



INTERFACES 5

New Prairie Press

Atmosphere(s) for Architects: Between Phenomenology and Cognition

a dialogue between Michael Arbib and Tonino Griffero
edited by Elisabetta Canepa, Bob Condia, and Mikaela Wynne
essays by Elisabetta Canepa, Federico De Matteis,
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Interfaces

Interfaces investigates the interplay of architecture, philosophy, and biology through the lens of meaning in architecture. Architecture is a thread, mending the fabrics of disparate realms of comprehension. There is a fractal-like intention of this book series to expand and contract in scale of observation. It serves less as a microscopic and precise account of the science of the experience|body|building triality and more as a kaleidoscope of thought. The allegory of a kaleidoscope seems especially appropriate when reflecting upon its construction and mechanics. A telescoping container houses three mirrors, arranged to form an equilateral triangle toward a fixed axis. When introduced to vision, an optical unfolding occurs as light, color, depth, and angle are adjusted, producing nuance and clarity with each refinement. Furthering the metaphor, our telescoping container is atmosphere; our medium of vision is meaning in architecture; our triangular mirrored prism is the reflective and mutually inclusive realms of experience|body|building — or always the sum of philosophy|biology|architecture.

Editorial policy

Interfaces began as an invention of the Advisory Council of the Academy of Neuroscience for Architecture (ANFA) to open our symposiums to the world through live performances, video recordings, and open-sourced publications. We operate here under no authority but in the spirit of academic enterprise.

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INTERFACES 5

Atmosphere(s) for Architects: Between Phenomenology and Cognition

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Elisabetta Canepa

An Essential Vocabulary of Atmospheric Architecture: Experiencing, Understanding, and Narrating Kansas State's Beach Museum of Art

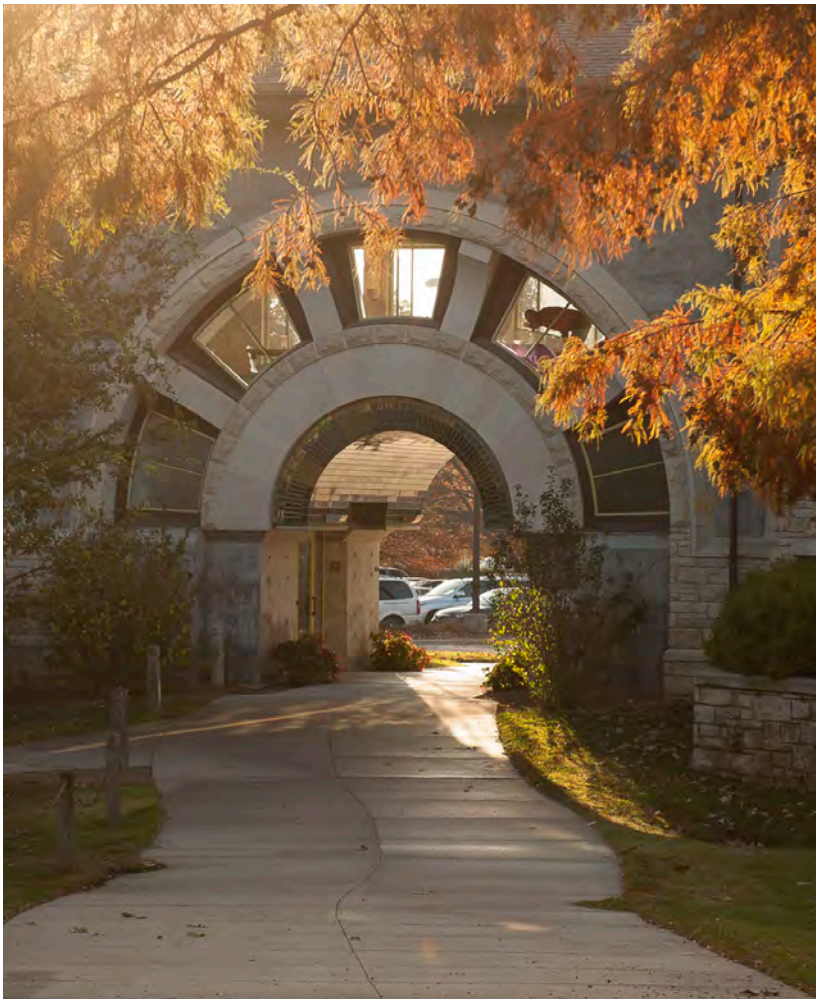
Abstract

Informed by (new) phenomenology and cog/neuroscience and grounded in the architectural discipline's expertise, *atmospherology* (namely, the study of affective atmospheres in space) can benefit from a shared lexicon to encourage mutual understanding and knowledge construction. A basic language of atmosphere helps cultivate an affective education that makes architects capable of articulating tacit experiences and designing atmospheric qualities. Fifteen essentials are discussed: affordance, arousal, atmosphere, attunement, body, conscious, emotion, feeling, first impression, generator of atmosphere, lived space, mood, nonconscious, resonance, and valence. Lastly, this essay develops an atmospherological critique of the Marianna Kistler Beach Museum of Art on the Kansas State University campus in Manhattan (Kansas) to evaluate the accuracy, coherence, and adaptability of the lexicon's concepts.

Keywords

architecture
phenomenology
neuroscience
atmosphere
atmospherology
affective education
tacit experience
language of atmosphere
Kansas State's Beach Museum of Art

- F1** Marianna Kistler Beach Museum of Art
 Kansas State University, Manhattan
 Kansas, United States
 Dan and Beth Bird Archway



PART I: ESSENTIALS OF ATMOSPHEROLOGY

Atmospherically Thinking, Architecturally Speaking

Nearly all literature about architectural atmospheres mentions their inherent vagueness, ephemerality, and elusiveness (Böhme 1993; Rauh 2017; Canepa 2023). Nonetheless, atmosphere constitutes “architecture’s most immediate communicative dimension” (Bressani and Sprecher 2019, 2). In a nutshell, atmosphere is the medium to describe what we *feel* about our surroundings and how space affects our *being-in-the-world*, priming our emotions, behaviors, and appraisals. Nesting on individual perspective and sensibility, its expressive force “has the advantage of relying on immediate experience, providing an accessible way to speak of architecture” (Bressani and Sprecher 2019, 2) [F1]. That was exactly my case: a young, trained engineer approaching doctoral research in architectural design and theory, worried about effectively communicating with her peers. Atmosphere became my language — a personal filter to observe, experience, and comprehend the universe of forms (Canepa 2022a).

Atmospheres establish a strong relationship between the built *form* — made up of “the most permanent components of architecture” (von Meiss 2011, 11) — and the human *body*, which is “our tool of tools,” “the crucial medium through which architecture is experienced and created” (Shusterman 2013, 7; 2012, 227). As with any other expressive system, atmosphere is live, porous, and constantly mutating. The genesis and semantic evolution of the term “atmosphere” prove its fluid essence (Canepa 2022b, chapter 2 “Roots”). Although it is a relatively recent neologism (dating from the seventeenth century), “the idea of a building’s emotional resonance has always been central to architectural practice,” as Harry Mallgrave explained during his 2023 Interfaces lecture in which he reconstructed the historical background of the atmospheric phenomenon (2023, 133).

1 At the end of the twentieth century, a novel aesthetic-experiential approach centered on affective atmospheres rose from the theses of new phenomenology to animate other research fields toward an emotional reading of reality, including the spatial disciplines of interiors, architecture, and city design. Among architects, “air, sound, light, fragrance, warmth, smell and other sensory streams are [...] becoming the focus of the creative and experimental endeavor,” in addition to “debate and theory-building” (Thibaud 2014a, 49). For an overview of primary publications, see Canepa 2023 (29 n. 1).

2 Logical-mathematical, verbal-linguistic, visual-spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, naturalistic, and existential intelligences.

As my Ph.D. research progressed, I began tuning my vocabulary to better communicate with scientists, as I wanted to understand the biological bases of architectural experience (Canepa 2019, 2022b). The following condensed lexicon is an attempt to craft terms like “affordance,” “body,” “resonance,” “attunement,” “emotion,” “feeling,” and “mood” into a *thesis of atmosphere for architects* that we can apply to theory and practice. This application is twofold: first, as *dwellers of the world* who continuously and inescapably move across a sequence of built spaces, “experienced primarily through the atmospheres it generates” (Janson and Tigges 2014, 26); second, as *designers of the world* who work “to anticipate a certain reception, including certain bodily responses” (Bresani and Sprecher 2019, 3). Indeed, if “the visitor and user, the customer and the patient are all touched or moved [by] atmospheres,” it is an architect who “creates them, more or less consciously,” as remarks the philosopher Gernot Böhme (1991, 36). Atmosphere is an architectural duty. Architecture is atmosphere.

Atmospheric Education

Juhani Pallasmaa, one of the most popular architectural authors on the so-called “atmospheric turn”¹ (1996, 2008, 2009, 2011), promotes a definition of atmosphere as the *sixth human sense* (1994, 2016). Furthermore, he updates the list of multiple intelligences developed by the American psychologist Howard Gardner (1999), who rejects single decoding of intelligence as a cerebral category. Alongside the types accredited by Gardner,² Pallasmaa flanks four varieties (2015, 61–62), among which are *emotional intelligence* and *atmospheric intelligence*. These skills are as essential as the logical-mathematical ones, for a long time considered superior and preferred in scholastic tradition (Galimberti

2021) as much as in architectural education (Mallgrave 2023), given that the logical-mathematical intelligence is a feature typically masculine and easily teachable thanks to demonstrations and evidence. Emotional intelligence is equally valuable and — although instinctive — it is cultivatable with appropriate practice. As we will see in the following section, there is a difference between *emotions* and *feelings*: emotions are born from nature, being nonconscious, bodily changes dynamically regulating our responses to stimuli, both external (such as those produced by our physical and social contexts) and internal (such as memories, reveries, and mental images); feelings manifest from culture, being cognitive functions consciously processing emotional and physiological information. Affect (encompassing emotions, feelings, and moods) is central to deciphering how we think and behave (Damasio 2021). We need to learn how affect works; how to recognize what we feel; and how to identify affective phenomena. In brief, we need an *affective education*.

Humanistic culture, through myths, literary works, visual arts, and performing activities, is the primary source of our affective education. For many children, our first education as malleable and permeable individuals is listening to fairy tales and interacting with parents and others as a basis for understanding those stories better. This step is crucial for building our abilities to shift from first- and second-person to third-person perspectives. Since affective events are always situated in temporal, spatial, and social contexts, we develop intuitive skills to read the world that enacts our emotional sensibility. As Michael Arbib and Tonino Griffero highlight in their dialogue, “the habit of atmospheres suggested by art (nowadays especially by cinema) contributes powerfully to people’s affective education, that is to say, it acts as a scaffolding to achieve certain feelings or, at least, to better identify and define them” (2023,

3 It is worth pointing out that non-expert inhabitants, just like professional designers, have strong intuitions about how they can generate affective atmospheres, thanks to constant interactions with space in their everyday lives.

4 The upcoming section will explain the notions of *arousal* and *valence*.

87). As we mature from adolescents to adults, we grow more and more sensible to the affective potential of atmospheres before becoming the architects responsible for giving atmospheres substance.³ Knowing how to feel atmospherically is a way to *perceive, share, and make* architecture. It is vital for both clients and designers: the first, even if only to the extent that they understand what they desire, can communicate their emotional expectations to designers effectively; the latter, only if possessing — inborn or trained — listening aptitude, can get in tune with the requests of their interlocutors and transform their impressions into design results. Expectations must turn into orchestrated atmospheres replete with affective meanings (Pérez-Gómez 2016).

The neuroscientist Lisa Feldman Barrett claims that people “differ considerably in their [emotional] experience” (Barrett et al. 2001, 713) and are not the same in comprehending, recognizing, and articulating what they feel. Albeit “how are you feeling?” is one of the most ubiquitous questions in our culture,” replies may vary extremely, based on “differential attention to feelings” or “differential attention to the properties of words” since “people use the same emotion words in very different ways to communicate their feelings” (Barrett 2004, 266). Barrett coined the expression *emotional granularity* to describe individuals’ abilities to discriminate the specificity of their affective states, which they can report in several manners (Canepa 2023). A person with a high degree of emotional granularity makes fine-grained distinctions between similar emotions (that is, emotions with similar levels of arousal and valence)⁴, describing their experiences with detailed emotional labels. Barrett distinguishes between *arousal focus* (namely, the amount of information people can self-rate about the intensity of the emotional experience as consciously felt) and *valence focus* (namely,

5 *Interoceptive sensitivity* is our ability to perceive visceral information from the body (such as heartbeat, respiration, gastroesophageal sensations, itching, and pain) and interpret related physiological changes. Interoception influences our capacities to recognize and experience emotions (Barrett et al. 2004; Zamariola et al. 2019). The hypothesis is that people who are more interoceptively sensitive (that is, more attuned to their internal body signals) are more accurate in perceiving and understanding their surroundings (Murphy Paul 2021). So far, however, it has not been confirmed whether our inside-body perspective influences how we perceive the outside world (Baiano et al. 2021).

identification of felt pleasure), both impacting our overall emotional granularity (Barrett and Bliss-Moreau 2009). Arousal focus is supposed to correlate with our interoceptive sensitivity⁵ (Barrett et al. 2004) whereas valence focus seems to link to our efficiency in perceptually processing affective stimuli within our environments (Barrett and Niedenthal 2004).

Since emotional intelligence may sway our atmospheric sensibility to resonate with our surroundings and grasp their affective potential, we wonder — as designers — *whether* and, if so, *how* we can improve our competence in *feeling* space. Preliminary research assumes, for example, “contemplative practices contribute to cultivating beneficial emotional granularity” (Wilson-Mendenhall and Dunne 2021, 5), but this hypothesis has yet to be tested experimentally. The architect-philosopher Sarah Robinson, who has written extensively about the centrality of our body as the privileged medium to experience and conceive architecture (2011, 2015, 2020, 2021), confirms that she practices meditation to strengthen her corporeal, emotional, and spatial awareness. She laments that, too often, we are not fully present in our bodies; technology tends to worsen this disconnection from our physical selves (see the interview in Buondonno 2023).

Even if “it is already difficult to verbalize our feeling of the height of a room,” as the architectural historian Ulrich Conrads admits (in dialogue with the sound-space artist Bernhard Leitner: 1985, 29), architectural background and expertise somewhat inform designers’ capacities for feeling and consequently being influenced by atmospheric affordances. The architect’s voice, probably their most essential tool, becomes more powerful thanks to the density and consistency of the

lexicon they use (Forty 2000; Janson and Tigges 2014; Pallasmaa and Zambelli 2020). The emphasis on mastering linguistic and descriptive skills has a longstanding tradition in design culture, compounded by the environmental and architectural lessons phenomenology provides (Holl, Pallasmaa, and Pérez-Gómez 1994).

Architectural phenomenology is “the phenomenological study of architectural experiences and meanings as constituted by qualities and features of both the built environment and human life” (Seamon 2017a, 247). Designers must fine-tune their inclination for phenomenological analysis to improve their fluency in qualitative descriptions and interpretations of reality. Knowing how to look at architecture (Zevi 1993 [1948]) promotes a virtuous circle (Seamon 2017b): the more we observe our surroundings, the more we develop our visual and aesthetic sensibility. Making an effort to articulate what we see intensifies the level of detail we can grasp. How we see the world shapes, in turn, how we communicate our perceptions and feelings. In this way, we come to a more comprehensive and solid understanding of human experience, encompassing even ineffable aspects of life, however invisible, which ultimately determine the quality of our spatial interactions. Atmospheres are an ideal example of these tacit qualities (Zumthor 1998, 2006) we should study better.

Learning how to read, describe, and imagine the tacit dynamics of our experiences co-originating in a specific place helps us to cultivate our atmospheric design sensibility and conceive profoundly affective situated projects. According to David Seamon, who teaches how we may apply a phenomenological approach to architecture and environmental design (2023), phenomenology emphasizes “the crucial importance of finding

⁶ Notes on the concept of atmosphere in encyclopedic contexts relevant to the architectural discipline are currently to be found in Janson and Tigges 2014 (s.v. “Atmosphere,” 26–29); De Matteis 2020 (s.v. “Atmosphere in Architecture,” n.p.); Pallasmaa and Zambelli 2020 (s.vv. “Atmospheres in Architecture,” 28–31; “Atmospheric Intelligence,” 31–32; “Atmospheres in the Arts,” 32–33; “Atmospheric Sense,” 34–35).

⁷ *Felt space* is another way to name our lived space.

‘fitting language’ to present the experience and meaning” (2017b, 68: table 5.1). Our atmospheric education must therefore sprout from an appropriate and shared *language*: the language of atmosphere.

The Language of Atmosphere

The essentials for a language of atmosphere here proposed take inspiration from the “Dialogue on Affordances, Atmospheres, and Architecture” between the phenomenologist philosopher Tonino Griffero and the computational neuroscientist Michael Arbib (2023). However, it yearns to be autonomous: it is an architectural lexicon composed by an architecture scholar to speak to and be utilized by other architects. Please refer to the index at the end of the book to identify the same terms and see how (new) phenomenology and cog/neuroscience interpret them. Lexemes in bold italics benefit from a focused definition. I suggest a track that can accompany the reader from contextual concepts to more applicative details without following alphabetical order. Although some words, above all “atmosphere,” seem relatively clear, there is a dearth of entries in architectural dictionaries and textbooks.⁶

Lived space

Lived space is the space of *our* embodied and affective experiences, which we feel in the first person, grounding on our *body*.⁷ We can only perceive and resonate with a fragment of the world surrounding us, and this particle does not have boundaries or surfaces but embeds affective *affordances*. Lived space is, indeed, “radically different from physical and geometrical space” since it is “structured on the basis of the meanings and values projected on [the outside reality] by an individual or group, either consciously or unconsciously.”

8 For further information on the philosophical history of the concept of *lived space*, from Martin Heidegger to Hermann Schmitz, see Griffero 2014a.

9 A building, from a phenomenological standpoint, is a constellation of lived spaces connected to people's experiences, that is,

how they perceive, feel, and act in a specific moment, in a precise place, and under a given circumstance.

10 Cf. John Dewey's idea of a "pervasive unifying quality" of immediate experience we often feel (1931, 1934).

ly" (Pallasmaa 2002, 18). The primary distinction is that *lived space* is the domain of the feeling body, whereas *geometric space* is defined without reference to bodies within it engaging with its elements, affordances, and qualities, or, if present, human bodies are considered only as material objects without an emotional life.⁸ As Michael Arbib suggests, architects learn much about the general notion of lived space but design *a* specific lived space.⁹ They must eventually reconcile each lived space (and there may be many in and around a building) with the geometric space of construction drawings.

Atmosphere

Atmosphere is "a combination of space and activity — something [co-]produced by the people within the space" (Thibaud 2014b, 71). It arises from the immersive and integral contact of the perceiver with their architectonic context. *Atmospheric space* is, thus, the space for *emotions*, *feelings*, and *moods*, where our *bodies* "play a central role" (Morselli 2021, 302: original italics). By incorporating the (neo) phenomenological legacy into architectural research, we can synthetically describe atmosphere as the "sensuous and intuitive character of *lived space*" (De Matteis 2021, 80), the "something more" transcending its material foundation (Griffero 2018). It is "the life of a place" (Schönhammer 2018), its unifying essence; what we immediately and pervasively *feel* about space.¹⁰ Atmosphere is the whole of affective qualities conferring identity and meaning to a situation, event, or context that influences our experiences, eliciting a state of *resonance* and possible *attunement* to our surroundings. For architects, it is "a phenomenon of significance and potential within [the] built environment" (Nielsen, Friberg, and Hansen 2018, §4) that they can trigger and inspire, but not entirely control, through the orchestration of

11 See Canepa 2022b, chapter 3 "Atlas of Atmospheres."

12 See the factor list analyzed in Canepa 2022c.

spatial *generators* (Canepa 2022c). Architectural culture, over time, molded a rich landscape of design interpretations and approaches to atmospheric dynamics: for example, atmosphere as indoor microclimate, decoration, aura, *genius loci*, *Zeitgeist*, metaphor, collector of memories, mood, or *Stimmung*.¹¹ The impression is that atmosphere is never a single experience but an intersection of similar meanings.

Resonance

Resonance unfolds our innate predisposition to be emotionally affected by the external world. It is the first stage in *atmosphere* dynamics, potentially followed by *attunement*. There is, indeed, a distinction between perceiving the presence of an atmosphere (*resonance*) and being affectively involved in it (*attunement*). Resonance is the immediate activation of *first impressions* that shape our spatial experiences by interacting *with* affective *affordances* enacted by an environment. Our adaptation responses can be *nonconscious*, affecting our bodily *emotions*, or reach the awareness threshold if particularly moving, evoking conscious *feelings*. "Through its resonance, the *body* functions as a *medium* of emotional perception" (Fuchs and Koch 2014, 9: original italics). For example, as soon as we join a party, we bodily grasp its essence, resonating with the emotional force of all its atmospheric *affordances* in unison. We perceive the affective signature of our surroundings and filter it through our current body-mind state (tinted by transient factors of both environmental and personal origin).¹² We would probably feel pleasurable activated, namely joyous (experiencing high *arousal* and positive *valence*); or not, feeling disagreeably disconnected (with high *arousal* and negative *valence*) if we contrast our bad *mood* to the cheerful disposition of the other guests and the overall festive ambiance.

13 Cf. the phenomenology of *atmospheric games* explained by Tonino Griffero (Arbib and Griffero 2023, §4.4; Griffero 2021, 29–66): dystonic, syntonic, non-involving, resisting, reversed, and time-varying dynamics.

14 Theories about emotions are “as old as psychology itself, or even older” and “many different attempts at conceptualizing and measuring emotions have been made” (Küller et al. 2006, 1504). Although

we have analyzed emotional dynamics for a long time, there are no univocal definitions since real-life emotions are very complex (Colombetti and Kuppens 2023). A review published in the early 1980s identifies more than ninety meanings in the emotion literature (Kleinginna and Kleinginna 1981). The neuroscientific history of affective studies started in the twentieth century (see Barrett and Satpute 2019 for a review).

Attunement

Attunement is the potential act of appraising an atmospheric experience that follows *resonance* mechanisms if particularly relevant to the subject. We evaluate the affective content of a specific *atmosphere* relating the external world to its effects on us. We assign affective meaning to our surroundings, grounded in whatever resonance suggests to us, modulating our emotional engagement and attachment. We can feel in tune with a given atmosphere, remain insensitive, or even reject it. Immersed in a party atmosphere and resonating with its vibe, we may, for example, realize the merry situation is unpleasant and uncomfortable because it does not suit our current body-mind disposition. Attunement appraisals inform our actions and behavioral readiness. We may (desire to) leave the party or go to another spot in the room. The concepts of *consonance* and *dissonance* represent the two extreme points on the spectrum of possible attuning responses: tuning into and tuning out. In between is a range of nuances.¹³ Affective attunement contributes to the consistency of our atmospheric experience. While *resonance* describes our visceral sensitivity to be affected by atmospheres, the attunement dynamic relates what we feel to our externally oriented perception. We understand our affective connection to the world surrounding us. *Atmosphere* is, therefore, revealed to be the medium between our *body* and reality mediated by architecture; it is a process of sense-making that builds meaning upon perception.

Emotion and feeling

Our emotional responses, extensively studied but not univocally explained by affective science,¹⁴ are temporal dynamics implying antecedent motivations (e.g., concerns, expectations, and goals)

and modulating cognitive processes (e.g., attention, memory, and decision-making). Emotional episodes are associated with a specific circumstance, quickly prime our *body* to react to it, and orchestrate multiple components translating into physiological, behavioral, and cognitive mechanisms that operate on *nonconscious* and *conscious* levels (Delplanque and Sander 2021):

- A** *emotions* are internal somatic and visceral feedback, nonconsciously developed, even if sometimes consciously recognizable (when we feel our body changing);
- B** *expressions* are outward signals, mostly nonconscious (detectable by observers of the one who is undergoing the emotion through their facial, vocal, and postural changes);
- C** *action tendencies* are behavioral correlates of emotion, often nonconscious;
- D** *feelings* are cognitive feedback of the emotional experience as consciously felt.

Emotions, expressions, and actions are bodily correlates of cognitive feelings, mutually interacting at different levels and timescales. For example, we may sense our heart pounding [**A**], our face flushing with eyebrows twitching [**B**], an urge to leave the room [**C**], and consciously feel nervous [**D**]. Emotions are “thoroughly embodied,” but this does not mean changes always occur in every component: the copresence of all the manifestations ([**A**], [**B**], [**C**], and [**D**]) is typical when emotions are the most accentuated and notice-

15 For further information on their definition, etymology, historical background, and bibliographical context, see Colombetti and Kuppens 2023.

able (Colombetti 2020). Adopting an embodied perspective and a contextually sensitive, constructionist approach, emotional states are not merely responses to stimuli: they are predictions affected by sensory inputs. Emotions disclose themselves as “constructions of the world” (Barrett and Satpute 2019, 11), reenacting past experiences and planning for visceral, somatic, and motor changes. It is a very architectural way to look at emotional dynamics that help us to decipher what is going on in the external world (our built surroundings) and in our interior world (namely, our *body*).

Arousal and valence

Understanding our ongoing emotional states is not an easy task since they interact with a world of personal meanings. Several theories exist regarding *how* and *why* we experience emotions, and several models propose how to conceptualize and categorize their differences. One of the most studied paradigms is the *circumplex model* (Russell 1980), which posits people primarily process and articulate their emotions as points within a continuum space based on two basic pan-cultural dimensions: *arousal* and *valence*. Briefly, arousal defines the intensity of the emotional state, that is, how strong the reaction is; valence describes the extent to which an emotional state is positive or negative, that is, pleasant or unpleasant. Their relationship is a still-open empirical question (Colombetti and Kuppens 2023), but their combination provides an effective way to compare emotions among each other.¹⁵ Arousal and valence are features of our lived experience and neurophysiological activity, accessible in *conscious* and *nonconscious* ways, constituting the core of our emotional complexity. In contemporary affective science, multiple meanings and uses of these concepts have been

16 We do not experience arousal and valence in the same manner, but rather, as was noted in the section titled “Atmospheric Education,” we have a unique level of *emotional granularity* with different focuses on arousal and valence.

proposed over time, even if not always clearly distinguished, such as bodily changes, felt experiences, behavioral directions, and affective appraisals. The circumplex approach refers to how we subjectively experience arousal and valence, adopting a two-dimensional domain [F2] that measures arousal on the vertical axis (self-rating how much we feel activated) and valence on the horizontal one (self-rating how much we feel good). If we are joyous, as in the party example, experienced arousal is intense and experienced valence is pleasant [F3].¹⁶ Arousal and valence are also applied to identify the intrinsic character of objects, scenes, and atmospheres, evaluated as ranging from calming to exciting (arousal) and from positive to negative (valence), passing through neutral conditions. In this case, the arousal/valence of the perceived stimulus depends on the arousal/valence experienced by the perceiver (Canepa et al. 2019). Arousal and valence are notions fundamental to structuring a dialogue between architects and future inhabitants to sound out how they usually feel in a certain space and what they want to experience. If coherently described and understood, we can try to design *atmospheres* tuned to people’s *body* and *feeling* expectations.

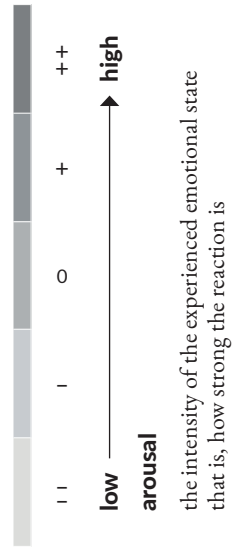
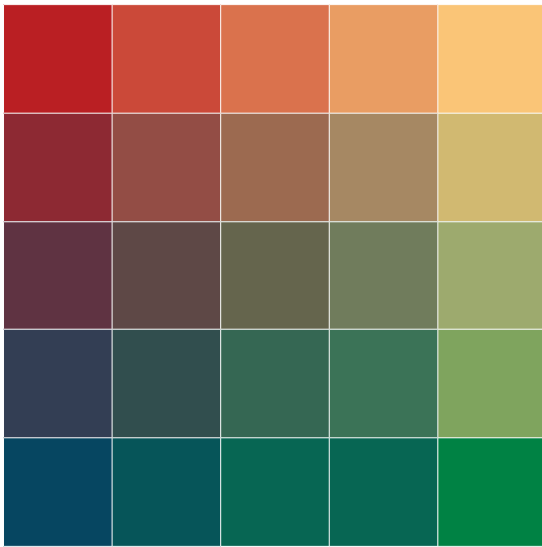
Mood

Emotional states have a short duration to ensure the necessary adaptive flexibility demanded by an ever-changing environment: bodily *emotions* are immediate, developing in milliseconds — a speed, in general, too fast to be consciously perceived and interpreted; *feelings* come a bit later, ignited by cognition. If the parabola of an emotional state persists in time, going beyond the threshold of extemporaneity, it constitutes a *mood*. Moods are “long-term conscious experience[s]” (Schreuder et al. 2016, 4), slow to shift, and less

INTERFACES

F2 A graphic reinterpretation of the circumplex model of affect: see the original formulation in Russel 1980

How are you feeling?



-- - 0 + ++

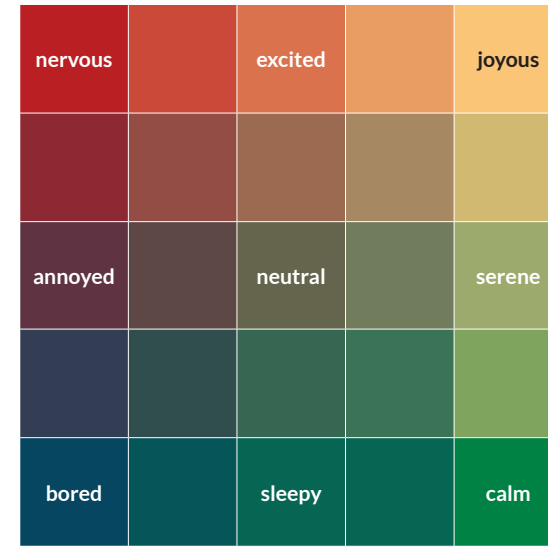
negative → positive
valence

the extent to which an emotional state is positive or negative that is, pleasant or unpleasant

ATMOSPHERE(S) FOR ARCHITECTS

F3 A simplified taxonomy of affect-descriptive terms: see the original study in Russel 1980

The “joyous” adjective, for instance, corresponds to an emotional state with high arousal and positive valence



17 The Norwegian architect Thomas Thiis-Evensen, Christian Norberg-Schulz's pupil, recalls that also "Le Corbusier saw moods as the essence of architecture" (1987, 15), quoting a passage from his book *Towards a New Architecture*: "you employ stone, wood and concrete, and with these materials you build houses and palaces. That is construction. [...] By the use of in-

ert materials and *starting from* conditions more or less utilitarian, you have established certain relationships which have aroused my emotions. This is Architecture" (Le Corbusier 1986 [1923], 179: original italics). Here Le Corbusier talks about function *and* atmosphere.

18 The duality *living/lived* has different semantic nuances, each with a distinctive

specific to a given circumstance. The ability to affect humans' moods, attuning them to the designed atmosphere, represents the ultimate timeless task of meaningful architecture (Pérez-Gómez 2016).¹⁷

Body

Resonance and *attunement* mechanisms influence our bodies and moods together. The premise is that "we are embodied beings whose minds, bodies, environment, and culture are interconnected at sundry levels" (Mallgrave 2013, 7). By the term "body," we refer to the holistic complexity of our corporeality: the biological organism (the *living body*, anatomical infrastructure responsive to sensory impressions) is completed by life experiences that make every individual unique (as embedded in the *lived body*, which allows the perceiving subject to grasp the personal nature of the world with which they interact). We both *have* living bodies and *are* lived bodies (Shusterman 2006, 3).¹⁸ The distinction between living and lived is a perceptual distinction: we undergo a physiological change *and* our body may feel that change (Gallagher 1986). From a methodological perspective, the study of architectural atmospheres has been dominated by a phenomenological approach grounded on observing the lived body as consciously felt in the first person (Canepa 2022b). What has changed in recent years is a greater biological emphasis on the living body, promoted by breakthroughs in cognitive science and neuroscience. They may shed new light on the lived body by looking into the living body, of which the brain and the autonomic nervous system are constituent parts (Arbib 2021). As Harry Mallgrave noticed, "the idea of *atmosphere* reemerged within the context of recent (and quite major) advances in the biological, psychological, and philosophical sciences" (2023, 150), which introduced a new way to inves-

meaning, grounded in the two words German uses to refer to what we indiscriminately call "body" in English: *Körper* and *Leib*. *Körper*, translated here as living body, can be called corporeal body (Fuchs 2002), physical body, biological body, organic body, or sensing soma (Shusterman 2006). *Leib* is the lived body or felt body (Griffero 2017).

tigate how we perceive the designed environment thanks to concepts like *embodiment* and *embodied simulation*. It is what we feel and experience as entangled *lived-living bodies* that allows us to explore the atmospheric phenomenon in its unique complexity (Canepa 2023). This unity encompasses the overall relationship existing between our experience and physiology, *conscious* and *nonconscious* behaviors, first-person and third-person perspectives, as well as phenomenological observations and cog/neuroscientific experimentations.

Conscious and nonconscious

Like affect, *consciousness* is a widely debated topic in philosophy, psychology, and neuroscience. There are many expressions used to define our state of not being aware of what happens around us, such as "unconscious," "nonconscious," "subconscious," "subliminal," "implicit," "automatic," and "pre-attentive." The neuroscientists Marco Tamietto and Beatrice de Gelder (2010) explain the difference between two terms that are commonly interchanged in this "terminological jungle": *unconscious* and *nonconscious*. The first term "is rooted in the psychoanalytical tradition and postulates the existence of an active mechanism of psychodynamic suppression of conscious information"; the second term, instead, "is rooted in the experimental psychology tradition and indicates a perceptual state in which the subject does not report the presence of a stimulus or of one of its attributes (for example, its emotional content) even though there is evidence (behavioral, psychophysiological, or neurophysiological) that the stimulus has in fact been processed" (Tamietto and de Gelder, 698). As other architecture researchers recommend (Canepa 2023; Djebbara 2023), the "nonconscious" form fits phenomenology and neuroscience of atmospheres better.

INTERFACES

19 A crucial capability of humans is being able to override first impressions when responding to them could be harmful (see Kahneman 2011). The key idea was known to nineteenth-century neurologists and has been explored in comparative neuroanatomy.

20 The gist may be misleading: see Arbib's analysis of Turner's *The Slave Ship* painting to note how further attention may

change our perceived atmosphere of a scene (Arbib and Griffero 2023, §4.3).

21 The human eye performs two perfectly integrated visual processes: *central vision*, which focuses on specific points, details, and objects; and *peripheral vision*, which offers a primary structural representation of reality, building its big picture. Simply stated, central vision is *what*, and peripheral vision is *where*. Any element falling outside the fovea

First impression

Atmospheres instantaneously affect the overall impression we have of space since “we perceive *atmosphere* through our emotional sensibility — a form of perception that works incredibly quickly, and which we humans evidently need to help us survive,” as Peter Zumthor states (2006, 13) in one of the most cited quotations ever about atmospheric perception. First impressions are profound and beneficial events providing us with personally meaningful information about our surroundings, with just a glance and without necessarily analyzing each detail or involving *conscious* evaluations. Their extreme speed, multisensorially nurtured, is essential for our interaction with reality, as science demonstrated (Bar, Neta, and Linz 2006; Djebbara et al. 2019).¹⁹ We can, for example, detect the presence (or absence) of a static or in-motion element and make global semantic categorizations of our surroundings (such as it is a park, house, or party) “within an eye blink” (Glanemann et al. 2016, 1566), which lasts for 100–150 milliseconds, that is less than a quarter of one second (Burr 2005). We immediately capture the *gist* of a real-world scene²⁰ informed by the whole configuration of its components, even if they are part of our peripheral vision field, the domain par excellence of atmospheric effects.²¹ Gaining a deeper understanding of how we first engage the built environment is a key objective for architectural phenomenology (Seamon 2017b).

Affordance

The concept of affordance, coined by the American psychologist James J. Gibson in the 1960s (1966, 1979),²² clarifies the intrinsic interrelation and complementarity of our *body* and our envi-

ATMOSPHERE(S) FOR ARCHITECTS

ronment (namely, the area with the maximum visual acuity) feeds the peripheral sensitivity, which detects contours, contrasts, and movements. Central vision brings into focus a limited portion of our surroundings, which approximately corresponds to two degrees of the entire viewable field. To have better schematization, extend your arm in front of you and raise your thumb showing the ok gesture: the surface covered by your

finger nail rounds to the fovea focus. Atmospheric dynamics are, instead, strongly mediated by our peripheral visual system (Pallasmaa 2014, 2019; Rooney, Condia, and Loschky 2017), letting us experience our environs with a “borderless eye” that reads space not in every single component but by grasping its complex essence.

22 The work leading Gibson to coin the term “affordance” started in the 1940s.

ronment that influence how we act based on “the ‘fit’ between the agent’s physical structure, capacities, and skills and the action-related properties of the environment itself” (Clark 1999, 346). Ecological meanings serve behavior depending on what the *environment* offers and what *we* can perceive suitably to our effectivities (sensory/cognitive/motor capabilities), intentions, past experiences, as well as sociocultural traits and norms (Rietveld and Kiverstein 2014). A flight of stairs is the typical example: if we were in a wheelchair or were toddlers, stairs do not afford us to climb.²³ This idea of Gibsonian affordances can, as suggested by Griffero (2014b) and discussed with Arbib (2023), be extended and involve the overall interdependence of action, perception, and *feeling*. How we may act, perceive, and feel is conditioned by the affordances embedded in our environment, working as “embodied predictions” (Djebbara, Fich, and Gramann 2021). If *praxic affordances* are bodily-activating triggers oriented to do something (e.g., going up steps), *atmospheric affordances* are possibilities to emotionally resonate with our surroundings, without “necessarily [reacting] with a given behavior” (Griffero 2020, 102).²⁴ They disclose the expressive character of an architectural element (or a composition of them), the so-called *generator*, that primes our affective *resonance*.

Generator of atmosphere

The German philosopher Gernot Böhme points out that “architecture and design have focused overly on creating things without acquiring an explicit awareness that architectural and design forms are *generators*; to wit, they must radiate something and contribute to the production of *atmospheres*” (2001, 178: original italics). Architectural generators²⁵ are the set of spatial components, ambient

23 For further explanations of the relationship between *affordances* and *effectivities* (namely, the actual actions one can take), see Turvey et al. 1981.

24 See the focus on atmospheric affordances in Kozljanič 2023.

25 Our atmospheric experiences are triggered by a complex and dynamic system of variables that interact and influence one another in many different ways. See the atmospheric equation discussed in Canepa 2022c, which works on five categories: physiological, personal, sociocultural, spatial, and experimental determinants.

26 Characters in architectural drawings are usually anonymous and neutral, without gender, age, or ethnicity, and their bodies are abled, fit, and with archetypical responses to space. People are generally happy keeping a smile.

27 See the bank example, thoroughly discussed in Arbib and Griffero 2023.

qualities, and their mutual interactions architects design to stage the intended atmospheric experience, despite what future occupants of that space will actually perceive moving around it. The term “generator” helps emphasize the enactive existence of affective affordances in architectural substance. It is a strategy to read the fundamental elements of architectural composition through an *affect-based perspective*. To roughly schematize, we can visualize the interrelated dynamic between architecture, *affordance*, and *atmosphere* adopting this correlation: architectural elements + affective affordances = atmospheric generators. Interpreting Böhme’s taxonomy of atmospheric characters (2013), we identify three main types of architectural generators of atmosphere (Canepa 2022c):

- A *gestural generators* (such as dimensions, proportions, forms, and geometries), distinguished by their ability to suggest movement and kinesthetic impressions (e.g., sensations of volume, load, and density, which can render a space oppressive, solemn, or poignant);
- B *sensorial generators* (such as light conditions, colors, materials, and textures), which produce specific sensory inputs (e.g., visual effects, sounds, scents, and tactile feedback) that transpire from the architectonic materiality through their sensuous force and are initially perceived as a whole synesthetic experience; and
- C *contextual generators* (such as a sense of home, power, or wealth), manifested with culturally significant details that situate the project into a given historical, social, and geographical context, incorporating well-recognizable, conventional meanings.

Atmospheric generators are the design tools architects craft to engage our *body* and sway our *emotions* and *feelings*, priming the affective processes of *resonance* and *attunement* that tint our *mood*.

User

Lastly, I want to wrap up this essential atmospheric vocabulary by suggesting renouncing a hackneyed word: *user*. A user does not have an individual identity, a feeling body, and an emotional richness. Users are not real. From a phenomenological perspective, “a building is a constellation of experiences, actions, situations, and events, all generated by and related to the individuals and groups that [enliven] that building” (Seamon 2017b, 67) according to their distinctive *identity*: designers, builders, residents, workers, visitors, architectural critics, and so on. Each possesses a *body*, interactive and mutually constitutive with its surroundings. Atmospheric design sensibility promotes improved attention to corporeality (Canepa 2022b), emphasized in its composite, dynamic, and multisensory uniqueness (Tvedebrink et al. 2022). Architects conceive people’s body in a variety of shades, often undervaluing it (Imrie 2003): they can neglect the body’s physical presence, chase ideal representations, adopt the human scale as a tool for proportionating geometric criteria, consider only normalized standards,²⁶ assume their own persona as privileged point of reference, or image spaces for stereotypical categories of users with unified purposes and conformist behaviors. We must target the *body* and *mood* of the individuals we design for, fine-tuning our empathic skills to gain an experiential understanding of their *lived spaces* and possible emotional *resonances* with proposed *atmospheres*. Versatile scenarios are better than customized but inflexible solutions.²⁷

INTERFACES

F4 Marianna Kistler Beach Museum of Art
Kansas State University, Manhattan
Kansas, United States
original building and addition
north façade
watercolor sketch

ATMOSPHERE(S) FOR ARCHITECTS

Phase 1 — museum: 1995
Moore/Andersson Architects from Austin
(design architects)
Wiedeman Architects from Kansas City
(architects of record)
Phase 2 — addition: 2005
Andersson/Wise Architects from Austin



28 The settlement of the Beach Museum was the acme of “K-State’s evolution from a small agricultural college into a major academic, cultural, and research institution” (Miller 1996, 1).

29 The occasion was an exhibition of more than one hundred paintings arranged in the newly constructed Farrell Library, the

first free-standing library on campus, renovated and renamed Hale Library in 1997. For further information about the K-State art collection history, see Sauber 2011.

30 Bill North, a former museum’s senior curator, well explains the fluid definition of *Kansas Art*: it “does not mean art that was made in Kansas” since “geography alone is

far too limiting a criterion”: “the museum is interested in art that has participated in the creation, development, and exchange of visual arts culture in the state, whether or not it was produced on Kansas soil by Kansas natives” (K-State Today 2011, n.p.).

PART II: ATMOSPHEROLOGY APPLIED TO ARCHITECTURE

Kansas State’s Beach Museum of Art

Inspired by Michael Arbib’s and Tonino Griffero’s lessons about *atmospherology* (2023) and grounded on the lexicon here crafted, I will apply what I have learned to analyze an architectural case study: the Marianna Kistler Beach Museum of Art [F4]. This building is nestled among the trees growing near the southeast edge of the campus that welcomed me for the last two years: Kansas State University (K-State) in Manhattan, Kansas — a college town known as the “Little Apple” of the United States. It is one of the most iconic campus edifices, inaugurated in the fall of 1996 and born as a special unforgettable present (Crawford et al. 2021). The businessman, rancher, and banker Ross Beach provided the lead gift for its construction, naming the museum as a tribute to his wife, Marianna Kistler Beach, on their golden wedding anniversary. The couple were Kansas State alumni: he graduated in engineering in 1940, and she obtained her degree in industrial journalism one year later. In the 1990s, K-State was the only large university in Kansas without an art museum.²⁸ The mission of its opening was dual: first, the need to host the permanent collection, established in the late 1920s,²⁹ consistently grown over the years but scattered on campus among public spaces and private offices; and second, the aim to acquire, preserve, and celebrate works of art reflecting the cultural identity and tradition of Middle America, by displaying authors raised in Kansas or with any connections to the state.³⁰ Both the permanent collections and temporary exhibitions pursue a balance between historical and contemporary vocation.

The museum spaces provide a free home to a diverse population: students, professors, staff, and visitors of the campus, pupils of any age,

citizens of the region and the state, and artists in residence or from the college departments. This building offers entertainment, cultural enrichment, inspiration, creativity, and a strong sense of history and belonging to the local community. Tours of the galleries and outdoor installations are integrated by educational and public programs including summer and after-school youth workshops, family activities, theatrical performances, film projections, concerts, ladies’ night events, exhibitions by alumni or faculty artists, scholarly symposia, and fundraising galas. It is a place for life and shared experiences, making the Beach Museum the ideal setting for an *atmospherological critique*. The perspective is the first-person account of an architect who did not grow up in Kansas but has been working on K-State campus over the last two years.

Atmospherological Critique

Being a member of the college community is significant for several reasons. The first factor has to do with how I typically approach the site. Coming from Seaton Hall, home of the Architecture Department [F5], I cross the campus sidewalks and lawns, slowly walking and passing by limestone buildings. On my way to the Beach Museum, the last encounter is the massive McCain Auditorium, which I can circumvent twofold: on the left or right. In the first case, I am received by the hug of the museum’s north façade [F6], whose two wings encompass the meadow sown in 2011. This green oasis stages a landscape of native Kansas grasses, wildflowers, and plants, designed by a multi-departmental team, which was coordinated by Katie Kingery-Page, today’s associate dean at the K-State College of Architecture, Planning and Design. By evoking the image of the prairie cyclically burning to restore its health, function, and beauty, the meadow was born to substitute for a sculpture de-

- F5** Kansas State University campus
Manhattan, Kansas
aerial photo
2010 (before the Seaton Hall
renovation and expansion project)



- 31** For further details about the meadow project, see Owen 2013.
- 32** Cf. how David Freedberg and Vittorio Gallese (2007) explain the implications of the discovery of mirroring mechanisms and embodied simulation for empathetic responses to works of visual art.
- 33** Mary Jarvis was the first woman to graduate in landscape architecture from Kansas State University in 1942.

- 34** Over 10,000 items now make up the museum's collection, which was less than 1,500 when it first opened in 1996. The 17,000-square-foot addition connects to the original 26,000-square-foot structure via a curving wall and courtyard. Anderson/Wise Architects desired to pursue a sense of continuity between the existing and new buildings still proposing a solution harmoniously distinct. The two-story wing

stroyed by vandals (Burch 2013, 1): its stone fragments are now embedded in the garden composition, habitat of colorful butterflies and many other pollinators. It is a living interplay of sense of place and culture echoes.³¹ Exploring this particle of local flora is an impressive moment: by seeing nature, smelling it, and being immersed in its sounds, our bodies resonate with its untamed strength, and the experience of one sense ignites another [F7]. I do not always feel positively attuned to this coarse and shaggy atmosphere, especially when weather conditions are extreme: summer, for example, is scorching in Kansas with cutting sun-rays and bugs noisily whirring everywhere. However, this sensory bath is crucial to prime my body and intensify my emotional sensibility. Once inside, what I observe in landscape paintings recalls what I touched and sniffed in the meadow, increasing the evocative potential of forms and colors. I grasp the brush strokes better since I can embody them, interiorly simulating their energy.³² Visual art, thus, succeeds to engage more sensations, melding the sense of space, time, light, and sound. The concrete walls of the museum galleries seem stronger in domesticating the natural elements: they become a house, pampering and altering my sensory perceptions. As Juhani Pallasmaa notes, “a storm raging outside the window or above the roof is a different storm to the one experienced without the sheltering, distancing, separating, and focusing function of [a building]” (2011, 119).

If I choose, instead, to turn on right when I face the McCain Auditorium [F5], I can admire my favorite perspective all around the campus. The Beach Museum is an architectural structure unlike any other building, especially the west segment (named Mary and Morgan Jarvis Wing),³³ completed in 2007 after the decision to expand the exhibition spaces taken on their fifth anniversary.³⁴ Arthur Andersson, founding prin-

INTERFACES

F6 Marianna Kistler Beach Museum of Art
north façade



ATMOSPHERE(S) FOR ARCHITECTS

F7 Marianna Kistler Beach Museum of Art
the meadow



introduced in the northwest lot redrew the configuration of administrative offices, increased the lower-level storage areas, and expanded the upper-floor display spaces with two temporary exhibition galleries conceived to work separately or in concert — without interfering with the permanent collection arranged in the first building.

35 To recap, phase 1 — Marianna Kistler Beach Museum of Art (1995) engaged Moore/Andersson Architects from Austin (as design architects) and Wiedeman Architects from Kansas City (as architects of record); phase 2 — Marianna Kistler Beach Museum of Art addition (2005) was realized by Andersson/Wise Architects from Austin.

principal of Austin-based Moore/Andersson Architects (now Andersson/Wise Architects), designed the museum and its addition, respectively in 1995 and 2005.³⁵ Andersson studied architecture at the University of Kansas and started his professional career in Kansas City: he is familiar with this land's distinctive characteristics, atmospheres, and colors. With his partner Christian Wise, they had an outstanding mentor for a phenomenological approach to design: Charles Moore, a post-modern icon and author of the book *Body, Memory, and Architecture* (Bloomer and Moore 1977). The southwest corner of the Beach Museum has an archetypal aspect [**F8**; **F9**; **F10**]: its limestone base evokes sunburnt grass, the earth concrete walls propose an abstract interpretation of the big sky, and the pitched roof mimics the geometry of prairie barns and huts (Moser 2008, 6) [**F11**]. Proportions and forms strongly resonate with me, offering a scale in harmony with my embodied European urban standards and in contrast with the limitless Kansas open spaces. In front of these elevations, I rebuild my measuring system and tune my sensory disposition. Some construction details, such as the concrete pillar nested in the window edge, recall my hometown (Canepa 2021), although far away. If the limestone veneer matches with the surrounding façades, reinforcing the texture and character of the place, it is the copper metal surface of the roofing, gutters, and downspouts to attract my first impressions: their material essence affords a sense of time, dynamism, and authenticity. I will return to this atmospheric spot later, when I describe the outdoor sculpture gallery.

Both trajectories are unusual since the museum's main entrance is on the south side of the building facing the parking lot. Driving is the privileged movement experience in the Midwest, more than walking, which is odd for a native Italian like myself. An archway in the old wing wel-

F8 Marianna Kistler Beach Museum of Art
southwest view
watercolor sketch



INTERFACES

F9 Marianna Kistler Beach Museum of Art
2005-wing (addition)
west façade



9 — An essential vocabulary of atmospheric architecture

ATMOSPHERE(S) FOR ARCHITECTS

F10 Marianna Kistler Beach Museum of Art
2005-wing (addition)
south façade



F11 Lower Fox Creek schoolhouse
Tallgrass Prairie national preserve
Chase County
Flint Hills region of Kansas



36 The museum selected this architectural feature as its symbol, including it in its logo, promotional materials, and title block on official project drawings.

comes visitors.³⁶ Its intrados is adorned with glossy emerald ceramic tiles, and five trapezoidal windows surround the extrados: this charismatic element attracts guests to the mass of the edifice [F12]. It conceals two glass doors with chartreuse-green frames: on the right is the entrance to the activity center, which is often closed; on the left are the administrative offices, always locked. I have never been afforded to open one of these two doors since the presence of the arch is imposing and seeping into its void is inescapable. Its proportions embrace the human body, its colors prepare our visual connection to the meadow, and its geometries create a strong sense of continuity with the tree canopies [F13]. This archway works as the southeastern gate of the campus, greeting people from Aggieville, the historic commercial district of Manhattan, and tacitly inviting them to pass through. The main entrance fades, frequently unnoticed or misinterpreted. Talking to Linda Duke, the director of the Beach Museum from 2011 to 2022, confirmed my ideas. Visitors struggle with entering from this threshold and do not intuitively climb up the stairs that lead to the galleries, feeling lost. The elevator confuses further since the landing on the first floor takes place behind the reception desk, within a tiny lobby enclosed by sage-green lockers. Duke added a reception station on the ground floor to welcome and help guests, but, every time architecture needs this kind of support, it fails in its essence of being an act of staging experiences and informing behaviors for people. The main entrance shows the side effects of poorly designed praxic affordances. We should attune more to our bodily sensations and trust our first impressions primed by the place's affordances, getting under the arch, immersing in the meadow, and slowly traveling along the curvilinear ramp nested in the north façade, which brings us up to the second-floor foyer and galleries. It is a worthy walk that triggers a richer experience [F14].

F12 Marianna Kistler Beach Museum of Art
1995-building
Dan and Beth Bird Archway
north façade



F13 Marianna Kistler Beach Museum of Art
1995-building
Dan and Beth Bird Archway
viewing toward the meadow



- F14** Marianna Kistler Beach Museum of Art
 northeast view
 back entrance
 watercolor sketch

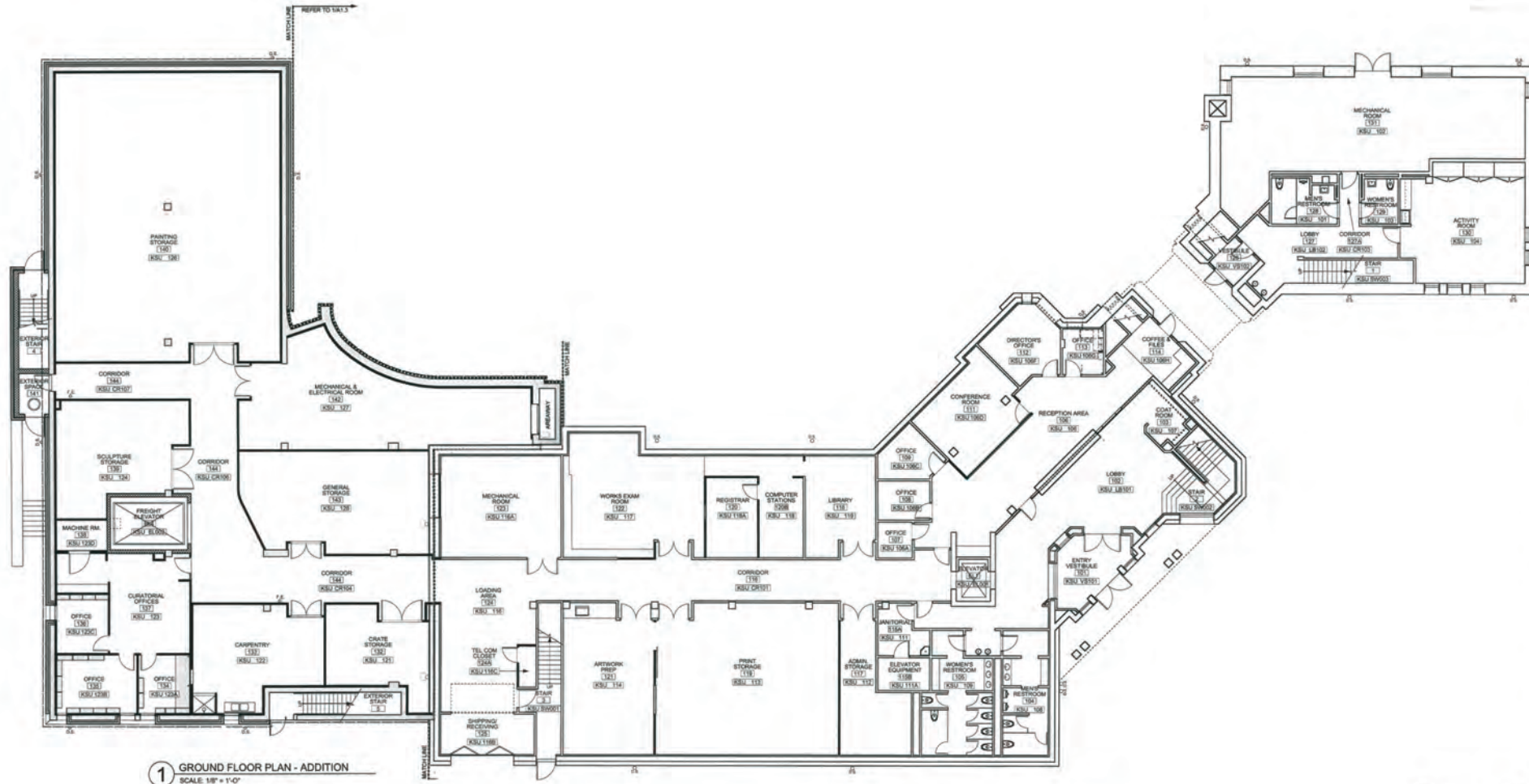


- 37** Dale Chihuly, *Chandelier*, 1996. This artwork evokes the flames flaring up when the prairie burns and turns into a warm lantern as night falls.

Notwithstanding the potential initial bewilderment, the building has a simple two-story structure: the *ground floor* [F15] contains (in addition to the museum entry) administration offices, workspaces (such as a small library, an artworks examination room, and a carpentry shop), art storage areas (separated for paintings, prints, sculptures, and crates), and technical rooms; the *second floor* [F16] (directly accessible from outside through the north entrance) hosts public functions: the reception hall, gallery spaces, education units, a theater, and an outdoor sculpture garden. No matter whatever entrance you choose — the back ramp [F14], the staircase with the orange blown-glass chandelier [F17],³⁷ or the elevator's gloomy niche [F18] — you will have a very appealing and pleasurable experience in the foyer (namely, intense arousal and positive valence). The double-height volume, perfused with sunlight reflecting on the concrete floor, white plaster, and sage-green matchboards, enchant us by creating a space that constantly changes. The disarranged geometries of the ceiling, the varied array of windows, and the contrast between the sleekness of smooth concrete and the comforting sense of domesticity irradiated by the wooden moldings make us feel welcomed — protected from the outdoor weather and hustle. The wonder easily turns into a calming experience, emphasized by the predominant silence (the Beach is, after all, a small campus museum). The last time I came, I was nervous and overwrought, but I immediately felt my body relaxing and breathing without haste; I resonated with the entryway's muffled atmosphere and got attuned to its pace. I took a break for a few seconds and exhibited a timid smile. Even if the lobby host was absorbed by her laptop and did not greet me, my instinct was to move toward the reception desk, shielded under a sophisticated concrete trunk embedding the elevator and generating two arched portals [F18].

F15 Marianna Kistler Beach Museum of Art
 addition project
 as-built drawing
 plan, ground floor

Designed by
 Andersson/Wise Architects, 2005



1 GROUND FLOOR PLAN - ADDITION
 SCALE: 1/8" = 1'-0"

1 GROUND FLOOR PLAN - RENOVATION
 SCALE: 1/16" = 1'-0"



BEACH MUSEUM OF ART
 MARIANNA KISTLER BEACH MUSEUM OF ART ADDITION
 KANSAS STATE UNIVERSITY
 MANHATTAN, KANSAS 66506

ANDERSSON WISE
 ANDERSSON - WISE ARCHITECTS
 1401 WEST 14TH AVENUE, SUITE 100
 AUSTIN, TEXAS 78703
 TEL: 512.476.1916
 FAX: 512.476.1918

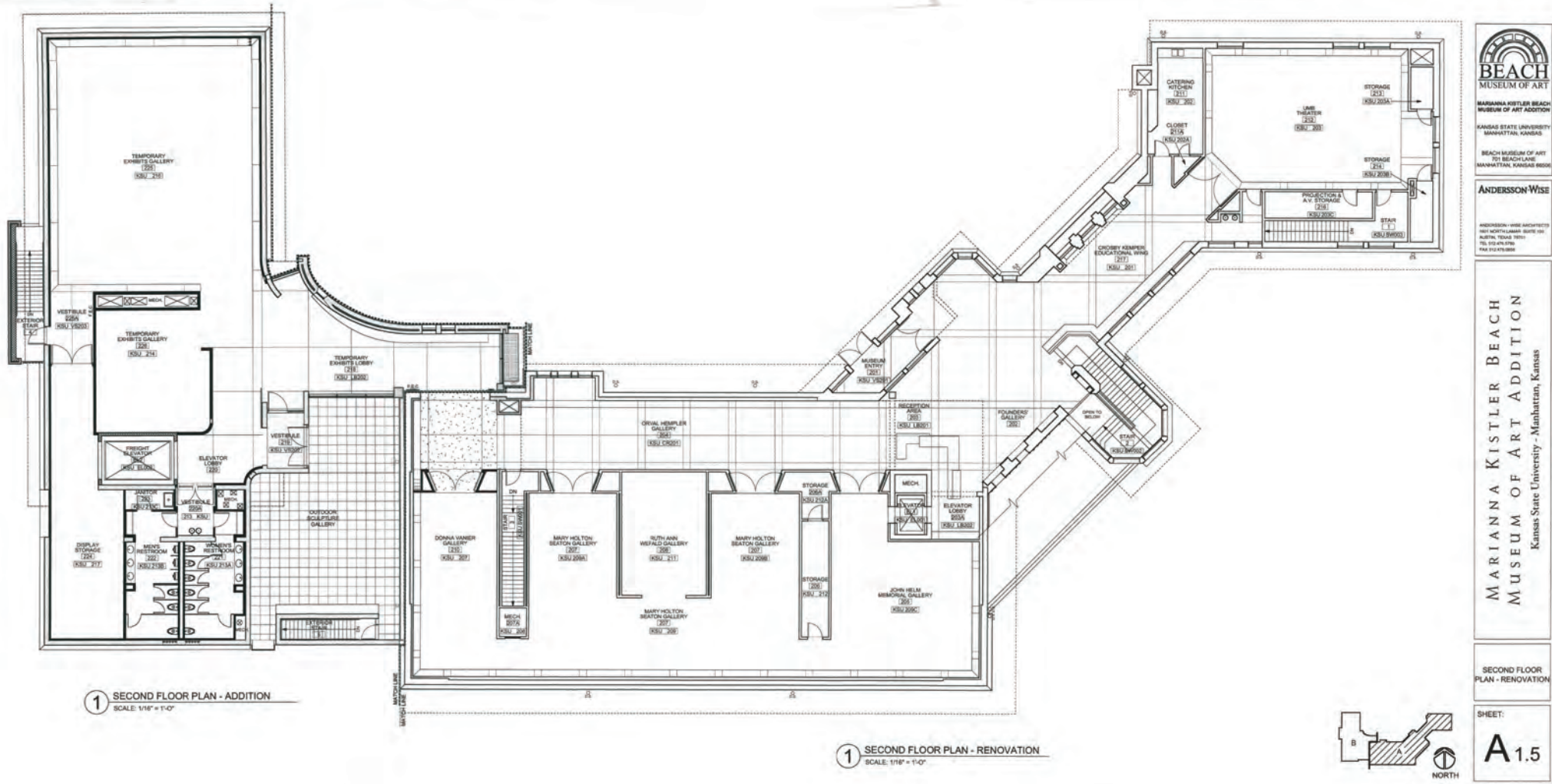
MARIANNA KISTLER BEACH MUSEUM OF ART ADDITION
 Kansas State University - Manhattan, Kansas

GROUND FLOOR PLAN - RENOVATION

SHEET:
A1.3

F16 Marianna Kistler Beach Museum of Art
 addition project
 as-built drawing
 plan, second floor

Designed by
 Andersson/Wise Architects, 2005



INTERFACES

F17 Marianna Kistler Beach Museum of Art
Founders' Gallery
second floor

Dale Chihuly, 1996
the orange blown-glass *Chandelier*
hung over the stairs



ATMOSPHERE(S) FOR ARCHITECTS

F18 Marianna Kistler Beach Museum of Art
reception area and elevator lobby
second floor

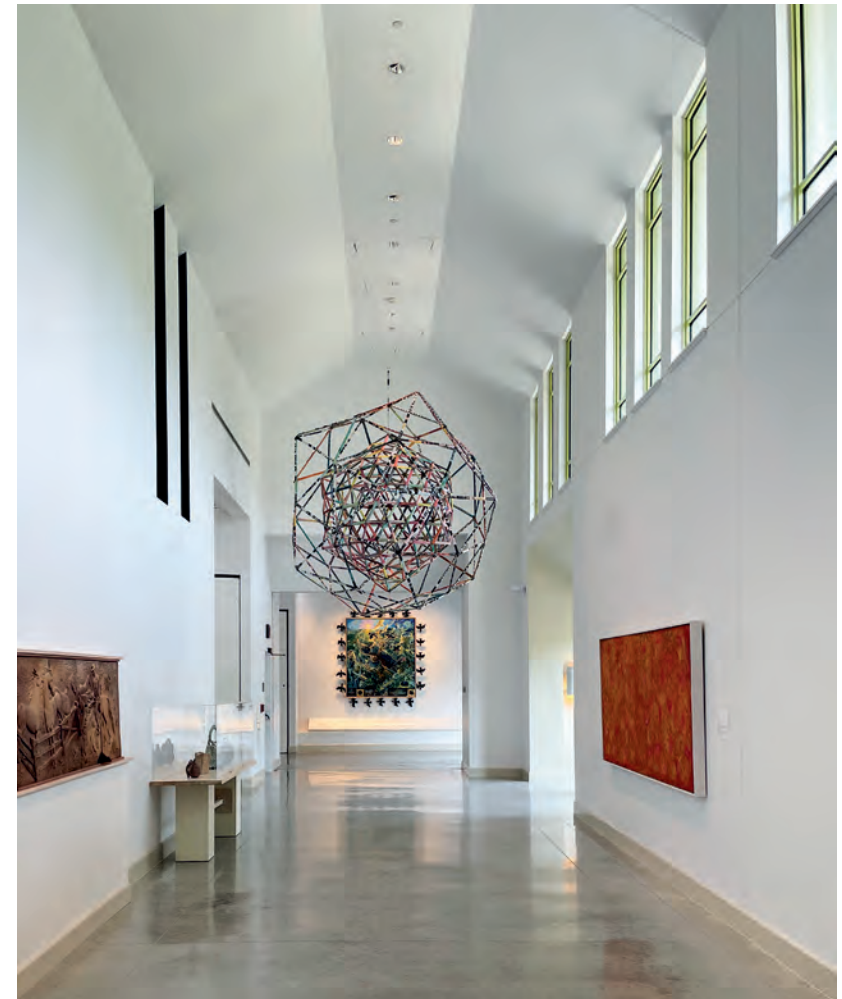


38 Ruth Ann Wefald Gallery: see the second-floor plan for further details.

The gallery hallway is airy and well-lit, affording me to walk along its nave as if simply sliding along a floor washed by the rays of sunshine [F19]: wandering becomes an act of learning more than knowing. The exhibition spaces are atmospherically more silent, disappearing to emphasize the artworks [F20]. Two architectural characteristics stand out: the geometry of the longitudinal section and the presence of a “room within a room,” namely a solitary smaller gallery.³⁸ Only after some time has passed does one notice the strip of clerestories, which the museum management obscured to preserve exhibits from UV exposure. The wooden flooring and the rounded upper edge of the perimetral wall (theoretically functioning as light baffle) accent our soft movements. I believe I can easily remember many construction details because the aesthetic quality of the galleries’ atmosphere is not so engaging. This design decision respects and valorizes the art display.

Windows are authentic atmospheric experiences, even if — as typical in a museum — they were born from a compromise between architects and curators. Their sculptural forms capture my attention, yet the light filtering through the glass moves my body. Natural light is a spiritual quality bringing spaces to life, especially the galleries conceived as pure masses of shadow. Two windows are extraordinary. One is carved into the curving lobby wall for temporary exhibits, a full-height surface facing east that stages a niche [F21], where two atmospheric generators borrowed from Peter Zumthor’s poetics shine: the *equilibrium between composure and seduction* (2006, 41–45), which makes architecture a spatial and temporal art, letting us attuning to the praxic and affective affordances of its details (such as a concrete bench); and the *tension between interior and exterior* (2006, 45–49), communicated by the view over the meadow.

- F19 Marianna Kistler Beach Museum of Art Orval Hempler Gallery second floor
 Alan Shields, 1985–1998
Kansas Meatball, an artwork made of aluminum tubing, bolts and nuts, and cotton thread



INTERFACES

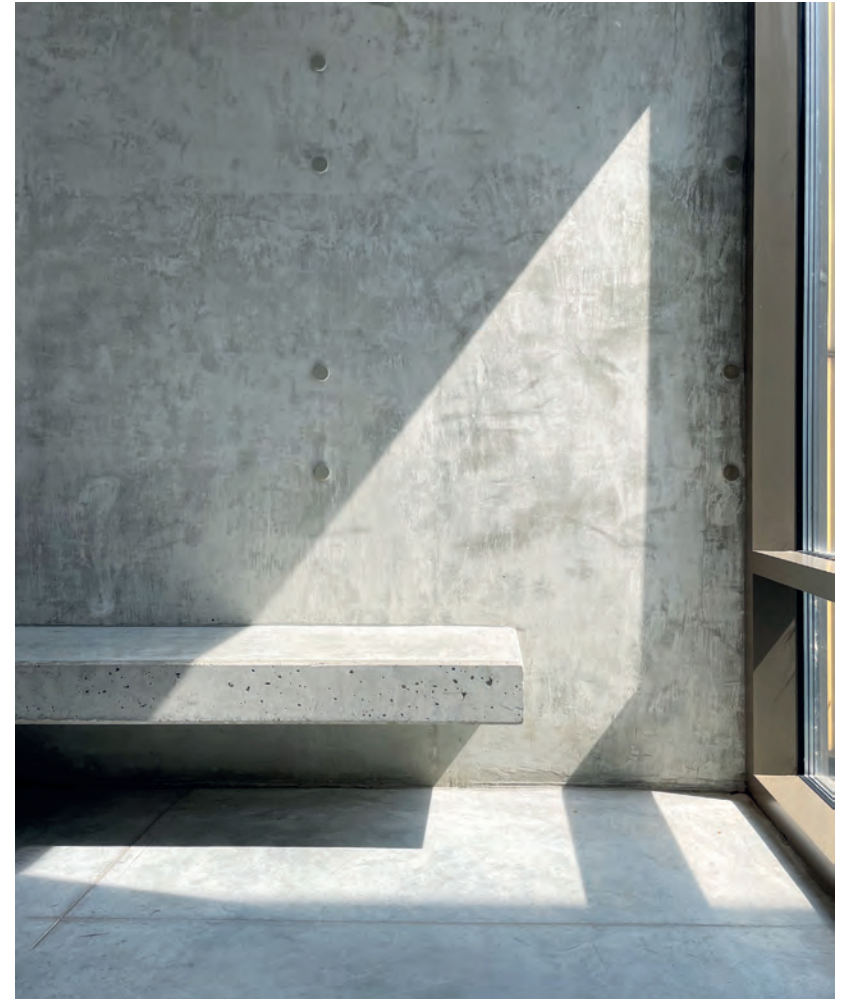
F20 Marianna Kistler Beach Museum of Art
Donna Vanier Gallery
permanent collection
second floor



9 — An essential vocabulary of atmospheric architecture

ATMOSPHERE(S) FOR ARCHITECTS

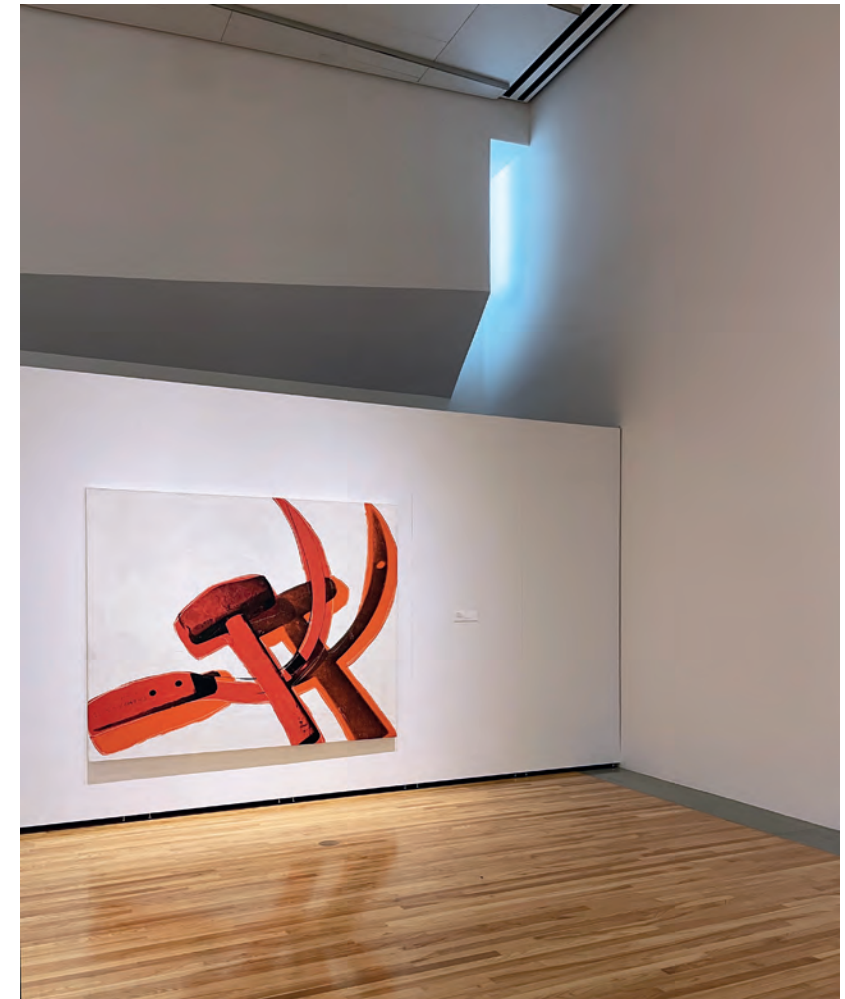
F21 Marianna Kistler Beach Museum of Art
Mary and Morgan Jarvis Wing
temporary exhibits, second floor
niche window



The second window momentum, more contemplative than bodily-felt resonant, happens in the final temporary exhibits' gallery, where a west-exposed crack is accommodated within a white volume with sloped surfaces fixed on the north wall [F22]. Intrigued by its eccentric presence, I learned this narrow slice of light is "a spirit window." Inspiration came from "American Indian weaving patterns that left a gap in the border of their works for spirits to escape" (Moser 2008, 6). Even if artworks are in the spotlight, the spirit window nonconsciously magnetizes my bodily emotions and tints my conscious feelings.

Due to its prominence in Kansans' life, landscape has historically been one of the preferred subjects for artists influenced by this region. Prairie's sea of grass immediately comes to mind, which is so unique and wild, but another landscape impresses me the most — something unexpected since I thought I already knew it well: the *sky*. Kansas skies are different from my home skies: they are more extensive — not compressed between buildings and cropped in thin strips; they are more powerful — shaken by clouds, winds, and tornados; and they are more colorful — inflamed by sunsets, thunderstorms, and the Milky Way's halo. I live on the west side of Manhattan, close to a gas station, and the view I admire every evening when I leave the campus recalls the paintings of the American artist Edward Ruscha, born in Omaha, in the neighboring state of Nebraska. Inside the Beach Museum, the celebration of the landscape's atmospheric majesty takes place in the outdoor sculpture gallery, whose roof is the sky offering an ever-changing canvas. This urban-character room is the campus spot that can most effectively translate corporeal and feeling expectations of my lived space into built forms. Quoting again Peter Zumthor (2006), here I find a well-orchestrated synergy of his praised generators of atmosphere: the

F22 Marianna Kistler Beach Museum of Art
Marion Pelton Gallery
temporary exhibits, second floor
spirit window



F23 Marianna Kistler Beach Museum of Art
Stolzer Family Foundation Gallery
outdoor sculpture garden

Douglas Abdell, 1980
Krege-Aekyad and *Kqrefe-Aekyad*
welded-steel sculptures



body of architecture, composed of elementary geometries and archetypal volumes [F23]; the *materials' compatibility*, radiated by the cast-in-place architectural concrete, paving stone, copper sheets, and mirrored glass; the *sound* and *temperature* of the space, not forged using acoustic insulation and air conditioning; the *surrounding objects*, namely vibrant pieces of art; the *equilibrium between composure and seduction*, which afford me to relax, surprise, or activate, according to the weather and light conditions; the *tension between interior and exterior*, speaking through the sky's voice; the *levels of intimacy*, which draws a delicate balance of proportions, masses, and gravity sensations, tailored to my corporeal scale and sensibility; the *light on things*, which reveals the real essence of materials, surfaces, and details; *architecture as human surroundings*, becoming an integral part of my days, a loved experience, and a maker of memories; the *coherence* among all the parts that make up the whole, integrating place, function, and aesthetic; and, lastly, the *beautiful form* granting my affective expectations and nudging me to return here.

The theater, frequently empty but open, is the final room in this atmospheric analysis. The pale colors, suffused sunlight, and sinuous section of the ceiling tune a gentle atmosphere. Aside from my current corporeal state or mood, it resonates with my body peacefully. Its soothing essence (delicate in terms of perceived arousal and intrinsically pleasant as valence) provides comfort, even if a storm is raging outside. We know lived space is never neutral, but this silent and bare room, lacking semantic or social cues, counterbalances the bank example discussed by Michael Arbib and Tonino Griffero (2023). I sense the weight of the void, sift it through my body, and fill it up with my emotional contents. It is a fluid scenario that transversely matches many circumstances, body-mind dispositions, and personalities. As a theater it needs an over-

all remodeling, but as an atmospheric environment [F24], it communicates clear praxic and affective affordances: I want to stay, rest, and contemplate my thoughts. When the former director, Linda Duke, was interviewed, she revealed that she loves to welcome visitors by acting as the host of a *tea ceremony*, a tradition she studied in college. Her goal is to offer a unique aesthetic experience to the visitors, staging an ad hoc experiential narrative: “the word ‘aesthetic’ means things that we learn through our senses,” she explains. “Think about the tea room, the garden path that they take to get to it, the fragrance of the incense, the painting hung on the wall, the flower arrangement, the way you make the tea and serve it to them, the taste of the tea — all of those things” (Witter 2019). Duke is (non)consciously talking of an atmospherology *mise-en-scene*. Liking art is not necessarily the point, but empathizing with human experiences belonging to some other time, place, or culture. Saying we did not appreciate an art show is still helpful if we can comprehend why we have that opinion. The theater’s space works as the final step of our atmospheric narratives: the last time I came here, I tested a meditation break to attune to my bodily emotions and ponder over my lived feelings because that experience will never happen again in the same manner. Since entering the building, my mood has changed, revealing the Beach Museum accomplished its task as meaningful architecture.

Lessons of Atmospheric Composition

This essay assumes that mastering how to read, understand, and articulate our spatial experiences can help to fine-tune our design sensibility and develop profoundly affective situated projects. Tonino Griffero’s first-person phenomenology of atmosphere and Michael Arbib’s cog/neuroscience of architectural design and experience provide a dialectic

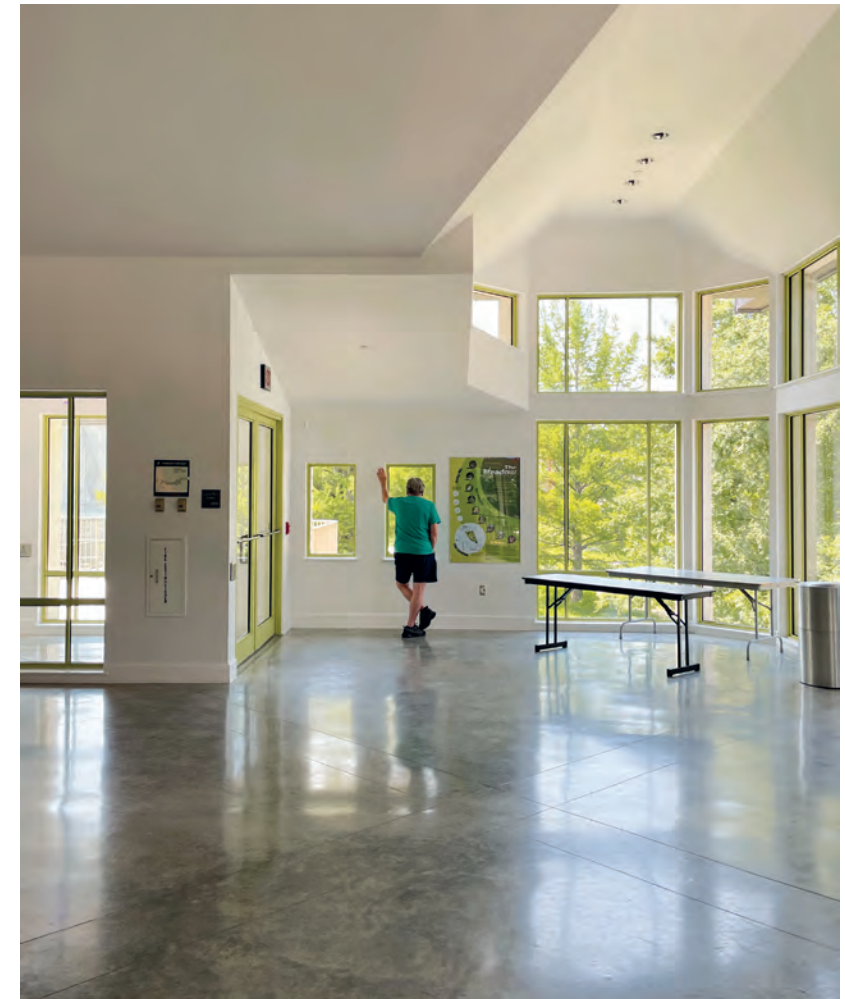
F24 Marianna Kistler Beach Museum of Art
UMB theater
second floor



scaffolding (2023) to outline the framework where an *architectural* language of atmosphere may take shape. I am aware to have metabolized a synthesis and simplification of their speculative axioms to serve the applied art of architecture. As designers, we must draw inspiration from theory and evidence and translate their insights into design principles.

Arbib and Griffero, for example, efficiently explain the difference between *praxic* and *atmospheric* affordances: the first invite us to move, act, or do something; the latter are opportunities for our bodies to feel and resonate with our surroundings. How do designers conceive and give substance to affordances? Through *architecture* — that is designed solids and voids. Hence, the assimilation “architecture is atmosphere” (Canepa 2022b) since architecture “produces atmospheres in everything it creates” (Böhme 1991, 36). It might sound like a provocation; still, it is a vital reminder for designers to place our (lived and living) *bodies* at the center of the project process instead of faceless users. For architects, due to the inherent vocation of their profession, separating the atmospheric dynamics from the physical world would be contrived. Architecture is the skillful combination of affordance-based atmospheres and behaviors. If we situate this reasoning in the Beach Museum case study, *windows* help us to understand better. Windows are one of the essential elements of architecture (Koolhaas et al. 2018), made of matter and enlivened by light energy. Determined by how architects design them and depending on countless contingent environmental and personal factors, windows afford several motor and affective opportunities orchestrating a specific atmosphere, in addition to accomplishing design functions (such as light control, thermal comfort, view framing, and interaction between inside and outside). As the Swiss architect Pierre von Meiss stated, “eye, mouth, nose, and

F25 Marianna Kistler Beach Museum of Art
 museum entry
 second floor
 windows overlooking the meadow



ear concurrently [the window] is not only a determining feature in the building's appearance, but also the intermediary which allows the occupants of a building to see, hear and feel the place of which they are part" (2011, 3). The Beach Museum's windows overlooking the buzzy campus, meadow in bloom, or infinite sky become powerful generators of atmosphere through their embedded affordances that invite people to stop by and re-energize during the galleries' tour [F25]. Each window triggers a physical, emotional, and cognitive break emphasizing the nature of the building as *a place to spend time* — as sought by artists, curators, architects, donors, and not least visitors.

Thanks to concepts like “affordance,” “generator of atmosphere,” “mood,” or “body,” architects may design better window *experiences* — conceived as *opportunities for being* in a certain emotional disposition. In other words, they interpret the fundamental elements of architecture through an affect-based perspective. Even if windows are typically struggling situations inside art galleries (it happened in the 1995-wing, whose clerestories are vanished now), the Beach Museum shows a sophisticated collection of atmospheric windows — ultimately the medium that can most convey Kansas landscape and art but also support designers in coloring our emotions. This is only one example of possible applications of an atmospheric approach to architectural design, proving to be a valid tool of analysis that promotes an affective reading of space. Lived space, being the space of *our* experience, is largely pre-verbal: mastering a language of atmosphere is essential in bringing to light understanding and meaning. It is the preliminary stage in deciphering how body and space are mirrors of each other. As designers, we must go beyond a phenomenographic description by translating words into architectural forms that realize and enrich our descriptions in novel ways.

Centuries of architectural history, culture, and experimentation provided us with the necessary knowledge to design and build. What atmosphere can mainly accomplish is improve our skills to observe, feel, read, and narrate — a crucial lesson preparatory to compose architectural elements and orchestrate praxic and affective affordances.

The atmospherological critique of the Beach Museum offers a personal account of how I experienced its atmospheres, intertwining first impressions and renewed memories, besides comparing insights received from privileged inhabitants who have enlivened that space for a long time, day by day. I interviewed the former director Linda Duke and two exhibition designers, Lindsay Smith and Marvin Gould, who recently retired. A challenge for future analysis is comprehending the architects' design intentions and expected atmospheres to discuss the gap or overlap between their attempts and what I have felt. As Michael Arbib and Tonino Griffero emphasize (2023, §4), there is a plurality of phenomenographic practices to describe our experiences in space. They are never exactly like the genuine experience since every duplicate of reality has its autonomy due to the atmospheric effects it creates. The language of atmosphere acquires strength and richness through the words crafted and simultaneously the expressive mediums adopted. Architects' watercolors [F4; F8; F14] are blurry and less defined than construction drawings [F15; F16]: paradoxically, “the more an image appears visually ‘indeterminate’ the more it is able to evoke a *similar* or *enhanced* emotional and synesthetic excitement of a real perception in action” (Morselli 2021, 301–302: original italics). Designers, thanks to the applied, aesthetic, and multisensory vocation of their discipline, master a variety of means to convey atmospheric experiences: this is something — extremely valuable — we can teach phenomenology and cog/neuroscience to bolster our conversation together.

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**Atmosphere(s) for Architects:
Between Phenomenology
and Cognition**

2023
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Manhattan, KS, USA

Interfaces 5 is a masterclass about architectural atmospheres where the philosopher Tonino Griffero and the neuroscientist Michael Arbib contrast first-person insights of the (neo)phenomenological approach with the third-person analysis of cog/neuroscience, arguing sternly for the advantages of each for architects.

— The editors

What can a **cog/neuroscientist** and a **neophenomenologist** teach architects while wrestling with each other's terminology and professional reasoning? Much!

— Mikaela Wynne and Bob Condia

Atmospheres and **affordances** address two deeply rooted and intertwined questions that have always haunted architects: why does a space make me feel in a certain way? And why does a space make me move in a certain way? We could argue that each question is a corollary to the other, and affordances and atmospheres — or atmospheric affordances — are two faces of the same coin.

Yet it is in the further implications of atmospherology that cog/neuroscience and new phenomenology point in distinct directions: whereas Michael Arbib believes that architects can master atmospheres and control them through design, Tonino Griffero eschews practical applications, preferring to preserve the aesthetics of atmospheres as a descriptive paradigm only.

— Federico De Matteis

Could we perhaps explore **Michael Arbib** and **Tonino Griffero's** views of atmosphere as an affordance to further the idea that affordances should be part of an equitable design process — in order to create work that is not designed to satisfy the lowest expectation of function, but to acknowledge and celebrate the complexity of human experience and feeling in space?

— Suchi Reddy

