



**Storp Weber
Architects**

**Uncovering
Casa Sperimentale**

**Storp Weber
Architects**

**Uncovering
Casa Sperimentale**









2

Project Details	6
Statement about the Research Content and Process	8
Introduction	14
Aims and Objectives	16
Questions	16
Context	28
Methodology	46
Dissemination	68
Project Highlights	74
Bibliography	74
Related Publications	77

1 (previous) Casa Sperimentale set within a forest of overgrown pine trees in Fregene, Italy.

2-3 (overleaf) The main inhabitable spaces are raised from the ground by an experimental concrete superstructure. Each element is supported by a metal coupling detail cast into the concrete floor and ceiling slabs.

Project Details

Author	Patrick Weber
Co-author	Sabine Storp
Title	Uncovering Casa Sperimentale
Output Type	Architectural study, exhibition and interactive website
Date	2015, ongoing
Location	Fregene, Italy
Exhibitions	<i>Casa Sperimentale</i> , architekturalerie am weissenhof, Stuttgart (2019); <i>Summer Exhibition 2019</i> , Royal Academy of Arts, London
Selection Committee, architekturalerie am weissenhof	Antje Krauter, Kyra Bullert, Andreas Hardegger, Christian Holl, Elke Knöß-Grillitsch, Dennis Mueller, Petra Stojanik and Stefan Werrer
Curator of the Architecture Room, Royal Academy	Spencer de Grey
Researcher	Samson Adjei
Research Assistants	Gintare Kapociute, Demetris Ktorides, Matt Lucraft, Sara Martinez Zamora, Matei Alexandru-Mitrache, Thomas Parker and Federica Terenzi
External Partners	architekturalerie am weissenhof
Funding	£25,000 The Bartlett Architecture Project Fund (APF); €3,000 architekturalerie am weissenhof
Thanks to	Angelo Bellotto, Roberto Bottazzi, Chiara del Giudice, Edward Denison, Wolfgang Schwarz and Raynaldo Perugini



Statement about the Research Content and Process

Description

Casa Sperimentale (1968–75) is an experimental structure designed as an ‘endless unfinishable house’ by the Perugini family in the town of Fregene near Rome. The house has been largely overlooked by the architectural community and abandoned since the death of the main architects. It is now severely at risk of collapse. This design-based study aims to understand the creation of the house and its place in the canon of post-war architecture. In addition to traditional surveying methods, the study uses contemporary technologies such as 3D scanning to document the house. An Augmented Reality (AR) gaming platform further explores the modular exchangeable structure of this unique building.

Questions

1. To what extent did Giuseppe Perugini’s interests in Baroque architecture and cybernetics inform the design process?
2. What innovations were made by Perugini in terms of design and prefabrication?
3. How might 3D scanning and interactive AR documentation be engaged in the conservation and preservation of Casa Sperimentale and similar projects?

Methodology

1. Archival and library research, addressing the historical and architectural context of the post-war period;
2. A comparative drawing study to observe the influence of Baroque principles on Giuseppe Perugini’s design;
3. Model making to explore different configurations of modular elements;
4. Systematic photographic survey assessing architectural and interior modifications;
5. 3D-scanning survey and AR modelling to document the house in a time-based exhibit;
6. Video interviews to narrate and document first-hand experiences.

Dissemination

The project has been exhibited in one solo exhibition at architektur Galerie am weissenhof in Stuttgart and the *Summer Exhibition 2019* at the Royal Academy of Arts in London. Weber has presented the research at lectures in Germany, South Korea and China, and is due to present a keynote at the 6th Iconic Houses Conference in Rotterdam. Four films made by the author are available to watch on YouTube. Further to this, Weber has launched an online archival and interactive research portal (www.casasperimentale.org) that documents the house and, through AR, engages visitors with Perugini’s design principles.

Project Highlights

Casa Sperimentale has to date evaded an in-depth study. This research aims to be the first study of its history and an in-depth survey of its current condition, an urgent task given the building's extreme dilapidation. The outcome will allow for future remote research and interrogation of the building's fabric via AR, potentially enabling the planning of conservation.





5

4 View of the building before it was vandalised, looking from the Sphere towards the main entry stairway.

5 View of the roof and the separate elements joined together by metal couplings.



6

6 Street view of Casa Sperimentale.

7 View from the pool area underneath the building, looking towards the Sphere.



Introduction

All architects experiment but only a few push the limits of what is possible and considered rational, by challenging their own understanding of what architecture is and how it is created. Some of these experiments succeed, while others fail. Casa Sperimentale is one such extraordinary experiment in building, which has escaped the attention of the architectural and academic community, and as such has rarely been published.

Being neglected and at danger of collapse, this research project aims to uncover the historical context of Casa Sperimentale and the architectural canon of post-war Italy that it was created in. Furthermore, it provides an extensive survey and documentation of the building. Using 3D scanning, a digital facsimile has been created as an up-to date record of the building, with the 3D model forming the basis for AR experiences. Real-life modelling has also been used to explore the modular design.

The building is not based on a compositional framework but rather explores design as an interactive iterative process. Perugini – a pioneer in computing in architecture – used the latest tools of the 1960s and 70s to speculate how building design can respond to the user's requirements. This research focuses on how the latest developments in AR can be used to interact and test ideas through a game-like interface. The research is presented on a website (www.casasperimentale.org) where visitors can explore the historical context of the building and play with the interface to create endless versions of the house using the 199 building elements.

8 The walls of Casa Sperimentale are constructed out of pre-cast concrete frames. Each wall has a different tectonic.

INTRODUCTION



Aims and Objectives

1. To comprehensively document the history and the present condition of Casa Sperimentale before it is lost to time;
2. To explore through design Perugini's work as a landmark example of interdisciplinary architecture, integrating architectural history, experimental construction tectonics and research in cybernetics.

Questions

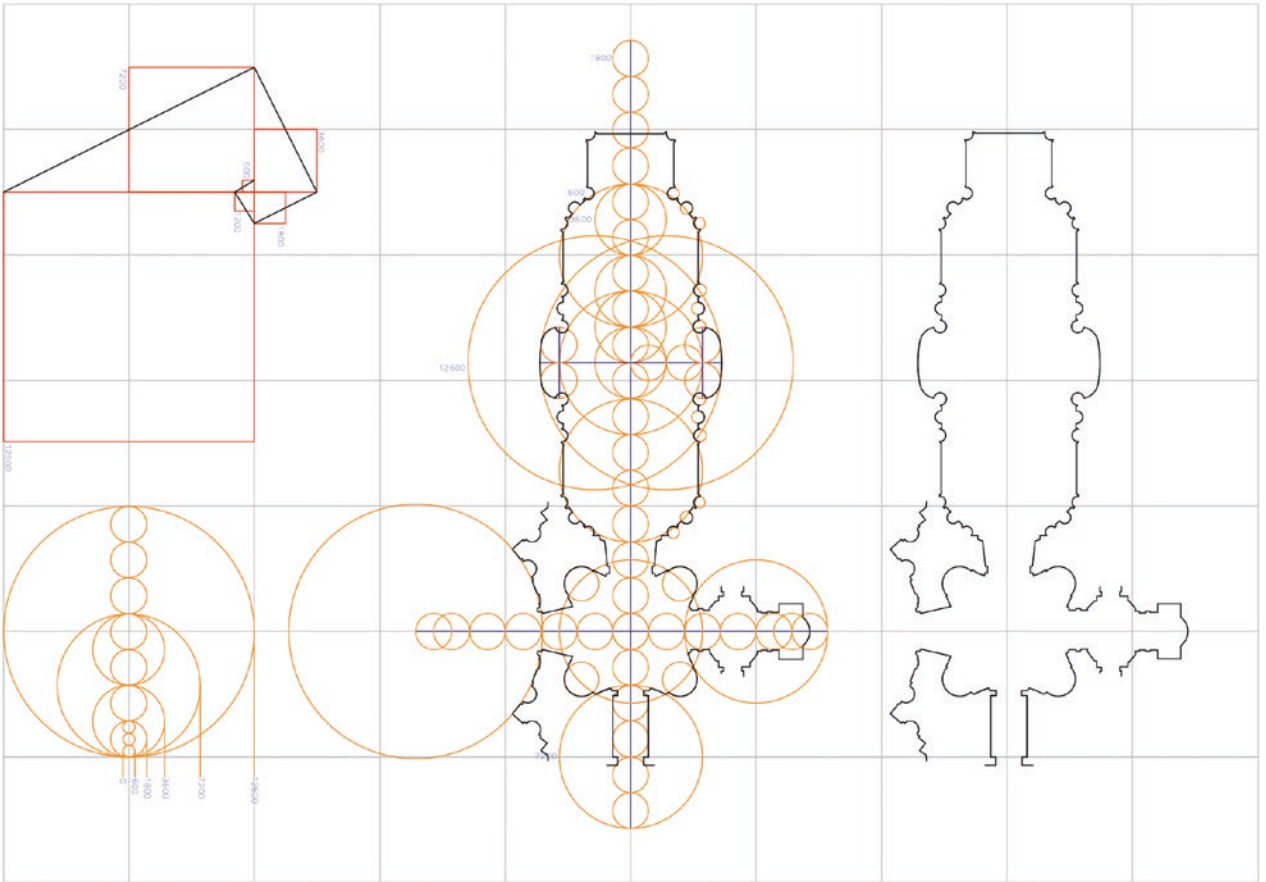
1. To what extent did Giuseppe Perugini's interests in Baroque architecture and cybernetics inform the design process?

Perugini's research at Sapienza University of Rome focussed on the Baroque architecture of Francesco Borromini. He mainly explored Borromini's architecture by studying the compositional arrangement of San Carlo alle Quattro Fontane (1646) and Santa Maria dei Sette Dolori (1655) through analytical geometric drawings. In *La Forma in Architettura* (1953), Perugini explores the idea of introducing a geometric tool to analyse architectural form. In his book *Architettura di Borromini nella Chiesa di S. Maria dei Sette Dolori* (1963) he sets out a baseline grid formed of numerically related circular geometries to interpret the space, concluding that 'the geometric repertoire of Borromini does not originate from emptiness; it has its roots precisely in that primordial geometry of the plan' (Perugini 1963, p. 23).

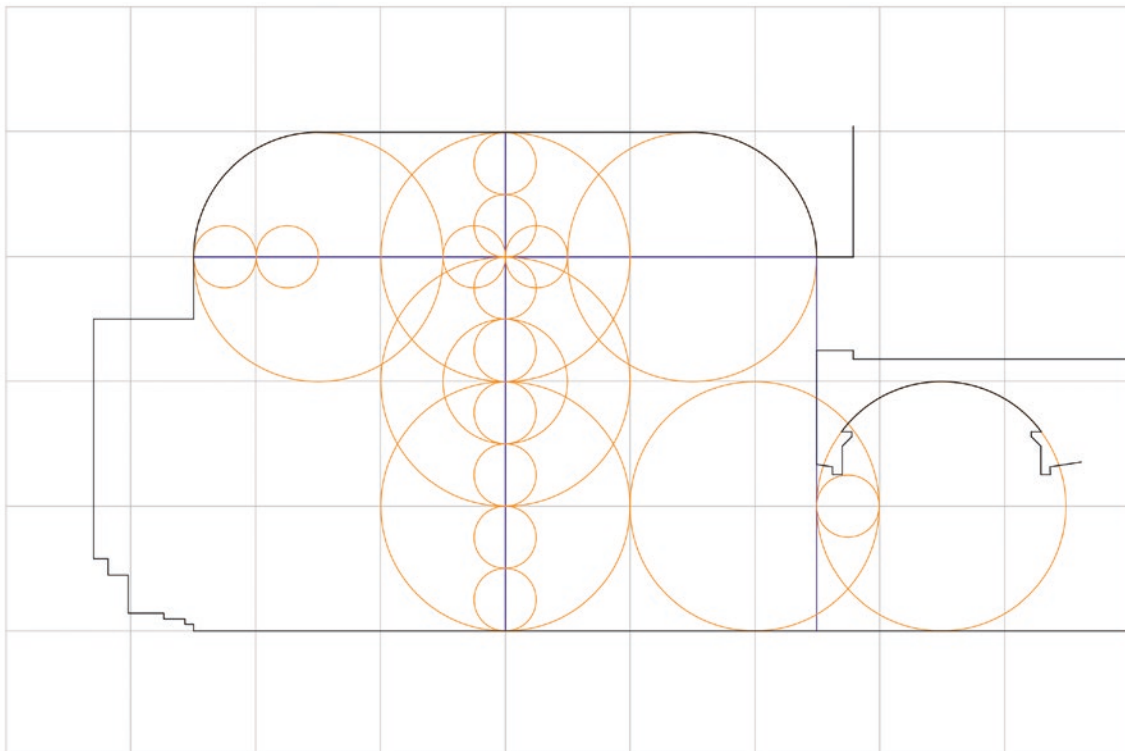
Perugini was not explicit in documenting his translation of Baroque projects to his contemporary design outputs. This is partially due to the organic nature of his design process, in which very few drawings were used or survived.

9 Plan drawing by the author depicting Perugini's Santa Maria dei Sette Dolori and its spatial relationships based on an arithmetic number sequence.

10 Drawing depicting geometric relationships of a section of Santa Maria dei Sette Dolori.



9



10

Perugini's work generally represents one of the earliest applications of computing in architecture as a design-assistive model. Sapienza University of Rome was a centre of early cybernetic research in the 1960s and 70s. Here, Perugini explored cybernetics alongside Bruno de Finetti, Vittorio Somenzi and Roberto Cordeschi. Together, they published *The Philosophy of Automata* in 1965. Perugini also took an interest in the Kiev circle of development in cybernetic research, referring to computers like the Mir-2, which suggested the idea of a centralised system that can remotely solve problems. Perugini was already imagining a future where computing would be employed to solve more complex problems in economics at a national level by networking smaller systems, which we see in his competition entry for the Cybernetic Hospital in 1967 (11). Using a computer, he reorganised the spaces around the patients' needs, creating a dynamic adaptive architecture.

Perugini was, however, equally aware of this 'new science' being used 'as a substitute for the "mental process" or as an aid to the quantitative verification of the mechanics of forms' (Perugini 1975, p. 134). Furthermore, he was critical of an education system he perceived as focussed on training architects to do no more than deliver for the industry.

In his vision, the role of computing should be to overcome 'the rationalism of function through a design that uses the computer to manage the relationship between things, in their movement, in their change, in their life, in their mutual action' (Perugini 1975, p. 136). Lacking the computing hardware, Perugini used the principles of programming to determine a design made of interchangeable elements; computing at the time was a numerical system and not yet a Computer Aided Design (CAD) environment. In managing

this new field of science, Perugini tried notional applications of cybernetics in the making of a full-scale building, experimenting with the permutations and variations of elements in Casa Sperimentale.

2. What innovations were made by Perugini in terms of design and prefabrication?

Perugini experimented with ideas of prefabrication for housing as early as 1955 with the reconstruction of San Germano, a village in northern Italy destroyed during the war (13). He further explored ideas of modular living in the 1967 Inarch-Finsider competition, which he then developed in Casa Sperimentale. Conceived as a Lego-like structure, all of the house's wall elements are bolted together so that they can be reconfigured to create different arrangements of space (17); this further enables connections between the house and surrounding site. Some elements have precast markings referring to assembly instructions and the manufacturing processes behind their formation.

Elements are described as modules and the infinite combinations allow for varied expressions in plans and sections. This is especially present in the plan where one can see an early development of the open and undetermined spatial arrangement (14).

11 Giuseppe Perugini, algorithmic organisational sketch for the Cybernetic Hospital, 1967.

12 Giuseppe Perugini, drawing for a convention centre in Vienna. All spatial organisations are organised as dependent spatial arrangements.

A oscillatore alimentatore del cavo di guida
1-2-3 amplificatori controllo zone A-B-C
X-Y-Z segnali di riflesso.

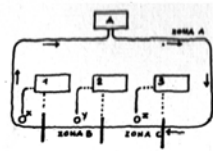


FIG. 5

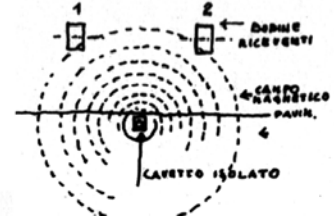


FIG. 6

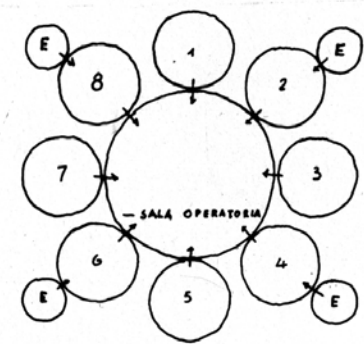


FIG. 7

PER CORSO

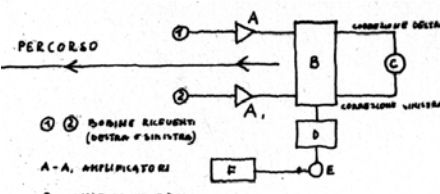
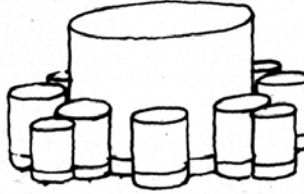


FIG. 7

A - A, AMPLIFICATORI
B, CONNATURAZIONE AL CAVO
C, SERVO MOTORE DI GUIDA
D, PULSANTE LIVELLO SEGNALE
E, RELAS DERIVATA DI GUIDA
F, MOTORE

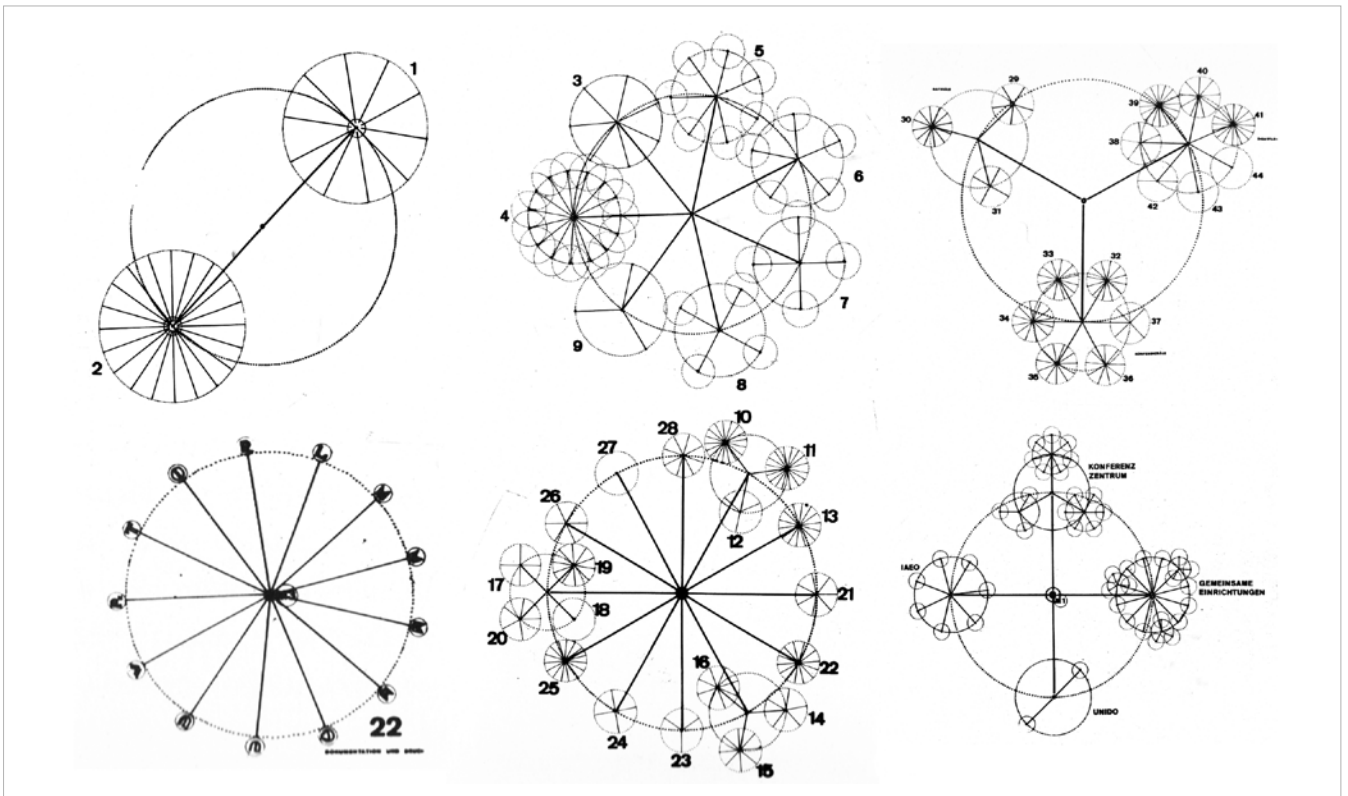
Circuito elettromagnetico

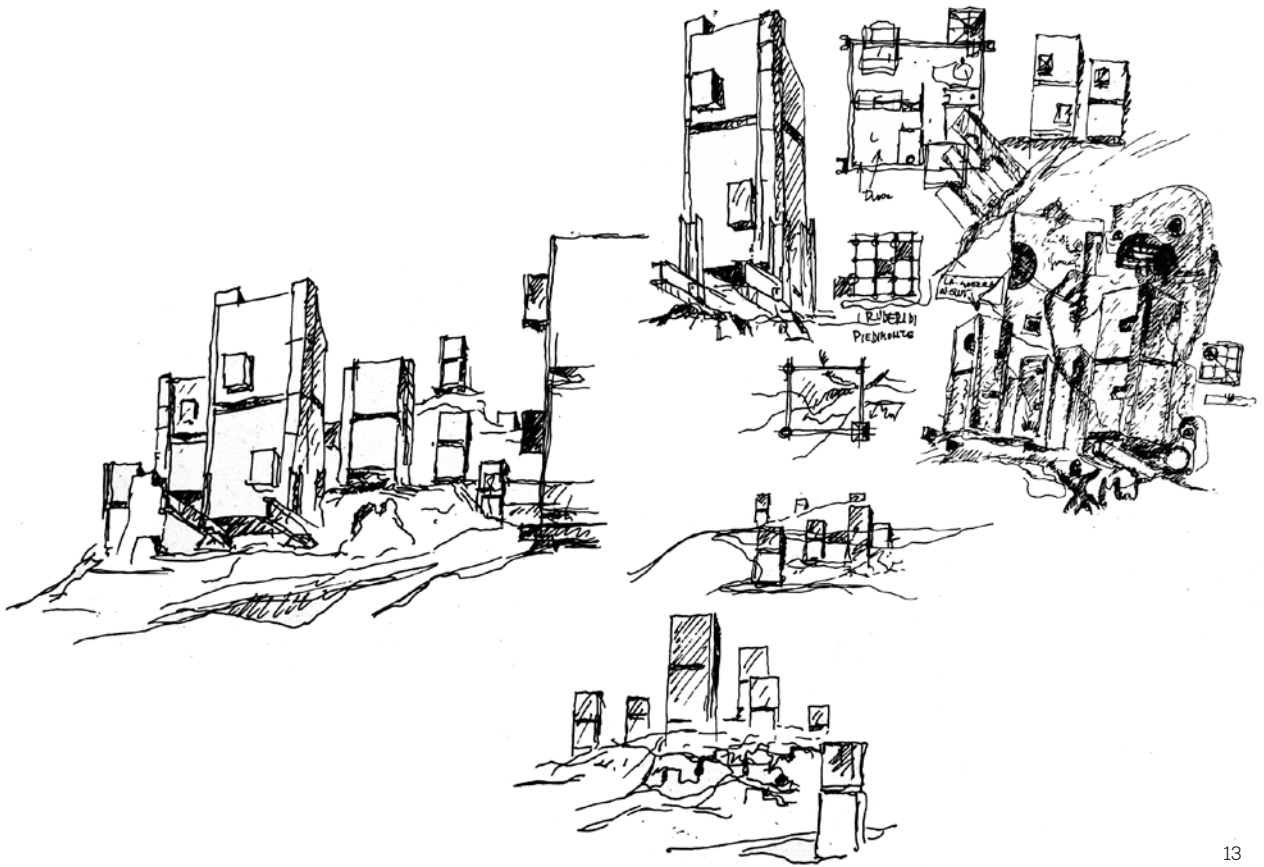
La camera operatoria



Assemblaggio dei servizi intorno alla camera operatoria

E - TRANS - ELEVATORI
1... 8 - TRANSLATORI
SALA OPERATORIA - TRANSLATORE

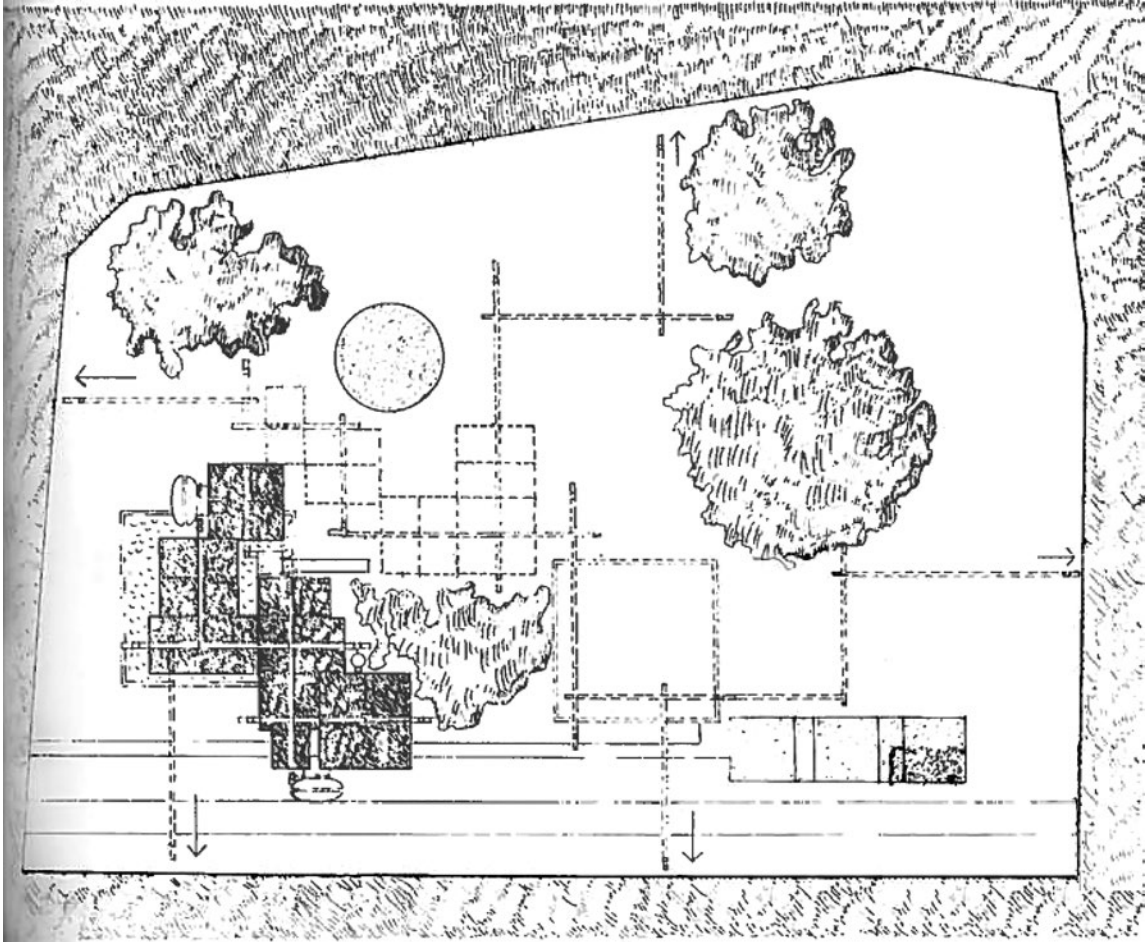




13

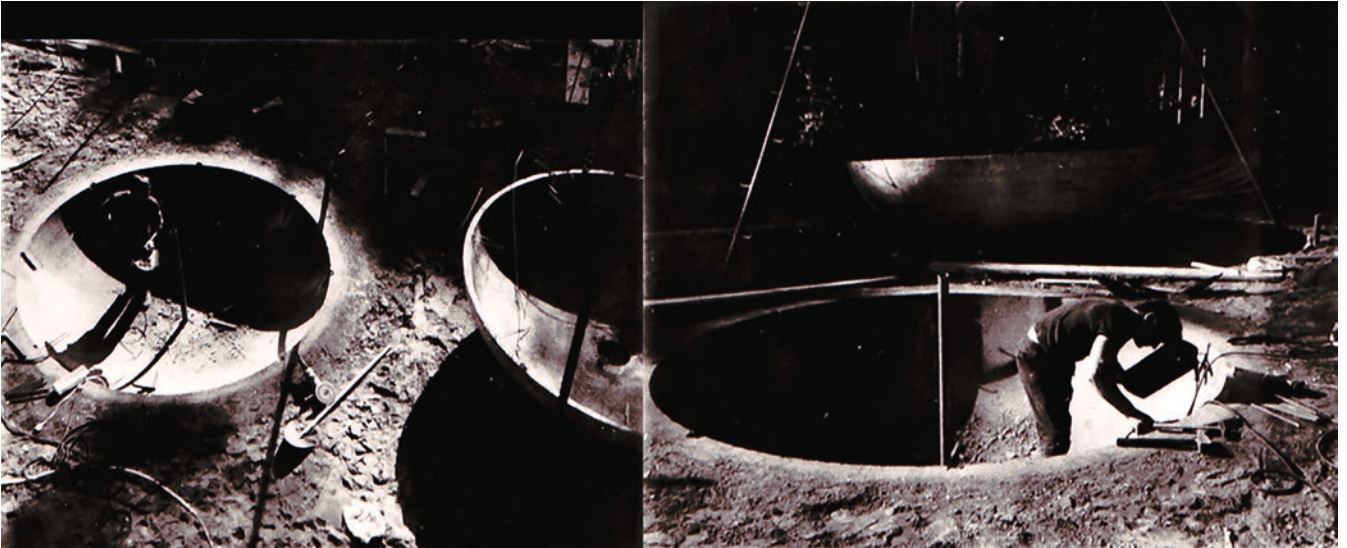
13 Sketch drawing, c.1955. Perugini introduced a new building tectonic for the reconstruction of San Germano, which he also implemented in Casa Sperimentale.

QUESTIONS



14

14 A speculative drawing by the architects shows how the structure could extend to create a meandering concrete treehouse complex.



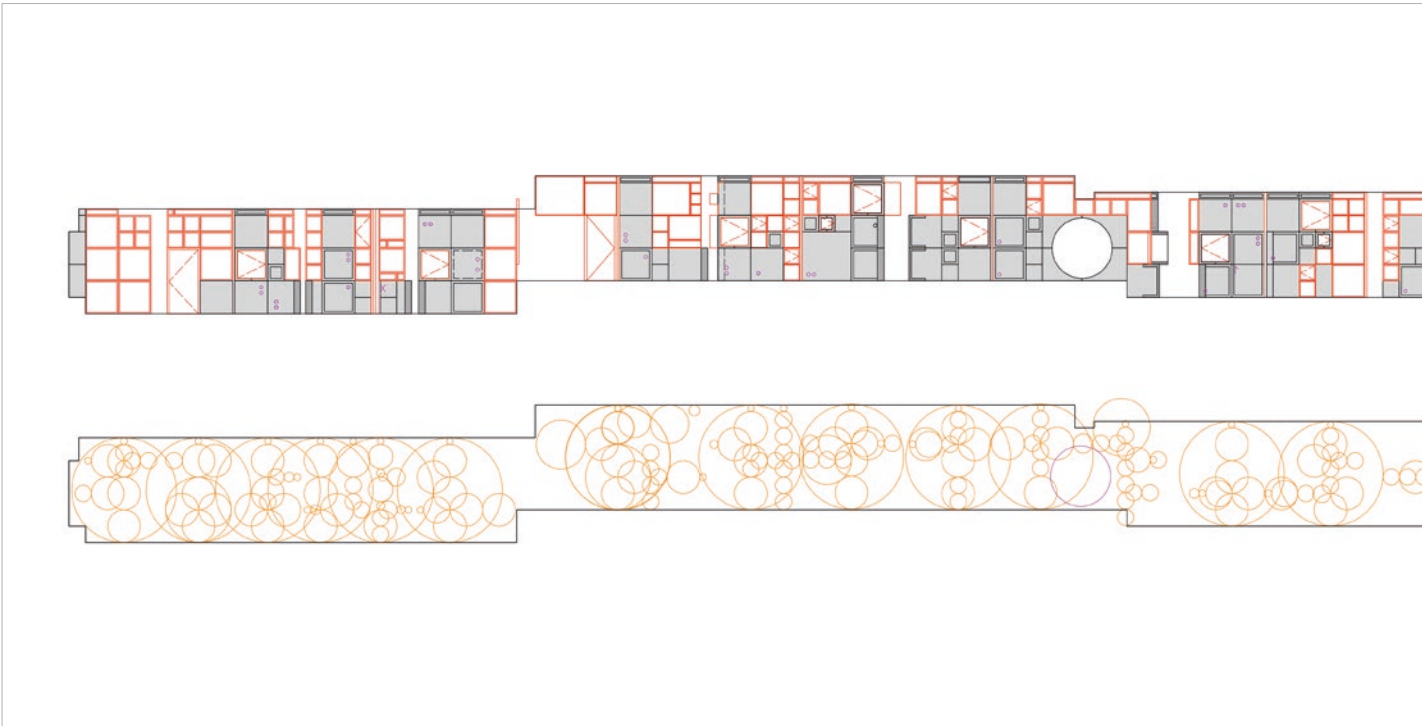
15 For the construction of the Sphere, 5 m half spheres were cast directly in a mould in the ground that utilised the sand onsite, c.1970.

QUESTIONS



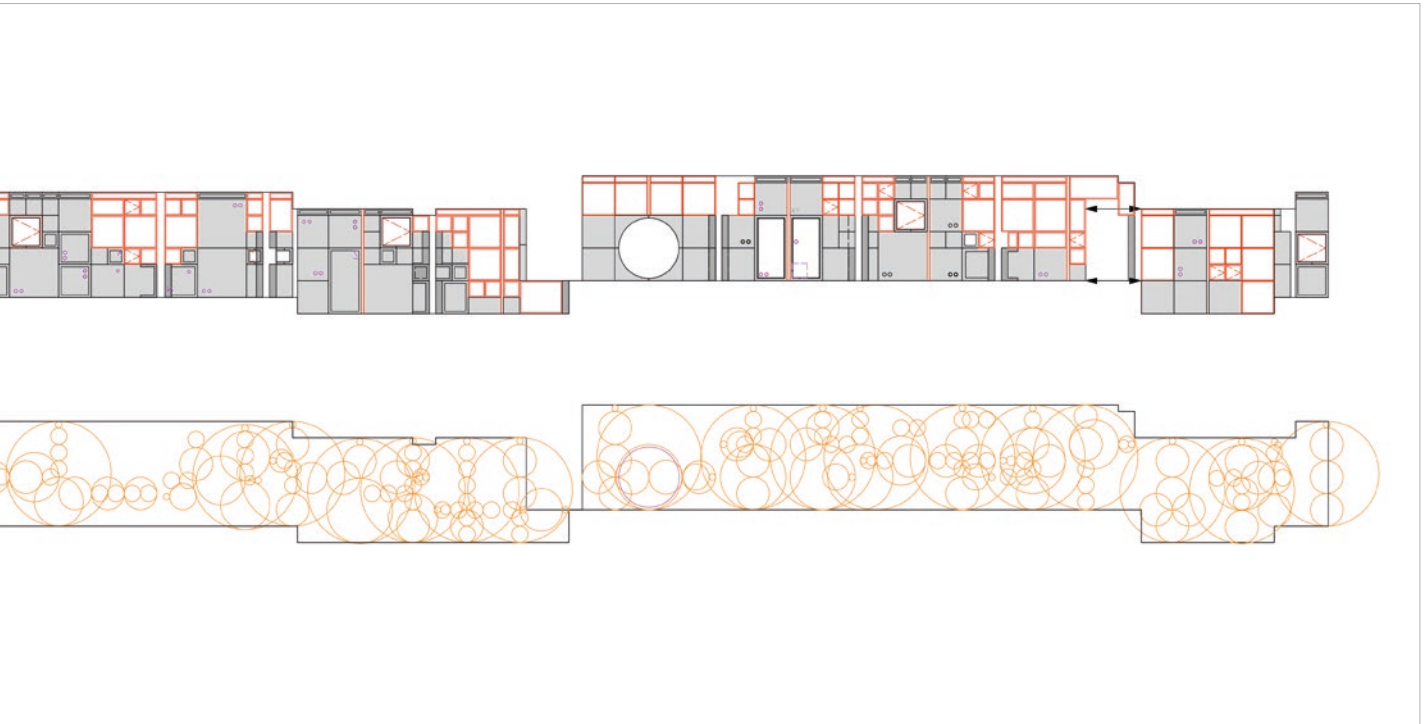
16

16 The Sphere under construction, c.1970.



17 The entire outer wall of Casa Sperimentale is composed of concrete elements, the sizes of which follow an arithmetic number sequence, creating a near infinite number of compositions. This drawing remaps the current layout using techniques demonstrated in Perugini's Santa Maria dei Sette Dolori drawings.

QUESTIONS



17

18 (overleaf) 3D-scanned section through the main building. The nature of the scan allows solid materials to render as semi-transparent. This allows for a new experience of the building, making connections between the interior spaces and the surrounding site context.

3. How might 3D scanning and interactive AR documentation be engaged in the conservation and preservation of Casa Sperimentale and similar projects?

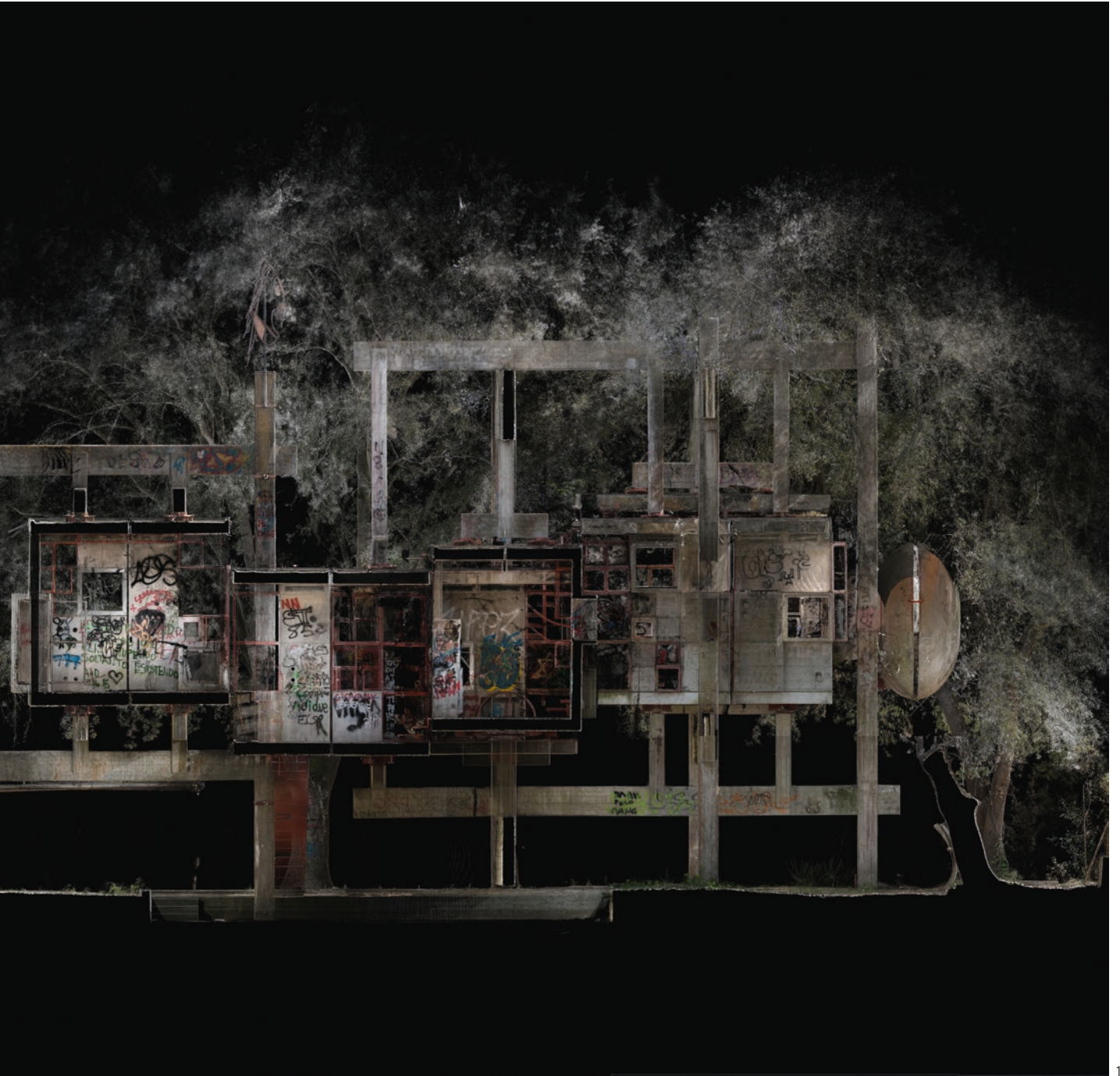
Casa Sperimentale is in an increasingly fragile state. Vandalism has opened the structure up to the effects of the weather, and corrosion of the main structural members connecting the concrete superstructure makes it difficult to visit and survey the building with traditional methods. Furthermore, there is no record of the complete structure in the context of the site because of the architects' improvisation throughout the design and building phase.

3D scans combined with photogrammetry enable detailed virtual modelling with millimetre precision, recording appearance and form as one. This enables more precise coordination and pre-planning of conservation efforts by allowing specialists to make useful preliminary remote assessments of material conditions.

Given the complexity of Casa Sperimentale's 3D form, standard survey methods of photography and linear 2D measurements would not have provided the certainty needed for reliable assessments. A comprehensive digital model enables unprecedented access to Casa Sperimentale for any number of viewers simultaneously. The 3D scan enables the viewer to virtually visit the building, explore it from previously inaccessible perspectives and make new connections between the parts, spaces and surrounding landscape. Furthermore, it saves the actual building from further deterioration. The 3D scan is at once a preservation document, a comprehensive record of the building as it exists today and a means of further protecting it.



QUESTIONS



Context

Casa Sperimentale is located in a pine grove near the coastal town of Fregene, near Rome. Construction started in 1968, led by a family of Italian architects: Giuseppe Perugini, his wife Uga de Plaisant and their son Raynaldo Perugini. The project consists of three independent buildings:

- Casa Sperimentale: the main house;
- The Sphere: a self-contained space set in a 5 m sphere;
- The Guest Houses: a set of separate buildings.



19 Outside view of the main house and Sphere.

20 (overleaf) The circular entrance to the Sphere.





MP+MA

WESLEY

SCUS

MP+MA





21

21 The Perugini family call the house 'Casa Albero' (the treehouse). Openings within the building reflect the clearings between the trees above and illuminate the pool underneath.

Casa Sperimentale's design plays with numbers, structure and light, influenced by the seventeenth-century Baroque architecture of Francesco Borromini and early architectural computing. It was conceived as a suspended object in a pine grove, echoing the forest's structure through an irregular grid of tree trunk-like columns and overarching concrete branches that support an architectural canopy overhead. Several 'trees' merge together to create a seemingly solid body but leave narrow clearings through which the sky can be glimpsed from a pool beneath the structure.

The design and construction started as intuitive sketches. While final design decisions were made onsite with the superstructure being developed rapidly, the placing and nature of enclosing walls was much debated. Perugini envisioned the house as a series of concrete boxes, while Uga de Plaisant – a professor of design at Sapienza University and Tor Vergata University of Rome – preferred a perforated skin throughout, allowing visual connections between the house and the tree canopy. After much negotiation, individual elements were cast and placed on the concrete floor slabs following a set of strict geometric rules. This defined a lively undulating wall elevation made from hollow concrete-framed panels and metal window frames.

The house is divided into elements with openings in the floors and ceilings, while the spaces in-between become open voids. The superstructure consists of three concrete frames from which further building elements are suspended. Each of the modular elements is divided into individual segments, separated by a slither of glass and supported at the centre through a bespoke steel coupling. The horizontal and vertical elements are independently supported, leaving the surrounding walls as interchangeable elements.

Today, the building is in a fragile state having been abandoned in 2004 and subject to intermittent vandalism since. In recent years, the house has been rediscovered on social media as an Instagram geotaggable location. Critically, it is used by urban subcultures as a canvas for graffiti and as an exercise ground for parkour, resulting in most of the windows having been smashed and the doors broken.

As well as Perugini's own explorations of Baroque geometries and cybernetics, Casa Sperimentale must be discussed in the theoretical context of Umberto Eco's *The Open Work* (1962), where he argues that expressions of work be understood as an indeterminate 'field of possibilities, to create "ambiguous" situations open to all sorts of operative choices and interpretations' (Eco 1962, p. 44). Free from the constraints of clients, time limitations and a real programme, Perugini explored the open-design process by testing ideas in a full-scale model. Referring to Mies van der Rohe's full-scale canvas model of the Kröller Müller House (1912) in the Netherlands, he wanted Casa Sperimentale to be understood as a 'valid didactic tool', a test for 'modelling ideas in scale 1:1' (Perugini 2018, p. 17).





22

22 The Guest Houses.

23 (overleaf) The roof elements are individually suspended from the concrete superstructure. This is mirrored in the support for the floors underneath the building.



23

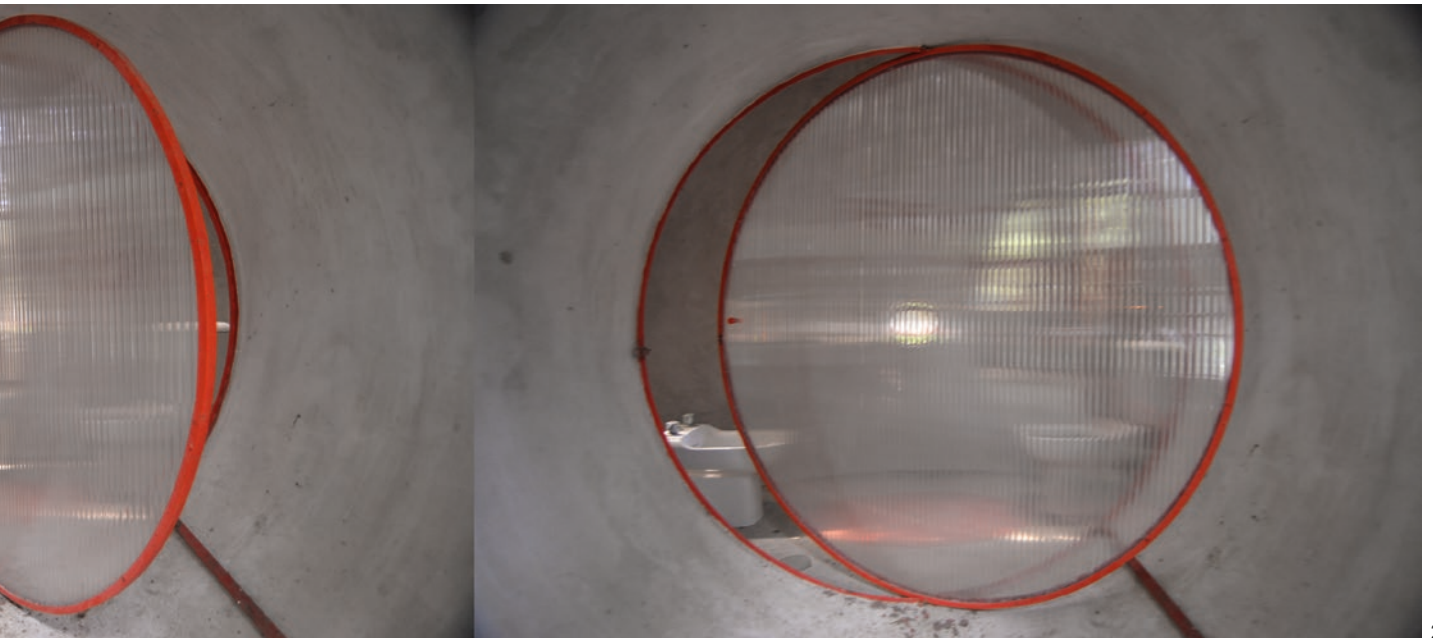




24 (previous) The windows follow a similar structure to the concrete wall elements. Set at different levels, they play with the geometry of the building.

25 In striking contrast to the grid geometry are two cantilevered spheres designed as bathrooms, which are accessed through a concrete tunnel.

CONTEXT



25



26

26-8 Only three photos exist showing the house inhabited, c.1990.

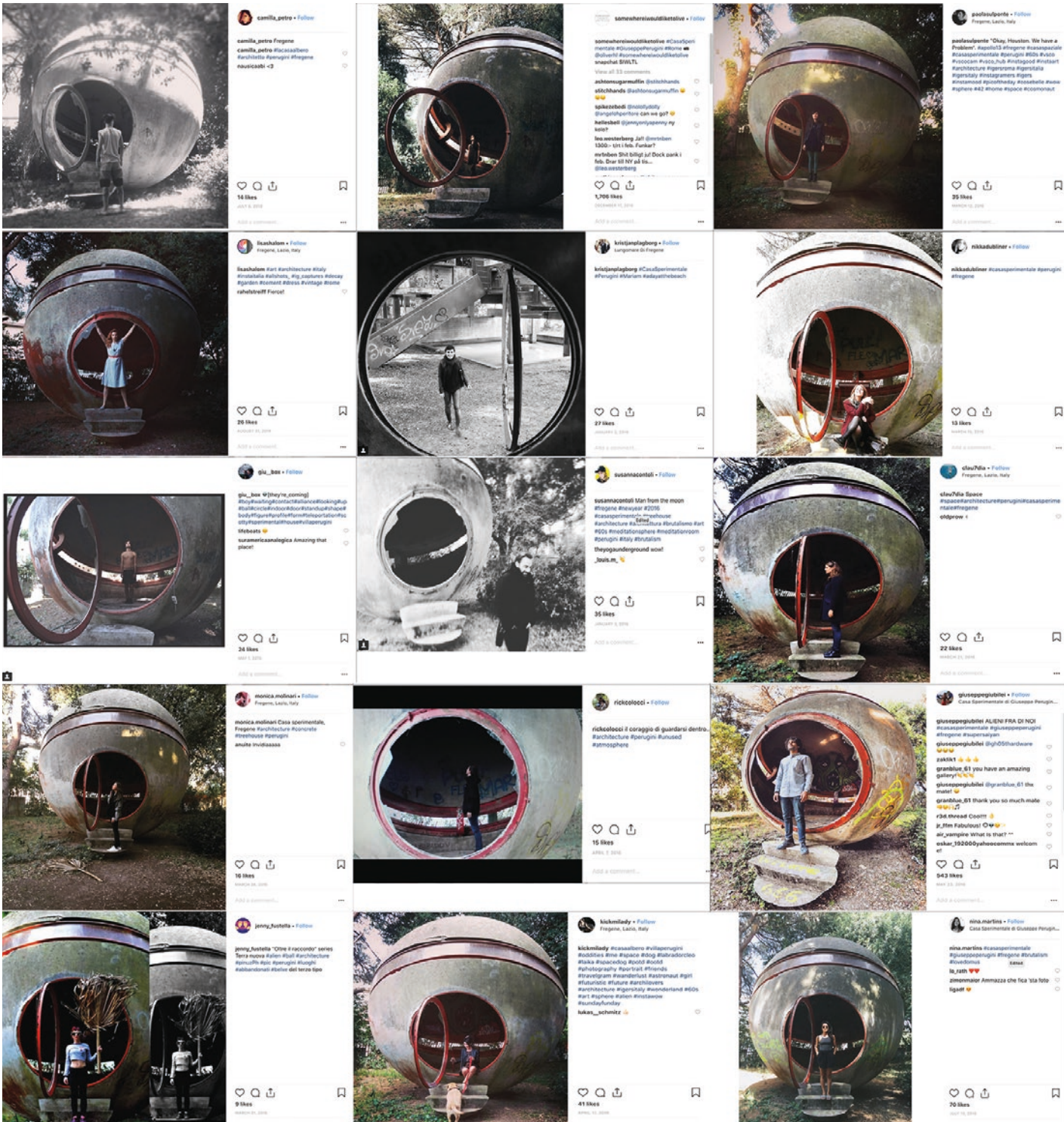




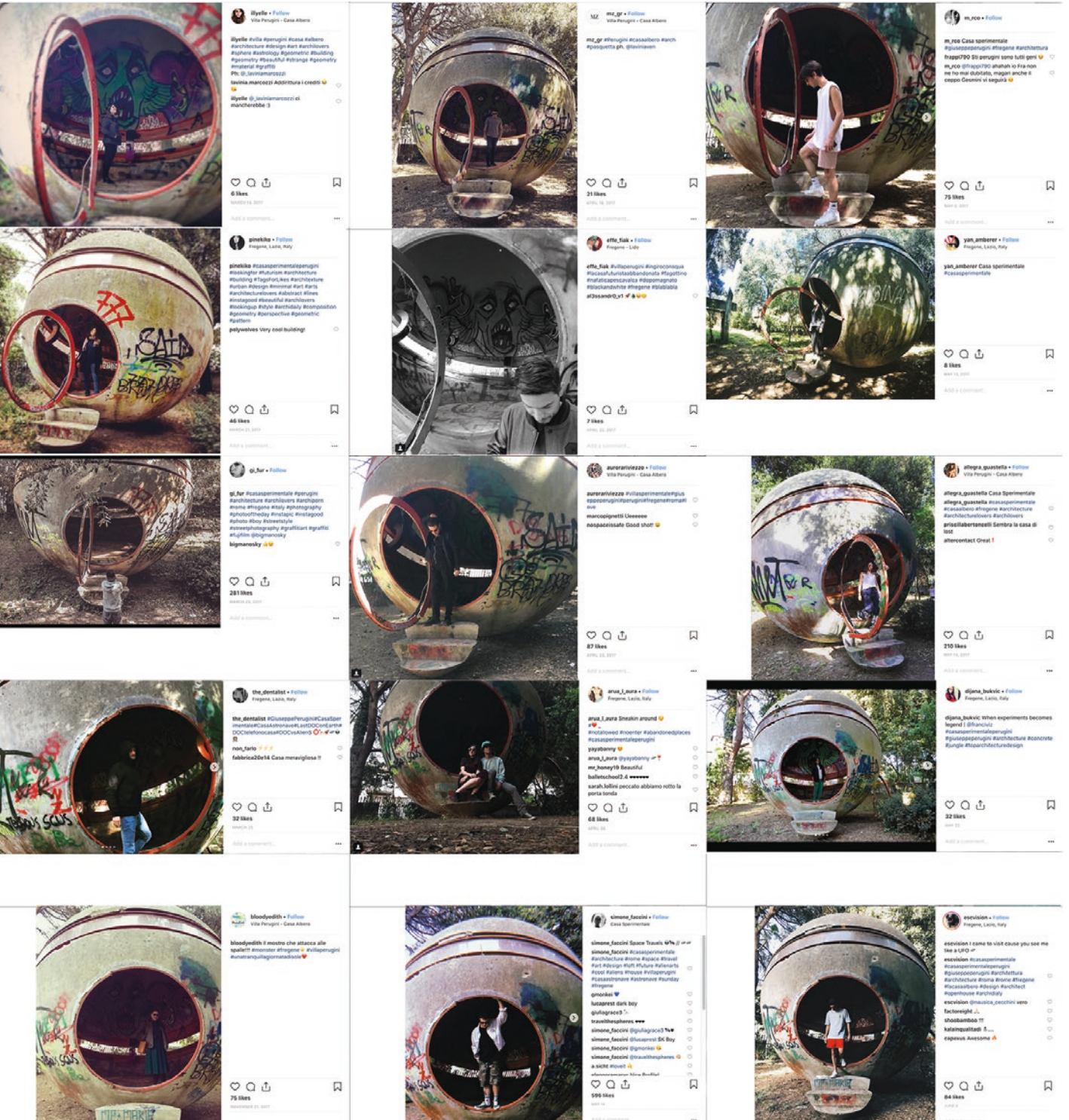


28

29 (overleaf) A selection of the many geotagged images on Instagram.



CONTEXT



Methodology

1. Archival and library research, addressing the historical and architectural context of the post-war period

Giuseppe Perugini published two books about his work and several on Baroque architecture in Rome. Weber and Storp studied his interest in Francesco Borromini and found specific similarities between the spatial expression of Casa Sperimentale and Borromini's geometries. Through a comparative analysis of the house and information on the Association for Organic Architecture, the authors established a close relationship between the design of Casa Sperimentale and the seven architectural principles defined by the founder of the Association, Bruno Zevi. Moreover, they researched Perugini's writings and drawings, observing his interest in cybernetics and computing. Whilst many sources have been studied, it was not possible to gain full access to Perugini's own archive at the time of writing. Raynaldo Perugini is, however, planning to make the archive accessible for future research.

Non-architectural material was also studied by the authors. In sharp contrast to its lack of visibility within architectural history, Casa Sperimentale has entered the realm of popular culture since being used as a location for a Fendi fashion campaign in 1989. Recently, it was used as a backdrop in a music video for the Italian band Dark Polo Gang (30). This new appreciation for the building has, however, proven to be detrimental to its condition.

30 Still from a music video by Dark Polo Gang.



31 (overleaf) Photograph showing the separation of the floor, wall and ceiling elements through narrow glazed gaps.



NATE

NAVIGATOR

BVA
N FAME

Nick

MAX

BONK

THE
MAY
STELLA

GIA

NICK
MAX



PLAYA

POM

852

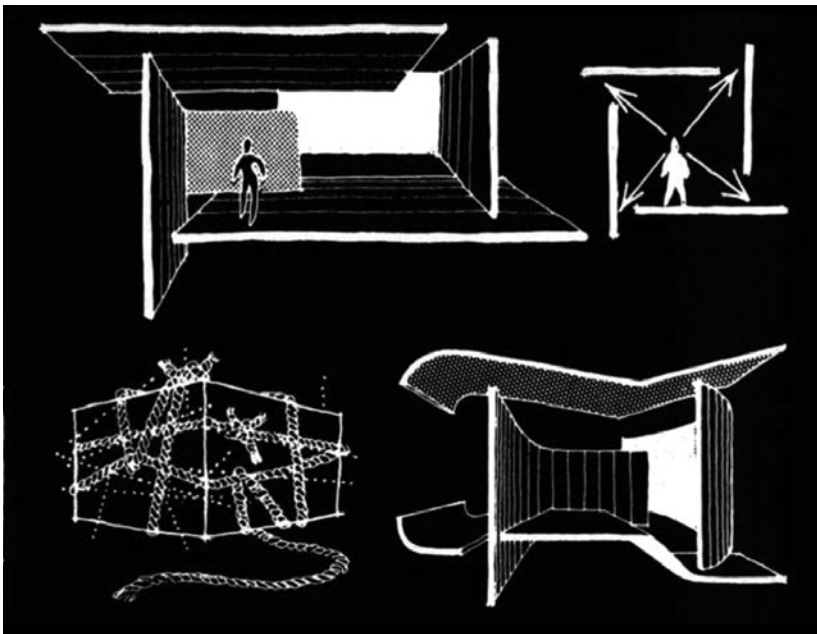
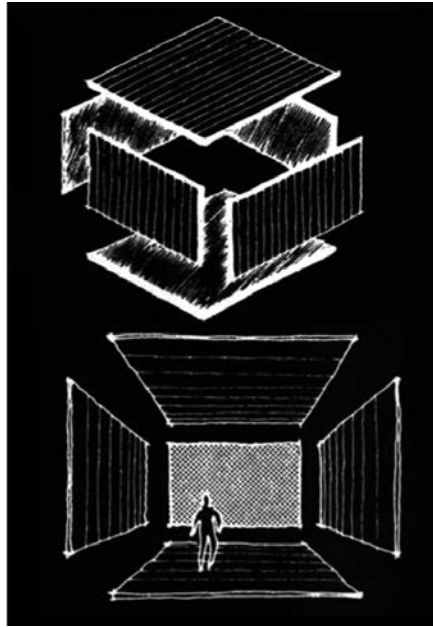
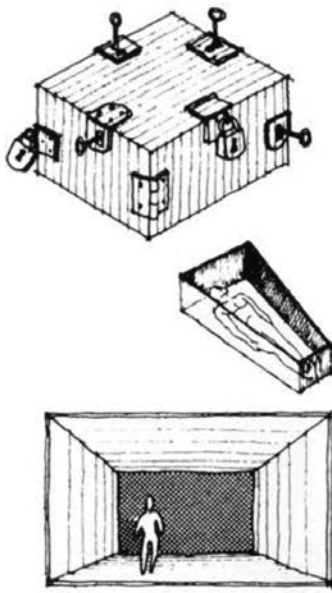
STENO
COMPIE
NOI due
ELSP

GIOVANNI
LEGGENDE

B

MARIN

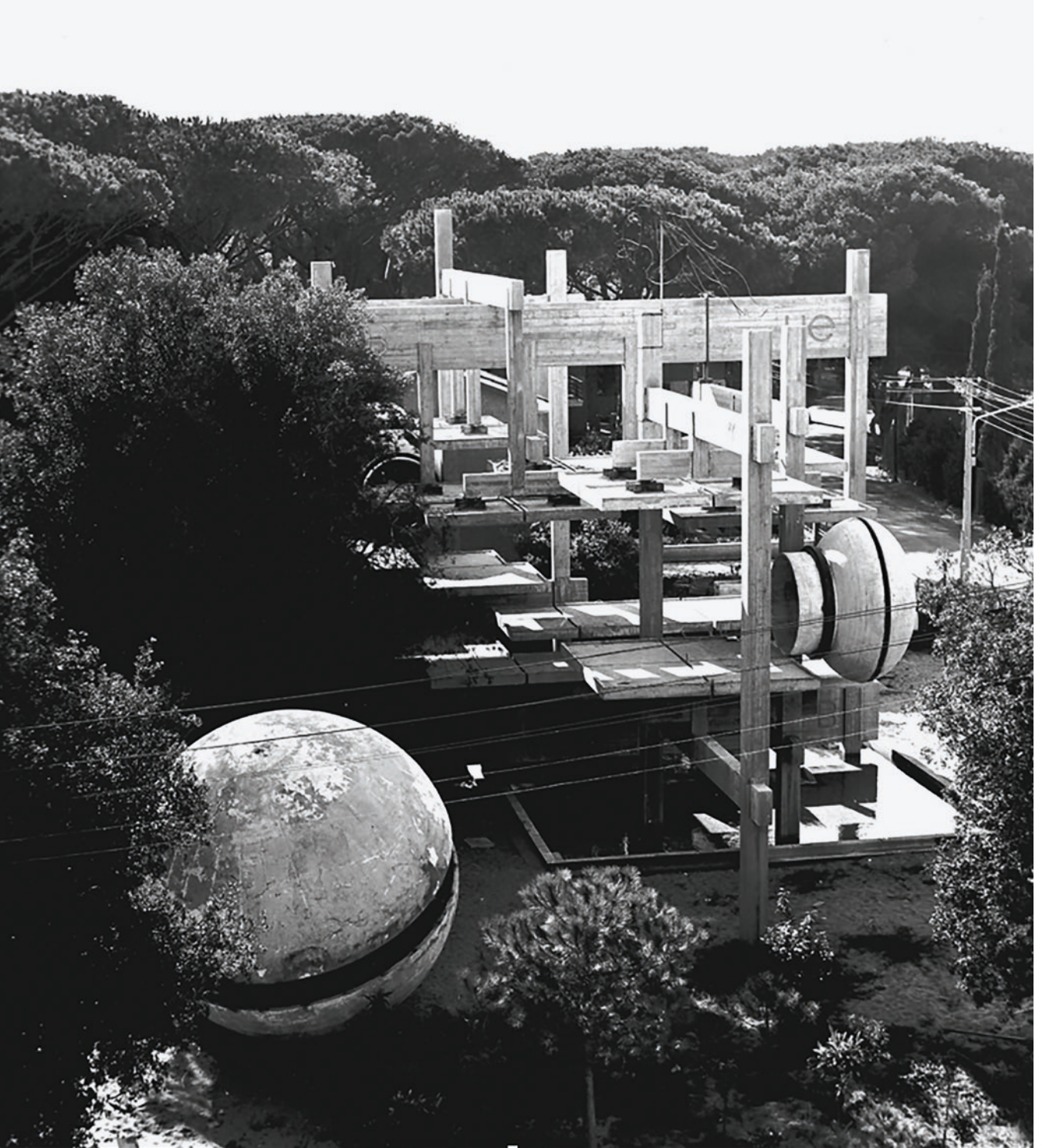
ALMO
NACCOTOS



32

32 Diagram drawing from Bruno Zevi's *The Modern Language of Architecture*, 1978.

33 Very few images survive of the building under construction. Here, the mainframe, floor and ceiling elements have been constructed; the bathroom elements have been placed and the infill wall elements are yet to be positioned, c.1973.



2. A comparative drawing study to observe the influence of Baroque principles on Giuseppe Perugini's design

Tracing possible reinterpretations and applications of Baroque ideas in Perugini's studies and designs provides an interesting exercise. In conducting a comparative meta-study – a study of Perugini's study, correlated to surveyed drawings – it became clear that Casa Sperimentale shows tangible influence from Baroque principles. These include:

- A rhythmic use of proportion at differing scales to define rooms;
- Undulating walls and light to dissolve the idea of a flat building perimeter;
- Lines, squares and circles in specific combinations, subtly echoing Baroque compositions.

Noting that Baroque space has many layered and possible interpretations, we can see Perugini's arc of interest focusing on the plan and elevation. Trigonometric patterns of proportion have also been used to order recognisable undulations of wall and structure in plan and architectural elements.

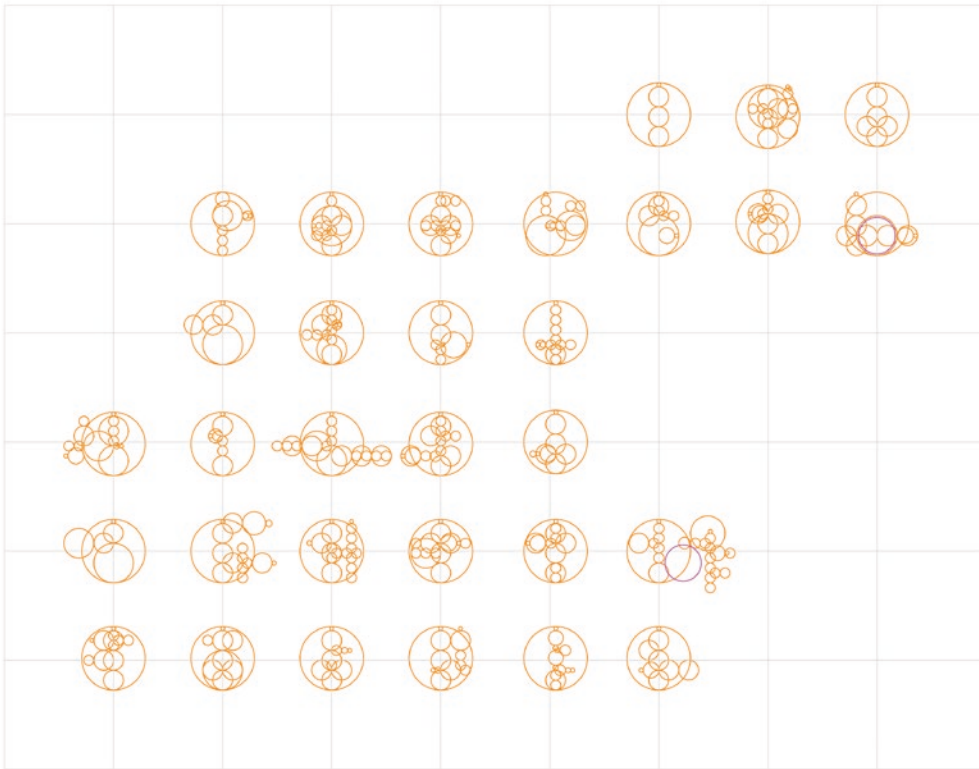
34 The compositional arrangement of the individual building elements is based on an arithmetic number sequence, similar to that in Santa Maria dei Sette Dolori.

35 Numerical sequences and the part-to-whole arrangement allows for a near infinite number of unique configurations within the set parameters of the exterior walls. This drawing depicts these relationships as arithmetic number sequences.

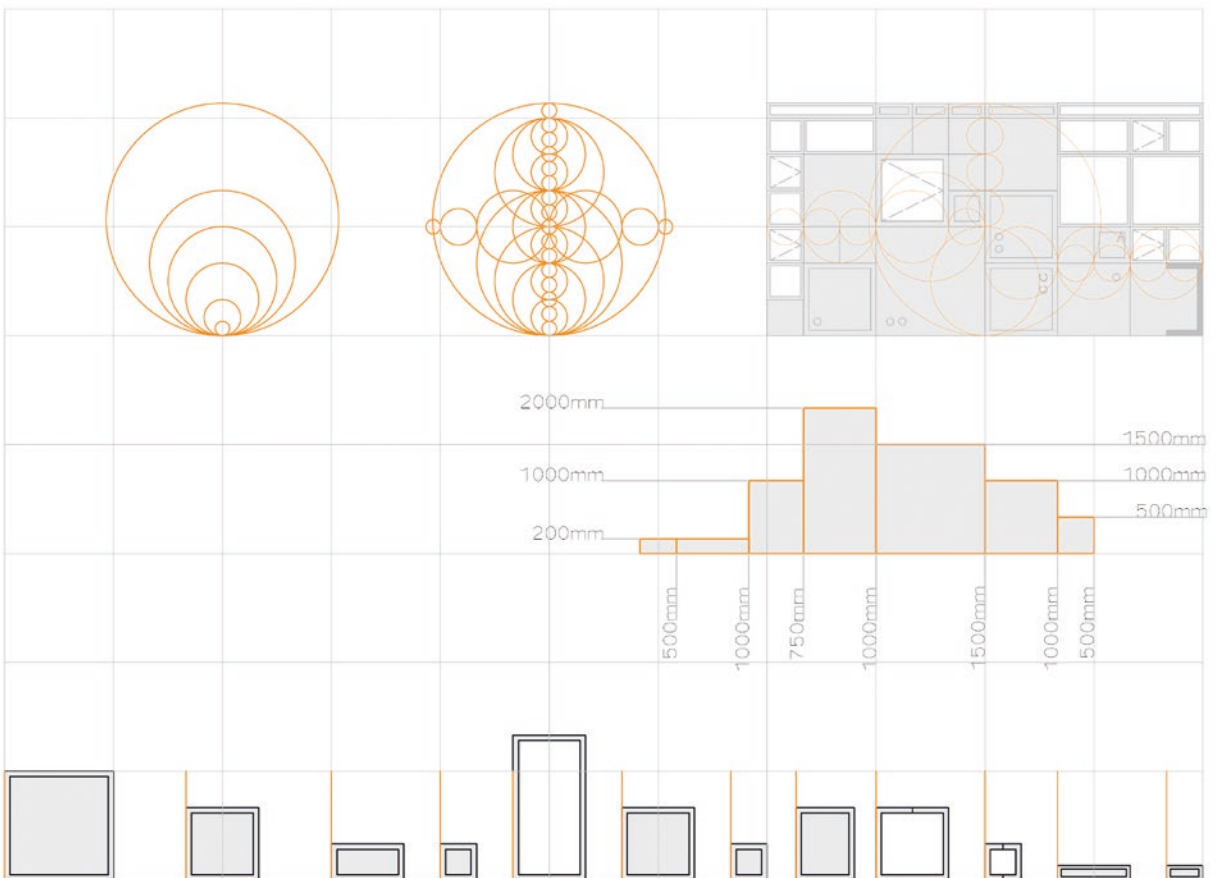
36 (overleaf) Exploring the walls using the Fibonacci number sequence.

37 (overleaf) Exploring the walls using the arithmetic number sequence 1-2-4-8-16.

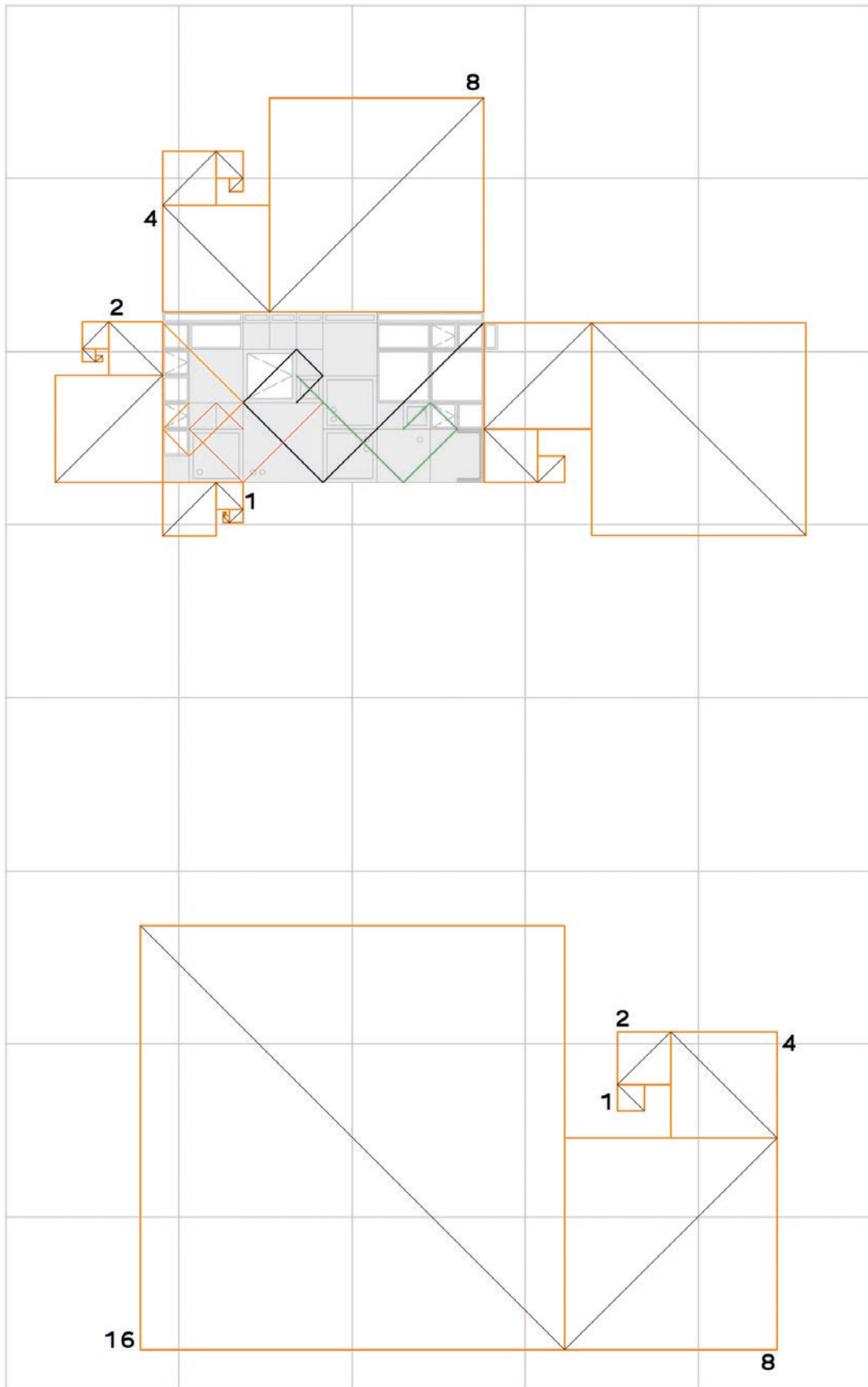
METHODOLOGY

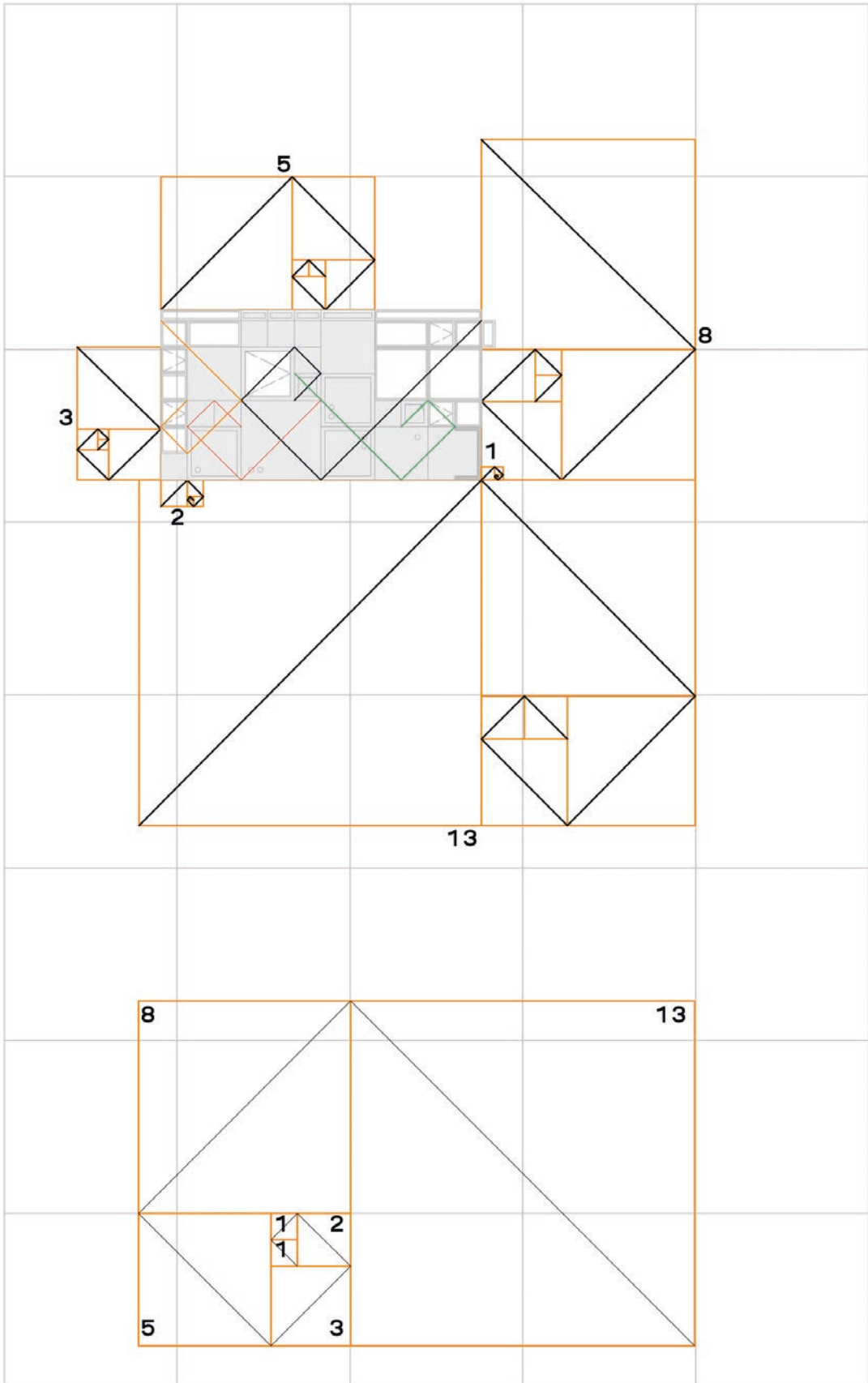


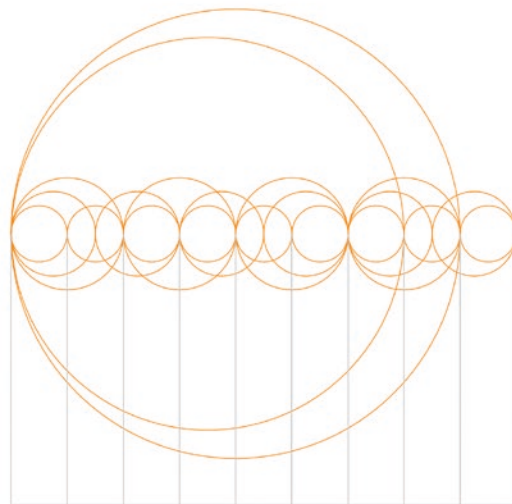
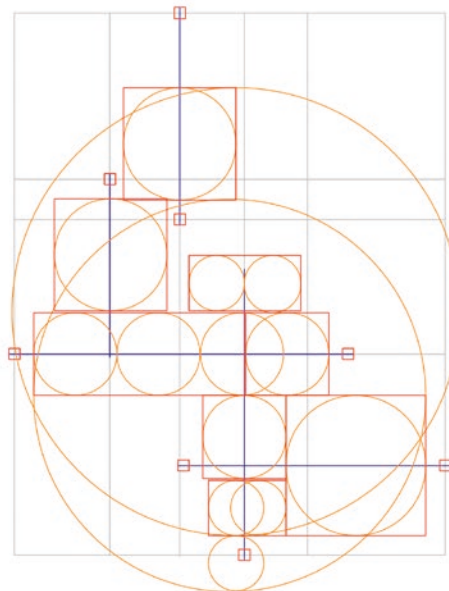
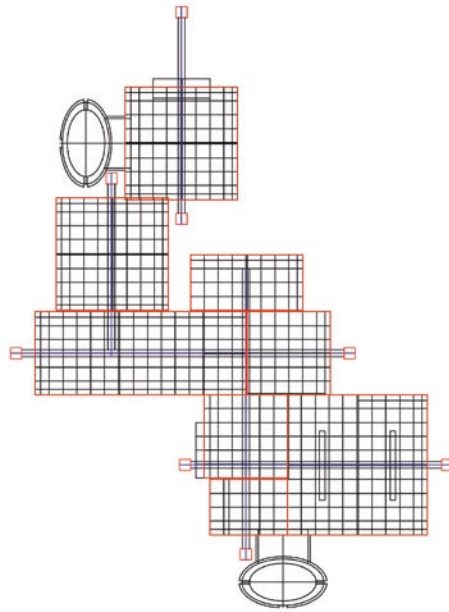
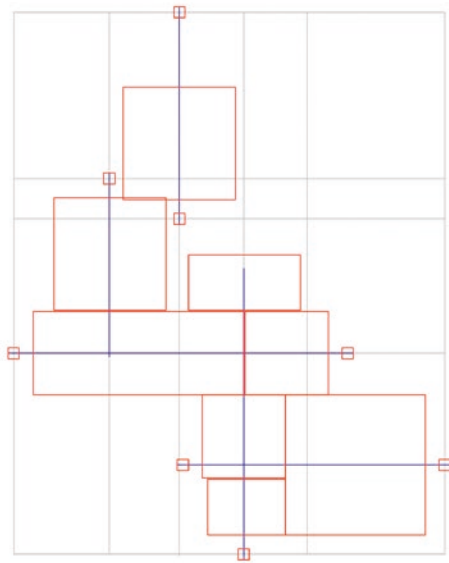
34



35





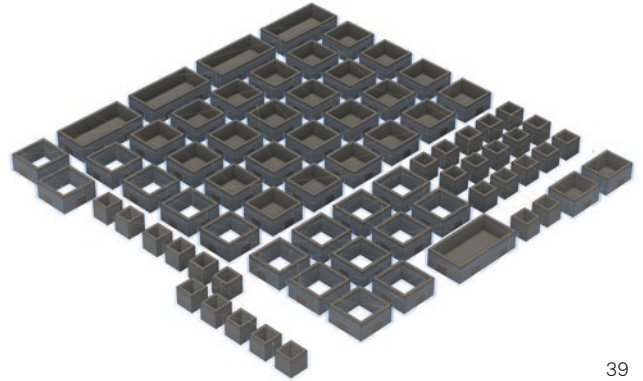


38

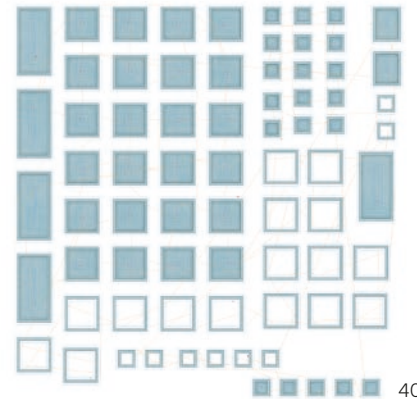
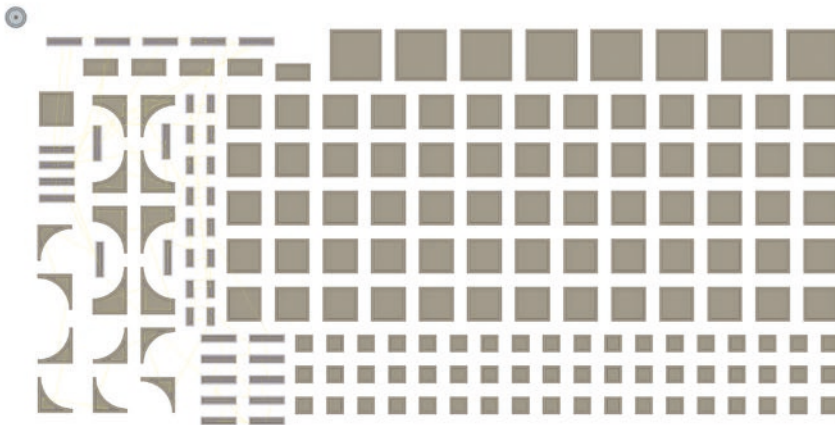
38 Plan arrangement using a similar method to Perugini in his Santa Maria drawings. Analysis of the plan's geometry reveals an arithmetic sequence of dependencies.

3. Model making to explore different configurations of modular elements

A model of Casa Sperimentale explores assembly strategies, the modularity of the individual building elements and the variations in execution of the outer wall elevations. Perugini adopted a strategy in which non-loadbearing walls are merely infill elements that can be reassembled in different configurations. This model uses 191 wall elements of nine types and eight infills to explore various arrangements.



39



40

39 A model was fabricated using CNC routing to cut the elements from a Valchromat sheet material.

40 CNC path within the digital model used to fabricate the wall elements.

4. Systematic photographic survey assessing architectural and interior modifications

The architecture, its setting and the structural damage caused by years of vandalism have all been extensively documented in the research. This photographic record forms the basis of an invaluable document of the building.



41 Comparative photographs of decay: 2015 (left), 2018 (right).



5. 3D-scanning survey and AR modelling to document the house in a time-based exhibit

A digital facsimile of Casa Sperimentale was created using 3D scanning. This was then used in the making of a film, which allows the house to be remotely explored while preventing further damage. The film examines the structure in unconventional ways, allowing the viewer to fly through walls and view the building from all angles including above and below.

After carefully addressing each of the elements and evaluating their connecting principles, the study extends and applies the idea of ordinaire using an interactive website interface that allows users to explore further variations in virtual form. Based on the data drawn from the 3D scans, this web-based platform allows users to explore different configurations of the wall elements.

42 3D-scan plan of the building and surrounding site. The scan enables tree foliage to be removed to expose the building in relation to the site.

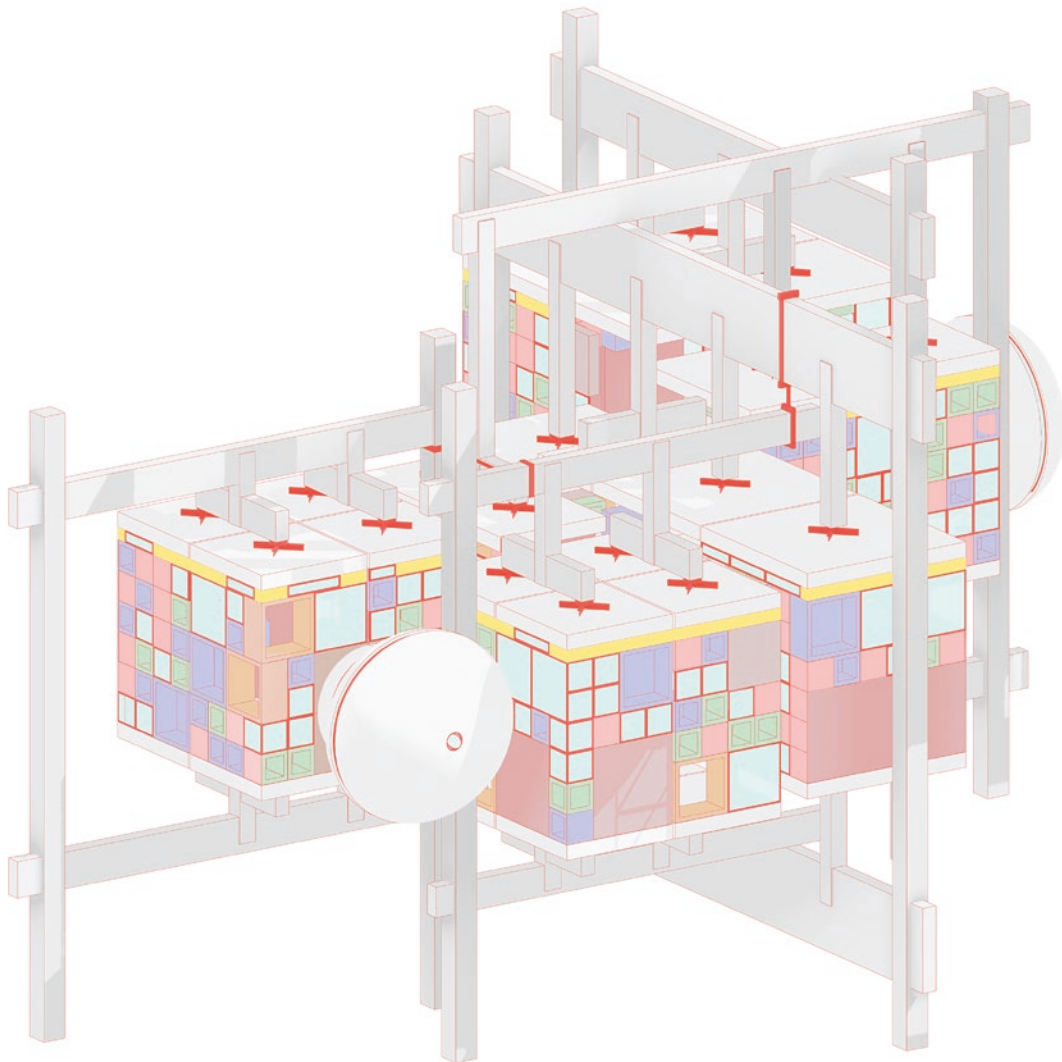
43 (overleaf) Stills from the 3D-scan film. Using point cloud information, the film takes the viewer through a scenic route otherwise impossible in real life.











44 (previous) The interior of Casa Sperimentale consists of independent levels and spaces, all of which have a visual connection to the surrounding landscape through glazed openings in-between the floor levels.

45 Using 3D scans, the programming of the game interface allows for the placing of the blocks based on the given geometric grid.

METHODOLOGY





46

46 Using a game-like interface, the Casa Sperimentale builder is a web-based application that allows users to test, change and play with the arrangement of the blocks.

6. Video interviews to narrate and document first-hand experiences of the house

Casa Sperimentale was envisioned as a laboratory for the testing of ideas on design, fabrication and space following an open-ended process. A small number of sketches survive, demonstrating a variety of design approaches, but most of the decisions were made onsite by the family in what Raynaldo Perugini calls a ‘democratic design process’ (Perugini 2018).

The oral history of the building is of great importance, as the different stakeholders did not keep a detailed record of the process. With Giuseppe Perugini and Uga de Plaisant no longer alive, first-hand knowledge of the building’s creation has fallen to the key surviving witnesses, Raynaldo Perugini and the local builder Angelo Bellotto, both of whom were interviewed for the project. Former members of Perugini’s studio in Rome, most notably the architect Gianfranco Tonelli, will be interviewed in the near future.



47



48

47–8 Stills taken from the interviews with Raynaldo Perugini (top) and Angelo Bellotto (bottom).

Dissemination

The research is presented on an online platform (www.casasperimentale.org), which includes an interactive model. The short animated film *Casa Sperimentale: The House in the Trees*, depicting a fly-through of the building, has been shared widely in lectures and on digital platforms. It has to date attracted over 25,000 views on YouTube.

- *Angelo, Builder* (2018). Produced by Patrick Weber and Sabine Storp. [Viewed 4 December 2020]. www.youtube.com/watch?v=W7FcuDjvdII&ab_channel=STORPWEBERarchitects
- *Casa Sperimentale Fregene* (2018). Produced by Patrick Weber and Sabine Storp. [Viewed 4 December 2020]. www.youtube.com/watch?v=TugPsqPPch0&feature=youtu.be&ab_channel=STORPWEBERarchitects

Exhibitions

The project was exhibited in the solo exhibition *Casa Sperimentale* in 2019 at the architektur Galerie am weissenhof in Stuttgart (49–51), as part of the Bauhaus100 celebration.

This featured:

- A large-scale model exploring the endless design and reconfiguration process;
- Two prints of the 3D scans;
- A large-scale exhibit demonstrating the modular nature of the building elements;
- A photographic survey;
- Four films, listed below.

A model of the house featured in the *Summer Exhibition 2019* at the Royal Academy of Arts in London (52).

Films

- *Casa Sperimentale: The House in the Trees* (2018). Produced by Thomas Parker. [Viewed 4 December 2020]. www.youtube.com/watch?v=hPfZqoL64xQ&feature=youtu.be
- *Raynaldo, Architect* (2018). Produced by Patrick Weber and Sabine Storp. [Viewed 4 December 2020]. www.youtube.com/watch?v=q4qbvahedBM&feature=youtu.be&ab_channel=STORPWEBERarchitects

Publications

The research has featured in the print publication *Casa Sperimentale* (2019), published by architektur Galerie am weissenhof. Articles by the authors have been published in the architectural periodical *Deutsche Bauzeitung* and online (*The Modern House*). The exhibition was reviewed in the national newspaper *Stuttgarter Zeitung*. Further to this, the project has been widely circulated online, including *Stuttgarter Nachrichten*, *BauNetz*, *Dezeen*, *La Citta Immaginaria* and *Iconic Houses*.

Lectures

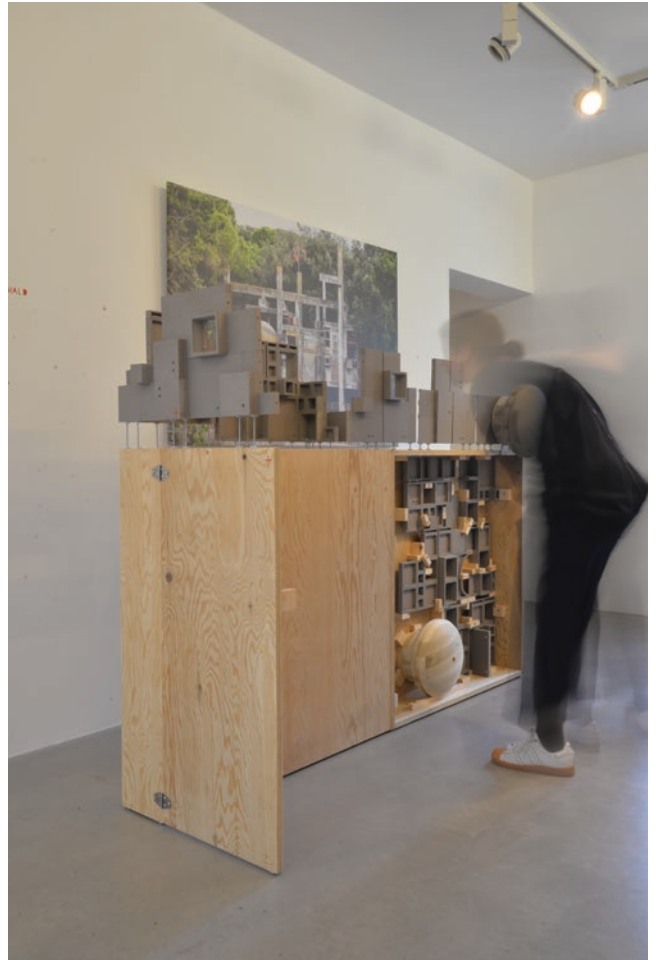
The ongoing research has been presented by the authors at:

- 6th Iconic Houses Conference, Rotterdam (2021)
- Ravensbourne University, London (2020)
- University of Nicosia (2019)
- DAKAM Conference, Dubrovnik (2018)
- Hanyang University Seoul (2018)
- CAA China Academy of Art, Hangzhou (2017)



49

49 *Casa Sperimentale*
at architekturalerie am
weissenhof in Stuttgart.



50

50 Model exploring the
modular design of the
house in its current
configuration, exhibited at
architekturalerie am
weissenhof. Following this,
it was shown in a different
configuration as part of
the Royal Academy of Arts'
Summer Exhibition 2019.



51



51 *Casa Sperimentale*
at architektur Galerie am
weissenhof.

52 Royal Academy of Arts,
Summer Exhibition 2019.



ADRESSE
AM WEISSENHOF 30, 70191 STUTTGART

TELEFON 0711 257 1434
INFO (AT) WEISSENHOFGALERIE.DE
WWW.WEISSENHOFGALERIE.DE

WWW.FACEBOOK.COM/WEISSENHOFGALERIE
WWW.TWITTER.COM/ARCHGWEISSENHOF
WWW.INSTAGRAM.COM/WEISSENHOFGALERIE

ÖFFNUNGSZEITEN
MITTWOCH BIS FREITAG 14–18 UHR
SAMSTAG UND SONNTAG 12–18 UHR
EINTRITT FREI

ERÖFFNUNG DER AUSSTELLUNG
MIT EINEM VORTRAG VON
SABINE STORP UND PATRICK WEBER
MITTWOCH, 16.01.19, 19 UHR
VORTRAGSSAAL NEUBAU 2
STAATLICHE AKADEMIE DER BILDENDEN
KÜNSTE STUTTGART, AM WEISSENHOF 1,
70191 STUTTGART

In Fregene, einem Vorort von Rom am Meer und direkt unter der Einflogschneise von Fiumicino, verankert in einem Pinienwald, steht das Ergebnis eines 10-jährigen Projektes, das Resultat eines Experimentes der Versuch, alle Grenzen zu überschreiten. ■ Der Tradition des Bauhauses folgend, ist ein Entwurfsprozess nicht linear, er folgt nicht nur einer Idee, für ist eine komplexe nicht-lineare Reise, eine Auswanderung mit der Realität, die Schwerkraft und den Materialien. Seit ist es ein Kampf mit sich selbst, um neue Konzepte herauszufordern und etwas wirklich Originelles zu entwerfen, etwas, das es vorher nicht gab. ■ 1957 begann für die Familie von Giuseppe Perugini, Architekt und Professor für Komposition an der Universität Roma Sapienza, eine fünf 10-jährige Reise, um ein Bauhaus als Feriendomizil für den Sommer zu bauen. Das Haus wurde nicht nur von Giuseppe Perugini entworfen, es war eine Zusammenarbeit zwischen ihm und zwei weiteren Architekten: seiner Frau Uga de Palmaant und dem Sohn Raynaldo Perugini – drei Architekten, ein Haus. ■ Giuseppe Perugini kam aus Argentinien, um in Rom Bildhauer zu studieren, wurde aber schließlich Architekt, dann Professor für Komposition. Er studierte die Struktur und Komposition der Bauwerke Hieronimino und experimentierte zur gleichen Zeit mit dem Einsatz von Computern in Entwurfsprozessen. Dies zwischen 1950- bis 1953 stattfindende Forschung führte zu Experimenten für eine kreisförmige Brücke über die Straße von Messina, einem Museum für Paris, das sich um den Besucher konfiguriert und einem kybernetischen Krankenhauskonzept. ■ Die Casa Sperimentale wurde als eine Serie von hängenden Betondecken entwickelt. Auf vier Böden über einem Schwimmbecken und an einer Hauptbetonstruktur hängend, wurden alle trennenden Hauptkörper organisch entwickelt und als Ergebnis einer andiosen Entwurfsentscheidung platziert. Wie Lagerteile sind die Elemente austauschbar und nicht tragend. Die Organisation der Wohnräume folgt einem organischen Prozess ohne Wände, die die Haupträume voneinander abtrennen würden. Die Räumlichkeiten sind luftigere Strukturen, die in den Rand des Grundstücks gepossen und in die Struktur gehoben wurden. ■ Nach dem Tod von Giuseppe Perugini und Uga de Palmaant ist das Haus in Verfall geraten. ■ Es wird wiederholt übergeben, die Jugendlichen aus Fregene benutzen das Haus für illegale Partys, Graffiti überzieht mittlerweile das gesamte Gebäude. ■ Die Casa Sperimentale hat momentan eine unruhige Zukunft. Die meisten Fenster sind eingeschlagen, das Dach ist zugewachsen, Wasser dringt in den Beton. Die Hauptstrukturträger sind in einem prekären Zustand und die Metallamente, die als zusammenhalten, sind kurz davor zu versagen. Nur Angelo, der Hausbesitzer, der das Haus ursprünglich baute, versucht jeden Tag nach dem Rechten zu sehen. ■ Unser Projekt ist der Versuch, das Gebäude und seine Geschichte zu dokumentieren und es in den architektonischen historischen Kontext einzuschreiben. Nur die Zeit wird zeigen, ob die Casa Sperimentale überleben wird.

Unser Bauhaus, später ■ Das Bauhaus hat wie keine andere Institution Ideen der künstlerischen Gestaltung und Ideen der Versammlung von angewandten und freien Künsten gebündelt. ■ Bauhaus wurde zu einem nahezu synonymen Begriff für die herausragende Qualität der klassischen Moderne. Wie unter einem allgemeinen kunsthistorischen Begriff werden unter «Bauhaus-Modernen» Phänomene der Avantgarde jener Zeit subsumiert. Wie diese Formen entstanden, rückt dabei in der Regel in den Hintergrund. Haltung, Absicht, Rahmenbedingungen, lebensweltliche Zusammenhänge, Diskurse sozialer, ethischer oder philosophischer Art treten hinter den Formen, die hervorgebracht wurden, zurück. ■ Die architekturhistorische am Weissenhof möchte für das Jubiläum nicht nur nach dem Potenzial dieser Formen fragen, sondern auch die Relevanz und Bedeutung der Bewegungen, die diese Formen hervorgebracht haben in den Blick nehmen. Damit sollen die Ideen des Bauhauses auf die Optionen für neue, produktive, subjektive, provokative oder spekulative Umsetzungen hin untersucht werden.

EINE VERANSTALTUNG ZU 100 JAHRE BAUHAUS | BAUHAUS100.DE
EINE INITIATIVE DER BAUHAUS KOOPERATION BERLIN/DESSAU/HEIMAR C/D STIFTUNG BAUHAUS DESSAU
#BAUHAUS100

AUSSTELLUNG VON SABINE STORP UND PATRICK WEBER,
KURATIERT VON WOLFGANG SCHWARZ,
#6066 FRENCH-TYE (WWW.FRENCH-TYE.COM)

100 Jahre bauhaus

BAUHAUS 100

architektur-galerie

CASA SPERIMENTALE
DAS BAUHAUS IM PINIENWALD
17.01 → 03.03.19

CASA SPERIMENTALE

am Weissenhof



DEUTSCHES ARCHITECTURMUSEUM AM WEISSENHOF
ARCHITECTURMUSEUM AM WEISSENHOF
BETON MARKETING SUD GRH
BONNEN WEISSENHOF ARCHITECTEN BADEN-WÜRTTEMBERG
DATEN & DRUCK OPTIKPLAN KOPPEL + MEDIENTECHNIK GRH
LEICHER PERKLETTEN DRH & CO. KG
LANDSCHAFTSTADT STUTTGART
HALLERRECHTSTADT IN HILFEN SCHMID DRH & CO. KG
TTR TECHNOLOGIEPARK TÜBINGEN REUTLINGEN

DEUTSCHES ARCHITECTURMUSEUM AM WEISSENHOF
ARCHITECTURMUSEUM AM WEISSENHOF
BETON MARKETING SUD GRH
BONNEN WEISSENHOF ARCHITECTEN BADEN-WÜRTTEMBERG
DATEN & DRUCK OPTIKPLAN KOPPEL + MEDIENTECHNIK GRH
LEICHER PERKLETTEN DRH & CO. KG
LANDSCHAFTSTADT STUTTGART
HALLERRECHTSTADT IN HILFEN SCHMID DRH & CO. KG
TTR TECHNOLOGIEPARK TÜBINGEN REUTLINGEN

DEUTSCHES ARCHITECTURMUSEUM AM WEISSENHOF
ARCHITECTURMUSEUM AM WEISSENHOF
BETON MARKETING SUD GRH
BONNEN WEISSENHOF ARCHITECTEN BADEN-WÜRTTEMBERG
DATEN & DRUCK OPTIKPLAN KOPPEL + MEDIENTECHNIK GRH
LEICHER PERKLETTEN DRH & CO. KG
LANDSCHAFTSTADT STUTTGART
HALLERRECHTSTADT IN HILFEN SCHMID DRH & CO. KG
TTR TECHNOLOGIEPARK TÜBINGEN REUTLINGEN



53–4 Exhibition posters for Casa Sperimentale at architektur-galerie am Weissenhof in Stuttgart.

architektur-galerie am weissenhof

CASA SPERIMENTALE

MIT-FREUNDLICHER UNTERSTÜTZUNG
THE BARTLETT SCHOOL OF ARCHITECTURE
RESEARCH FUND - UCL

B The Bartlett School of Architecture

finken & burmiller • dirk wagner

CASA SPERIMENTALE
DAS BAUMHAUS IM PINIENWALD
17.01 → 03.03.19

AUSSTELLUNGSORT
AM WEISSENHOF 30, 70191 STUTTGART
WWW.WEISSENHOFGALERIE.DE

ÖFFNUNGSZEITEN
MITTWOCH BIS FREITAG 14–18 UHR
SAMSTAG UND SONNTAG 12–18 UHR
EINTRITT FREI

100 Jahre bauhaus

Project Highlights

Casa Sperimentale is one of the few built works by Giuseppe Perugini yet it has never been the subject of an in-depth study. This research explores the project's history and provides a survey of the house while it is still possible. The outcome allows for future remote research and interrogation of the building's fabric via AR, potentially enabling the planning of conservation measures in advance of going to site. Through interactive rearrangement of Perugini's modular system, the study also re-establishes his ideas and asserts the importance of his position within the architectural context of his time and the relevance of his thinking today.

Elements of the research, in particular the 3D point cloud, have been used at the Hochschule für angewandte Wissenschaften Coburg as part of their studies into the conservation of historical concrete buildings.

Bibliography

- Bottazzi, R. (2018). *Digital Architecture Beyond Computers*. London: Bloomsbury.
- Boyacioglu, D. (2014). 'Paradoxes of Neorealist Architecture'. *Fen Bilimleri Dergisi*. **13** (26). pp. 49–59.
- Burke, E. (1823). *A Philosophical Inquiry into the Origin of Our Ideas of the Sublime and Beautiful*. London: Thomas Lean.
- Ciorra, P. and Cohen, J. L. (2018). *Zevi's Architects*. Rome: Quodlibet.
- Cordeschi, R. and Numerico, T. (2013). 'La Cibernetica in Italia'. *Il Contributo Italiano alla Storia del Pensiero: Scienze*. Rome: Istituto della Enciclopedia Italiana Treccani.
- Dark Boy (2016). Produced by Dark Polo Gang. [Viewed 10 June 2020]. www.youtube.com/watch?v=5dBr0HnIcY4&feature=youtu.be&ab_channel=DARKPOLOGANG
- Eco, U. (1962). *Opera Aperta*. Milan: Bompiani.
- Giedion, S. (1941). *Raum, Zeit, Architektur*. Cambridge, Mass.: Harvard University.
- Glushkov, V. M. (1966). *Introduction to Cybernetics*. Cambridge, Mass.: Academic Press.
- Hersey, G. L. (2002). *Architecture and Geometry in the Age of the Baroque*. University of Chicago Press.
- Imperiale, A. A. (2014). *Alternate Organics: The Aesthetics of Experimentation in Art, Technology & Architecture in Postwar Italy*. Princeton University.
- Leach, A., Macarthur, J., Delbeke, M. (2017). *The Baroque in Architectural Culture, 1880–1980*. London: Routledge.
- Lyotard, J. F. (1982). 'Presenting the Unpresentable: The Sublime'. *ArtForum*. April. pp. 64–70.
- Moliterno, G. (2000). *Encyclopedia of Contemporary Italian Culture*. London: Routledge.


- Nesbitt, K. (1995). 'The Sublime and Modern Architecture: Unmasking (An Aesthetic of) Abstraction'. *New Literary History*. **26** (1). pp. 95–110.
- Perugini, G. (1953). *La Forma in Architettura*. A. Conti Roma.
- Perugini, G. (1959). *Architettura di Borromini*. Sapienza University of Rome.
- Perugini, G. (1963). *Architettura di Borromini nella Chiesa di S. Maria dei Sette Dolori*. Sapienza University of Rome.
- Perugini, G. (1969). *Architettura Sovietica della Rivoluzione*. Rome: Edizione Nuova Dimensione.
- Perugini, G. (1969). *Strutture*. Rome: Nuova Dimensione Prima Edizione.
- Perugini, G. (1975). *Progetti Ricerca*. Rome: Nuova Dimensione Prima Edizione.
- Perugini, G. and Perugini, R. (2018). *La Casa Albero. Un Esperimento di Architettura*. Rome: Ginevra Bentivoglio Editoria.
- Saunders, A. (2009). 'Baroque Parameters'. *Urban Futures*. **79** (1). pp. 132–5.
- Somenzi, V. and Cordeschi, R. (1965). *La Filosofia Degli Automi*. Turin: Universale Scientifica Boringhieri.
- Zevi B. (1950). *Towards an Organic Architecture*. London: Faber.
- Zevi, B. (1957). *Architecture as Space*. New York: Horizon Press.
- Zevi B. (1973). *Spazi dell'Architettura Moderna*. Turin: Giulio Einaudi.
- Zevi, B. (1978). *The Modern Language of Architecture*. Seattle: University of Washington Press.




55

55 Exhibition publication for *Casa Sperimentale* at architektur Galerie am weissenhof, Stuttgart.


Related Publications by the Researchers


Weber, P. and Storp, S. (2018). 'Eine Tragödie In Drei Akten'. *Deutsche Bauzeitung*. September. pp. 128–9. 

Weber, P. and Storp, S. (2019). *Casa Sperimentale: Giuseppe Perugini, Uga de Plaisant and Raynaldo Perugini*. Stuttgart: architektur-galerie am weissenhof 

Weber, P. and Storp, S. (2019). 'An Unfinishable Endless House': The Untold Story of Casa Sperimentale'. *The Modern House*. February. 

Related Writings by Others

Block, I. (2019). 'Photos and Scans Reveal Abandoned Ruins of Casa Sperimentale'. *Dezeen*. 22 February. 

Catani Scarlett, I. (2019). 'The Experimental Architecture of Casa Sperimentale in Fregene'. *All About Italy*. 26 November. 

Fontanesi, L. (2019). 'Casa Sperimentale Perugini di Fregene: Giustapposizioni e Contrasti Cromatici'. *La Citta Immaginaria*. 16 September. 


French and Tye (2019). 'Casa Sperimentale'. *Marlowes*. 15 January. 

KooZArch (2019). 'Casa Sperimentale'. *KooZArch*. 27 November. 

LeBlanc, D. (2020). 'Website Aims to Alert Architecture Aficionados of 'Icons at Risk''. *The Globe and Mail*. 12 June. 

Leisten, G. (2019). 'Beton-Ufo unter Pinien'. *Stuttgarter Nachrichten*. 22 January. 

Meyer, F. (2019). 'Baumhaus im Pinienwald'. *BauNetz*. 14 January. 

Moderne Regional (2018). 'Quo Vadis, Casa Sperimentale?'. *Moderne Regional*. 23 January. 

Szita, J. (2020). 'Patrick Weber on Discovering an Unknown Icon.' 

 Printed article


 Online article (clickable link)

Image Credits

All images © the author, unless otherwise stated.

1-3, 5-6, 19-20, 22-4, 31, 44 Photo: Andy Tye, French+Tye

11-6, 26-8, 33 Perugini Family Archive

29 Instagram. Copyright unknown

30 © Dark Polo Gang

32 © Fondazione Bruno Zevi

53-4 © architekturalerie am Weissenhof

Bartlett Design Research Folios

ISSN 2753-9822

© 2022 The Bartlett School of Architecture. All rights reserved.

Text © the authors

Founder of the series and lead editor:
Yeoryia Manolopoulou

Edited by Yeoryia Manolopoulou,
Barbara Penner, Phoebe Adler

Picture researcher: Sarah Bell

Additional project management:
Srijana Gurung

Graphic design: Objectif

Layout and typesetting: Siâron Hughes

Every effort has been made to trace the copyright holders of the material reproduced in this publication. If there have been any omissions, we will be pleased to make appropriate acknowledgement in revised editions.

