

Venustas, Utilitas, Fragilitas

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QUADRA

Volume 01

Edited by Elena Marchigiani and Giuseppina Scavuzzo

Research Investigation on Territories and the Built Environment

Università degli Studi di Trieste
Università degli Studi di Udine

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The book collects the essays of former doctoral students:

Elisa Maria Vittoria Bertolini (XXXIV cycle); **Elisa Cacciaguerra** (XXXIV cycle); **Sara Carciotti** (XXXIII cycle); **Alberto Cervesato** (XXXIII cycle); **Barbara Chiarelli** (XXXIII cycle); **Gianluca Croce** (XXXIV cycle); **Egidio Cutillo** (XXXIV cycle); **Mariacristina D’Oria** (XXXIV cycle); **Veronica Riavis** (XXXII cycle); **Valentina Rodani** (XXXIV cycle).

They are introduced by essays of their supervisors:

Giovanni Corbellini, full professor of Architectural and Urban Design at the Politecnico di Torino; **Giovanni Fraziano**, Senior professor of Architectural and Urban Design at the Università di Trieste; **Ilaria Garofolo**, full professor of Architectural Engineering at the Università di Trieste; **Giovanni La Varra**, associate professor of Architectural and Urban Design at the Università di Udine; **Alessandra Marin**, associate professor of Urban and Landscape Planning and Design at the Università di Ferrara; **Sara Marini**, full professor of Architectural and Urban Design at the Università Iuav di Venezia; **Paolo Rosato**, full professor of Real Estate Appraisal and Project Evaluation at the Università di Trieste; **Alberto Sdegno**, full professor of Drawing at the Università di Udine, and coordinator of the PhD course in Civil and Environmental Engineering and Architecture.

This first issue of the *Quadra* series collects the results of researches developed in the frame of the Architecture curriculum of the XXXII-XXXIV Cycles of the PhD course in Civil and Environmental Engineering and Architecture, jointly established by the Università di Trieste and Università di Udine since the academic year 2015-16. Being characterised by strong interdisciplinarity, the curriculum encompasses a range of study fields: architectural and urban design, urban and landscape planning and design, architectural representation, technical architecture, and economic evaluation of plans, projects, and policies. Under the umbrella of economic, social, economic and cultural sustainability and of climate change adaptation and resilience, the focus is on the enhancement and transformation of territories and the built environment, through the integration of different theoretical and operational tools and scales of intervention. By bringing together architectural and urban design reflections and devices, technical and technological tools, spatial planning investigations and instruments, the doctoral researches this book presents provide a picture of a large variety of topics and approaches. Their common aim is to explore fields of innovation in the various steps of transformation processes: from their conception to the proposal of approaches to the building of possible solutions. The first section of the book, *Territories of Smartness and Interactions*, collects contributions dealing with material and immaterial, physical and technological aspects and tools, addressed to the investigation, integrated planning, management and communication of the multiple dimensions of territorial assets and transformations. The second section, *New Metabolisms and Subtractions*, presents researches that are primarily related to the fields of architectural and urban design. Each essay is the result of a synthesis and reworking of a doctoral thesis and its key findings, and is introduced by a presentation written by the research supervisor to sketch broader theoretical frameworks. Overall, the book offers an articulate “geography” of topics and hypotheses the PhD course has dealt with: a tentative mapping of research paths, understood as a starting point for new critical reflections, and for stronger interactions among disciplinary fields and approaches.



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Dipartimento di
**Ingegneria
e Architettura**



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Being the first of the *Quadra* series, this book collects the results of some researchers developed in the frame of the Architecture curriculum of the PhD course in Civil and Environmental Engineering and Architecture (cycles XXXII-XXXIV). The course has been jointly organised by the Università di Trieste and the Università di Udine since the academic year 2015-16. The coordinator of the course is Alberto Sdegno, Elena Marchigiani and Giuseppina Scavuzzo are respectively the current vice coordinator and the previous vice coordinator.

The PhD offers multidisciplinary education and training on topics and approaches that today are at the center of resilient and sustainable design. The objective is to develop skills capable of addressing the radical transformations that are happening in contemporary cities and territories. The curriculum dedicated to Architecture includes a number of disciplines such as architectural and urban design, urban and landscape planning and design, technical architecture, project evaluation and appraisal, and drawing. Researches explore design theories and methods, from the scale of buildings to that of territories, also through the use of advanced surveying and representation tools, information and communication technologies, economic assessment, and construction techniques focused on environmental sustainability.

This book would not have been possible without the commitment of doctoral students; through their researches, they make it valuable evidence of the work done so far. A heartfelt thank goes to all the colleagues who participated in the PhD teaching and training activities, and provided their essays. Last but not least, special thanks go to the PhD students Martina Di Prisco, Anna Dordolin, Andrea Peraz, Vittoria Umani, and Camilla Venturini whose efforts have made the creation of this editorial product possible.

PhD in Civil and Environmental Engineering and Architecture

Università degli Studi di Trieste

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Giovanni Corbellini

Mean-time, the exhibition curated by Cedric Price at the CCA between 1999 and 2000, considers transience as the real, though counterintuitive, condition of architecture. The British architect, by focussing on the interstitial and transitional time frames that affect the built environment, opposes impermanence to the established, Vitruvian idea of solidity as one of the main goals of our discipline and its outcomes. This shift from space to time – or, more precisely, toward a different space-time understanding – deeply marks modern thinking in both the practice of design and its theoretical interpretation, with a dramatic acceleration in the last decades.

In order to address this quite complicated and widely explored research issue, Mariacristina D’Oria decided to look at the instances where temporary conditions and attitudes produced the most radical evidences. The idea was to probe the limits of an extreme architectural phenomenology as a promising testing ground, able to highlight the potential of time-related design tools and strategies. She started accordingly to collect problematic situations and examples, where architecture reacts to and tries to cope with traumatic events, more than often triggered by human violence on people and territories, such as war, extractivism, pollution. The English term “mean” takes this way another of its many meanings, superimposing on the starting concept of something medium, positioned in-between, the threatening atmosphere of evil.

As a first evidence of the operative relevance of this complex notion, Mariacristina D’Oria’s work shows how the architectural devices deployed to manage the conflict between the human body and traumatic events mutate according to time span. Topological tactics shift for instance from inclusion to expulsion: the more dangerous the threat, the longer the time frame and the less human interaction can be allowed. This result emerges from an ongoing investigation, which proceeds from reviewing the literature to the analysis of several crucial case-studies able to elicit some provisional conclusions. The thesis presents accordingly

two main parts. “Paraphernalia”, traces the theoretical connection between traumatic obsolescence and failed aspirations for permanence. Its main goal is to collect, define, and unfold the basic concepts and terms the research works with. The following part, “The emergence of *mean* time architectures”, deals vice versa with duration as the intrinsic feature of the *mean* time approach.

Three different time spans – short (days), medium (years), and long (centuries) – provide the framework for a comparison of different examples able to highlight various design strategies. Practices meant to rapidly exorcise and overcome trauma often imply cyclical rituals and reiterated operations: movements, trajectories, and gestures that, by means of repetition, erasure, re-enacting, and in some cases spectacularisation, face the aftermath of painful events, with the aim to heal their effects. Body’s protection issues have usually triggered medium-term solutions, generally ascribable to defensive archetypes and the complex bunker taxonomy they developed. These thick, matter-intense shelters employ and represent an obsession for stability, resistance, and permanence, often beyond their functional effectiveness. Wars have been, of course, the privileged breeding ground in which this typology underwent an ongoing experimentation. Its contemporary reinterpretations translate the bunker’s main features in particularly hostile contexts, real or perceived. The dominant fear of an imminent end of the world, for instance, triggers new applications of this warfare apparatuses in the luxury havens where millionaires hope to find shelter from looming catastrophes.

More extreme conditions, where danger is so threatening and enduring that its time span involves many generations, ask design to get beyond its limits, probing uncharted land. Projects that deal with super-long time perspectives must explore architectural strategies for landscapes and territories traumatised by the emergence of contemporary “hyper-objects” – those huge technological apparatuses described by Timothy Morton. These latter enact a sort of slow-motion catastrophe that interrogates the very concept of containment. Nuclear waste repositories certainly represent from this point of view the most problematic infrastructures, since they are often expected to last for a time span that is even longer than the human history behind us. In these conditions, design can hardly maintain any ambition to control future events and must include material and informational entropy as inevitable issues.

Both the increasingly complicated contemporary scenarios and the dystopian narratives they trigger and currently monopolise the debate challenge architecture’s intrinsically optimistic attitude to probe its ultimate potential, entangling, over and over again, the functional with the representative, the operative with the ritual.

Mariacristina D'Oria's research on temporariness in architecture related to traumatic events explores this recent phenomenology, cutting into the architectural debate an original, very specific cross-section, able to highlight both some ongoing design directions and the way critics are theorising about them.

Mean Time Architecture. Or, How to Deal with Trauma in the Posthuman Era

Mariacristina D’Oria

Drawing on a reinterpretation of Cedric Price’s notion of “mean time”, the research adopts his methodology to identify the transitory space-time fragments generated by the increasing occurrence of man-made catastrophes within our current entropic condition. The work explores, through the entanglement of body-trauma-architecture, three mean time intervals: from the short (days), medium (years), and long (centuries) terms, detecting a complex system of case studies.

Architecture, impacted by trauma, mirrors the same symptoms of traumatised bodies, simultaneously recording theoretical and physical wounds and activating reacting processes and strategies. The relevance of the design process emerges as a powerful explorative practise to trace possible future scenarios through representation, being unfolded on the paper surface or displaced to shape performative spatial experiences, revealing compelling experimental testing grounds to trigger an operative reconstruction of our contemporary condition.

Keywords: transitional space-time, experimental cartographies, body-trauma-architecture entanglement.

1. Introduction

Rooted in the contemporary entropic scenario, the work explores the relation between architecture and artificial trauma by observing the transitional temporal intervals opened up by the latter with its occurrence: the *mean* times.

The research seeks to investigate the articulated network composed of disturbing symptoms and reacting processes that constituted an enormous field of experimentation and a fertile testing ground for architecture, intending to retrace design strategies and practises to navigate the uncertainty of our contemporaneity (Fig. 1).

In 1999 Cedric Price¹ observed: «time present has no length, as a line has no thickness» (1999: 1), critically addressing the weakening of the Vitruvian *firmitas*, and employing the “mean time” as a spatiotemporal device to detect and interpret the different thicknesses of “intermediate” times trapped in a condition of latency within the urban transformation processes. Reinterpreting this concept within the mutated posthuman² entropic state (De Caeter, 2012), the research employs it to describe the precise condition of architecture, immersed in a permanent state of impermanence, constantly threatened by a tangible and gradually materialising looming. If architecture has always stolen «entropy from the environment because it is an open system, not linear» (Soriano, 2002), being constantly perturbed by the impact of external factors, nowadays, the progressive reduction of the distance that separates us from the imminent ends of the worlds forces it to wander uninterruptedly from trauma to trauma.

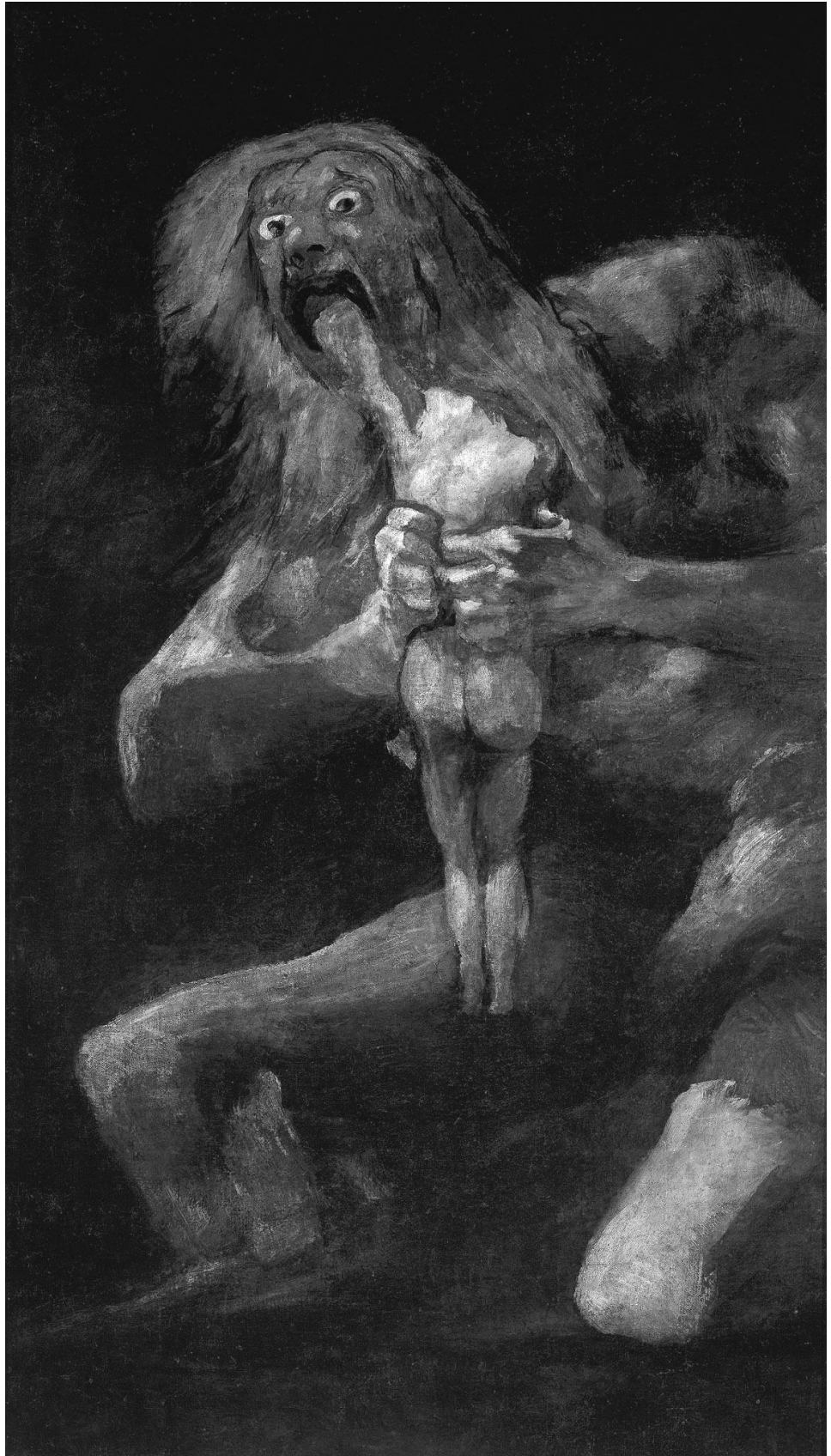
The shift from Price’s “mean time” to *mean* time remarks the research’s scope focused on the transitory space-time intervals opened up intermittently and suddenly by the impact of anthropic shocks and on the investigation of the projects formulated in these contexts, which, blurring and eliding boundaries between real and unreal, introducing disturbing ambiguities and shaking the fixed certainties, seek to intercept new escaping lines of survival. An operative and provisional taxonomy is reassembled, whose collected projects – pragmatic, speculative, utopian, or dystopian – embody three fundamental issues: the search for refuge from an impending catastrophe, the aspiration to survive time, and the celebration of loss.

By constantly recalibrating the amplitude of these *mean* time intervals, the research intercepts what Hejduk defined as «densities that silently implode» (1998: 14-15), retracing “*mean* time expiring architectures” derived from the urge to contain, react, and repair built and human bodies hit by anthropic trauma. The purpose is to detect a system of architectural sequences, cyclical returns, projects, paper architectures, and theories that, formulated within

1 The exhibition *Cedric Price. Mean Time* was curated by Cedric Price and hosted in The Canadian Centre for Architecture, from October 19, 1999, to February 27, 2000, in the museum’s Octagonal Gallery.

2 The Posthuman Convergence, investigated and promoted, among the others, by Rosi Braidotti, raises from the encounter of the fourth industrial revolution and the sixth extinction, exhorting the necessity to ground the discussion in the materiality and through cartography and figuration, understood as methodologies that conceptualise time, help trigger the process of mapping, of navigation in space and time. To deepen these concepts further see: Latour, 2017; Haraway, 2016; Braidotti, 2013a; Braidotti, 2013b.

Figure 1
Goya, F., Saturn devouring
one of his son, 1819-1823.



these *mean* time intervals, could constitute a corpus of architectural operative strategies for contemporary design. Nowadays, recording the replacement of the Vitruvian *firmitas* with structural impermanence, is it possible to reconstruct the archaeology of this defensive language and its sequential rearrangement in defence of an increasingly fragile entropic condition?

Furthermore, assuming, on the one hand, the strict linkage between architecture and trauma and, on the other, the discipline's power of representation and communication, what are the contemporary practises through which architecture deals with trouble?

The investigation intends to weave a game of strings, outlining frictions, paradoxes, and conflicting tensions that fill the traumatised spaces in an operation that can be described through Donna Haraway's words:

String figures are like stories; they propose and enact patterns for participants to somehow inhabit a vulnerable and wounded Earth. My multispecies storytelling is about recuperation in complex histories that are as full of dying as living, as full of endings, even genocides, as beginnings. [...] I am deeply committed to the more modest possibilities of partial recuperation and getting on together. Call that staying with the trouble (Haraway, 2016: 10).

Thus, the work aims to open possibilities of reflection rather than defining fixed and closed solutions to draw trans-relational and trans-dimensional connections intertwining different disciplines: architecture, urban practices, art and performance, psychoanalysis, sociology, and humanities.

The research consists of five chapters, organised into two parts, and a final section dedicated to the apparatuses. The whole work should not be interpreted as strictly divided between theory, case studies, and personal experimentation but, rather, as a progressive zoom-in operation. The research, moving from the general issues related to transience and trauma, further explores the topic within the contextualised field of the nuclear era, experimenting, in parallel, through various installations, the critical challenges of representation and time-fragmentation that trauma is responsible for.

Paraphernalia.

2. Nomenclature of *the Mean Time Architectures*

These paraphernalia specify and clarify the strategic terms of the research.

A barycentric position occupies the term "*mean time*", which provides the frame through which the enquiry is carried out and refers to the homonymous exhibition curated by Cedric Price in 1999 at CCA, in which he explored the possibilities of measuring time-space through movement. Retracing the architectural context in which it has been elaborated, several connections have been drawn with: the work of Bernard Tschumi (and the crucial role of the event), the concept of maintenance (deriving from Derrida and explained by Cuomo (2015: 64) as «the writing of space through the event. Thus, inscribing within the architectural device: sequence, open seriality, narrative, cinematic, dramaturgy, choreography», and, finally, Eisenman's concept of spacing,

blurring, and unfolding. Price's exhibition does not exhaust its relevance in its theoretical contents but assumes a further critical meaning once its spatial organisation has been explored. Rejecting any logic of chronological or thematic organisation, Price draws a kind of architectural entanglement in which the project's places, strategies, and tools are connected according to principles of spatial organisation and internal dynamic trajectories. Thus, different places and times could be grasped through a single glance, reassembling and reinterpreting the fourteen mean time categories³ presented by Price (Fig. 2). Cedric Price charges the term "mean" with two main significances, referring respectively to the temporal dimension, embracing the consistency of a multiplicity of transitory and mutable time frames and its semantic value conveying messages and concepts. The research appropriates another semantic nuance of this term. In addition to Price's definition, this concept refers not only to an in-between condition but also to cruelty, introducing the second pivotal theme of this research: trauma.

This term describes a psychological and physical injury responsible for mental disorders and distortions in time-space perception. Trauma has been investigated focusing on its Western conceptualisation and analysed through the work of Jean-Martin Charcot, whose *Teatro di Nervi*⁴ provides an example for understanding the entanglement body-trauma-architecture, and Sigmund Freud's psychoanalysis, which marked the foundation of the trauma theory.

Defined as «a piercing or breach of a border that puts inside and outside into a strange communication, violently opening passageways between once discrete systems, making unforeseen connections that distress or confound» (Luckhurst, 2008: 3), trauma seems to assume the same agency as catastrophe. It breaks a previous order through a sudden or slow-motion shock and introduces a new complex system of spaces and temporalities that must be renewed, reinvented, and cured.

Trauma intertwines a strict relationship with architecture. Associated with the philosophical concept of the fold, the occurrence of a traumatic event operates on space, unfolding transitional interstices of intervention and performing what Bataille defined as violent laughter: «a violent current that traverses the human pyramid like a network of endless waves that renew themselves in all directions» (Bataille, 1985: 74). Trauma virulently decomposes space, interpreted as an *informe*⁵ matter, challenging its composition and functioning.

3 In his exhibition, Cedric Price identified fourteen categories of "mean time", respectively: selfdestruction, reconstruction, prevision, chronicle, anticipating the impossible, synchronisation, interval, simultaneousness, uncertainty, the pleasure of frustration, suspending time, distorting time, gravity, and pacing.

4 Jean-Martin Charcot, director of the Salpêtrière Asylum of Paris and master of Sigmund Freud, focused on the psychic-cognitive effects provoked by this deformation of the spatiotemporal coordinates generated by trauma, approaching this issue from the un-investigated perspective of memory, posing, by so, the attention on an essential facet of the relation between trauma and time. Furthermore, he developed within his *Teatro dei Nervi*, the hypnotic practise, involving physically his patients and orchestrating a performative space that integrated the bodies and movements of patients and doctors, later joined by a consistent public.

5 George Bataille conceived this concept in his entry for the *Critical Dictionary*, describing it as: «a term serving to declassify, requiring in general that everything should have a form. [...] To affirm, on the contrary, that the universe resembles nothing at all and is only formless, amounts to saying that the universe is something akin to a spider or a gob of spittle» (Bataille, 1929: 382).

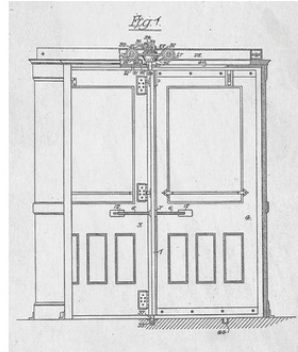


29



9
Incertitude
Uncertainty

20



26



11
Le temps suspendu
Suspending Time



16

5
Chronique
Chronicle



31



13
Gravité
Gravity

8 - J. Britton (London, 1771-1857)
Stairs from the chapter house to the nave. Designed to allow for the formation of the procession. Wells Cathedral in: The History and Antiquities of the Cathedral Church of Wells (London: Printed for Longman, Hurst, Rees, Orme, Brown, and Green, the Author, and J. Taylor, 1824).

16 - A. Saint Ange Briquet (France, active 1854-1896)
Aztec stone calendar showing two parallel time structures 1870s

20 - A. Genthe (Germany, 1869 - USA, 1942)
General view of the aftermath of the 1906 earthquake and fire, looking down Market Street from the Ferry Building Tower, San Francisco, California 1906

22 - J. Stoddard, Active United States
View of Howard Street between 17th and 18th streets following the 1906 earthquake and fire, San Francisco 1906

26 - H. Ehrlich & Sons Mig. Co.
Saint Joseph, Missouri, The "Ehrlich" Track Door, "Double Sealed" The "Ehrlich" "One at a Time" (No More) Automatic Recording Ice Door Ehrlich, St. Joseph, Mo.: catalog no. 43 (Saint Joseph, Missouri, c. 1926), pp. 6-7.

29 - I. Bing (Germany, 1899 - USA, 1998)
Eiffel Tower used as an electric billboard for the Citroën company, alternating with an electronic temperature gauge. Paris 1934

31 - A. Aubrey Bodine (USA, 1906-1970)
Phoenix Shot Tower (1828), 801 East Fayette Street, Baltimore, Maryland C. 1940

43 - B. Becher, (Germany, 1931), H. Becher, (Germany, 1934)
Winding Tower, Glenrhondda Colliery, Treherbert, South Wales 1966



43

6
Synchronisation
Synchronization



8



22

The research focused on the two main traumatic effects: the spatiotemporal distortion – connected with memory disorders – and the *aporia* – responsible for the appearance of blockages and interruptions that impede the representation and the complete reconstruction of the traumatised phenomenon.

Moreover, highlighting the relationships, assonances, and reverberations that trauma entangles with the human body and, by so, with the architectural discipline, and observing the constant shift between the traumatic agent and the traumatised reagent, three different agencies in which architecture is inserted simultaneously as a victim, author, and potential saviour were identified and deepened.

Trauma on architecture interprets the latter simultaneously as the medium of disaster destruction, erosion, and erasure. These are processes that harshly hit its physical and symbolic body and as the means to repair the scars it produced, embodying an action-reaction operative functioning. Trauma of architecture records the same discipline in the role of the violence's agent, becoming the device through which trauma is operated, projected, and imposed on a heterogeneous apparatus of corpses, from human to territorial bodies. This agency recalls both the implicit violence enacted by the very materialisation of architecture and the tensioned frictions coming from the relation between the preconfigured design space and the unexpected movement of bodies within it. Finally, trauma as architecture exemplifies the discipline attempts to understand and metabolise trauma through the displacement of representational tools, leading to the definition of inverted archives, whose contents are the violent scars produced by disasters, or through the diagrammatisation of trauma's very dynamics, drawing by so a parallel between the design planned construction and the traumatic event choreographed destruction.

Figure 2

Reconstructing the spatial experience of Cedric Price's exhibition. The entangled projects of wall (M. D'Oria, 2022).

3. The Emergence of *Mean Time Architectures*

Reconstructed the theoretical framework and reinterpreted the *mean* time as the vehicle to explore the traumatised and traumatising architectures, the investigation has further pushed its exploration in the contextualised field of the nuclear era, de-grounding, nowadays, numerous criticalities from the constant threat of an imminent nuclear war to the urgent issue of nuclear waste disposal to the recovery of contaminated territories.

The complex system of temporalities unfolded by and within this field determined the modulation of the metronome according to three different rhythms: short-term (days), medium-term (years), and long-term (centuries). Moving from this structure, the work constantly blurs, relates, and intertwines these intervals, drawing connections between buildings and architectural speculative processes, memory and forced or unconscious amnesia, rituality and exorcism, intentional precariousness and unexpected permanence. Since trauma's impact provokes a strong shock in the human mind, it disrupts the ordinary boundaries between the temporal dimensions perceived as past, present, and future, also architecture is affected by this puzzling and disorienting phenomenon.

3.1 Deployments. *Choreographing Trauma between Rituality and Geography, Memory and Erasure. Short-term*

Roger Luckhurst (2008) recognises several syndrome clusters generated by traumatic events, including the afterwardness, the symptomatology described in Sigmund Freud's psychoanalysis as «a mode of belated understanding or retroactive attribution of sexual or traumatic meaning to earlier events» (Lauretis, 2008: 118). The human mind, attempting to react to trauma, adopts this defence mechanism producing a significant temporal shift between the moment of the shock and that of the reacting defence, opening interstitial and transitional temporal intervals to metabolise trauma.

These *mean* time intervals are characterised by the array of physical and metaphorical movements of bodies and objects whose trajectories and reiterated routines exorcise and overcome trauma, recalling the ritual's «symbolic technique of making oneself at home in the world» (Han, 2020: 2). While evolving on significantly reduced time intervals (seconds, hours, days), these practises generate via repetition a temporal echo that, grafting the dimension of memory, resew the branch produced by trauma within the collective memory. Firstly, the ephemeral movement of the human body across space, intended as a generator of space and a narrative tool, is detected. Then, the hectic and unpeaceful movement of the thoughts displaced on paper has been observed, which embodies a sort of control room where to test resistance's strategies, intercepting, finally, cases in which traumatic events have been spectacularised and capitalised through the construction of fascinating dystopic narratives.

Initially moving effortlessly on the ground and seeking a re-integration with it, these ritual choreographies gradually translate into trajectories in which the body is increasingly heavily mediated and separated by the environment through contemporary armour that filters and distances humans from contaminated environments.

3.2 Paranoid Architecture. *The Bunker from a Safe Internal to a Threatening Black Box. Medium-term*

The metronome of Cedric Price harmonises on the *mean* time interval of years. The main focus is the archetype that, par excellence, has symbolised the refuge of modernity, embodying simultaneously the shaking paranoia of the end and the effort to resist it: the bunker. Deeply rooted in the ground, this *dispositif* progressively underwent an extensive sequence of manipulative operations that defined archetypal hybridisations of new architectures. Starting from the archetype of the bunker, significantly autonomous trajectories are retraced, recording a constant replacement of the object hermetically stored and protected in its insides: from the bomb shelter to the time capsule, from the isolation cell to the spacecraft, to the data centres and nuclear waste deposits. Human beings have been brought outside architecture's main focus, replaced by technology and databases, shifting from users to hackers (Fig. 3). Finally, a double tendency is underlined: while some massive structures are

reused and converted into hermetic data centres, others have been forgotten. The amnesia and hermeticism of these structures triggered the colonisation of their interiors by bacteria that, developing metabolic processes with the toxic substances left by warfare, gave rise to new forms of life in a process in which humans are entirely excluded.

3.3 *Invisible Battlefields, Cartographies of Erasure, and Artificial Geologies. Long-term*

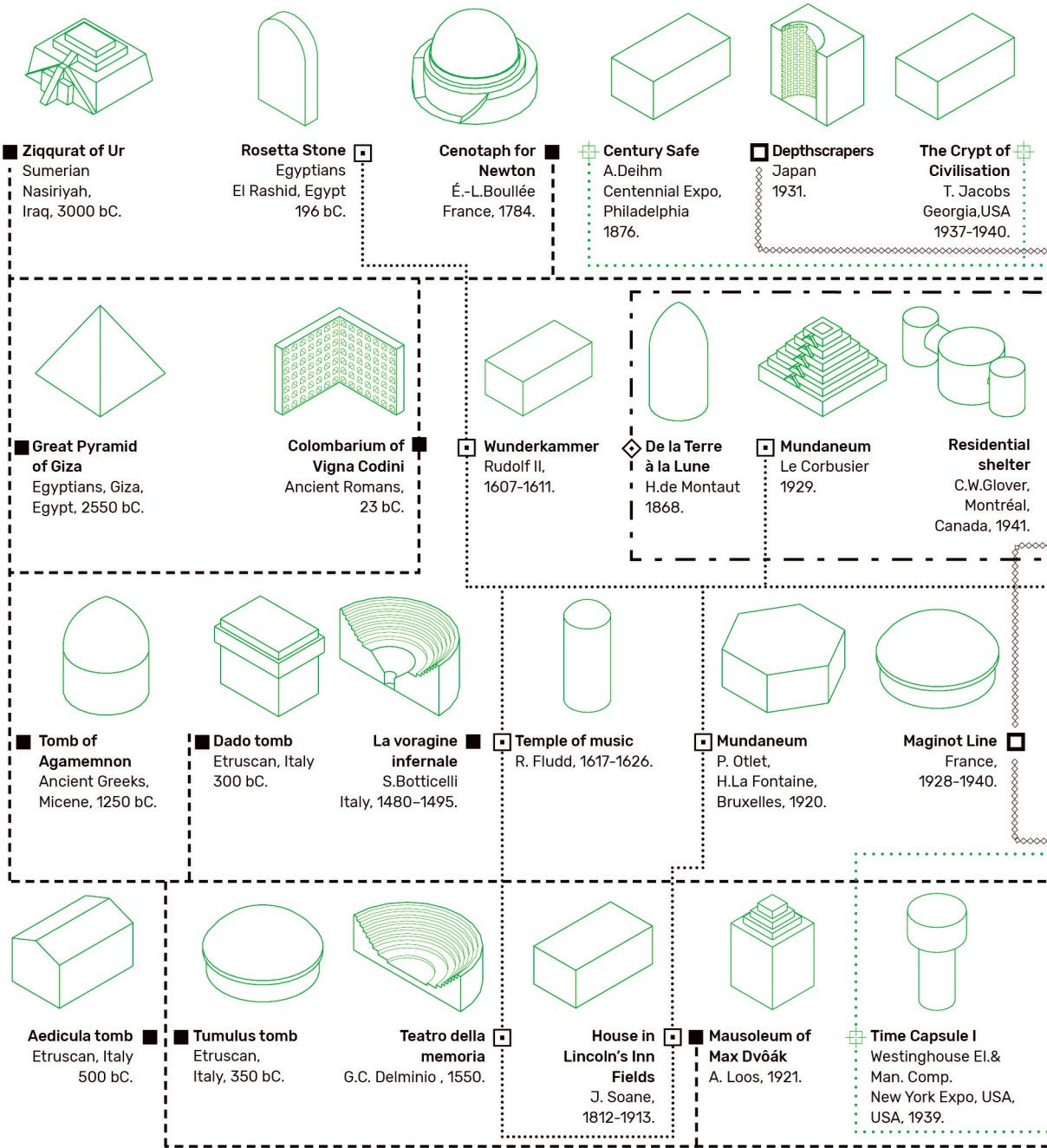
The third observed *mean* time interval records a further temporal dilatation, embracing the anthropic processes related to geological time and focusing on the nuclear waste repositories. These architectures expand in depths through the geological strata, triggering overlapping processes that stratify the landscape's memory. Their very structure embodies and synthesises a double condition. In the underground, inheriting many essential features from the bunker archetype, they radicalise and condense massive containers, the deposit, with a highly engineered and technological system to contain the nuclear waste from its outward spreading. On the surface, they configure volumes often articulated in ready-made operations to shape a monumental aspect, seeking to communicate their content and converting themselves into the same warning message for future humans. Confining a slow-motion catastrophe, these projects critically question the meaning of monumentality: time duration is no longer a cultural aspiration but a matter of survival.

4. Learning from the Mean Time

The quality of monstrosity here does not affect any real body, nor does it produce modifications of any kind in the bestiary of the imagination; it does not lurk in the depths of any strange power. It would not even be present at all in this classification had it not insinuated itself into the empty space, the interstitial blanks separating all these entities from one another (Foucault, 1966/1989: XVII).

Mean time expiring architectures have increasingly colonised our contemporaneity and architecture's theoretical and physical space. Their retracement led to identifying frictions, recurrences, returns, and echoes of these monsters within the deteriorating fossil of architecture, a taxonomy produced by the constant mutation of balances within the entanglement body-trauma-architecture. Here the disturbing component lies in the ambiguity between the conventional architectural elements and the extreme ones assembled in traumatic contexts, which have been constantly manipulated, tested, and reverberated within everyday life. These initially-provisional features shape *mean* spaces where the relation between architectural space – human refuge has been intermittently put in crisis and inverted.

Finally, detecting the *mean* time expiring architectures, the research retraced a progressive tendency that transversally crosses the entire work. The reconstructed taxonomy of architecture and practises defined to confine and react to the nuclear trauma records a gradual topological inversion, shifting from pro-



| ANCIENT AGE | MEDIEVAL AGE | MODERN AGE |

⊕ TIME CAPSULE

■ BURIAL

□ ARCHIVE

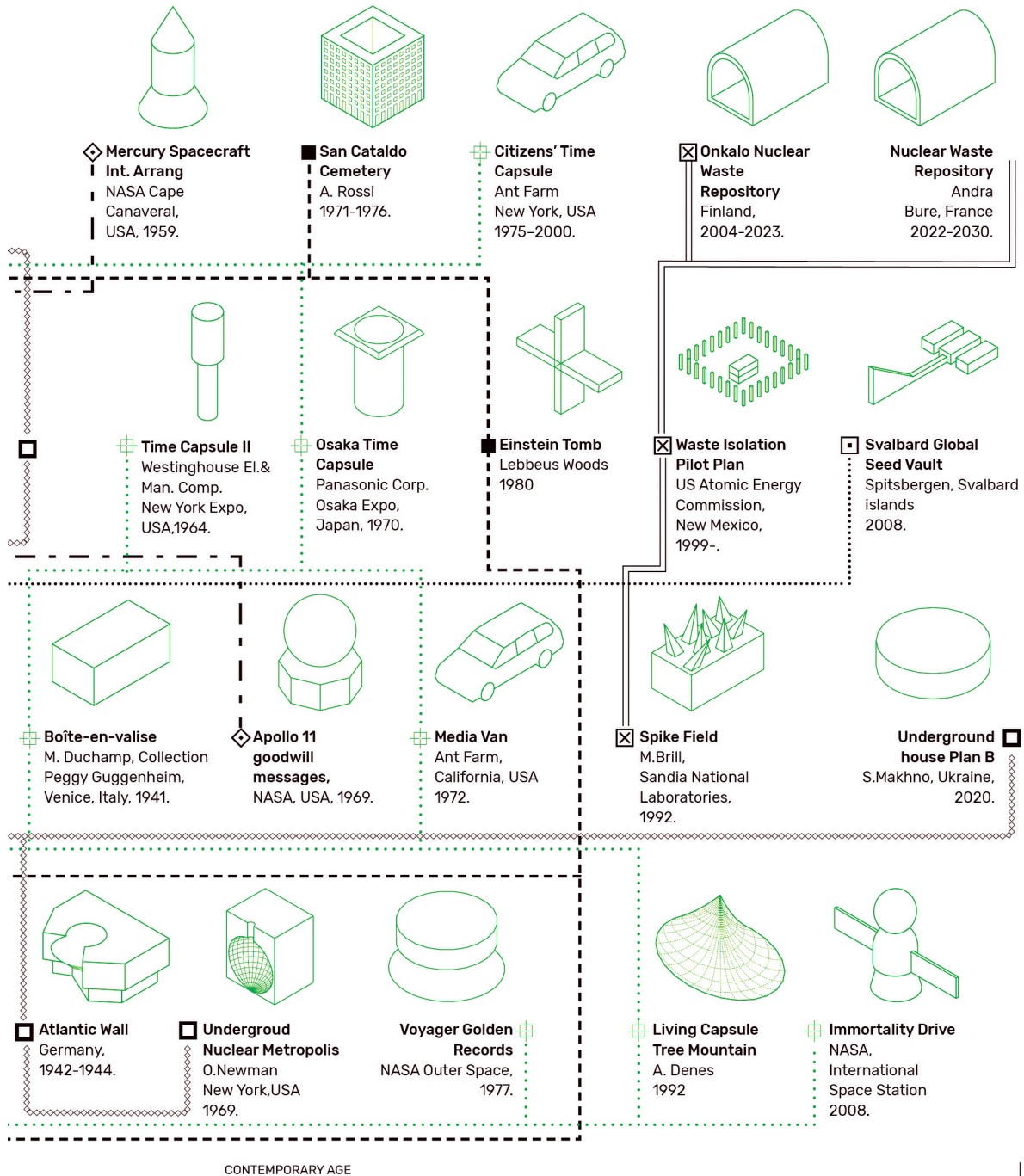


Figure 3

Retracing the time-capsule taxonomy. The image is part of Time-capsule Transcripts, the design-driven research developed with Gianluca Croce (PhD Units, Italy), presented and displayed at the CA2RE | CA2RE+ Conference | RECOMMENDATION at Delft University of Technology, Faculty of Architecture & the Built Environment, The Netherlands 28.03.2022 – 01.04.2022 (M. D’Oria and G. Croce).

tection to containment. Since its origins, architecture symbolises the means through which humans have shaped an internal safe space that could provide shelter and comfort, subtracting themselves from external threatening events and impacting weather conditions. This topological configuration, which arms the conflict between humans and traumatic events, records a first shift with the bunker and its reinterpretation. The logic of confining a safe space has started to be manipulated, adopting its typical features to shape alienating and threatening cells. Thus, the human body started to record a progressive removal from the centre of the containment issue, firstly replaced by data, at the very base of our contemporary technological progress, and then nuclear waste. The research, reconstructing this sequence of architectural devices, underlines the gradual inversion of spatial configuration, from shelter and bunker to containment shield, from protecting from external conditions to containing threats.

The relevance of the design process does not exhaust its capacity for physical intervention in the built environment and in the landscape but relies strictly upon the powerful explorative practise it can trigger through its representational tools. Through drawings, diagrams, mappings, performances, installations, critical texts, and transdisciplinary explorations, architecture has shaped a crucial testing ground and battlefield to confront the aporia of representation produced by the impact of physical trauma or the perception of its threatening potential apparition.

Our hope is that such attention will allow us to stand up to the constant barrage of messages asking us to forget. [...] Our era of human destruction trained our eyes only on the immediate promises of power and profits. This refusal of the past, and even of the present, will condemn us to continue fouling our own nests. How can we get back to the past, when we need to see the present more clearly? We call this return of multiple pasts, human and not human, “ghosts”. Every landscape is haunted by past ways of life (Tsing et al., 2017: G1).

Drawings interpreted as a space of escape and imagination and architectural installations shaping spatial experience are fundamental to reconstructing the complex cartographies of our contemporaneity. Retracing these systems of intertwined complex and transitional relations is crucial to reformulate architectural tools and language in the posthuman era, and find new paths to reconnect with the trouble embodied by the complex condition of permanent impermanence in which we are immersed (Fig. 4).

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