Vesper
Rivista di architettura, arti e teoria
Journal of Architecture, Arts & Theory

No. 12 | Solar
Primavera | Estate 2025
Spring | Summer 2025

ISBN 978-88-229-2336-3
ISSN 2704-7598
DOI 10.57644/Vesper012

Fundamentals
222 – 223
A period

Lorenzo Renzullo

DOI 10.57644/Vesper012_030

The Mock-up as a Tool of Experimentation. Several Cases of Ignazio Gardella

Keywords
Mock-up, Punta Ala, façade, device, Ignazio Gardella
Parole chiave
Mock-up, Punta Ala, facciata, dispositivo, Ignazio Gardella

Abstract

The Mock-up as a Tool of Experimentation. Several Cases of Ignazio Gardella

The use of full-scale *mock-ups* played a central role in the architectural design process since the second half of the 20th century, contributing to the experimentation of innovative procedural methodologies. Due to their replicative properties – capable of simulating the spatial and material behaviour of the real object – *mock-ups* were employed to progressively assess the influence of environmental factors on the theorised aesthetic and construction solutions. Spanning the ideation and execution phases, and involving the observer in a kinaesthetic manner, the analytical data conveyed to the object were revised in light of the physical experience conducted in the field. The practice of full-scale models in Italian architectural culture emerges through the singular case of the *mock-ups* for the Tourist Residential Settlement project in Punta Ala (1962-1966) by architect Ignazio Gardella, aimed at exploring and physically testing the experimental effects of the interplay between natural light and the responsive object.

The Mock-up as a Tool of Experimentation. Several Cases of Ignazio Gardella

Lo strumento del *mock-up* in scala reale ha rivestito un ruolo centrale nel processo di progettazione architettonica dal secondo Novecento, contribuendo alla sperimentazione di innovative metodologie procedurali. In virtù delle sue proprietà replicative – in grado di simulare il comportamento spaziale e materico dell'oggetto reale – il *mock-up* è stato impiegato per valutare, in maniera progressiva, l'influenza dei fattori ambientali sulle soluzioni estetico-costruttive teorizzate. Dispiegandosi tra il processo ideativo ed esecutivo, anche coinvolgendo cinestesicamente l'osservatore, i dati analitici trasmessi all'oggetto venivano revisionati a valle dell'esperienza fisica effettuata sul campo. In tale ambito, l'evidenza di una pratica del modello in scala reale nella cultura architettonica italiana emerge attraverso il singolare caso dei *mock-ups* del progetto del Complesso residenziale turistico a Punta Ala (1962-1966) dell'architetto Ignazio Gardella, volto ad approfondire e testare fisicamente quegli effetti sperimentali di interscambio la luce naturale e l'oggetto reagente.

Università Iuav di Venezia
Department of Architecture and Arts

VESPER No. 12

SOLAR

Quodlibet

9 788822 923363
ISBN 978-88-229-2336-3
ISSN 2704-7598 € 18

Università Iuav di Venezia
Dipartimento di Culture del progetto

VESPER No. 12

SOLAR

Luigi Ghirri, *Bastia*, 1976. © Eredi di | Heirs of Luigi Ghirri.

Spring | Summer 2025
Journal of Architecture, Arts & Theory

Primavera | Estate 2025
Rivista di architettura, arti e teoria

Vesper
Rivista di architettura, arti e teoria

Vesper è una rivista scientifica semestrale, multidisciplinare e bilingue, si occupa delle relazioni tra forme e processi del progetto e del pensiero. Ponendo lo sguardo al crepuscolo, quando la luce si confonde con il buio e l'oggetto illuminante non è più visibile, *Vesper* intende leggere l'atto progettuale seguendo e rendendo evidente il moto della trasformazione. Pitagora identificò nel pianeta Venere sia la stella della sera (*Hesperos*) che quella del mattino (*Phosphoros*), i due nomi si riferiscono allo stesso astro ma posto in condizioni temporali differenti. *Vesper* dichiara quindi una posizione più che un oggetto e privilegia il situarsi che ne profila lo statuto. Non è qui accesa la luce tagliente dell'alba, che promette giorni completamente nuovi e alti sol dell'avvenire, ma quella che fa intravedere nella penombra una possibilità nell'esistente.

Richiamando e rinnovando la tradizione delle riviste cartacee italiane, *Vesper* ospita un paesaggio articolato di modalità narrative, accoglie forme di scrittura e stili differenti, privilegia l'intelligenza visiva del progetto, dell'espressione grafica, dell'immagine e delle contaminazioni tra linguaggi. La rivista è pensata nella sua successione di numeri tematici come discorso sulla contemporaneità, nello spazio di ogni singolo numero è articolata in un insieme di rubriche che gettano luci differenti sul tema. Nel procedere delle diverse sezioni – editoriale, citazione, progetto, racconto, lezione, saggio, inserto, traduzione, archivio, viaggio, ring, tutorial, fundamentals – mutano i riverberi tra idee e realtà, si accende l'intreccio tra evidenze concrete e loro potenzialità, potenziali trasformativi, immaginari. Le rubriche sono pensate non per aggiornare istantaneamente ma per indagare condizioni progettuali e per fornire strumenti e materiali dall'*ombra lunga*.

Vesper
Journal of Architecture, Arts & Theory

Vesper is a six-monthly, multidisciplinary and bilingual scientific journal which deals with the relationships between forms and processes of thought and of design. Gazing into the dusk, when light slowly merges with darkness and the illuminating object is no longer visible, *Vesper* aims to interpret the act of designing through tracing and revealing the movement of transformation. Pythagoras identified in the planet Venus both the evening star (*Hesperos*) and the morning star (*Phosphoros*), assigning the two names to the same star observed in different temporal conditions. *Vesper* thus states a perspective rather than an object, privileging the condition that defines its status. Rather than the sharp light of dawn, heralding a brand-new day and promising a brighter future, it is the twilight that allows you to have a glimpse at the potential of what is already there.

Following the tradition of Italian paper journals, *Vesper* revives it by hosting a wide spectrum of narratives, welcoming different writings and styles, privileging the visual intelligence of design, of graphic expression, of images and contaminations between different languages. The journal is conceived as a series of thematic issues that build a discourse on the contemporary. Each issue is divided into sections that offer a range of diverse perspectives on the theme analysed: editorial, quote, project, tale, lecture, essay, extra, translation, archive, journey, ring, tutorial, fundamentals. Throughout the different sections, reverberations between ideas and reality change, connections emerge between tangible facts and their potentials, transformative prospects, collective perception. The principal aim of these sections is not to provide instant news, but to offer an in-depth investigation of different instances of design and to provide tools and materials that have a long-lasting effect.

Università Iuav di Venezia
Department of Architecture and Arts

Università Iuav di Venezia
Dipartimento di Culture del progetto

VESPER No. 12

SOLAR

Spring | Summer 2025
Journal of Architecture, Arts & Theory

Primavera | Estate 2025
Rivista di architettura, arti e teoria

Luigi Ghirri, *Rimini*, 1977. © Eredi di | Heirs of Luigi Ghirri.

Editoriale | Editorial
6 – 13 Sara Marini
Solar

Citazione | Quote
14 – 15 Dino Buzzati
Nothing

Breve estratto da un testo critico che definisce la rotta o le coordinate di attraversamento del tema. | Brief excerpt from a critical text concerning different perspectives on the topic.

Inserto | Extra
16 – 26 Francesco Jodice
Colpo di sole
Sunstroke

Forma e modo d'espressione di questa rubrica sono a discrezione dell'autore. | The section consists in the original contribution of an author.

Saggi | Essays
28 – 43 Tim Matts
Downstream of Starburn. Accelerationism and the War Against the Sun
A valle di Starburn. L'accelerazionismo e la guerra contro il Sole

Saggi critici articolati in citazioni, note, iconografie e una bibliografia. | Essays including quotes, notes, iconography and bibliography.

44 – 59 Agostino De Rosa
Sotto il segno dell'astro cabalistico. Alfabeti di fuoco e immagini modellate dal Sole
Under the Sign of the Kabbalistic Star. Alphabets of Fire and Images Shaped by the Sun

60 – 71 Andreas Körner
Thriving Chronodiversity. Contextualising Weathering as Ornament in Architecture
Thriving Chronodiversity. Contestualizzare il *weathering* come ornamento in architettura

72 – 85 Alberto Petracchin
All'ombra della piramide. Magia e tecnica dell'architettura solare
In the Shadow of the Pyramid. Magic and Technique in Solar Architecture

86 – 88 Bibliografie | Bibliographies

Racconti | Tales
90 – 97 Jimmi Pianezzola
Villa no. 3. Dispositivo solare
Villa no. 3. Solar Device

Narrazioni testuali o per immagini attraverso realtà note o ipotetiche. | Textual or visual narratives exploring actual or hypothetical worlds.

98 – 100 Pier Franco Midali
Viganella Double Sun

Archivi | Archives

102 – 109 Gabriella Liva
Archivio di luci. Il calcolo e la geometria delle aurore boreali
The Light Archives. Calculations and Geometry of Aurora Borealis

Testo critico che accompagna una selezione di materiali d'archivio presentati con le loro coordinate di provenienza. | Critical text accompanying a selection of archival material presented with its source reference.

110 – 113 Valter Scelsi
Set the Controls for the Heart of the Sun

114 – 119 Silvia Berselli
Come entra il Sole nell'atelier? Excursus non esaustivo sulla luce naturale nei luoghi della creazione artistica
How Does the Sun Enter the Atelier? A Non-exhaustive Excursus on Natural Light in Places of Artistic Creation

120 – 126 Pierluigi Grandinetti
Un gruppo di torri all'orizzonte. Sul progetto di Gianugo Polesello per il Concorso di Schio
A Group of Towers on the Horizon. About Gianugo Polesello's Project for the Schio Competition

Progetti | Projects

128 – 137 Giulia Bersani, Davide Zaupa
Noor CSP. Solar Deserts

Contributi che indagano le ragioni, le *mise-en-scène*, le risultanti di progetti attraverso le voci degli autori e/o di critici. | Contributions that investigate the reasons, the *mise-en-scènes*, and the results of projects throughout the voices of the authors and/or the critics.

138 – 147 Francesca Belloni
Greenhouse: abitare e costruire la poetica del sole. Diciotto *logements* a Rixheim di Lacaton & Vassal
Greenhouse: Inhabiting and Building the Poetics of the Sun. Lacaton & Vassal's Eighteen *Logements* in Rixheim

148 – 157 Simone Gobbo
Cosmologie e amnesie *sans titre* nel progetto M26 di BAST
Sans Titre Cosmologies and Amnesias in BAST's M26 Project

158 – 166 inter- with | con Živilė Mantrimaitė
Solar Laboratory. Re-powering The Domestic

Viaggi | Journeys

168 – 177 Sandro Rolla
Hidden Shadows. China's Dual Soul

Resoconto di un viaggio fisico o immaginario e delle sue evoluzioni temporali e spaziali. | A physical or imaginary journey in its temporal and spatial development.

178 – 187 Anna Livia Friel, Marco Provinciali with | con Giovanna Silva
Quebra-sóis. Technology and Abstraction in Brasilia
Quebra-sóis. Tecnologia e astrazione a Brasilia

Building

188 – 197 Studio Other Spaces (Ólafur Elíasson, Sebastian Behmann)
A Solar Study in Light and Reflection. Common Sky and Vertical Panorama Pavilion

Contributo che indaga la costruzione di un progetto attraverso disegni tecnici di dettaglio e un testo critico. | Contribution that investigate the building process of a project through detailed technical drawings and a critical text.

Ring

198 – 205 Hugo de Almeida Pinho
Solar Capital

Fronteggiamento tra posizioni differenti poste sullo stesso "campo di gioco". | Different points of view facing each other on the same 'playing field'.

Fundamentals

208 – 209 *An author* Marco Cimillo
Ralph Knowles and the Rise of Solar Architecture

Testi critici su autori, idee, libri, lavori, luoghi, periodi a fondamenta del tema. | Critical texts on authors, ideas, books, works, places, periods on the basis of the theme.

210 – 211 *An author* Filippo Perfetti
Solar Projections. Tacita Dean

212 – 213 *A film* Cristina Moraru
The Solar Vision of the Future. A Cosmist Analysis on Anton Vidokle's film *The Communist Revolution Was Caused by the Sun*

214 – 215 *A work* Tommaso Bartoloni
Lightwells in Francesco Venezia's Work

216 – 217 *A place* Jacopo Bonat, Matteo Zambon
The Extraordinary Perpetuity of the Fixed Point. The Renazca District Project by Diller Scofidio + Renfro

218 – 219 *A place* Annamaria Prandi, Andrea Vescovini
Fringes. Casa Sassi, a Solar Pavilion by Filippo Monti

220 – 221 *A period* Vincenzo Valentino
We Have Never Been Copernican. The Years of Solar Investigations in Le Corbusier's Architecture

222 – 223 *A period* Lorenzo Renzullo
The Mock-up as a Tool of Experimentation. Several Cases of Ignazio Gardella

Indice | Contents

The Mock-up as a Tool of Experimentation. Several Cases of Ignazio Gardella



Ignazio Gardella, façade mock-up of the Tourist Residential Settlement in Punta Ala, Castiglione della Pescaia, 1962. Ph. Foto studio 22. Courtesy CSAC, Università di Parma.

Mockÿ up – mock, 'to mock', from the Old French *mocquer*, 'to laugh at, to ridicule', *mock-up* – meaning 'to outline, simulate, reproduce', is the term used in architectural design to denote a full-scale architectural model. There are several types of *mock-ups*, both physical and virtual, diversified by their functional purpose – descriptive, evaluative, predictive, and explorative (Dunn 2007) – by the type of use – visual, prototype, performance, field, in-place (Gelpi 2020) – and finally by the component of the built organism they reference – structure, envelope, cladding. Regarding physical *mock-ups*, they differ from prototypes, which are functioning models of a product or service, as well as from copies or replicas, which are models created with the same structure and materials as an original example. This latest distinction emerges, exemplarily, in the 1:1 floating mock-up of Borromini's San Carlino alle Quattro Fontane, built by Mario Botta in 1999-2003 on lake Lugano. This fragment assumes new metaphorical meanings as a 'free reproduction of the real work' (Neri 2020, p. 7), in which the spatial and plastic uniqueness of the Baroque masterpiece is confronted with a new temporal dimension. In addition to the mock-up as *simulacrum* or *paradeigma*, its employment in the design process has also contributed to the recognition of perceptual characteristics previously overlooked (Geiser 2021) and to the introduction of new qualitative and quantitative parameters for the progressive evaluation of aesthetic and constructional solutions. This singular artifact, as described in Vincenzo Scamozzi's *L'idea dell'architettura universale* (1615) and Jacques François Blondel's *Cours d'architecture* (1777), served formal, perceptual and illustrative purposes. The use of *mock-ups* within the creative process provided 'the ability to see' (Smith 2004), allowed for 'the production of knowledge about reality' (Eidenbenz 2023, p. 21), stimulated the physical transformation of immaterial concepts, and supported the formulation of hypotheses through 'a process of retrospective and prospective learning' (Lee 2020). For instance, Talete di Mileto employed a scale model of the Pyramid to measure its height by observing the shadow it cast and, during the 20th century, Mies van der Rohe constructed a *mock-up* of the entire design for the Villa Köller-Müller in 1912, using canvas and wood to test 'the effects of form, light, and shadow on the landscape' (Gelpi 2020, p. 19). Similarly, Francesco Borromini placed an in-situ model of 'perishable materials' (Mindrup 2019) for his design of the Lanterna di Sant'Agnese in Piazza Navona (1653-1657), while Marcello Piacentini and Attilio Spaccarelli, in their 1938 project for the Interrompimento in front of Basilica di San Pietro in Vatican City, equipped the façade *mock-up* with wheels to test possible *chiaroscuro* variations and to find the correct distance and height regarding the influence of solar radiation on its surfaces (Goffi 2022). Therefore, even in Italy – in line with international experiences – the emphasis on physical construction approaches in the design of architectural façade advanced alongside an increasing interest from prominent designers. Among the most significant experiences of the late 20th century in Italy, Ignazio Gardella's legacy continues to provide specific insights into the methods and tools of architectural design. The need to 'study and learn the technical and cultural tools […] that enable the architectural "machine" to function' (Boidi, Nonis 1986, p. 9) was deeply related to the assessment of the contingent effects of quantitative and qualitative factors. Through this tool-based facilitation, the cognitive process – not only aimed at the construction of the building but, more importantly, at the formulation of the underlying idea – was directed towards defined objectives: 'To minimise the inevitable compromise between the conceived form and the objective conditions' (Argan 1965, p. 354). The design insight found a first validation in the modelling practice – operating through scale variations and fragmentations of the building elements (Zermani 1991) down to 'the technical and constructive details represented in real scale' (Loi 2018, p. 90) – while constructive verification relied on physical and visual experience in the field. This pragmatic aspect of the process relied on full-scale *mock-ups* to 'truly see' the architecture and perceive its temporal dimension – 'by moving around it, entering it, traversing its spaces, and using it' (Faroldi, Vettori 1995, p. 80). However, the isolated and disassembled diaphragm was made to respond to the 'multiplicity of specific environmental factors' (*ibid*., p. 81) through sequential attempts at testing and verification. The phenomenological object, abstracted either into a few elements or defined precisely, was studied through a careful consideration of the 'light' element alongside the presumed but not predicted effects of direct, diffuse, or reflected radiation on its surfaces. Thus, every intervention on the material, its position and distance in space occurred as a consequence of its reaction to light: 'Light becomes something more than its own physical reality; it presents itself as a spatial fact' (Argan 1965, p. 22). The set of quantitative data transmitted to the object would come to shape the compositional and proportional rules of architectural reasoning, altering, for example, 'the placement of planes and the appropriate scale of measures […], the structural system, the dimensional problem, the visual occupation of space' (*ibid*., p. 371). This procedure can be observed in several projects: from the Chiesa del Sanatorio in Alessandria (1930) to the early projects of the 1960s, where the element of 'rebate' emerged as a true architectural parameter – 'rejecting excessively sharp edges to […] break up the luminous planes and […] inhibit the light thresholds' (Porta 1985, p. 33). This method is further exemplified in the models for the Torre in Piazza Duomo (1934), which were used to evaluate the effects of light and shadow cast on the pillars against the wall; in the invention of new light effects through the modelling of the external envelope in the designs for the Dispensario Antitubercolare (1931-1938) and the Laboratorio Provinciale di Igiene e Profilassi (1937-1939) – where the flared openings tangent to the wall aimed to 'remove or minimise shadow cones' (Ciarcia 2012, p. 33); in the introduction of the *notched wall* in the Villa Baletti project (1948-1952) to 'ensure adequate lighting for each bedroom, as well as a view of the panorama' (Dulio 2008, p. 26); in the disorienting effects of visual perception created by the refraction of Mediterranean light on the columns of the Terme Regina Isabella in Lacco Ameno (1950-1954); and in conclusion, in the design of the 'vibrant' elevation in Casa alle Zattere (1958-1962), which reflects particular luminous effects in the water. In these and other projects, the evaluation of light was often combined by photographs of small-scale models – during various design tests – by photomontage techniques applied to them, and by the verification through full-scale *mock-ups*. Within this context, the case of the Tourist Residential Settlement in Punta Ala (1962-1966), near Castiglione della Pescaia in Tuscany, designed by Ignazio Gardella – along with A. Mazzoni, D. Giucciardi, and V. Sonzogni under the overall design of the coastal project plan coordinated by Ludovico Quaroni – emerges as a singular instance of *mock-up* production in the architectural culture of Italy in the late 20th century. The architect himself described it as 'an exciting undertaking that transcends all instrumental and constructive factors and becomes a true moral commitment' (I. Gardella, *Posa della prima pietra per la costruzione del porto di Punta Ala*, in *Relazione sulla Cerimonia*, 1 January 1962). The attention given to the landscape, as well as to the aid of water and light is evident in both the formal façade solutions and in the materiality of the external surface of the elevation, which becomes a 'non-canonical narrative' (Zermani 1991, p. 115) generated by 'a study more on site than at the drawing board […] taking into account all features of the environment' (Palandri 2017, p. 101). On 1st January 1962, during the ceremony for laying the first stone, a volumetric *mock-up* of the buildings was created 'to clarify to attendees the volumetric and dimensional relationships between the new volumes and the natural context that would accommodate them' (*ibid*.). Archival photography, preserved at the CSAC-Centro Studi e Archivio della Comunicazione dell'Università di Parma, shows thin wooden tubular profiles 'shaping' a synthesis of the design process in the form of visual abstraction – aimed at physically materialising experimental effects of interchange. Designers, administrators and citizens walked among these volumetric objects, envisioning their future impact, measuring heights by the shadows cast, photographing human profiles against these outlines, and imagining the transformations of the façades as the intensity of light varied until they almost completely disappeared at dusk behind the irregular contour of the inland ridge. On 10 May 1962, a full-scale model of a small section of the façade was constructed in place of the arched buildings at the harbour front. The construction of that fragment, designated A-A, was deemed necessary not only to define the constructive and formal elements of the proposed buildings but especially to clarify their characteristics based on the unexpected and unpredictable environmental conditions on site. Interposing itself between the conception and execution processes, the *mock-up* effectively becomes a design tool, capable of suggesting a revision of the absolute principles defined in the graphic elaborations. From an early planovolumetric proposal of October 1964 – composed of uniform but broken blocks – the project evolved into the version of June 1962-1963 – marked by diversified housing units: the reinforced concrete pillars of the portico were eliminated, the volume of the attic was set back on the seaward fronts, the openings were resized, and pocket terraces were replaced with large terraces. Thus, while the longitudinal cut of the ground-floor portico will create a deep shadowy void on which the front will appear suspended, in plan, the introduction of loggias and additional openings will allow for a more qualitative relationship between the depth of the interiors and the incident light. In conclusion, it is possible to assert that the use of full-scale *mock-ups* – ranging from urban to building scales – enabled the triggering of a form of critical imagination regarding reality and facilitated a rigorous logical development of responses to mathematical problems (Martì Aris 2007, p. 26), rather than adding something 'missing' to the environment. Beginning with Ignazio Gardella, the practice of physical *mock-ups* will endure even with the introduction of new analytical models and programs within the epistemological field: the main difference, compared to digital models, lies in the high production cost – when original materials are used – and in their 'short lifespan' – as such models are typically destroyed after use, transferring their evidence to photographic images. Nevertheless, current experiments in this field tend towards an integrated design approach, aimed at increasingly refining verification methodologies and performance simulation on-site, alongside the variable influence of environmental factors.



Ignazio Gardella, façade mock-up of the Tourist Residential Settlement in Punta Ala, Castiglione della Pescaia, 1962. Ph. Foto studio 22. Courtesy CSAC, Università di Parma.

Bibliography:
Argan G.C., *Progetto e destino*, il Saggiatore, Milano 1965 | Boidi S., Nonis F. (eds.), *Ignazio Gardella*, Electa International-Harvard University Press, Milano-Harvard 1986 | Ciarcia S., *L'architettura di Ignazio Gardella. Il pensiero e le opere*, Giannini, Napoli 2012 | Dulio R., *Ville in Italia dal 1945*, Electa, Milano 2008 | Dunn N., *The Ecology of the Architectural Model*, Peter Lang, Bern 2007 | Eidenbenz M., *Lloyd's 1:1: The Currency of the Architectural Mock-Up*, Gta, Zürich 2023 | Faroldi E., Vettori M.P., *Dialoghi di Architettura*, Alinea, Firenze 1995 | Geiser R., *Between Representation and Reality*, in Idem (ed.), *Archetypes*, Park Books, Zürich 2021, pp. 69-81 | Gelpi N., *The Architecture of Full-Scale Mock-Ups From Representation to Reality*, Routledge, London 2020 | Goffi F. (ed.), *The Routledge Companion to Architectural Drawings and Models. From Translating to Archiving, Collecting and Displaying*, Routledge, New York 2022 | Lee Y.H.B., *Prototyping. The Dual Actions*, in "Cubic Journal", no. 3, 2020, pp. 54-73 | Loi M.C., *Antico e nuovo. Otto progetti di Ignazio Gardella*, Maggioli, Santarcangelo di Romagna 2018 | Martì Aris C., *La centina e l'arco*, Marinotti, Milano 2007 | Mindrup M., *The Architectural Model: Histories of the Miniature and the Prototype, the Exemplar and the Muse*, The MIT Press, Cambridge Mass. 2019 | Neri G., *Tra modello e realtà. Mario Botta e il San Carlino di Lugano*, in "Archi", no. 6, 2020, pp. 6-7 | Palandri A., *BBPR, Franco Albini e Franca Helg, Ignazio Gardella. Tre architetture in Toscana*, Diabasis, Parma 2017 | Porta M. (ed.), *L'architettura di Ignazio Gardella*, Etas Libri, Milano 1985 | Smith A.C., *Architectural Model as Machine: A New View of Models from Antiquity to the Present Day*, Routledge, London 2004 | Zermani P., *Ignazio Gardella*, Laterza, Roma-Bari 1991.

Lorenzo Renzullo

Vesper
Rivista di architettura, arti e teoria
Journal of Architecture, Arts & Theory

Vesper è un progetto di | is a project by Pard – Publishing Actions and Research Development / Ir.Ide – Infrastruttura di Ricerca Integral Design Environment
Dipartimento di Culture del progetto – Dipartimento di eccellenza
Università Iuav di Venezia

Direttrice | Editor-in-Chief
Sara Marini, Università Iuav di Venezia

Consiglio editoriale | Editorial Board
Fabrizio Barozzi, Barozzi Veiga
Francesco Bergamo, Università Iuav di Venezia
Felice Cimatti, Università della Calabria
Juan Carlos Dall'Asta, Xi'an Jiaotong-Liverpool University
Dario Gentili, Università degli Studi Roma Tre
Sebastián Irarrázaval, Pontificia Universidad Católica de Chile
Angela Mengoni, Università Iuav di Venezia
Nieves Mestre, Universidad Politécnica de Madrid
Alessandro Orsini, Columbia University
Gundula Rakowitz, Università Iuav di Venezia
Luka Skansi, Politecnico di Milano

Comitato scientifico | Advisory Board
Petar Bojanić, University of Belgrade
Giuliana Bruno, Harvard University
José María Calvo López, Universidad Politécnica de Cartagena
Emanuele Coccia, École des Hautes Études en Sciences Sociales
Michele Cometa, Università degli Studi di Palermo
Giovanni Corbellini, Politecnico di Torino
Giuseppe D'Acunto, Università Iuav di Venezia
Serenella Iovino, University of North Carolina at Chapel Hill
Andreas Kreul, Universität Bremen
Andrew Leach, University of Sydney
Gianfranco Marrone, Università degli Studi di Palermo
Pasquale Miano, Università degli Studi di Napoli Federico II
Inés Moisset, Universidad de Buenos Aires - Conicet
Fiamma Montezemolo, University of California, Davis
Andreas Philippopoulos-Mihalopoulos, University of Westminster
Andrea Pinotti, Università degli Studi di Milano
Marko Pogacnik, Università Iuav di Venezia
Alessandro Rocca, Politecnico di Milano
Eduardo Roig, Universidad Politécnica de Madrid
Annalisa Sacchi, Università Iuav di Venezia
Federico Soriano, Universidad Politécnica de Madrid
Federica Villa, Università degli Studi di Pavia
Mechtild Widrich, School of the Art Institute of Chicago

Redazione | Editorial Staff
Pietro Alfano, Giulia Bersani, Giovanni Carli, Diana Carta, Egidio Cutillo, Giacomo De Caro, Stefano Eger, Simone Lavezzaro, Francesco Maranelli, Elisa Monaci, Andrea Pastorello, Alberto Petracchin, Francesca Rognoni, Riccardo Segradin, Davide Zaupa, Luca Zilio.

Traduzioni | Translations
Laddove non diversamente specificato, tutte le traduzioni dei testi e delle citazioni sono di Just!Venice. | Translations of texts and citations in this journal are by Just!Venice, unless otherwise specified.

Layout grafico | Graphic Layout
bruno, Venezia

Impaginazione | Layout
Redazione Vesper | Vesper Editorial Staff

Caratteri tipografici | Typefaces
Union, Radim Peško, 2006
JJannon, François Rappo, 2019

Editore | Publisher
Quodlibet srl
via Giuseppe e Bartolomeo Mozzi, 23 - 62100 Macerata
www.quodlibet.it

Abbonamento annuo (due numeri) | One Year Subscription (two issues)
Italia | Italy € 25 Estero | International € 50

Per abbonamenti e ulteriori informazioni | For subscriptions and any further information: ordini@quodlibet.it

© Vesper. Rivista di architettura, arti e teoria | Journal of Architecture, Arts & Theory

Periodicità semestrale | Six-monthly Journal

Fondi per la pubblicazione | Publication Funding
Dipartimento di eccellenza 2023-2027 - Finanziamento Mur

Iscrizione al Registro Stampa del Tribunale di Venezia n. 4/2019 del 24/10/2019
Direttore responsabile: Sara Marini

No. 12 | Solar
Primavera | Estate 2025
Spring | Summer 2025

Autori | Authors
Tommaso Bartoloni, *dottorando in Composizione architettonica e urbana*, Università Iuav di Venezia.
Francesca Belloni, *professoressa associata in Composizione architettonica e urbana*, Politecnico di Milano.
Giulia Bersani, *dottoranda in Culture del progetto*, Università Iuav di Venezia.
Silvia Berselli, *ricercatrice in Storia dell'architettura*, Università degli Studi di Parma.
Jacopo Bonat, *dottorando in Ingegneria Civile-ambientale e Architettura*, Università degli Studi di Trieste.
Silvia Camporesi, *fotografa e artista*, Forlì.
Marco Cimillo, *Senior Associate Professor in Architecture*, XJTLU Xi'an Jiaotong-Liverpool University.
Hugo de Almeida Pinho, *artist*, Lisboa.
Agostino De Rosa, *professore ordinario in Disegno*, Università Iuav di Venezia.
Anna Livia Friel, *Research Associate in Architecture*, TU Wien.
Simone Gobbo, *ricercatore in Composizione architettonica e urbana*, Università Iuav di Venezia.
Pierluigi Grandinetti, *già professore ordinario in Composizione architettonica e urbana*, Università Iuav di Venezia.
Inter-, *Architectural Research and Design Studio*, Zürich.
Francesco Jodice, *artista visivo*, Milano.
Andreas Körner, *Assistant Professor in Experimental Architecture*, University of Innsbruck; *Lecturer in Bio-integrated Design*, University College London.
Gabriella Liva, *professoressa associata in Disegno*, Università Iuav di Venezia.
Živilė Mantrimaitė, *Indipendent Researcher*, Vilnius.
Tim Matts, *Writer and Visual Artist*, London-Los Angeles.
Pier Franco Midali, *già sindaco di Viganella*, Verbano-Cusio-Ossola.
Cristina Moraru, *Lecturer in Visual Arts*, National University of the Arts "George Enescu".
Filippo Perfetti, *dottorando in Storia dell'arte, cinema, media audiovisivi e musica*, Università degli Studi di Udine.
Alberto Petracchin, *assegnista di ricerca in Composizione architettonica e urbana*, Università Iuav di Venezia.
Jimmi Pianezzola, *architetto*, Vicenza.
Annamaria Prandi, *Ludens architetti*, Zurigo.
Marco Provinciali, *architetto*, *fondatore Supervoid*, Roma.
Lorenzo Renzullo, *dottorando in Composizione architettonica e urbana*, Università degli Studi di Napoli Federico II.
Sandro Rolla, *Associate Professor in Architecture*, XJTLU Xi'an Jiaotong-Liverpool University.
Valter Scelsi, *professore ordinario in Composizione architettonica e urbana*, Università degli Studi di Genova.
Giovanna Silva, *fotografa*, Milano; *docente*, Isia Urbino.
Studio Other Spaces, *Arts and Architecture Studio*, founded by Ólafur Elíasson and Sebastian Behmann, Berlin.
Vincenzo Valentino, *assegnista di ricerca in Composizione architettonica e urbana*, Università degli Studi di Napoli Federico II.
Andrea Vescovini, *Ludens architetti*, Reggio Emilia.
Matteo Zambon, *dottorando in Ingegneria Civile-ambientale e Architettura*, Università degli Studi di Trieste.
Davide Zaupa, *dottorando in Culture del progetto*, Università Iuav di Venezia.

Tutti i contributi pubblicati sono sottoposti a un procedimento di revisione tra pari (Double-Blind Peer Review) a eccezione dei testi presenti nelle rubriche Citazione, Inserto, Racconti e Ring. | All published contributions are submitted to a Double-Blind Peer Review process except for the sections Quote, Extra, Tales and Ring.

Contatti | Contacts
Per qualsiasi altra informazione | For any further information:
pard.iride@iuav.it | www.iuav.it/vesperrivista | www.iuav.it/vesperjournal

ISBN 978-88-229-2336-3
ISSN 2704-7598

Finito di stampare nel mese di maggio 2025 da | Printed on May 2025 by Tecnostampa srl, Loreto (AN).



Vesper è inserita negli elenchi dell'Agenzia nazionale di valutazione del sistema universitario e della ricerca (Anvur) delle riviste di Classe A nei settori concorsuali *08/D1 - Progettazione architettonica*, *08/F1 - Pianificazione e progettazione urbanistica e territoriale* e *11/C4 - Estetica e filosofia dei linguaggi* e delle riviste scientifiche nelle aree non bibliometriche *08 - Ingegneria civile e Architettura*, *10 - Scienze dell'antichità, filologico-letterarie e storico-artistiche* e *11 - Scienze storiche, filosofiche, pedagogiche e psicologiche*. | *Vesper* is included into the lists compiled by the Italian National Agency for the Evaluation of Universities and Research Institutes of Class A journals (academic fields for Italian university national recruitment *08/D1 - Architectural Design*, *08/F1 - Urban and Landscape Planning and Design* and *11/C4 - Aesthetics and Philosophy of Languages*) and scientific journals (Italian academic areas *08 - Civil Engineering and Architecture*, *10 - Antiquities, Philology, Literary Studies, Art History* and *11 - History, Philosophy, Pedagogy and Psychology*, with the exception of their bibliometric subfields).

Vesper è inserita nel | is included into the Norwegian Register for Scientific Journals, Series and Publishers redatto da | compiled by National Board of Scholarly Publishing e | and Norwegian Directorate for Higher Education and Skills.

Vesper è indicizzata in | is indexed in SCOPUS, JSTOR, Torrossa e | and EBSCO.

Vesper.
Rivista di architettura, arti e teoria
Journal of Architecture, Arts & Theory

No. 1 | Supervenice
Autunno | Inverno 2019
Fall | Winter 2019

No. 2 | Materia-autore | Author-Matter
Primavera | Estate 2020
Spring | Summer 2020

No. 3 | Nella selva | Wildness
Autunno | Inverno 2020
Fall | Winter 2020

No. 4 | Esili e esodi | Exiles and Exoduses
Primavera | Estate 2021
Spring | Summer 2021

No. 5 | Moby Dick: avventure e scoperte | Moby Dick: Adventures and Discoveries
Autunno | Inverno 2021
Fall | Winter 2021

No. 6 | Magic
Primavera | Estate 2022
Spring | Summer 2022

No. 7 | Cielo | Sky
Autunno | Inverno 2022
Fall | Winter 2022

No. 8 | Vesper
Primavera | Estate 2023
Spring | Summer 2023

No. 9 | L'avversario | The Adversary
Autunno | Inverno 2023
Fall | Winter 2023

No. 10 | Progetto Eden | Eden Project
Primavera | Estate 2024
Spring | Summer 2024

No. 11 | Miserabilia
Autunno | Inverno 2024
Fall | Winter 2024

No. 12 | Solar
Primavera | Estate 2025
Spring | Summer 2025

No. 13 | Giancarlo De Carlo Trajectories
Autunno | Inverno 2025
Fall | Winter 2025

Questo volume è concesso in licenza secondo i termini della Creative Commons Attribution (CC BY-NC-ND 4.0 International License) che permette di scaricare le opere, a patto che si accrediti l'Autore(i), non potendo modificarle in alcun modo o utilizzarle commercialmente. Le immagini o altro materiale di terze parti non è incluso nella licenza Creative Commons della rivista e l'uso non è permesso dalla normativa vigente, o eccede l'uso consentito. Per l'utilizzo si dovrà ottenere il permesso direttamente dal titolare del copyright. | This publication is licensed under a Creative Commons Attribution (CC BY-NC-ND 4.0 International License). This license allows downloading the articles provided that they are properly attributed to their Author(s), without modifying them in any way or using them for commercial purposes. Images and other third parties' material is not included in the Creative Commons license of the Journal and their use is not allowed by current legislation, or exceeds the permitted use. It is necessary to ask permission from copyright holders for the use.