# The Climate of Spaces

## On Architecture, Atmospheres and Time

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This paper discusses the concept of *climate* in relation to architectural space. By elaborating on the notion of atmosphere, that today permeates a wide range of architectural research, I intend to expand its relevance by outlining a relationship between atmosphere and climate analogous to what occurs in meteorological studies. While climate represents a rather stable (if evolving) cycle of recurring conditions, atmospheric events are fleeting and less predictable. Equally, architectural spaces can establish a general climatic scaffolding that increases the possibility of particular atmospheres to unfold, without however evolving into a deterministic cause-effect relationship. By addressing and comparing philosophical notions and architectural questions, I intend to formulate a novel theorisation as a useful tool for both criticism and design. | *Keywords: Architecture, Atmospheres, Climate, Temporality*

### 1. Introduction

If we review the broad field of architectural and urban scholarship and its principal contemporary issues, we cannot but notice that, over the past years, there has indeed been a shift of perspective. Just as a photographer can adjust a camera's focus and reveal with greater clarity something that was previously blurred, occupying space in the frame but otherwise remaining latent, so the attention of many architecture scholars appears to have modified its point of anchorage. Architectural objects, in their physical dimension, are no longer a central concern: more than their materiality, it seems that we prefer to observe the process of their making; over their formal configuration, perhaps the conditions under which our encounter with them occurs. A building's political engagement with urban space may take the lead over its geometric articulation, signalling how what matters to us is the web of relationships it is capable of establishing. The way people dwell inside or around buildings has also come to the foreground, thus considering how architecture facilitates the unfolding of human (but also more-than-human) events. We are enmeshed in a network of invisible threads binding us to things: threads that are cultural,

social, affective, and that endow inhabited space with what we feel is its deeper sense. If extracted from this relational carpentry, architectural objects could be merely placed on exhibition shelves, or revered as highly polished consumer commodities.

In many ways, these are welcome news. To consider architectural objects as parts of wider and more complex systems of interaction helps them be more useful – not in a pragmatic, functionalist acceptation, rather intending their adherence to everyday reality. Yet while we can observe a growing sensitivity towards this way of thinking architecture, there is still a long way to go, for there are many aspects of practice that today, depending on the setting, appear as being faulty. To name but a few: the steep increase in technical complexity of construction can often divert the process of making into a barren, near-mechanical sequence, widely sustained by contemporary digital tools. The process by which architecture is made is indeed complex, but perhaps not articulate enough: while norms and regulations, tenders and certifications cannot be eluded, what becomes more easily marginalized is that which ultimately allows an architectural work to be embedded within a given space of human action. Feelings are not regulated by norms, but, on the contrary, do dictate how we go about with architecture.

Other digital tools, in turn, encourage aestheticization, a perennial crux of architectural design. While extreme image realism is no longer the talk of the town and has largely been out-fashioned by more symbolic forms of representation, what fuels a quest for ever-renewed visual narrative styles is the urge for their instant dissemination. As architectural works enter the ecosystem of images through social media, their consumption becomes rapid and epidermic, placing the focus on their immediate appearance and ability of striking the viewer well above the more articulate spatial engagement they would eventually produce.

Each of these practice-bound dynamics summons its own narratives and metaphors, arguments needed to sustain their necessity. And indeed necessary they are, as architectural objects have grown in size, cost and complexity, but their usefulness often appears more directed to how they can be practically achieved, over what we expect them to be and the power they can exert once the gates are opened. There is no need – and probably no possibility – to scrap these reductionist narratives, but we can imagine introducing additional ones to give a richer voice to the human space that buildings institute once they are made. These metaphors are what these pages are about.

## 2. Three useful metaphors

The gradual shift from considering architecture in its isolated, objectual dimension to the observation of the mesh of liaisons wherein its conditions of existence are given helps explain why atmospheric theories have gained so much attention.[1] Architectural atmospheres are by definition relational

[1] See, among others: Alison (2020), Böhme (2017), Borch (2014), Hahn (2012), Hasse (2014), Pallasmaa (2014), Tidwell (2014), Zumthor (2006). Several journals have recently published special issues dedicated to architectural atmospheres, e.g. *Oase* 91, 2013; *Archimaera* 8, 2019; *Journal of Architectural Education* 73/1, 2019; *Venti* 1, 2020.

entities: they belong neither to the physicality of objects nor to the observer's private sphere, but rather to both. They are not given in terms of objects, allowing a permanent and stable framing, since they only become manifest once they are encountered by a feeling subject. And encounters, as we know, only occur when trajectories align, when entities and agencies cross paths in the worldly horizon. Quite tellingly, today it is not uncommon to find records of architecture enriching the description with notes that one might have previously expected to remain silenced: for example, *who* is the observer reporting the experience? When did it occur? What is the broader background of culture articulating the spatial setting? And what was the very reason for my being here in the first place? More and more frequently, the description of an architectural situation today espouses the practices of (auto)ethnography, for objects in themselves are rather barren aesthetic devices, whose influence on our agency can only be exerted under specific and unstable circumstances.

This shifting of balance towards what lies between objects points to a conceptualization of architecture that is closely inherent to a common understanding of landscape. Landscape can hardly be conceived as a system that is static and solely anchored to material things: it is, by its own nature, a relational field where a variety of entities enact their agency. A theatre of sorts, with a stage that is furnished with objects and other paraphernalia, but where the overall narrative unfolds in an impenetrably more complex array of open-ended events, processes and cycles. For a natural setting to become a landscape we need to establish a frame defining a border, and a point of view from where we describe the ongoing drama. A landscape is altered by changing seasons, by the weather, and by the coming and going of material and immaterial agents. It is sometimes imbued with historicity, sometimes with ghosts: and one is left wondering why this thick density of layers is not normally observed in architectural settings as well. To consider architecture as a condition of landscape can thus offer a useful metaphor: the built environment as a stage for action, where the material scaffolding of things is but the starting point for the unfolding of meaningful events.

A second useful metaphor we should introduce is that of climate. Architects usually speak of climate as a congregation of external forces that influence a building's environment and energy performance. But climate also describes a landscape as much as its orography and vegetation do. In the 19th century the term extended to characterize the attitudes and practices of populations – including architectural customs. Climate is a cyclical structure, displaying a certain stability over time: neither entirely rigid nor completely arbitrary, climate establishes an atmospheric framework for a spatial horizon, where certain manifestations of weather are more likely to occur in a given season than in another. Some climates of the world have even acquired celebrity status – *sakura* season in Japan, fall in New England, the Mediterranean summer, wintertime in Lapland, April in Paris… – attributing to each a precisely connotated array of sensations, a feeling that cyclically returns, year after year. For certain places, we can even speak of microclimate, for example a park embedded within the city or a leafy neighbourhood: but

microclimates can equally settle around and within buildings. Affective microclimates perhaps: the room where intimate conversations are most likely to take place, or the sorrow embedded in a memorial hall. Yet the climate, and the way it gives seasons their recognizable character, does not equate with weather: mild and sunny days can bless us in the deep of winter, and even the high of summer is sometimes shredded by a storm of hail. Equally, a room's enduring ambience of comfort can be contradicted by the sudden conflict exploding between its walls.

A conceptual triangulation starts to take shape. Climate and weather are related to each other: one more stable and reliable (although Earth has known summer-less years that have spawned monsters and spectres), the second variable, bound to fleeting, mostly unpredictable events. Mood and atmosphere are related notions which signal affective states, yet with a different connection to the articulation of time. Moods can colour a felicitous day, extend into a remorseful week, produce a season of mourning and even tinge – as forms of character (Schmitz, 2011, p. 81) – an entire human existence. Atmospheres, on the other hand, can come and go in an instant, like the changing weather, and disappear without leaving a trace (Griffero, 2019a). In general, spatialized affective tonalities may be bound to subjects and their personal biographies, but also pervade space and exert their influence on groups and communities, spreading emotions like a contagion (Landweer, 2019) – the *Zeitgeist*, or one of its sibling concepts. A collectively experienced mood makes bodies resonate, adopting a shared corporeal dynamic (Rosa, 2019, p. 15). Architectural spaces also imply a twofold articulation: the domain of the stable, the permanent, the near-fixed array of material objects, vis-à-vis the action taking place there – action in terms of movement but also of *being moved*. The two spheres are not unrelated: the link between them is strong yet not causal, for the material scaffolding acts as the climate – the mood – affording possibilities of action that are more likely to emerge, but not altogether predictable. The third useful metaphor is therefore that of meteorology – just as climate, not new to architectural studies, albeit with a different orientation.[2]

Meteorology is a complex science. We can send astronauts to the moon but are unable to foresee if it will rain during the weekend. The oracular powers once deriving from pre-modern attunement to the natural world are unmatched by present-day computational capacity: beyond the 72-hour timeframe, predictions are an educated guess at best. Meteorology, however, is not only

[2] Swiss architect Philippe Rahm defines his work as "meteorological architecture", with a theory based on the natural and physical domain of climate, with no connection to the domain of emotions. His proposal is that of shifting the focus from the buildings' masses to their voids, designing the temperature, the air pressure and currents that give life to the interior spaces: "Travailler sur l'atmosphère, désagréger les limites entre intérieur et extérieur, entre corps et espace, physiologie et météorologie, ambiance et sensualité. Travailler sur le vide, sur l'air et ses mouvements, pressions et depressions, conduction, transpiration, convection. L'architecture comme dispersion des bordures, vaporisation des structures, evaporation des limites. Invisible, légère, claire, l'architecture deviant le design des mouvements d'air, la composition des temperatures, des taux d'humidité, des pressions et depressions" (Rahm, 2009, p. 99). The term "atmosphere" is here used clearly in the naturalistic sense rather than in the phenomenological acceptation introduced by Schmitz's *Neue Phänomenologie* (Schmitz, 2014; 2019). See also Rahm (2015; 2020).

about weather forecasts: it studies atmospheric phenomena in all their manifestations. Since its field of observation is the atmosphere, meteorology has no "hard" objectual focus, the only materiality being the fleeting volume of air enveloping the earth. It is a science of relations, which attempts to reconstruct how a vast variety of physical forces interact and resonate with each other. Describing architectural environments in meteorological terms is a useful metaphor since it conjugates the permanence of terrain morphology with the theatricality of landscape, the predictability of climate with the occasionality of weather, the duration of mood and the contingency of emotions.

The design-ability of atmospheric spaces has produced a heated debate in phenomenological aesthetics (Griffero, 2014a, p. 35). Thinking in meteorological terms can make us consider this issue from a different point of view: design intentions and experienced atmosphere are as removed from each other as climate and weather. Climate can broadly help us predict the likeliness of weather events, but will not determine them. Similarly, a constructed spatial scaffolding may instantiate an affective response, yet also clash against the emotional resistance of subjects bearing an adverse corporeal disposition. We can ultimately consider design a non-deterministic practice, where in terms of the affective impact cause-effect relations – despite all our best intentions and exceptional technical skills – are largely absent, and in any case not reliable. A building's affective microclimate can be deliberately oriented, but the subjects' response not crystallized – a landscape architect can design a garden knowing in which climate it will grow, but has no control over the weather. Spatially effused feelings can be artificially manipulated, a practice that architects have always been familiar with and that over the past century has been appropriated with equal zeal by totalitarian regimes and late-capitalist liberalism. There is no question that spaces can *do things* to us: the ethical dimension of what they end up doing, however, is left to the designer's responsibility (Camilli, 2021).

Oscillating between stability and variation, the situations emerging in architectural settings can be well described in meteorological terms. As weather affects our perception of landscape, modulating our sensations and thus altering our mood, so the situational encounters occurring in built environments change with the incidence of light, the view glimpsed from a window, the presence or absence of people, the depth of a shadow or an unknown smell: these are all entities eluding a material dimension, acting almost parasitically towards physical objects. They are all in-between, in a space of relations entangling humans and materialities. As atmospheric phenomena, they may come and go, sometimes quickly, sometimes with the brooding lentitude of a summer sunset.

In this fold lies another clue to what meteorology could mean in architectural terms: not designing the weather, but being aware of how atmospheric phenomena unfold over a certain landscape, in a certain climate. The sky and its actors offer a near-endless variety of manifestations: wind and light, clouds and rain, colour and temperature, a world of sensations encompassing so much

of what there is to perceive on the horizon. A storm is not just a rainstorm: it may sit lazily over our heads or rumble across the sky propelled by sharp jets of air, it can be seen cracking on the distant horizon far at sea, rage in the night or be hidden by a shelter of trees. Such atmospheric phenomena are never encountered in their isolation, and a storm is not an object that we can separate from the ambient world. Architectural atmospheres, all the same, belong to the landscape as much as clouds are native to the sky: they are *in the air*, we can sense their presence and be delighted or terrified by their onset, but we cannot extract them from where they are, for they lose sense outside of the horizon where they are encountered. They are too fragile and subtle to exist on their own: atmospheres only emerge with a corporeally present subject (Böhme, 2006, p. 113).

In a way, it is puzzling to note that many descriptions of architectural environments – the reductive narratives we take as our antagonist – somehow suppress the world of atmospheric events that spaces are capable of staging. Imagine describing a mountain landscape omitting any observation concerning the sky. A geologist could formulate statements on the sole morphology of mountain masses, but for any other observer the landscape-effect would be inextricable from the phenomenal solidarity between sky and earth. What is then the nature of an architectural environment? Does it lie in its material configuration, or must it extend to include the *effect* it sparks in those who encounter it? Can we state that a landscape is the same in any weather? And is a built environment not different if its atmosphere shifts?

Architectural meteorology may be only a metaphor, but it is a useful one. It allows us to frame an exceedance, a more-than-given closely concerning built spaces. Its perspective is not limited to observing the way things are, nor – in a metaphorical sense – what they are *like* (Vesely, 2015), but to what will happen to *us* once we encounter them. It is about how we move in and through a building, but also about how that building *moves us*. It does not only concern how things happen, but also precisely where. It looks at time: *when* events occur, and also *how long* they last. Time is hardly ever the subject matter of architectural discourse: at most, chronographic time, bearing no biunivocal relation to experienced time. Yet a gradual unfolding of architectural events can orchestrate theatricality: not merely as the picturesque sequence of disclosing views, rather as the possible accumulation of feelings pervading space. The atmosphere can strike us as a sudden explosion – something felt when crossing a threshold (Schmitz, 2011, p. 121; Griffero, 2014b, p. 130) – and stand clearly in front of us; or it can emerge slowly, as if seeping through cracks in the walls, and take hold of our feelings well before we are aware of it. Compare a violent thunderstorm, with its dramatic power, with the silent softness of the fog in the winter dusk: it does not matter which feeling is more intense, more aggressive, for both are worth observing, both can reveal something about how spaces act on us. Architectural environments can be designed to set up the climate for these atmospheric phenomena: it is up to the meteorologist to observe them, recognizing their dynamics, describing their effects and affects. The entanglements between the experiencing of

atmospheric spaces and their making form the core of architectural meteorology.

### 3. The Hours

In romance languages, words referring to weather and time are closely related. Stemming from the Latin *tempus*, they lead to a single word – *il tempo, le temps, el tiempo* – signifying both concepts. *Temporada* is the Spanish season, *printemps* is the year's first season for the French. *Temporale*, in Italian, means storm. The Greek ὥρα – a period of time – spawned the Latin *hora*, meaning both a season and a more indeterminate temporal extension. Well before it became the chronographic unit, it was divinized into the Hours, entities who oversaw the unfolding of seasons and the fruiting of plants. The origin of words may not explain the dynamics of experienced space, yet it points towards a deep bond between the atmospheric domain and human time. Before mechanical devices started measuring minutes and seconds with unprecedented precision and dryness, time could only be assessed in broad expanses – the phases of the day, the return of night, the moon's celestial wandering, the sun's and other stars' cyclical movement, or a human being's lifespan – metaphorically subdivided in the *seasons of life*.

Seasons are not a unit of time only: they can be defined atmospherically, as the returning cycle of emotions and affective states that our relationship to the environment and its manifestations affords. Each season is bound to a corporeal disposition, a physiological humour as per the classic tradition: autumn was the season of melancholy, summer choleric – associations that are all but incidental (Bowring, 2008, p. 73). The receding light of autumn, the fog and chill of November in the northern hemisphere, orchestrate bodies to resonate to a common, bitter-sweet feeling. Summertime heat fuels intense affects with the penetrating clarity of Meridian light. We can imagine both atmospheric instalments being performed by architectural environments: as a building is capable of modulating light and shadow, the tactile sense of humidity, articulate vision, so it can set up a sort of "artificial season," where we may be invited to corporeally encounter that feeling that is otherwise only afforded by the astronomic and climatic pulsation of the natural world. Among other stratagems, architectural spaces can organize affective microclimates that speak of moods, sensations, resonances with the elements of climate.

Is it appropriate to consider architectural environments in terms of the seasonal sensation they produce? Historically, the perennial quest for comfort prompted anyone who could afford it to migrate – like birds – to locations where the climate offered better living conditions. Entire royal courts transferred to cooler hillside locations during the summer, and emperor Hadrian preferred his villa by Tibur over his Palatine abode, amid Rome's mephitic atmosphere. During the Raj, British hill stations on the Himalayan foothills provided relief from India's sweltering summer climate. But even single spaces within houses – the winter garden, the conservatory – were meant to interact with external atmospheric conditions, producing comfortable settings. Victor Olgyay's notion of bioclimatic design (1963)

attempted to counter the dominant HVAC practice, which isolated the buildings' internal microclimate from whatever variable conditions were found outside, thus creating artificial temperature islands as "climatic heterotopias" (Diaconu, 2019, p. 42).

However, comfort is not about temperature only, no matter the extent to which it has been hijacked by scientific normalization: it refers to a corporeal condition that can have different origins. To be sheltered by things can evoke comfort, as a child seeking the secrecy of a hidden nook; to be protected from weather – observing a storm from the warmth of a heated living room, or chill under a shady pergola in the high of summer noon – can offer a similar sensation. Yet also an embrace – of a loved person, of a pet – can grant the warmth of comfort, just like the gentle feeling of an autumnal dusk. Comfort is only partially bound to climate and temperature: it is rather a returning state of corporeal affairs, an involuntary memory. The archetypal feeling of home speaks of comfort, protection, of being sheltered from unwanted events – but also from unwanted affects (Griffero, 2019b, pp. 116–125).

Architectural spaces can serve as scaffoldings for these feelings: the emphasized intimacy of a hotel room provides an ersatz condition of homeliness – one that may easily cross the threshold into a sense of estrangement. More complex feelings, equally associated with bodily sensations, can also become the subject matter of architectural design, as in the classical Chinese gardens in Suzhou, where pavilions were set up to sustain the enjoyment of a precise atmospheric condition. The autumn pavilion opens the view towards the reddening foliage reflected on the artificial pond, brings in the smell of moist soil and the fragrance of blooming Osmanthus, resounds with the raindrops falling on the leaves: an architectural device that concentrates and amplifies sensations, inviting us to attune to the autumnal atmosphere. Here, meteorology is all but a metaphor: the diminutive pavilion, hinged on the garden's vegetal and natural agents, installs an atmosphere that speaks of autumnal moods, of melancholia. That spatially extended feeling is there for anyone to capture.

### 4. Designing time, designing climate

These considerations lead to a thought-provoking conclusion. For over a century, to design architecture has been conceived as the anticipatory vision of space – a space, as I have argued, that only emerges once we are there to engage it (De Matteis, 2021, p. 45). But is there more to this? If we take a step sideways to observe things from a different angle, placing lived time at the centre of our gaze, noting the relation between time and feeling – the affective climate that tinctures an environment we encounter – then we can ask: is the aesthetic practice of architecture not also about making time? A compelling hypothesis invites us to reflect on how movement occurs in architectural space – movement of persons, but also of the world, of the natural elements, of the sun's revolution and the weathering of materials: the building as a clock, a device that meters the cycles of time and existence (Leatherbarrow, 2021). In such perspective, architecture becomes a verb: no longer something that

simply stands on the ground, in the objectual fixity of material things, but a more subtle device that *happens*, and does so in varying ways.

Equally, making architectural space is about the construction of climate – of feelings that are experienced in time, bound to the recurrence of corporeal states and drives that we are familiar with and can name. Just as we are energized by the first day in which we sense the arrival of spring, we can shiver with anticipation when crossing the threshold of the opera house for the long-awaited performance; and the soft air of autumn speaks of the same emotions to which my body resonates when I linger in a certain room of my home. Architectural space is not an aggregate of material entities, each performing a separate script: it is rather a field of relations, where all that is accessible to perception resonates to an overarching tonality. The affective climate a space affords is this base tone, and it modulates the lived bodies of all those involved, who respond vibrating to emotions, moving in time, performing practices and rituals that corroborate the atmosphere, attuning to the architectural environment.

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