat naturally) through Mānoa Valley District Park, about a mile from our house. Having read the expressions in her face these last nearly sixteen human years, (about 105 or so for dogs) it seems to be her most favorite place. I usually don’t mind being there too. The grassy slopes are gradual and the stream eddies in calm spots under the shade of Hala and Kukui trees. Indy dips in and lays down in the cool water for several minutes, just breathing and being still. Her nose does most of the visible surface-level work, her eyes close and open slightly as the clouds break and sunlight passes over us (Figure 2). I hide in the shade a few feet away or right next to her if it is early or late in the day. Sometimes when she comes out and shakes off and the light is just right, the spray forms a prism—a million little rainbows. I snap back to the present moment from whatever daydream we’re having. We repeat this magical choreography and lightshow just about every day.



Figure 2. Indy's favorite spot—a lovely patch of the Mānoa Valley District Park where the Mānoa Stream passes through. The site of the (Spring 2024) final project for ARCH 381 Landform & Water (Site Engineering) at UH Mānoa's School of Architecture.

More than all the research performed for this article or other topics I have read or written about over the years, it is the ritual bookending of our days together in this small, semi-accidental built-space which has embedded in me an understanding that the past is gone, and the future obviously may never be. Both are too far away to sense with any real certainty. Neither seem to exist in any valid way for Indy, or so it seems, and therefore hold no meaning for either of us as we enter Stream Time. The built spaces of the park, set into a much broader strategy of local flood control, regional military security, and global foreign policy, are alive and active in shaping our pace, and our internal and external perception of the world around us. And we have the US Army Corps of Engineers (USACE) to largely thank for that. The park they built here in the Mānoa Valley operates like an urban paradise. But rather than walls holding in fussy private gardens, a ring of houses, a school, and a community garden which have all since settled in the periphery, offer a screened yet welcoming degree of enclosure. The park is porous in every axis, shaded, and accessible for people and water. I am doubtless the ancient Islamic architects would be happy to know their conceptual diagram of such a place and time is alive today.

This particular USACE project has incredible presence in this Valley. It functions perfectly well as intended, but well beyond its initial scope. The park has evolved to integrate with its surroundings to such an extent that it is now arguably one of the most beloved public spaces in Honolulu. That success grew out of a host of factors, not least of which is the steadfast advocacy of the Mānoa community, its Neighborhood Board, and local advocacy groups like the Outdoor Circle. Not usually known for an ecologically

sensitive approach, the USACE has been widely criticized for their insertions of typically monofunctional infrastructure into all types of sensitive environments [19,20].

The USACE rightly aims to solve a particular ‘problem’, but often only one at a time. What to do about sea level rise (SLR)? Try a seawall. Too much water in this wetland for the new subdivision? Dig a drainage canal, and so on. Often with brute force over judo, they engineer massive yet often singular solutions to such problems in stride, and at monumental scales. The sizes and proportions of their work are universally impressive. Each “solution” works well for a time, many for ages (Dam Time? Canal Time?). But they all eventually fail. When they do, instead of being a minor inconvenience like a temporary electricity black-out, the failures, due to their scale and magnitude, can be catastrophic, like a breached levee. Much of the work in contemporary landscape architecture attempts to counter this approach through the deliberate integration of ecological principles of resilience into processes of design and maintenance.

And therein lies the central opportunity for students. Take the site-analysis, often the first step in any design process. What are some ways we might move away from a simple inventory of things or objects in a field toward a more holistic reading of unique spatial and temporal perceptions? My Site Design Studio uses this set of alternate lenses to read and gain understanding into how each individual person senses and responds to the myriad stimuli present at the time of the first site-visit. We do not simply redraw what is there in a purely deductive or rational workflow. We instead aim to engage with our own inductive (inside-out) or abductive (gut) instincts of the place in an effort to more fully and authentically respond. Next, we move into framework development. Here in typical fashion, a regular “grid” is often imposed on a parcel of land. Streets, trains, goods, services and other lines of utility tend to dominate. By a “grid” I am referring to a horizontal organizational strategy which permits the integration of multiple dissimilar and/or disconnected parts of a whole.

Grids can be very practical. But it is the negative spaces left behind when two or more come together that has greater significance. Known as *Moiré*, this important and usually unnoticed residual form is left behind after preconceived ideas about framing space and the “sequence of experience” are registered. *Moiré* helps identify a soul or essence of something not easily seen or sensed, not by a-priori bracketing of personal experience, but instead as a shared a-posteriori way of seeing and understanding. Slowing down helps us make such sensitive and peculiar observations. More still, the attention we give to finding the unknown can dramatically reshape the way we learn to see it in the first place. We may even begin to believe in the possibility of “abundance” [21]. If we set out looking for things, we see things. If instead we start by acknowledging these legible objects then shift our focus to their resulting effects (and affect), we can get even closer to reality of a given moment [22–24]. Rather than relying solely on a given parameter or constraint, I ask my students to look more carefully for novel forms found in the voids, and I ask that their interpretations, whether for analytical or framing purposes, be made of a more holistic temporal and sensorial approach. This feeds into the conceptual process and subsequent decisions required to complete a meaningful design proposition.

In 1938, Ludwig Mies van der Rohe, in his inaugural address as the Director of Architecture at the Illinois Institute of Architecture shared this wisdom. He told the gathered assembly, that “our practical aims determine the character of our civilization. (And) our values determine the height of our culture.” He went on to say, that, “different as practical aims and values are, arising out of different planes, they are nevertheless closely connected. For to what else should our values be related if not to our aims in life? And where should these goals get their meaning if not through values?” [25]. Returning to design education in closing. In *The Idea of Time*, a perfect title for Chapter 5 in *What Time is This Place?* Kevin

Lynch wisely suggests, “as we gain conscious control of the external world, environmental time could be adjusted to fit our own human structure, while allowing more gracefully for individual variations.” He goes on to say, that, “Rhythms, objects, and events exist; but time and space are triumphant human inventions. Past, present, and future are created anew by each individual.” [14]. To me, knowing what I have learned from my students and their ambitions for a better world, there is a powerful optimism in the words of Lynch and van der Rohe. Even more so, however, and despite the challenges associated with our parceled and commodified landscape, I am compelled by the quiet wisdom of an old dog in a stream.

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