THE TRANSFERENCE OF DESIRE: THE GREENHOUSE AS CONTEMPORARY ARCHITECTURAL PARADIGM

LA TRANSFERENCIA DEL DESEO: EL INVERNADERO COMO PARADIGMA ARQUITECTÓNICO CONTEMPORÁNEO

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ABSTRACT
This article addresses the convergence between architectural materialisation and theoretical construction. Through inferential criticism and the analysis of thought representation, it examines the greenhouse as a tensegrity-spatial paradigm, taking the Almerian case as its central focus through a sports pavilion and doctoral research. The findings identify specific intentional patterns: a dynamic structural equilibrium that minimises material to generate weightless spaces; the creation of uniform luminous atmospheres through translucent envelopes; and spatial continuity free from hierarchies. The study reveals four evolutionary models of spatial thought, ranging from landscape framing to architecture as mediated landscape. It concludes that the greenhouse anticipates key aspirations of contemporary architecture by establishing active exchanges between materiality and perception, thus redefining the relationship between technique and experience.

KEYWORDS
Atmospheric spatiality, greenhouse, spatial tensegrity, architectural transference, mediating translucency

RESUMEN
Este artículo aborda la convergencia entre materialización arquitectónica y construcción teórica. A través de la crítica inferencial y del análisis de la representación del pensamiento, examina el invernadero como paradigma tensegrítico-espacial a partir del caso almeriense, mediante un pabellón deportivo y una investigación doctoral. Los resultados identifican patrones intencionales específicos: el equilibrio estructural dinámico que minimiza la materia generando espacios ingrávidos, la creación de atmósferas luminosas uniformes mediante envolventes translúcidas y la continuidad espacial sin jerarquías. El estudio revela cuatro modelos evolutivos del pensamiento espacial, desde el encuadre del paisaje hasta la arquitectura como paisaje mediado. Se concluye que el invernadero anticipa aspiraciones clave de la arquitectura contemporánea, al establecer transferencias activas entre materialidad y percepción que redefinen la relación entre técnica y experiencia.

PALABRAS CLAVE
Espacialidad atmosférica, invernadero almeriense, tensegridad espacial, transferencia arquitectónica, translucidez mediadora

INTRODUCTION

Contemporary architecture is defined by a constant tension between the material and the conceptual. Far from being opposed, construction and thought are intertwined in a space of transference where each design gesture involves a questioning, a seeking. As Heidegger reminds us, "every questioning is a seeking" (1994, p. 30). The gaze is also laden with intention. For José Antonio Marina, "not even scientific contemplation (...) is innocent contemplation" (2016, p. 38). In architecture, to perceive is already to interpret. Each architectural gesture implies assuming a position that interrogates matter, space, and their ability to produce sensations.

In this context, the greenhouse emerges as a paradigm. Not only because of its function, but for its capacity to articulate the technical with the atmospheric, the constructive with the perceptive. The case of the Almerian greenhouse in Spain is particularly eloquent. Its lightweight structure, based on dynamic balances, minimizes matter and produces a weightless spatiality. Light, filtered through a translucid skin, creates a continuous atmosphere, devoid of shadows or hierarchies. Its spatial organization is isotropic. Although these characteristics respond to agricultural needs, they condense fundamental architectural aspirations: to build with the minimum, to inhabit the atmospheric, to dissolve the boundaries between technique and experience. Thus understood, the greenhouse can be read as a form of 'unusual architecture' (Vielma-Cabruja et al., 2023), whose apparent contingent nature conceals critical potential. An architecture that reveals rather than imposes. That transforms the banal into the poetic. In line with Pallasmaa, this experience is only possible through an 'innocent gaze', open to the unexpected. Zumthor, for his part, highlights how the architect, faced with an unknown place, develops a renewed sensitivity to light, climate, or landscape (Andersen, 2012). Being foreign, far from restricting, sharpens our attention.

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This reading finds a concrete application in the analysis of the *Pabellón Polideportivo de Garrucha* (2004–2010) and the subsequent doctoral thesis *El jardín de los deseos* (Luque García, 2023). The former operates as *causa efficiens*, by constituting itself as a materialized anticipation; the latter serves the function of *significatio*, by theoretically organizing and developing the project insights formulated in the initial stage. Far from a conventional deductive logic, where theory precedes the work, here the thesis, in a retroactive way, reinterprets, organizes, and activates latent senses in the project. Both manifestations —practice and research— are thus situated within a single conceptual shift between materiality and thought. A methodological bridge is drawn that makes it possible to interpret the greenhouse as a critical device endowed with reflexive capacity, conceived from its project and conceptual potential, above their definition as functional typology. The analysis is structured based on converging patterns: the lightweight tectonics of the pavilion anticipates the greenhouse's economy of means; the structural modularity is extended in a non-hierarchical spatial organization; the skin, in both cases, articulates the interior and the exterior, the climatic and the sensory.

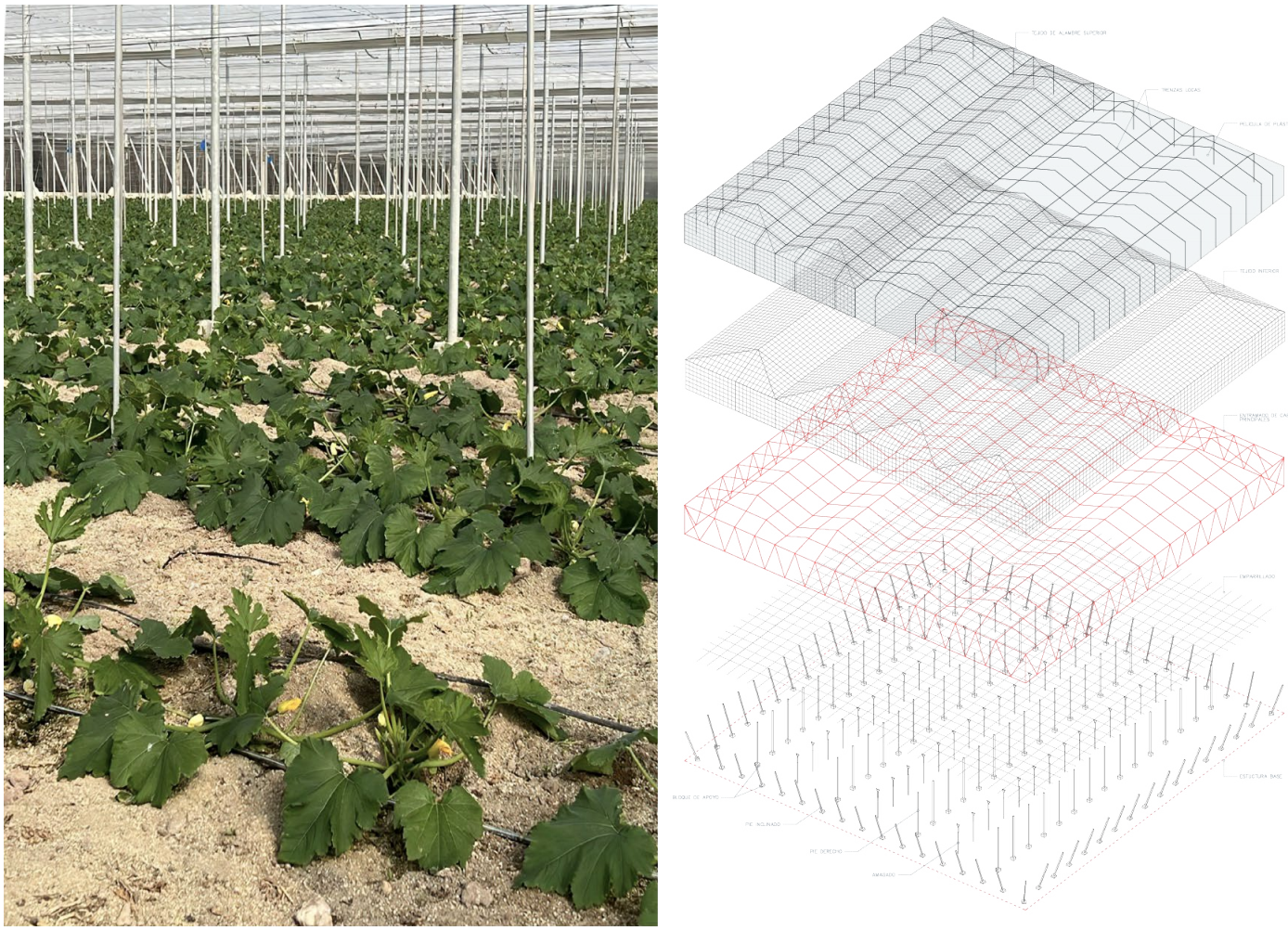
This analytical framework is reinforced by the identification of four evolutionary models of representation of spatial thinking (*cogitatio*): from the framed landscape to architecture as mediated landscape. In this journey, the greenhouse is interpreted as a condenser of disciplinary tensions: control and openness, abstraction and experience, permanence and transience. The purpose of the article is not to extol the Almerian landscape, or to analyze agricultural techniques. Nor is it to formulate a merely formalist reading. Although the thesis incorporates hermeneutic elements , such as the interpretation of everyday landscapes through direct experience, cultural mediation, and collective interpretation (Ojeda, 2013), The objective here is different. It is about exploring how certain seemingly neutral spatial conditions —horizontality, programmatic isotropy, structural lightness— can become critical vehicles for architectural thought. Conceived in this way, the greenhouse ceases to be a passive object. It becomes an active agent. It generates ideas. It condenses disciplinary desires. And challenges our habitual ways of looking, designing, and inhabiting (Figure 1).

CONTEXTUAL FRAMEWORK

The greenhouse as object of the architectural

The modern concept of greenhouse was established in the early 19th century, when its design was oriented towards the creation of controlled microclimates. John Claudius Loudon identified this transformation as the moment in which "every thing (...) which has a heavy appearance, or tends to exclude the light, in some degree frustrates their utility (...) and consequently ought to be avoided"

Figure 1
Spatial Tensegrity: structural system and atmospheric device in the Almerian greenhouse



Note. The '*raspa and amagao*' typology optimizes the structure through profiles, cables, and plastic film, establishing a balance between tension and compression that transcends the structural aspect. Reducing the material to its minimal expression qualifies the space, transforming technical principles into atmospheric devices.

Source: author.

(1805, p. 199). Until then, the *orangeries* or *hot houses* resembled domestic spaces rather than specific climate control devices (Luque García, 2023). The significance of this conceptual shift is that architectural decisions began to respond to environmental conditions, subordinating form to climatic function. Thus, materialization is focused on the generation of an encapsulated atmosphere. The search for uniform light favored translucency over transparency, adapting architecture to the biological needs of plants. Although climate control technologies already existed, advancements in the production of iron and large-format glass allowed for a new tectonics of lightness, which enabled slimmer greenhouses, with dematerialized structures and diffuse luminosity (Luque García, 2023; Prieto, 2019).

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Seminal prototypes like The Great Stove (1836-1840) by Joseph Paxton marked the transition from the domestic scale to territory-capturing devices (Luque García, 2023)[1], becoming mediated architectural landscapes (Shin, 2025). This transformation reaches its ultimate expression with the Crystal Palace (1851), where iron and glass integrate in an architecture that is atmospheric and habitable, establishing a new tectonic logic. Its legacy persists into the 20th century in projects like Project C (1936) by Le Corbusier and Jeanneret, where the glass and metal roof structure echoes Paxton's palace in a redefinition of the relationship between structure, light, and materiality (O'Byrne Orozco, 2007). In this vein, the greenhouse is inscribed in the genealogy of 'buildings of light', where the constructive aspect becomes a perceptive interface, and where architecture is experienced not as object but as phenomenon. Its translucency, its lightness, and its open structure transform it into a catalyst of an active representation in architectural thought (Luque García, 2023) (Figure 2).

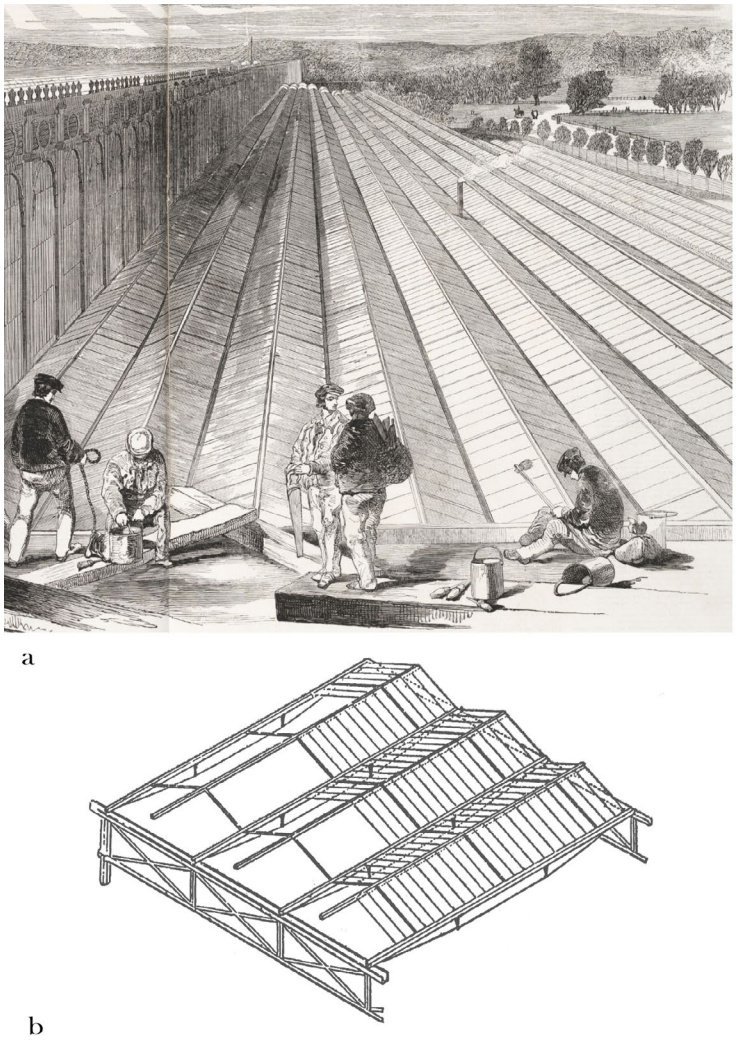
The productive greenhouse

While the ornamental greenhouse evoked an encapsulated Eden, another more operative lineage emerged strongly: structures designed to optimize cultivation, rationalize the atmosphere, and subordinate the space to productivity. A foundational reference of this genealogy is Charles McIntosh's design for Dalkeith Palace (1841), whose concatenation of iron and glass modules established a repetitive, precision-lit spatial grammar. The Dutch type derived from this logic, structured using the ridge-and-furrow system and Paxton's gutter, which crystallized in the Venlo model. Its present continuity does not respond to nostalgic evocations, but to a proven atmospheric efficacy (Luque García, 2023).

The real turning point came in the mid-20th century, when glass is replaced by plastic. Versatile, lightweight, unruly, this material opened the way to an architecture of translucent panels attached to lightweight frames. A new form thus emerges, adaptative, contingent, sensitive to its surroundings. A hybridization between industrial technique and vernacular wisdom (Luque García, 2023). By the end of the century, two archetypes encapsulated this evolution: the glass greenhouse and the plastic multi-tunnel. The former, with its luminous front; the latter, with its ability to envelop, attenuate, and modulate the climate. Both deploy different modes of atmospheric mediation: they produce crops, but also perception (United Nations Food and Agriculture Organization [FAO], 1990). Far from being neutral objects, these structures form an architecture of modulation. They activate ideas. They do not impose forms; they respond to variations. The structure becomes atmosphere. The atmosphere, experience.

[1] Referring to the constellation of glasshouses and greenhouses characteristic of 20th century botanical gardens.

Figure 2
From Paxton to Le Corbusier: migration of structure and lighting principles from greenhouses to modern architecture



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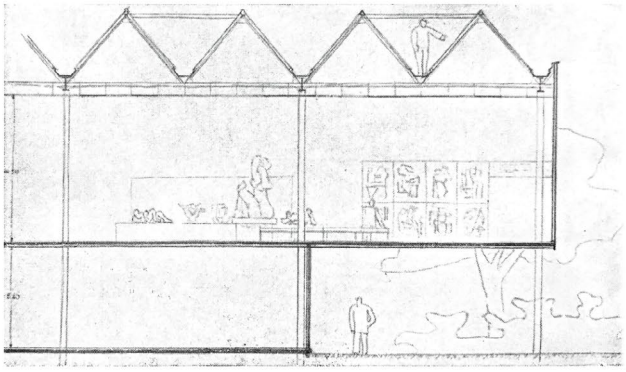

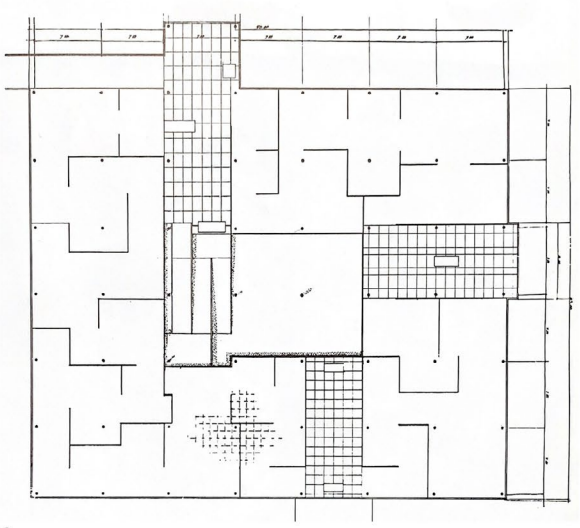

c

Note. (a) Joseph Paxton, Illustration of the building of the pavilion for London's Great Exhibition of 1851; (b) The ridge-and-furrow glazed roofing system (Paxton's Gutter) patented by Paxton in 1850: assembly of glass panels between ridge bar and gutter, supported by iron trusses; (c) Section and floorplan of Project C: Centre D'esthétique contemporaine (Paris, 1936) by Le Corbusier and Pierre Jeanneret.

Sources. (a) Courtesy of Yale University Library (https://collections.library.yale.edu/catalog/2029095); (b) (Luque García, 2023, p. 206. Fig.II.86); (c) (Le Corbusier & Jeanneret, 1999, p. 155).

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As pointed out by Koolhaas (2020), in these operational landscapes, a disquieting logic of climatic control persists, a rationality that Haraway (2015) defines as *Plantationocene*, where bodies and territories integrate in extractive regimes. However, reducing the greenhouse to mere technique would be to impoverish it. Its device condition transforms it into an artifact where structure, climate, matter and perception are intertwined (Koolhaas, 2018). Not only does it grow tomatoes. It also produces intensities, experiences, atmospheres. From its pragmatism without author or style, it hints at a poetics of the minimal gesture: efficient architecture, but also sensitive space.

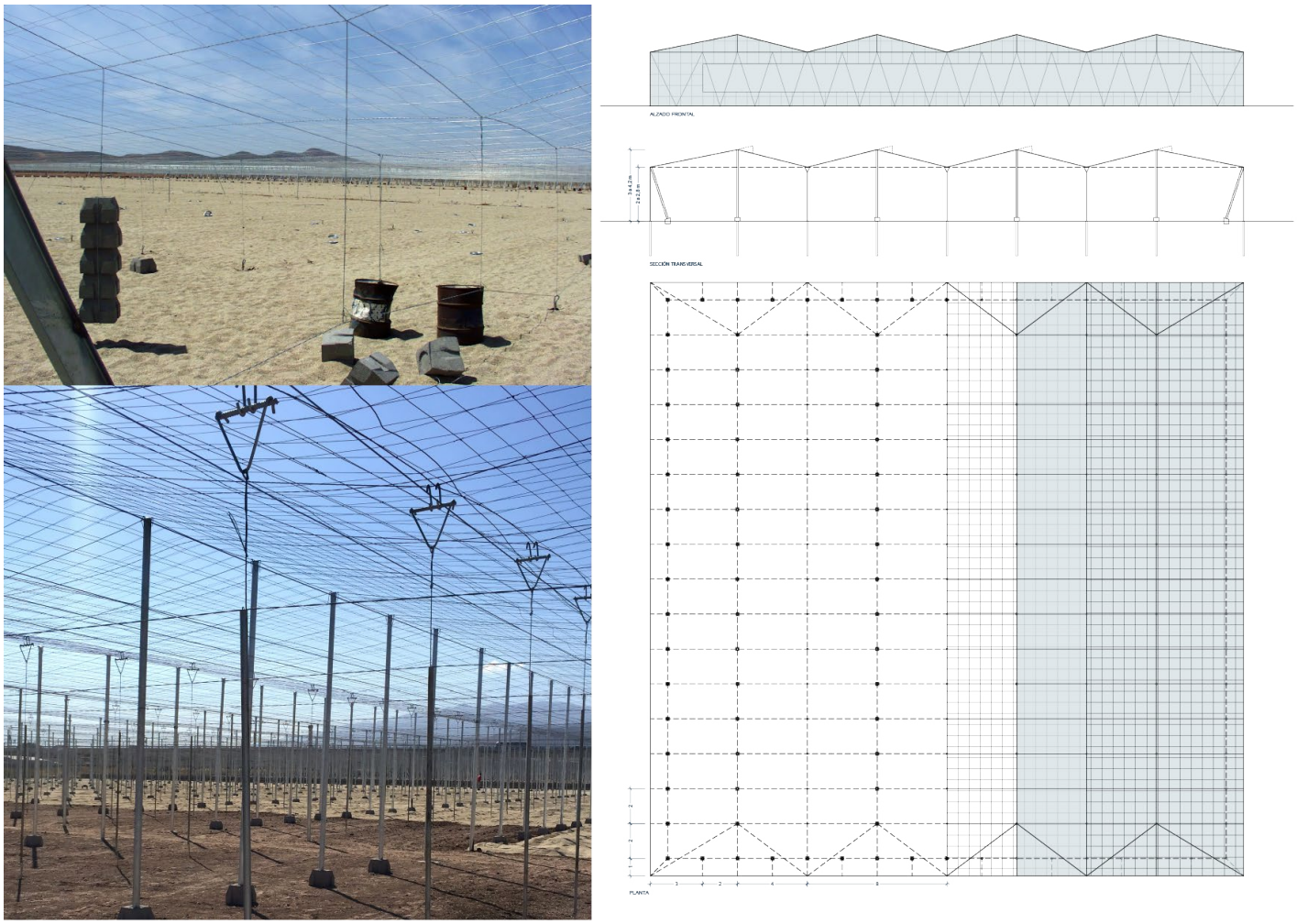
The Almerian greenhouse: singularity and sophistication

Beyond its agricultural function, the Almerian greenhouse constitutes a sophisticated model of integration between structure, climate, and perception. Emerging in the 1960s in Campo de Dalías under the auspices of the *Instituto Nacional de Colonización*, its form adapted the vineyard system, or *parral*, from La Alpujarra to the coastal context. We can find specific technical details on greenhouse typologies and crop types in (Luque García, 2023, pp. 261-286; 287-385; Valera Martínez et al., 2016; Fundación Cajamar, 2025).

That vernacular structure of posts, wire, and plastic evolved over a few decades to become a refined environmental typology (Hernández Arango, 2014). The '*raspa y amagao*' type exemplifies this transformation. Its mixed system —rigid profiles, tensed cables, translucid film— generates a logic of efficient tensegrity: minimum material, maximum climate control (Ávalos-Sánchez et al., 2023; Valera Martínez et al., 2016). Techniques such as whitewashing, which attenuates solar radiation, and passive natural ventilation allow the interior to be tempered between 2 and 5 degrees with respect to the exterior without requiring mechanical air conditioning (Centro Experimental Valencia, 2016; Fundación Cajamar, 2025). Structural lightness is not circumstantial; it is an active principle. Unlike other solutions, this model has a smaller environmental footprint —between 0.5 and 1.3 kg CO_2 eq/m^2 as compared to the 2.9 kg of a glass greenhouse— (Antón et al., 2014). This lightweight architecture refers to nomadic traditions where, rather than defining physical boundaries, the enclosure regulated atmospheres (Faegre, 1979; Guacheta-Alba et al., 2023). Space becomes a living medium. Light, nuanced by the whitewashing; the air, regulated by minimal openings. The atmosphere becomes material for the project (Figure 3).

From this perspective, the ephemeral implies openness, not weakness. Borghi (2022) relates it to a 'lost spatiality', more permeable than permanent. Ebeling, in *Raum als Membran* (1926), already proposed an architecture conceived as a sensitive envelope that modulates light, heat, and air, as opposed to the rigidity of the

Figure 3
The Almerian greenhouse, an example of a tensegritic-spatial system.



Note. Images courtesy of the author.

wall (López del Río, 2024; Pancorbo Crespo & Martín Robles, 2014). Jofré & Ortega (2020) extend the ephemeral towards other visually unstable forms, where transparency and the reflection generate ambiguous, fluctuating, and perceptive experiences of the mutable, the ambiguous, the atmospheric. The greenhouse thus acts as an atmospheric interface. Its programmatic isotropy and enveloping spatiality situate the body in the center of the experience. In line with Gernot Böhme (2017), an 'atmospheric architecture' is configured, aimed at sensations rather than representation. The Almerian greenhouse, then, not only grows vegetables: it also cultivates presence, desire, climate, and light. It is presented as a conceptual operator where technique, perception, and matter are intertwined in a single project logic (Kousidi, 2023).

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The greenhouse as architectural artifact

Beyond its agro-industrial utility, the greenhouse has been progressively reinterpreted as architectural artifact: a conceptual operator that articulates technique, climate, perception, and society. It is no longer a peripheral infrastructure, but a figure capable of condensing, from within its lightweight logic and atmospheric performativity, new ways of inhabiting. This re-reading manifests itself with particular clarity in the work of Lacaton and Vassal who, in Maison Coutras (2000), explore the domestic potential of the multi-tunnel greenhouse, transforming an agricultural typology into habitable space. The strategy is radicalized in Manifiesto City (2005), where they propose an expanded notion of luxury based on generous spatiality, natural light, and environmental qualification, and not in the use of noble materials (Druot et al., 2011) (Figure 4). These project tactics have been updated by the architects in proposals that revisit the notion of architectural resilience and the recycling of collective housing, and incorporate the greenhouse as a formal and environmental matrix to imagine second habitable lives in the *grands ensembles* of the 20th century (Luque García, 2023; Tostões y Silva, 2020; Trzcińska, 2021).

Figure 4
Domestication of the productive greenhouse

Note. From left to right. The multi-tunnel greenhouse as prototype of inhabiting, in Maison Coutras (2000) and Manifiesto City, Mulhouse (2005).

Source. Images courtesy of Anne Lacaton and Philippe Vassal. Photo by Philippe Rouault.

In the present urban context, the greenhouse is reconfigured as a hybrid infrastructure that articulates food production, material sustainability, and public space. The Oberehausen administrative building (2019), designed by Kuehn Malvezzi, or the ICTA-ICP center (2014), by H Arquitectes, exemplify this vision by operating as ecologic and social mediators. The productive roofs, far from being mere technical devices, are projected as landscapes for the reconnection between city and nature (Appolloni et al., 2021; Nadal et al., 2017). This line is expanded in proposals like the Design District Canteen (2021) by SelgasCano, the Floating Farm Dairy in

Rotterdam (2019) or the B-Flat Commune market in Tokyo (2023), where the greenhouse acts as an architectural interface between crops, consumption, and sensitive experience (Nakamura, 2024). These practices align with Ivan Illich's notion of *conviviality*: a technology at the service of more autonomous, symbiotic, and cooperative life forms. Consequently, the reintegration of agriculture in the city does not imply a bucolic regression, but a strategic re-reading of urban production, capable of dissolving the dichotomy between countryside and metropolis and activate new ecologies of inhabiting (Pitarch-Alonso, 2023). The greenhouse, understood from an architectural perspective, is then projected as key typology to imagine more sensitive, productive, and permeable urban futures.

METHODOLOGY

Between practice and thought

Addressing the relation between built work and architectural thought requires going beyond the formal description. It is necessary to explore the systems of sense that emerge from the practice itself. The project is here conceived as a generative mechanism and not as a mere execution of previous ideas. In *Patterns of Intention*, Michael Baxandall (1989) proposes an inferential critique, oriented more towards explaining than interpreting. Architectural works, he points out, are intentioned responses to problems that are historically, technically, and culturally contextualized. Jorge Torres Cueco (2017) carries this perspective to the architectural field and defends the project as a legitimate form of academic investigation, capable of producing knowledge from within its internal processes. From this methodological basis, the present work structures its analysis around three interdependent dimensions: the *causa efficiens* (causality of the object), the *significatio* (autonomy of meaning) and *cogitatio* (representation of thought). More than closed frames, these vectors allow us to understand how architecture thinks from within its making; how built matter generates critical discourse. The representation of thought does not precede the project: it emerges as a result of the interaction between project experience and theoretical elaboration.

The *causa efficiens* is materialized here in the Pabellón Polideportivo de Garrucha, whose lightweight structure, environmental logic, and lighting quality are in an open dialogue with the phenomenology of the Almerian greenhouse. Far from being interpreted as a typological shift, it is about a re-reading of the project that condenses —and translates— tectonic, climatic, and perceptive principles of an agricultural architecture in a contemporary key. The architectural work operates as a signifier, that is to say, as material activator of a spatial concept that transcends its functional program. In parallel, the *significatio* is deployed in the thesis *El jardín de los deseos* (The Garden of Desires) where a device is constructed which

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reinterprets the Almerian greenhouse as architectural artifact. Rather than limiting itself to a typological genealogy, it proposes an intensive reading in which the greenhouse becomes a contemporary archetype, capable of concentrating experiments related to atmosphere, sustainability, and material exploration (Seamon, 2024). Thus, the thesis constitutes itself as an autonomous device for the production of meaning, whose reflections exceed the literal interpretation of the case studied.

From tis double operation emerges *cogitatio*, understood as the representation of architectural thought. According to Fernández-Valderrama (2004), the distance between work of architecture and theory does not imply dissociation, but alternance between comprehension *(con)* and explanation *(ex)*, following the distinction formulated by Marina (2016). To think from architecture implies elaborating ideas from form, context, and experience. By becoming a shared reference between finished work and thesis, the green house allows to trace intentional patterns that reflect central concerns of the contemporary discipline, in particular those related to structural lightness, atmospheric modulation, and spatial de-hierarchization (Baxandall, 1989). It is not an illustrative case: it acts as an epistemic operator. It articulates theory and practice, thought and matter. Its threefold condition —signifier, signified, archetype[2]— renders it a methodological tool capable of organizing disciplinary knowledge (Pizoni, 2024). Therefore, the object is not closed off to interpretation: it remains open. I acts as a catalyst of thought. The methodology proposed here explores this condition: an architecture that thinks from what it does, that elaborates knowledge from matter, form, and the atmosphere.

RESULTS

Dialogues between matter and concept: manifestations of the spatial paradigm

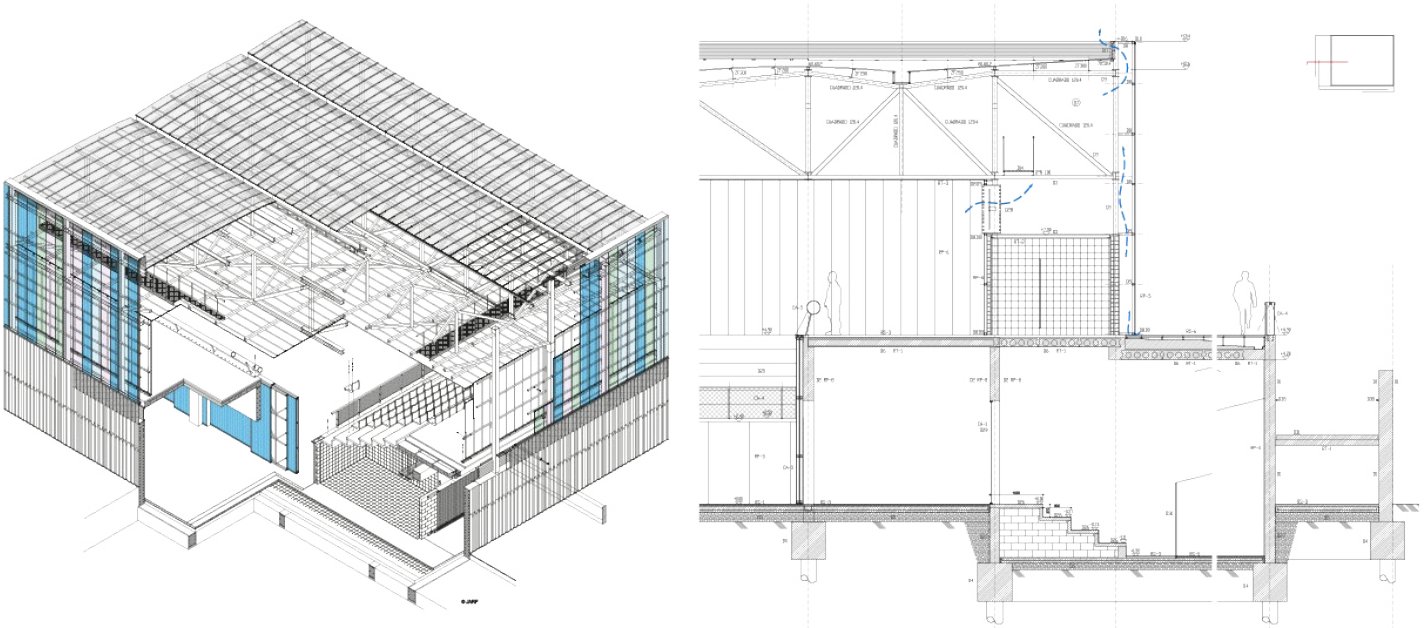
The causality of the object

The Almerian greenhouse can be read as a dense atmospheric environment, where light, temperature, humidity, and air form a sensory continuum. Far from operating as isolated variables, these physical conditions are intertwined in a field of intensities. It is a fluid spatiality, described as 'supercritical space', in analogy with those thermodynamic states in which liquid and vapor coexist without boundaries. This atmosphere is no longer a neutral background, but redefines the architectural experience, transforming it from a perception based on accumulated volume to a fully sensory immersion. The Garrucha Sports Pavilion inherits and translates this logic. It does so through a double translucent skin that, instead of enclosing, wraps the space.

[2] Archetype (from the Latin archetўpum, and this from the Greek ἀρχέτυπον archétypon, with accentuation influenced by the French archétype): original and fundamental model in the field of the arts or other disciplines. Synonyms: model, prototype, paradigm, among others.

The metal structure is contained by a polycarbonate skin that regulates temperature, filters light, and protects from excessive sunlight. The atmosphere ceases to be an effect. It becomes design material. Inside, diffused light erases shadows, dissolves contours, and expands spatial perception (LosdelDesierto et al., 2009, 2015). That sensation of weightlessness triggers a complex experience. The body does not traverse space: it inhabits it as an enactive field. According to Feldges (2021) and Griffero (2023), space is grasped not only visually. It is experienced through the skin, sound, and breath. The pavilion, rather than reproducing the greenhouse, interpolates its atmospheric logic. It translates it into a phenomenological spatiality. In this sense, architecture functions as a *sensorium*: a place where body and environment are interwoven. (Salazar González & Jiménez-Fajardo, 2022). Tectonically, the building articulates two traditions: the stereotomic —based on mass— and the tectonic —based on lightness. As pointed out by Campo Baeza (2021), the former captures light by incisions; the latter, by filters. In Garrucha, both are intertwined: mass disappears, structure dissolves leaving a suspended plane that connects the sky and the ground through

Figure 5
The atmospheric artifact, between the tectonic and the stereotomic



Note. Isometric view of Pabellón Polideportivo de Garrucha.

Source. Graphics courtesy of LosdelDesierto (ELAP) (Isometric drawing: Juan Antonio Rodríguez).

an almost immaterial horizontality (Marcos et al., 2020). The translucent skin acts as an active threshold. A membrane that does not act as a closure, rather as an active mediator. Thus, the space is defined by its atmosphere. It is not a backdrop. It is sensitive form. Architecture becomes a perceptual field. Embodied experience. Atmospheric thinking (Figure 5).

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The autonomy of meaning

In dialogue with the built experience, the thesis *El jardín de los deseos* proposes a reading of the Almerian greenhouse as an architectural artifact laden with meaning. It is not merely a productive infrastructure. In its material specificity —plastic skin stretched over a minimal structure— the greenhouse reveals its symbolic potential. It is configured as a unit of mediation, where body, atmosphere, and form converge (Luque García, 2023). A space that links technique and perception, where matter stopped being a passive backdrop to become an agent of experience. A relation that Koolhaas (2018) associates with the conception of sublime space: abstract, lightweight, and phenomenological. This architectural device articulates essential principles in contemporary thought: spatial continuity, shadowless modulation, tectonic lightness, economy of means. An active tension between minimal elements generates a homogeneous, hierarchy-free space. The translucent skin, rather than closing, mediates. It filters. It envelops. Technique becomes atmosphere, and the atmosphere, thought. This design operation transforms the skin into an interface. It redefines the relationships between structure and context, between interior and exterior. The greenhouse thus becomes part of the genealogy of archetypes that destabilize the canonical categories of mass, permanence, and limit. It is more 'anti-building' than building (Parra Bañón, 2022). Buckminster Fuller anticipated it: ephemeral architecture is strategic and non-collateral. A radical way of producing meaning with the minimum (Luke, 2010).

To this light and modulated spatiality, a deeper dimension is added. The greenhouse can be thought of as a 'spatial object' (Calduch Cervera, 2013): a perceptual entity that brings together mass, emptiness, and atmosphere in a single gesture. This condition activates the 'peripheral perception' described by Pallasmaa (2014), where space is not contemplated, but sensorially inhabited. The atmosphere is not experienced as a backdrop, but rather as the medium in which the experience unfolds. Ontologically speaking, the greenhouse alludes to both the Platonic *khôra* and the Aristotelian *tópos*: receptacle and place. It is an interior that holds an exterior. A welcoming figure. A landscape in itself. In tune with Heidegger's notion of 'bridge' —that which brings together and situates—, the greenhouse functions as a point of symbolic condensation (Heidegger, 1994). It holds, filters, connects. It becomes an atmospheric container and, at the same time, an activator of thought.

Conceptual convergences

From the intersection between built work and theoretical research, converging patterns emerge that position the greenhouse as a contemporary architectural paradigm. This articulation occurs through an expanded notion of transparency, understood as a condition of transfer rather than an optical attribute. Thus, a fluid integration is

generated between interior and exterior, structure and atmosphere, technique and perception. Within this framework, architecture is transformed by its capacity to mediate. Mediating is more than uniting; it is creating relationships. The Almerian greenhouse —with its tensile structure, modulation of light, and spatial continuity— operates as a multiple transfer device. Its power lies not in spectacular gestures, but in repetition, economy, and honesty. In line with Peter Zumthor's sensitivity to light and matter as generators of meaning, and with Juhani Pallasmaa's vindication of the value of the vernacular as a support for identity. (Andersen, 2012), this architecture is rooted in simplicity. Light, texture, climate. Everything is articulated as a situated response. An identity is constructed that moves away from the generic and is affirmed in sensory experience. From this perspective, the greenhouse transcends its technical function. It becomes a tenso-spatial archetype of relational architecture. Translucency, far from being a decorative resource, is activated as an operating principle. It is process, not image. It modulates intensities, generates contextual meanings, and articulates spatial relationships. Its ability to operate between the material and the atmospheric, between technique and perception, positions it as a productive figure from which to rethink the relationships between construction, habitation, and thought.

The ephemeral condition acquires also a new value. It refers to a visual instability that transforms architecture into a sensitive threshold ,rather than a merely transitory condition. Form is no longer fixed: it fluctuates, responds, adapts. In this latent state, lightweight materials and translucent skins cease to be technical solutions and become mediators of an expanded atmospheric experience (Jofré Muñoz y Ortega Culaciati, 2020). Translucency, therefore, acts as an operational and philosophical principle. More than a finish, it is a system of relationships: it modulates light intensities, conditions the mood, and adjusts the link with the environment. The atmosphere, according to Böhme (2017, 2021), is not an effect, it is substance. It is the medium from which a situated experience is constructed. From this perspective, the Almerian greenhouse asserts itself as an operational model. A place where architecture acts as a mediation between body and environment, between technique and desire (Figure 6).

THE REPRESENTATION OF SPATIAL THOUGHT

Stemming from the previous analysis, architectural thinking is presented here as a form of active representation: a field where material intuition is transformed into conceptual density. Where design operations acquire critical depth, structures of meaning are condensed. This representation is not a formal transcription. It emerges as an exchange between matter and atmosphere, technique and affection, perception and form. At the same time, it acts as a philosophical mediation that modulates the relationships between interior and exterior, between structure and atmosphere.

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Figure 6
Exterior and interior view of Pabellón Polideportivo de Garrucha (Almeria) 2010

Note. Courtesy of LosdelDesierto (ELAP). Photo: Jesús Granada.

To represent spatial thought implies translating the sensory in a critical way. It requires an attentive language capable of dissolving appearance into context. As stated by Nietzsche, it is a matter of "dissolving an image into a concept" (2013, p. 95), of expanding the immediate into a symbolic and shared dimension. In this shift between perception and theory, architectural thinking is activated as a situated cultural form. The process of reconfiguration transforms the sensible into the intelligible, opening links between local scales and broader cultural systems. In this framework, the figure of the bridge, according to Heidegger, acquires a renewed value. It does not unite extremes: it welcomes. It brings together body and environment, earth and sky, technique and desire. The greenhouse, with its homogeneous light and calibrated atmosphere, generates this field of mediations. It is inhabited from within the phenomenon. It is not contemplated, it is traversed.

This logic can be deployed in a genealogy of spatial models that reveal how architecture has historically negotiated different forms of relation between structure, perception, and experience. Four representative configurations allow us to trace this transit towards a contemporary understanding of spatial thought (Figure 7):

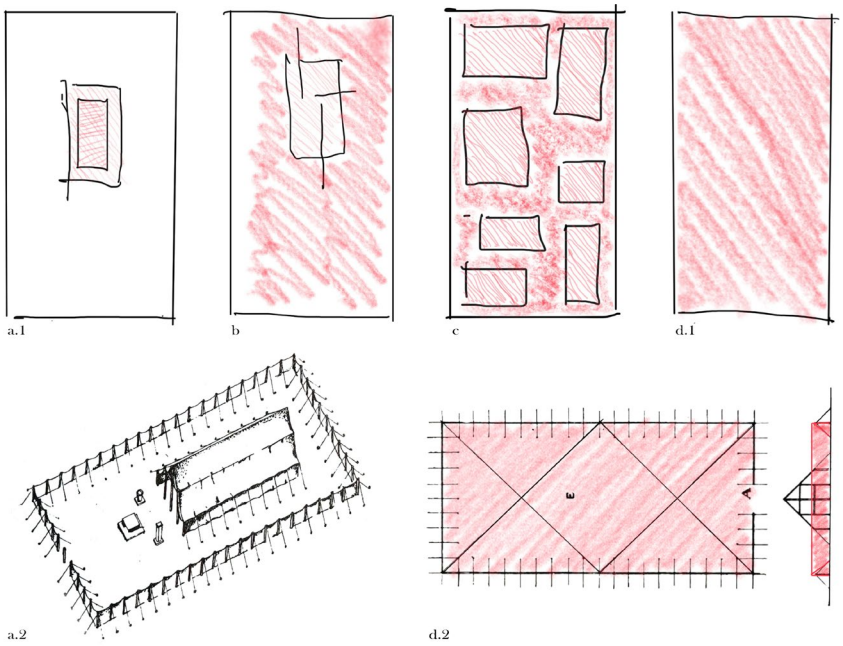

Figure 7
Evolutionary models of spatial thinking: from framed landscape to architecture as mediated landscape

*Note.*Conceptual evolution of architectural space in the floorplan: (a.1) framing of the landscape, in reference to (a.2) Temple Primitif by Le Corbusier; (b) dissolving of boundaries; (c) spatial atomization; (d.1) space as an atmospheric field; (d.2) interpretation of the greenhouse space over floorplan and elevation view of the Temple Primitif (1923).

Source. Images courtesy of the author. (a.2; d.2) (Le Corbusier, 1995, pp. 55-56).

First model: the place as a framing of the landscape. From the Temple Primitif (1923) to the *Ville Savoye* (1928), Le Corbusier proposes an architecture where built space acts as a geometric framework that qualifies the landscape. Although visually open, this scheme organizes the experience through sequential routes, where elements such as the *pilotis* or the *fenêtres en longueur* mediate the perception of the environment as a fragmented visual narrative (Colomina, 1987). Here, the observer remains differentiated from space, reaffirming the autonomy of the architectural object.

Second model: the dissolution of material boundaries. In works like the Brick Country House (1924) or the German Pavilion (1929), Mies van der Rohe introduces a geometry of open walls and glazed surfaces that expands the space outwards. Influenced by neoplasticism, this model develops a fluid spatiality where hierarchies between full and void are relativized, shifting the focus toward abstraction as an organizing principle, guiding architecture toward the essentiality of space (Altés Bustelo, 2013; Santatecla-Fayos, 2005; Santatecla-Fayos et al., 2024).

Third model: the atomization of architectural space. In the Moriyama House (2005), by Ryue Nishizawa, and the Japan Pavillion (2008) by Junya Ishigami, architecture dissolves into the landscape, and the boundaries between the built and the natural are dissolved (López del Río, 2022). In particular, Ishigami

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reinterprets vernacular Japanese structures through acrylic greenhouses that encapsulate natural fragments, subverting the traditional logic of the shelter. The dispersion of these lightweight acrylic glass structures supported by steel tubes atomizes the architecture in the landscape, reconciling scale, proportion, and program with nature. The living space extends outwards, organized by outdoor furniture, while vegetation acts as a thermal regulator, redefining the interaction between architecture and environment (Ishigami, 2008; Juarranz, 2018; Vitorino, 2018).

Fourth model: architecture as mediated landscape. This paradigm is consolidated in the KAIT Workshop (2004–2008) and Horizon (2010), also by Ishigami. Derived from research on greenhouses, both works propose a radical horizontality where space and structure form a continuous field that operates in terms of being-landscape rather than seeing-landscape. In the KAIT Workshop, a multiplication of slender pillars evokes a 'forest' structure, a contemporary version of the hypostyle hall, homogeneous and without hierarchy, similar to SANAA Park Café (Kazuyo Sejima and Ryue Nishizawa), destabilizing any perceptual center. (Carrasco Aparicio y Gamarra Sampén, 2024; Jaraíz, 2013). Horizon, instead, proposes an almost total dematerialization, where the interior merges with the landscape, and the structure disappears in favor of an enveloping atmosphere, sharing a great similarity with the Almerian greenhouse (Ichikawa, 2023). Both typologies share fundamental taxonomic characteristics: 'horizontal' structures, lightweight materiality, and hybrid atmospheres, which redefine liquid space as a 'playground', a place where things simply happen without impositions, in an immersive and spontaneous experience (Castro Marcucci et al., 2021; López, 2018; Nurjannah et al., 2024) (Figure 8). The Pabellón Polideportivo de Garrucha is inscribed in this type of unitary and horizonal spatial model. Essentially, the greenhouse space is constituted, in other words, a space that contains, within itself, a trapped landscape.

The evolution of these models reveals a decisive shift in the way spatial thought is represented: from the modern ideal of visual transparency and formal synthesis to denser configurations, where the construction itself operates as an active mediator between bodies, materials, and atmospheres. Representing architectural thought, therefore, involves opening up a symbolic territory where sensory experience takes on a constructed form. In this context, the greenhouse stands out as a paradigmatic figure. Its continuous spatiality, minimal structure, and homogeneous atmosphere make it a device of mediation, in tune with Pallasmaa's notion of full habitation and Peter Zumthor's

Figure 8
Conceptual synergies: the greenhouse space as an atmospheric field

Note. From top to bottom. Contemporary greenhouse for wasabi production; 1:50 scale model of the structure of KAIT Workshop (2008), Junya Ishigami + associates; greenhouses in Honshu, Japan (1999); prototype model of Horizon (2010).

Source. Courtesy of the author; Frac Centre-Val de Loire (www.frac-centre.fr); Yann Arthus-Bertrand (www.yannarthusbertrand2.org); junya.ishigami+associates. Photographer: Yasushi Ichikawa.

idea of silent rooting, which he attributes to architectures that remain without having to impose themselves (Andersen, 2012). It seeks to foster, not to expose. Its design logic activates the sensory, allowing atmospheric conditions to unfold without forcing them. In this availability, in this attention directed to the place is where its power lies. From this clear perspective — that of someone who arrives without preconceptions, ready to perceive what the environment has to offer— a spatial concept emerges that intertwines technique, desire, and identity. A form of knowledge that arises from doing, from experimenting, from adjusting. A thought that unfolds at the intersection between the material and the atmospheric, between the structural and the perceptual, and which finds in the greenhouse a contemporary archetype: a tense synthesis between structure, atmosphere, and lived form.

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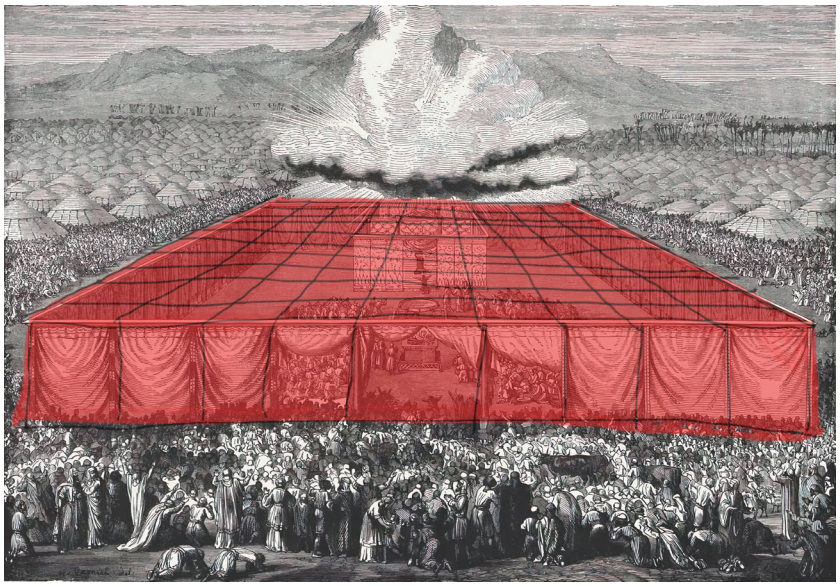
CONCLUSION

This article explored the emergence of the Almeria greenhouse as an operational figure capable of articulating a contemporary architectural logic where technique and perception are intertwined with precision and openness. Based on the intersection between a constructed work —the Garrucha Sports Pavilion— and subsequent theoretical research —*El jardín de los deseos*— a situated methodology has been deployed in which thought emerges from practice itself, id does not anticipate architecture. Every built form contains a material memory that, when reinterpreted, projects future possibilities. In this context, rather than starting from the exceptional, the essential emerges from a sensitivity directed toward the common, toward that which persists in its daily use. The four spatial models proposed outline a genealogy of architectural thought that connects modern aspirations with new forms of environmental and perceptual sensitivity. This evolution implies a shift from the visual framing to more diffuse configurations, where the architectural enclosure acts as a field of mediation, not as a limit. Contemporary architecture is increasingly defined by its ability to articulate complex transitions between the material and the atmospheric, between the technical and the experiential. In this journey, the greenhouse consolidates itself as a project-space paradigm and epistemic figure, capable of operating as a case, model, and method within the fourth model represented: far removed from a merely technical or productive vision.

As discussed here, the Almeria greenhouse embodies an architectural archetype that integrates the vernacular, the atmospheric, and the technical. Its lightweight structure, controlled modulation of light, and non-hierarchical spatiality offer a localized response that avoids generic abstraction. This seemingly neutral architecture is activated by bodily experience: in a light that does not dazzle, in a skin that does not separate, in an atmosphere that does not adorn but constitutes the space itself. Translucency functions as an operating principle: it does not represent, it happens. Its conceptual power lies in its condition as a threshold between interior and exterior, between matter and atmosphere. Theory, rather than closing off the object, allows it to operate as a catalyst for thought. Thus, from its technical specificity and perceptual capacity, the greenhouse reveals itself as a figure capable of rearticulating the relationships between inhabiting and building, between disciplinary knowledge and sensory experience. Rather than closing off a meaning, this work opens up a horizon from which to rethink, in a situated key, the possible forms of an architecture to come (Figure 9).

Figure 9
Representation of the Almerian greenhouse over Moses' Tabernacle



Note. Photomontage based on Moses' Tabernacle, illustrated interpretation of Exodus:40, *Biblia Pictórica Popular*, 1862.

Source. Courtesy of the author.

CONFLICT OF INTERESTS

The author declares no conflicts of interest.

DECLARATION OF AUTHORSHIP

Eva Luque-García: Conceptualization, Fundraising, Research, Methodology, Project Management, Supervision, Visualization, Writing – original draft, Writing – copy proofing and editing.

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