Practicing

Abdullah Maddan
Columbia GSAPP
2024

Uncertainty

& Becoming

Antifragile

ANTIFRAGILE

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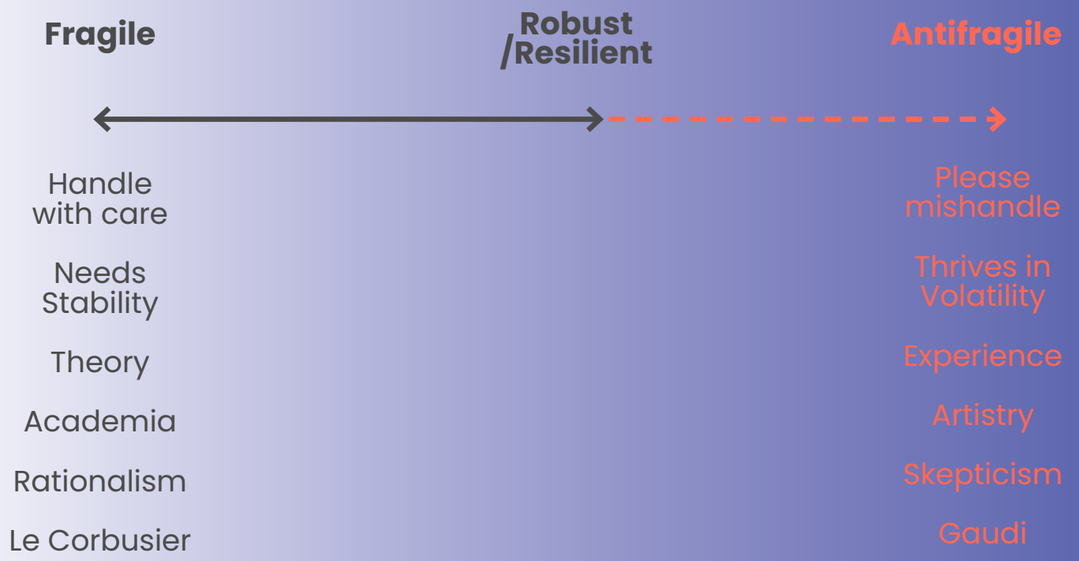
Antifragility is a concept developed by Nassim Nicholas Taleb in his book "Antifragile: Things That Gain from Disorder." It describes systems, entities, or structures that benefit and grow stronger from volatility, stressors, shocks, randomness, and disorder. Unlike fragile things that break under stress and robust things that resist it, antifragile things actually improve and thrive when exposed to such conditions.

Nassim Taleb

ANTIFRAGILE



The increasing complexity of our reality is elevating levels of uncertainty, volatility, and randomness within systems. Although modernity aims for a more efficient, optimized, and stable future, its endeavors inadvertently undermine the system, heightening susceptibility to unpredictable catastrophic events, aka black swans.

Black swans are events that are highly improbable, have a significant impact, and are often unexpected or unforeseen. These events are characterized by their extreme rarity, unpredictability, and profound consequences. They challenge conventional wisdom and defy regular expectations, catching people off guard due to their unprecedented nature. Examples of black swan events include financial crashes, natural disasters, technological breakthroughs, and geopolitical upheavals.

I.

THE LINDY EFFECT

Aging in reverse

The Lindy Effect is a concept suggesting that the longer something has been around, the longer it is likely to continue to be around in the future. This principle applies to various cultural artifacts, technologies, ideas, and even organisms. Essentially, the longer a book has been in print, the longer it's expected to remain in print, or the longer a technology has been in use, the longer it's expected to remain relevant.

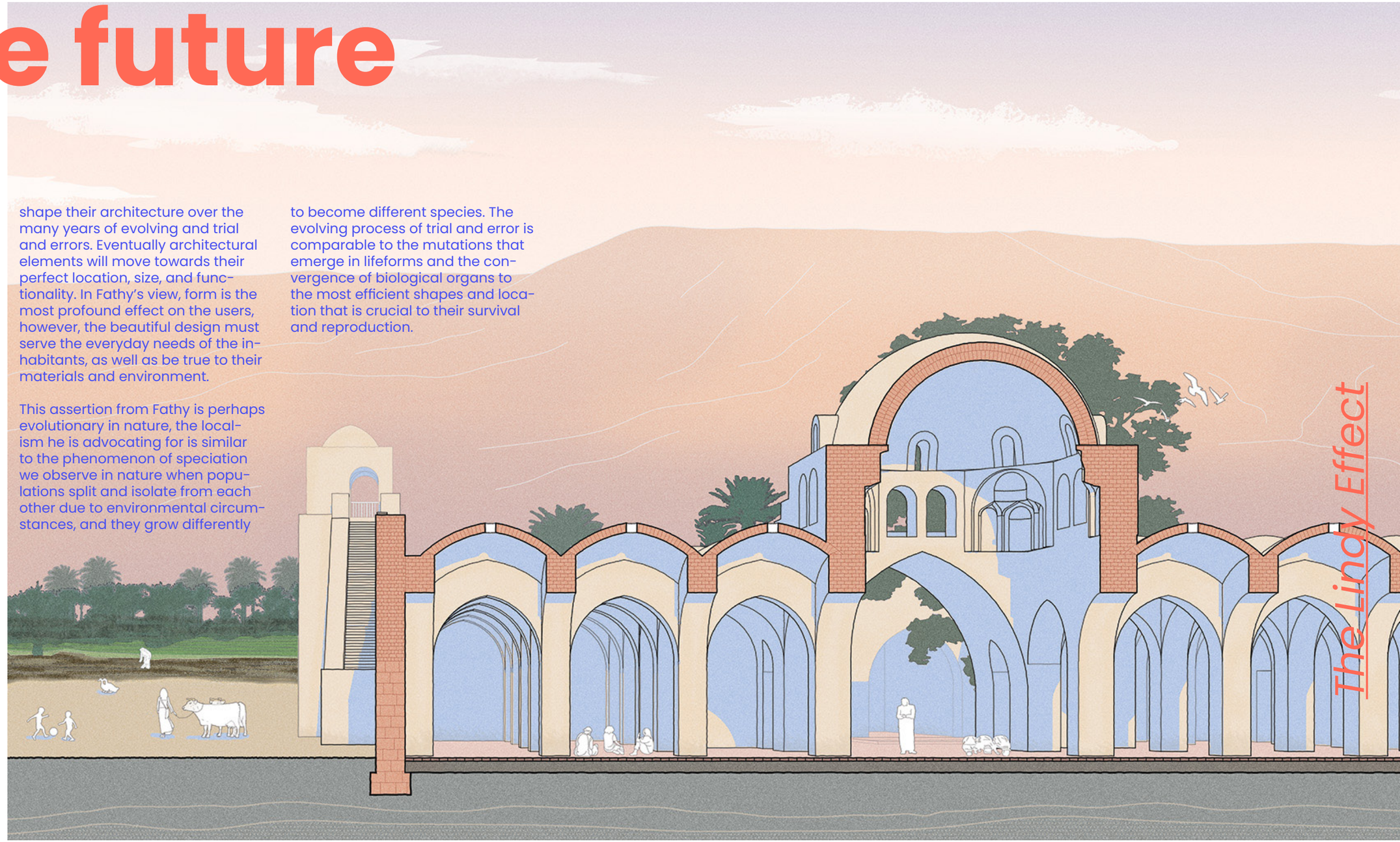
Tradition: Window to the future

Excerpt from
History of Architectural Theory
Mark Wigley, Fall 2023

Fathy builds further on the intrusion of modernity and points out to the collapse of "cultural frontiers". Those frontiers produced distinct local shapes and details in architecture for centuries, carved by people's inspirations from their environments, their customs, and local materials. The collapse also produced cultural confusion, where one cannot tell the difference between a Persian arch from a Syrian one, a missing signature that usually follows from the curvature of the dome to curvature of the jar. We can determine from Fathy's arguments that he considers an indigenous architectural style an important "expression of the character" that is unique for every community and since every community has its own circumstances and settings then it should produce different expression. Perhaps, he is assuming that any attempts to change or unify the style across many communities is in confrontation with these community's character and expression.

Fathy drives the point of tradition further, by questioning the notion of style and how it is treated as a mere superficial finish that could be applied to a building and could be changed like a man changes his clothes. He emphasizes that "real architecture" cannot exist except in a living tradition, meaning that the tradition of a group of people and their environmental conditions will shape their architecture over the many years of evolving and trial and errors. Eventually architectural elements will move towards their perfect location, size, and functionality. In Fathy's view, form is the most profound effect on the users, however, the beautiful design must serve the everyday needs of the inhabitants, as well as be true to their materials and environment.

This assertion from Fathy is perhaps evolutionary in nature, the localism he is advocating for is similar to the phenomenon of speciation we observe in nature when populations split and isolate from each other due to environmental circumstances, and they grow differently to become different species. The evolving process of trial and error is comparable to the mutations that emerge in lifeforms and the convergence of biological organs to the most efficient shapes and location that is crucial to their survival and reproduction.



The Lindy Effect

Seminar of Section
Marc Tsurumaki, Spring 2024

Tradition: Window to the future

Fathy challenges architects over their pursuits of “originality”, he asserts that they will not escape using the work of earlier architects and no matter how hard they strain over it they will eventually fall in a tradition or another

Fathy then challenges architects over their pursuits of “originality”, he asserts that they will not escape using the work of earlier architects and no matter how hard they strain over it they will eventually fall in a tradition or another, and then the question arises on why disown one’s own tradition and create a make-shift synthesis that in many cases may not function properly , only to “gratify the architect’s own selfish appetite for fame.” While brutal, this observation by Fathy does resemble some truth but it could be a necessity in the creative fields in general that allow for self-expression which eventually manifest in a lot of these different shapes, forms, and patterns we observe in cultures across the world. However, tradition does not necessarily mean stagnation for Fathy. The need for innovation is always present in many of the traditional solutions might not work with the changing environment and customs. A problem or a challenge that might have remained unsolvable with the passing of generations is the perfect place for creative intervention and problem-solving. On the other hand, modernity is not synonym with change, and change is not always for the better. For Fathy, innovation should be in response to specific circumstances and not an end in and of itself.
With a defensive tone, the clarifications that Fathy made about the relationship between tradition and innovation are a sign or confirmation that tradition might be and to a certain degree a slower engine for new ideas which might be discouraging for architects and people at large. Fathy continues with his defense and suggests that tradition actually free the artist from the distraction of the non-essential decisions, while tradition provides many answers for the common issues the arises, the artist can focus on the art, and he uses “the social analogy” of personal habits, where a person goes on about his life doing daily tasks unconscious of every little decision they take along the way, and focusing their concentrating their attention on the vital issues at hand.
Furthermore, breaking away from tradition especially with traditional society such as the rural peasants, it might be a “cultural murder”, as tradition is baked into their way of living with all its safeguards, and creating an alien architecture that does not respect their tradition will inevitably be disastrous, he adds “What may go in a cosmopolitan city like Paris, London, or Cairo, will kill a village.”
Fathy clearly warns architects from willingly and blindly invading traditional societies with alien styles while they can with utmost artistry contribute to the tradition and the advancement of one’s culture. He also warns of the pursuit of shiny products of the west that have invaded the defenseless markets of the villages. Europeans had their unique gods and their unique environment that shaped their architecture. A shepherd in the desert has his unique environment and beliefs that produce unique architectural devices that align with his view of the universe.

Hassan Fathy

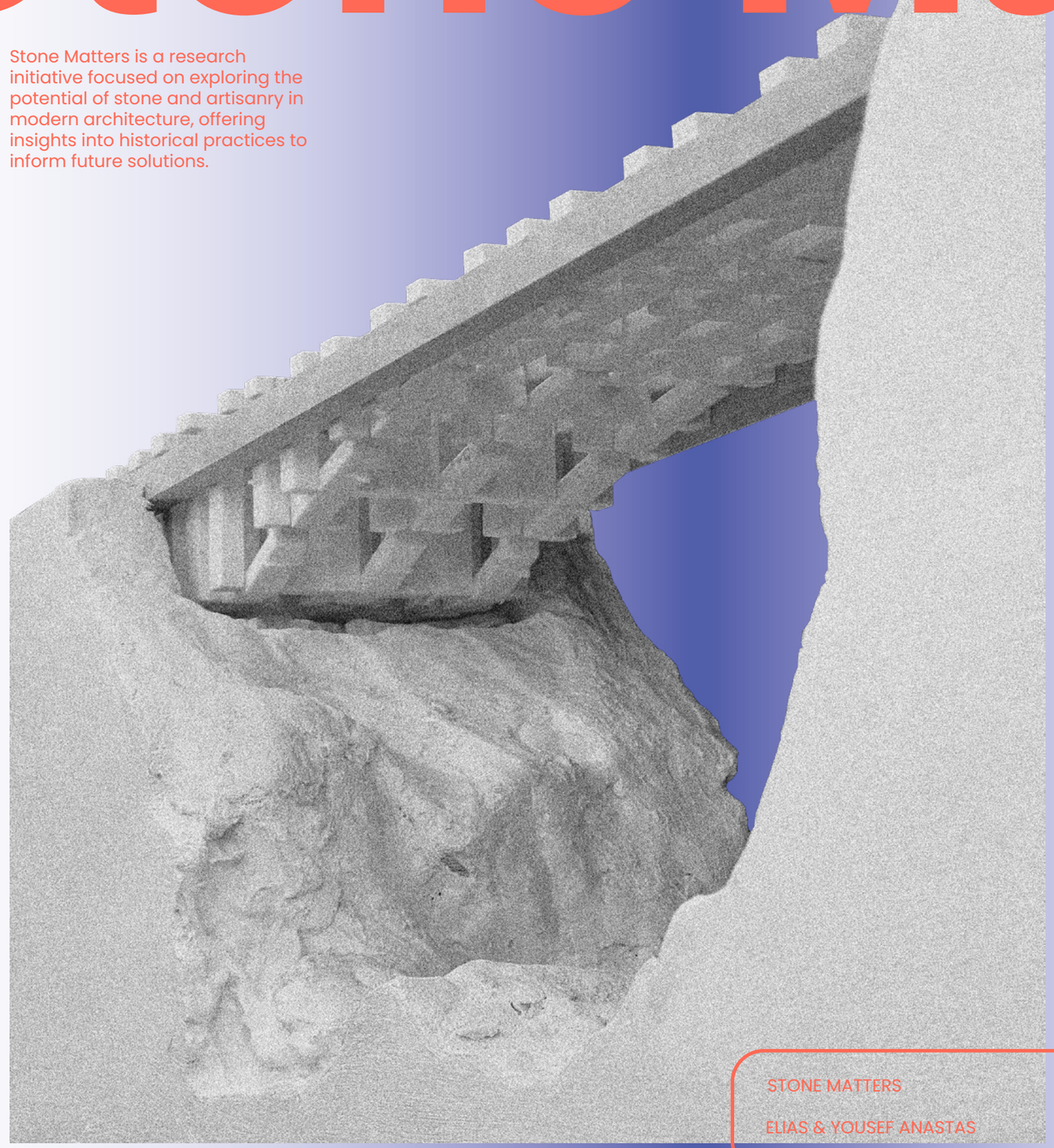
Stone Matters

After the introduction and mass adoption of steel and reinforced concrete as the main building materials in the construction industry, the significance of stone gradually diminished as a building material in architecture and was reduced to a cladding solution, an exotic architectural veneer.

A notable shift has emerged towards sustainable and naturally derived materials within architecture. This movement, driven by a conscious response to the pressing climate crisis, has facilitated the revival of conventional building materials like heavy timber, bamboo, straw, mud bricks and stone. This resurgence holds the potential to reshape the discourse surrounding energy consumption in the construction industry, introducing a fresh perspective on the interplay between construction methods and environmental impact.

As the use of stone in construction was in the decline, some of the valuable knowledge that had been passed down through generations of stone masons and craft guilds faded away and efforts to revive the artisanal craftsmanship have been gaining momentum.

Stone Matters is a research initiative focused on exploring the potential of stone and artisanry in modern architecture, offering insights into historical practices to inform future solutions.



STONE MATTERS

ELIAS & YOUSEF ANASTAS

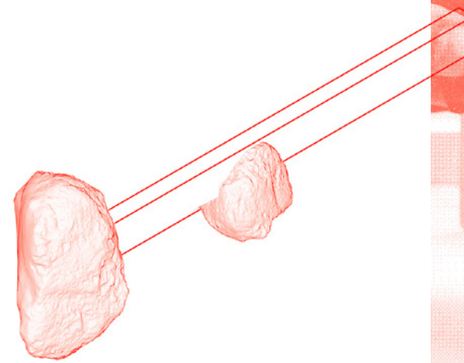
SUMMER 2023

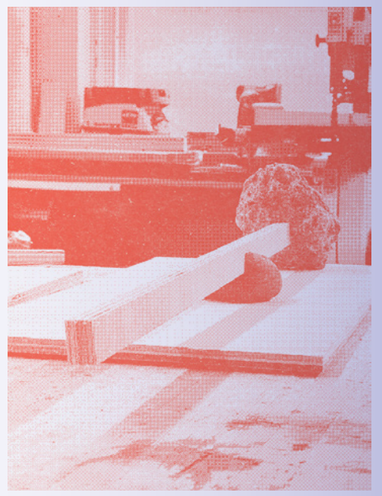
WITH FOTEINI KALLIKOUNI
& RACHITA VISWANATH

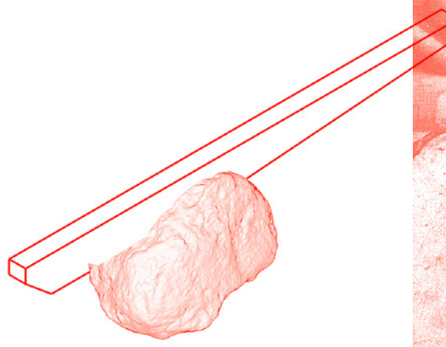
Not experimentation, but tinkering

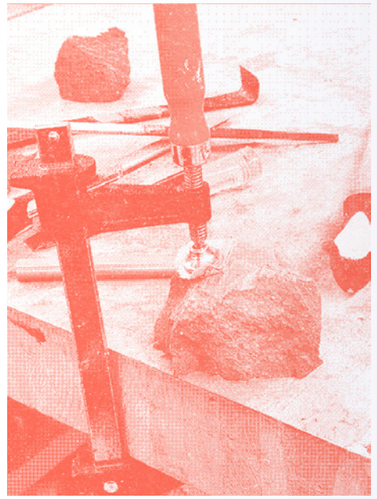
A tinkering-based exploration into the potential of stone and artisanry within contemporary architecture, offering insights from the past to inform future solutions.

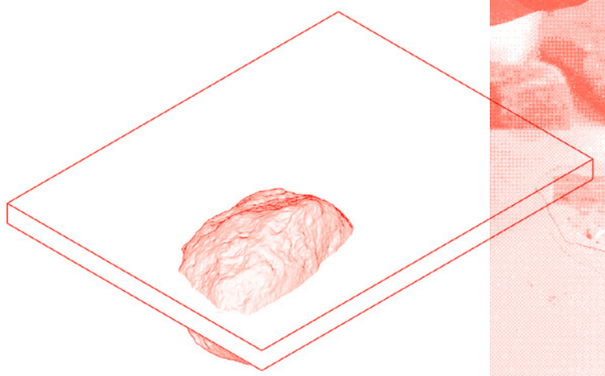
Tinkering, unlike conventional experimentation, involves a more playful and iterative approach to exploration. While experimentation typically follows a structured process with defined hypotheses and outcomes, tinkering is characterized by hands-on exploration, curiosity-driven discovery, and a willingness to embrace unexpected outcomes. In our approach, tinkering allows us to engage with the material in a more intuitive and open-ended manner, enabling us to uncover new possibilities and push the boundaries of traditional stone craftsmanship within architectural design.

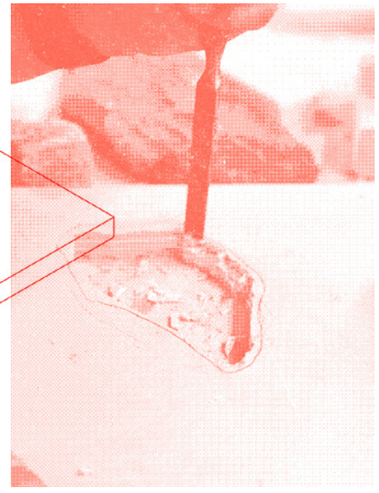


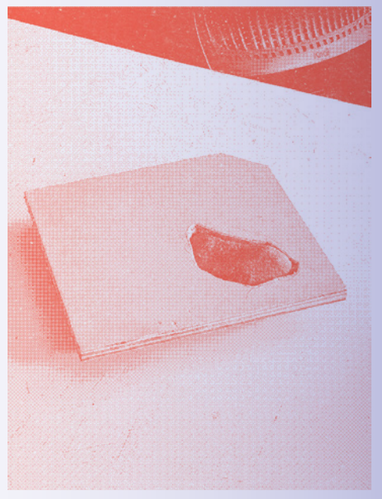


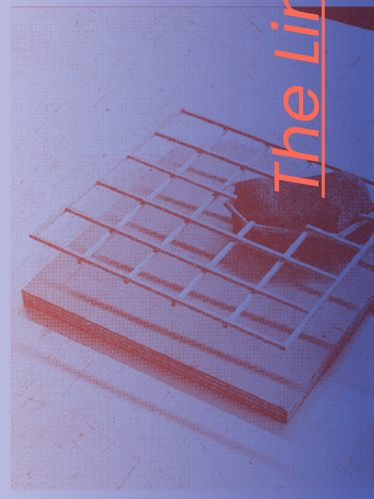








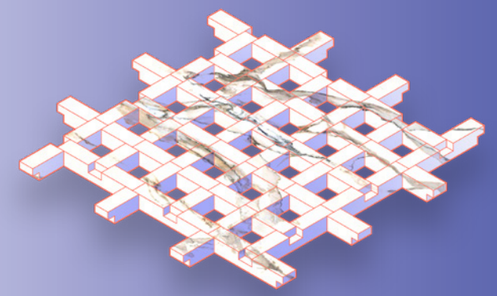




The Lindy Effect

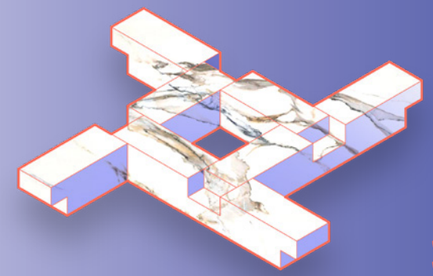
Stereotomy

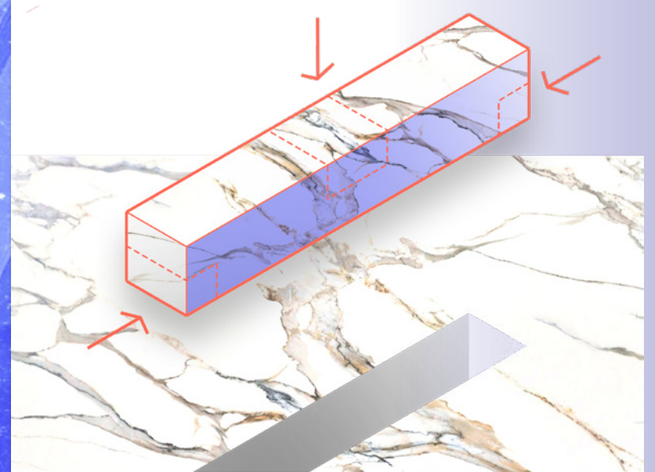
Stereotomy, the art of cutting stones into particular shapes for the construction of vaulted structures, is an ancient art that has been practiced over a wide chronological and geographical span, from Hellenistic Greece to contemporary Apulia and across the Mediterranean Basin. Yet the history of ancient and medieval stereotomy is little understood.

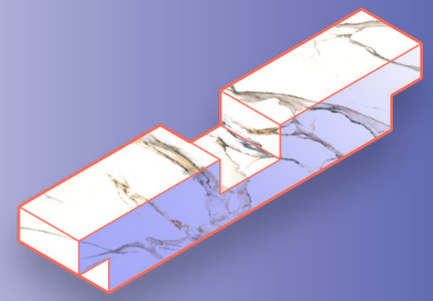


Reciprocal Frame Structures

The reciprocal frame is a three-dimensional grillage structure mainly used as a roof structure, consisting of mutually supporting sloping beams placed in a closed circuit. The inner end of each beam rests on and is supported by the adjacent beam. At the outer end the beams are supported by an external wall, ring beam or by columns.
The mutually supporting radiating beams placed tangentially around a central point of symmetry form an inner polygon. The outer ends of the beams form an outer polygon or a circle. (Larsen ,2008)



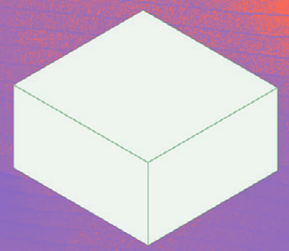


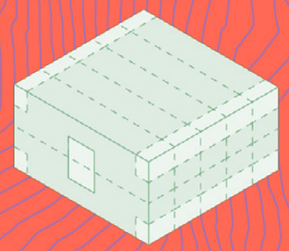


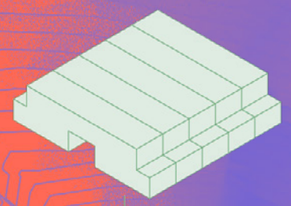
The Lindy Effect

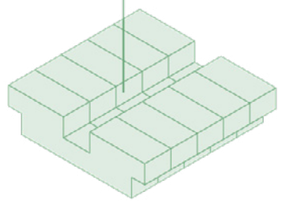
Architectural Devices

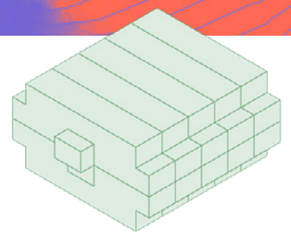
Through the process of tinkering, our explorations have serendipitously unveiled several architectural solutions tailored for contemporary challenges. Among these discoveries are innovative methods for seamlessly connecting two points, devising structurally sound cantilevers, and techniques for vertical construction. Our journey of tinkering has not only resulted in these practical solutions but has also fostered a deeper understanding of the inherent properties of materials like stone, allowing us to push the boundaries of traditional craftsmanship while addressing the evolving needs of modern architecture.









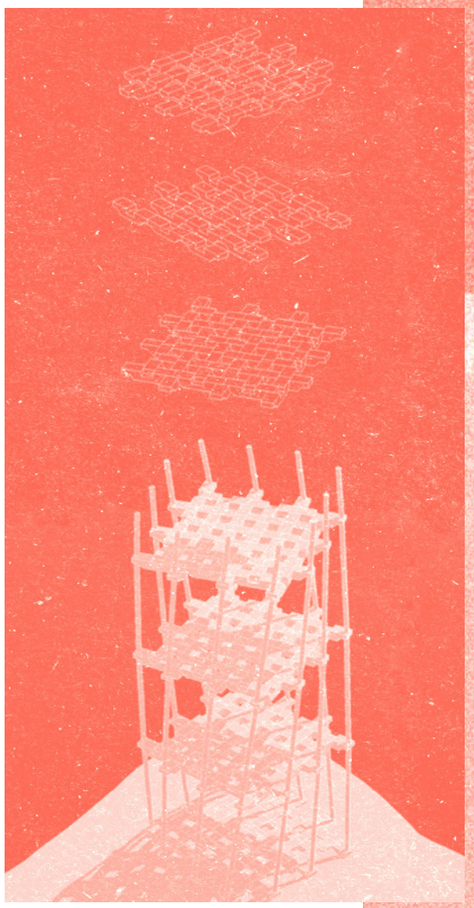


Strategic stereotomic cuts play a pivotal role in enhancing the efficiency of packaging and transportation, especially in large-scale production processes. By meticulously planning and executing precise cuts, manufacturers can optimize the use of raw materials, minimize waste, and streamline the packing process. These strategic cuts not only reduce the overall volume of materials required for packaging but also facilitate easier handling and transportation of stone products.

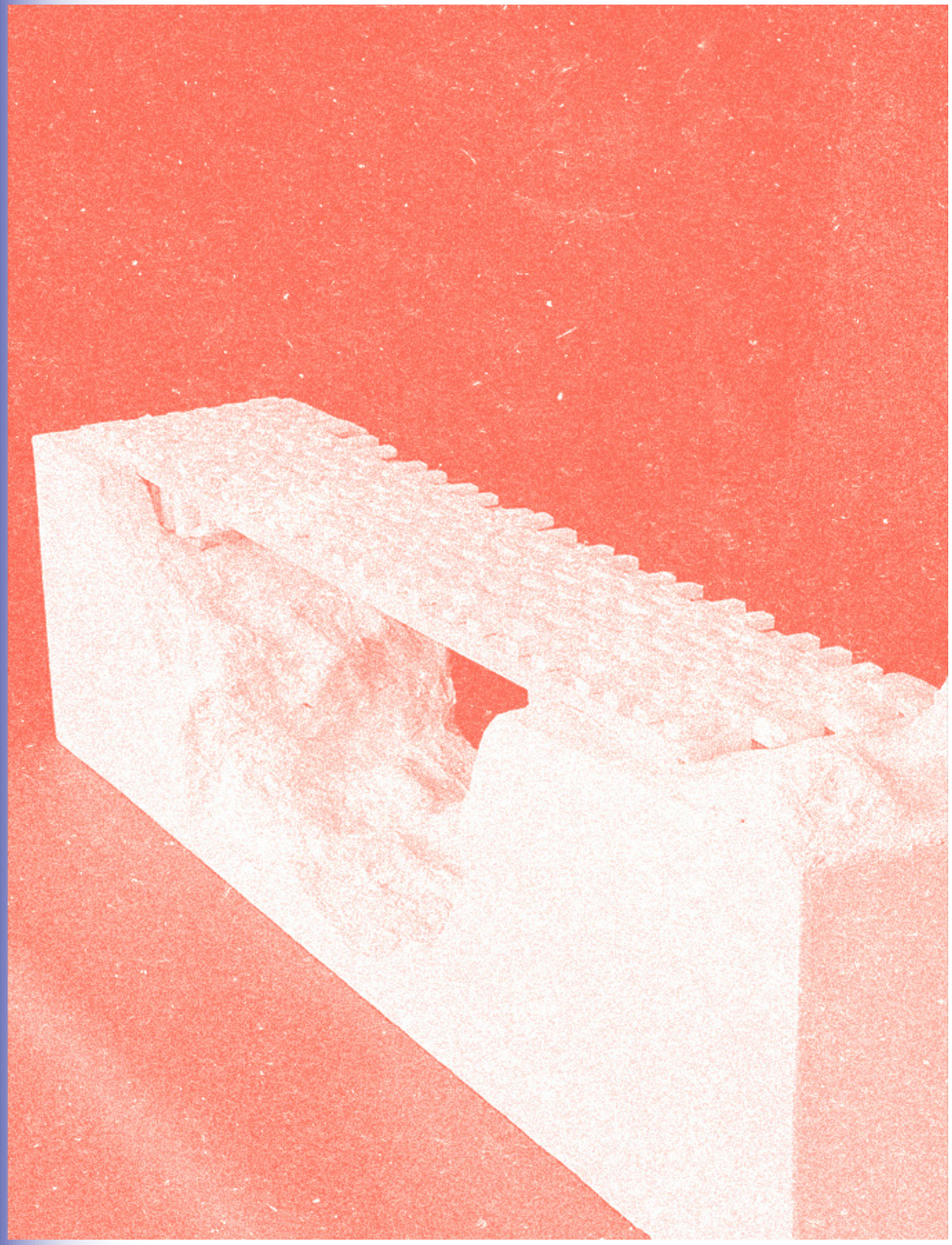
Cantilever
Horizontal Projection

Bridge
Connecting Two Points

Tower
Going Vertical



The Lindy Effect



II.

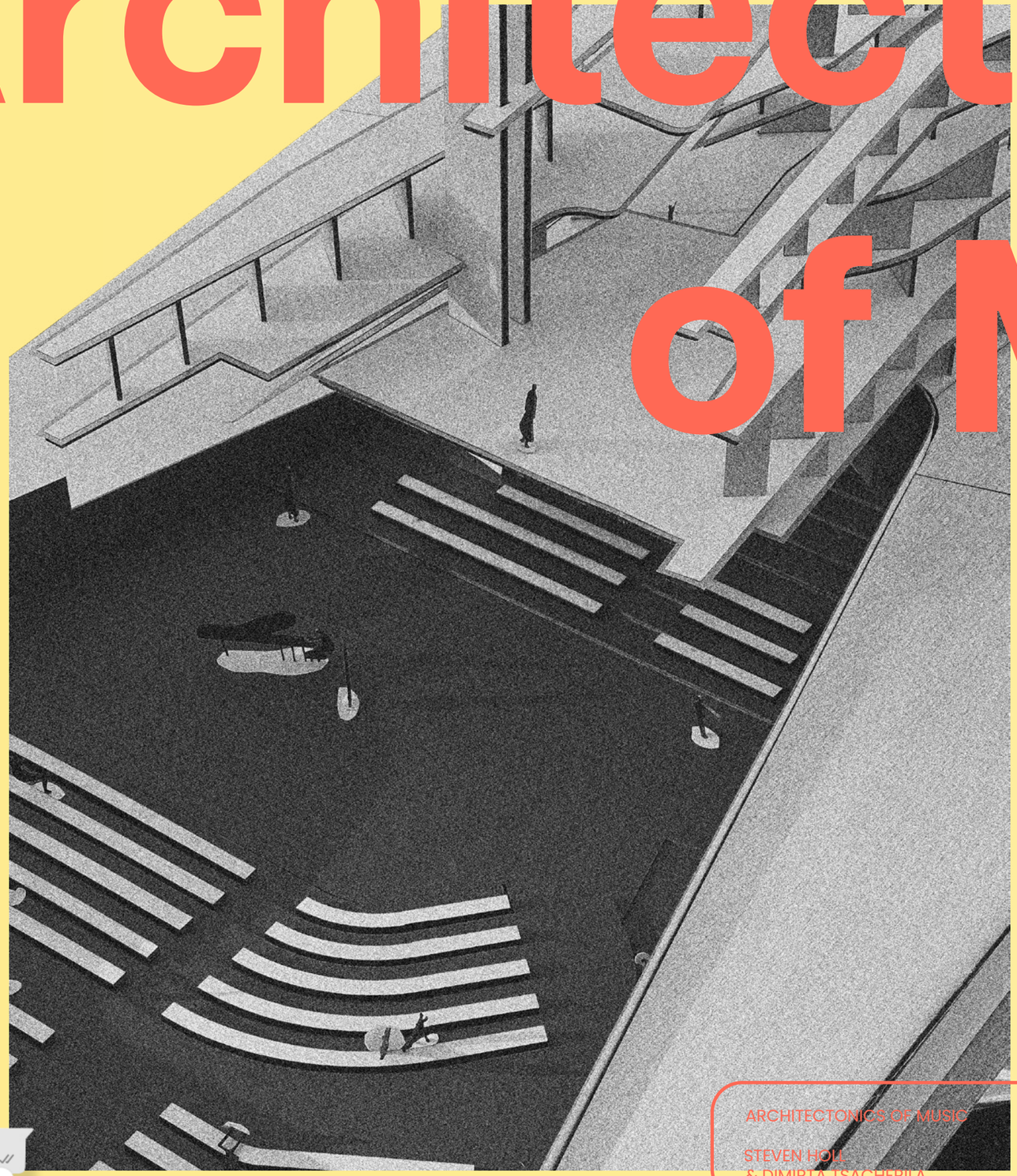
PSEUDORATIONALE

Lecturing birds how to fly

Superficial logic and an excessive dependence on flawed models neglect the complex realities and uncertainties of the real world. This tendency often overlooks the inherent randomness and unpredictability of complex systems, resulting in unwarranted confidence and poor decision-making. The misuse of statistics further compounds this issue, fostering an illusion of understanding where none exists.

Architectonics of Music

An ongoing inquiry initiated by architect Steven Holl. This exploration examine the intersections between music and architecture, investigating how rhymes and resonances can serve as springboards for new vocabularies and forms in architectural design1. The studio focuses on translating music excerpts into spatial, material, and formal expressions, creating a unique dialogue between these two immersive experiences—music and architecture. Through cross-disciplinary collaboration, students explore geometric potential, historical references, and innovative conceptual strategies, bridging the gap between sound and space.



Pseudo-rationale

ARCHITECTONICS OF MUSIC

STEVEN HOLL
& DIMIRTA TSACHERILA

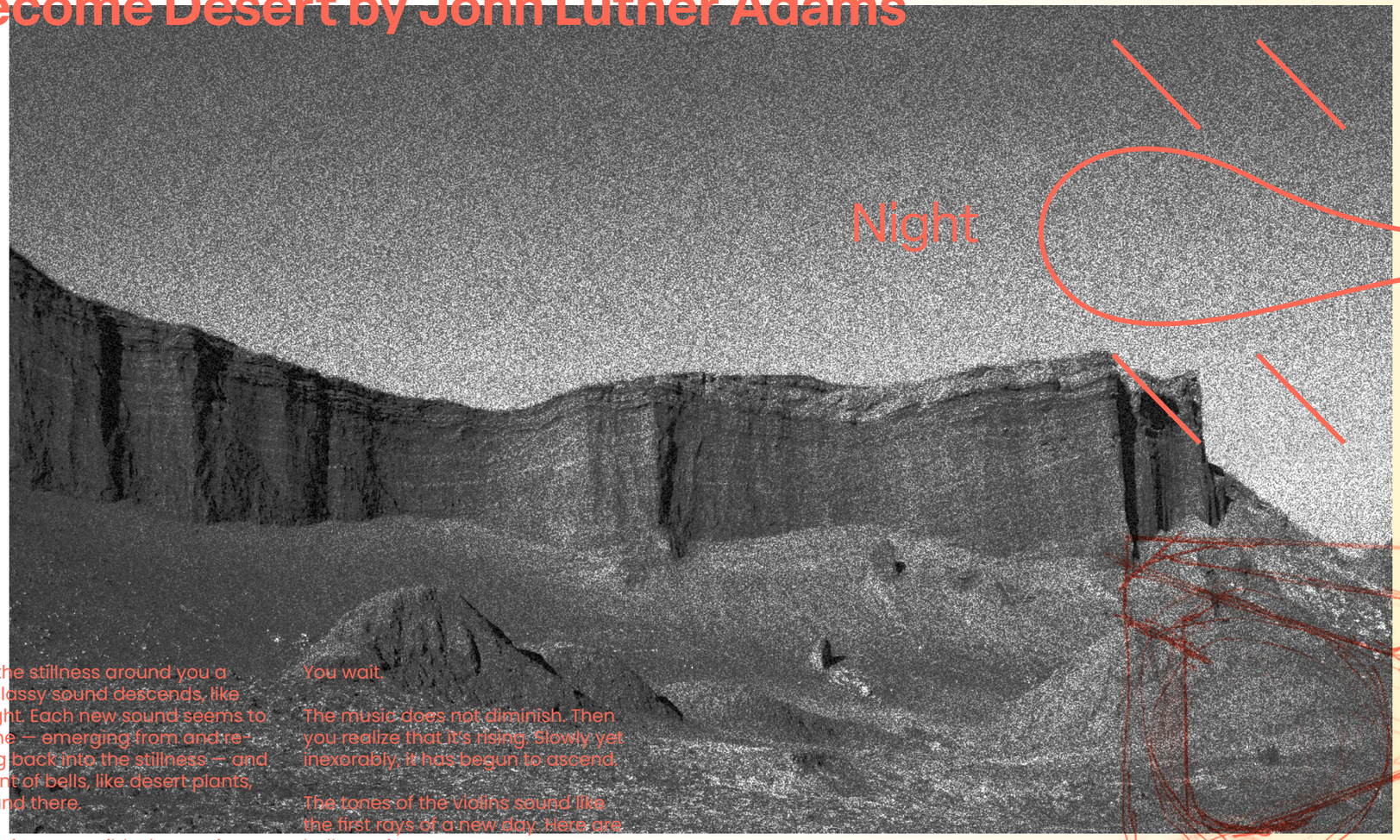
SPRING 2024

WITH SIZHE WANG

Steven Holl for Rachaporn? 11:11 AM

2

Become Desert by John Luther Adams



From the stillness around you a high glassy sound descends, like first light. Each new sound seems to breathe — emerging from and receding back into the stillness — and the glint of bells, like desert plants, here and there.

Almost imperceptibly the music swells and continues falling in pitch.

From somewhere above — like a gleam of metal, like sunlight emerging from behind a ridgeline — comes the sound of flutes.

You are in a strange landscape.

You notice that the musical light has changed again. The sounds are even lower. You hear trombones and men's voices. The harmonies are clearer, but much deeper. You feel a sound through your feet — bass drums and double basses, rumbling softly, like distant thunder.

The music has become night. Is it ending?

You wait.

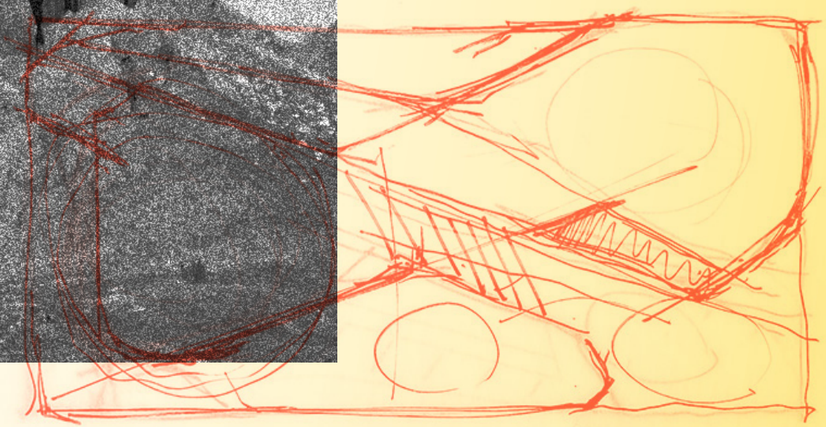
The music does not diminish. Then you realize that it's rising. Slowly yet inexorably, it has begun to ascend.

The tones of the violins sound like the first rays of a new day. Here are bells again.

The sound grows higher and brighter. The space around you seems to expand.

You ask yourself, "How long has it been?" And you realize you aren't sure.

- John Luther Adams
New York Times

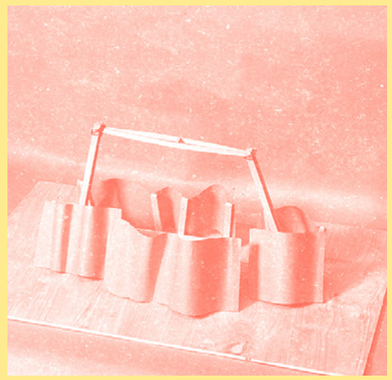


Palindromos

A palindrome of architecture is a journey through symmetries that agree and contradict. A dialogue between light and shadow, earth and sky, sun and water, oranges and pomegranates.

Pseudo-rationale

Iterative design processes, with their adaptability and openness to change, are naturally more conducive to creating antifragile architectures compared to linear processes, which may lack the flexibility to incorporate and benefit from stressors



Pseudo-rational

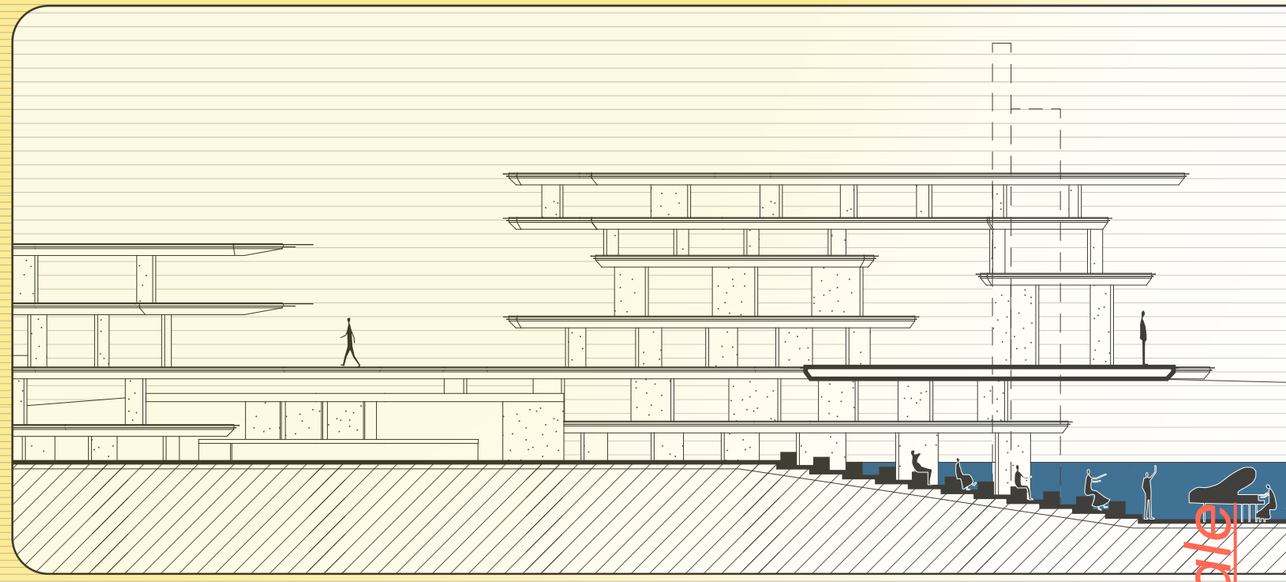
Not linear, but iterative

Steven Holl

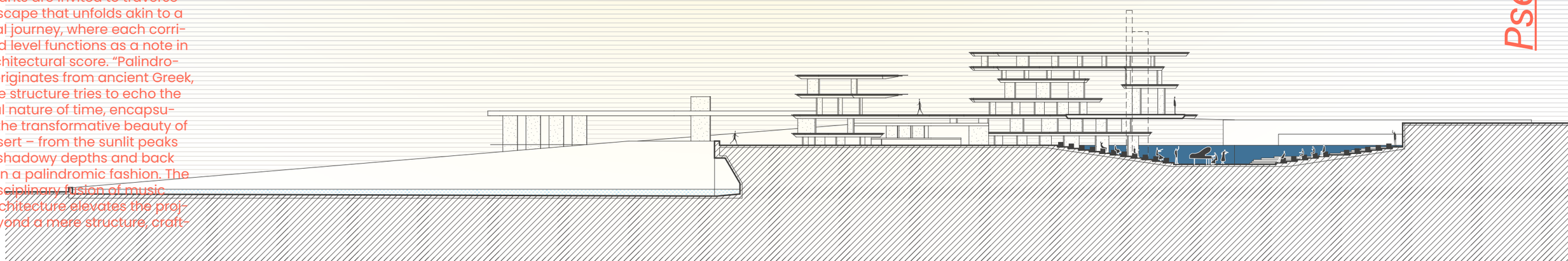
Palindromos

Music Chapel
Granada, Spain

Our Project “Palindromos,” is a slow, gradual movement that renders it inherently monolithic and opposing to deconstruction. Yet, within this seamless whole, three distinct themes emerge, offering the potential for translation into a nuanced architectural experience. The musical score unfolds with the ethereal tones of high instruments, reminiscent of a desert sunset, gradually descending into deeper tones resonating with bass and double bass, symbolizing the profound stillness of the night before rising anew to announce a new day.



Mirroring the topographical features of deserts, our architectural structure serves as an emulation of a canyon, shaped over millennia by the relentless forces of nature. Through meticulous experiments with space and light, we strategically position vertical louvers along dynamic corridors and levels, creating a symphony of interplay between form and function. This deliberate manipulation of elements mirrors the nuanced tonalities present in Adams' composition, contributing to a spatial experience that is both unique and immersive. Occupants are invited to traverse a landscape that unfolds akin to a musical journey, where each corridor and level functions as a note in the architectural score. "Palindromos" originates from ancient Greek, and the structure tries to echo the cyclical nature of time, encapsulating the transformative beauty of the desert – from the sunlit peaks to the shadowy depths and back again in a palindromic fashion. The interdisciplinary fusion of music and architecture elevates the project beyond a mere structure, crafting a harmonious synthesis that seamlessly weaves together artistic inspiration and the natural world, offering a profound and enriching experience for those who engage with it.



Pseudo-rationale

Excerpt from
Fragile Half Earth
Arguments, Summer 2023

History is carved by the highly improbable and unpredictable events i.e., black swan events, look at WWII, 9/11, the Internet and social media, the rise of both Christianity and Islam, and the Fall of the USSR are all paradigm shifts that no one could have predicted despite everyone trying to rationalize, theorize, intellectualize, philosophize the causes the led to said events with the benefit of hindsight.

Controlling and stabilizing complex systems will most probably make them more fragile and prone to black swan events and will self-correct by collapsing and so is scaling up, centralizing, optimizing, and effecientizing their networks, errors and failures will be catastrophic and spread like fire through the network. So, to deal with any complex environment such as climate, economy, or a city, we'll need almost the exact opposite of the Half-earth socialism proposal, a small, local, decentralized, inefficient, and non-optimum network, with big margins for volatility and uncertainty. Errors and failures will be local and stay local, they will feed back into the self-correcting system and improve and evolve to counter future errors i.e., Antifragile (Taleb, 2012).

This is not an attempt to undermine the scale or urgency of the problem we have at hand, regarding climate

change and consumerism, nor is it to undermine the good intentions of proposals such as Half-Earth Socialism, but it's about modernity's approach toward problem-solving, about the iatrogenics of naïve interventionism, causing harm while trying to help.

Small is beautiful, and it's never 'too big to fail', whether it's a bank, corporation, or government. It's local, it's diverse, it's resilient, and with a little luck, it might survive an asteroidal impact even if it's a couple of billion years later.

III.

VIA NEGATIVA

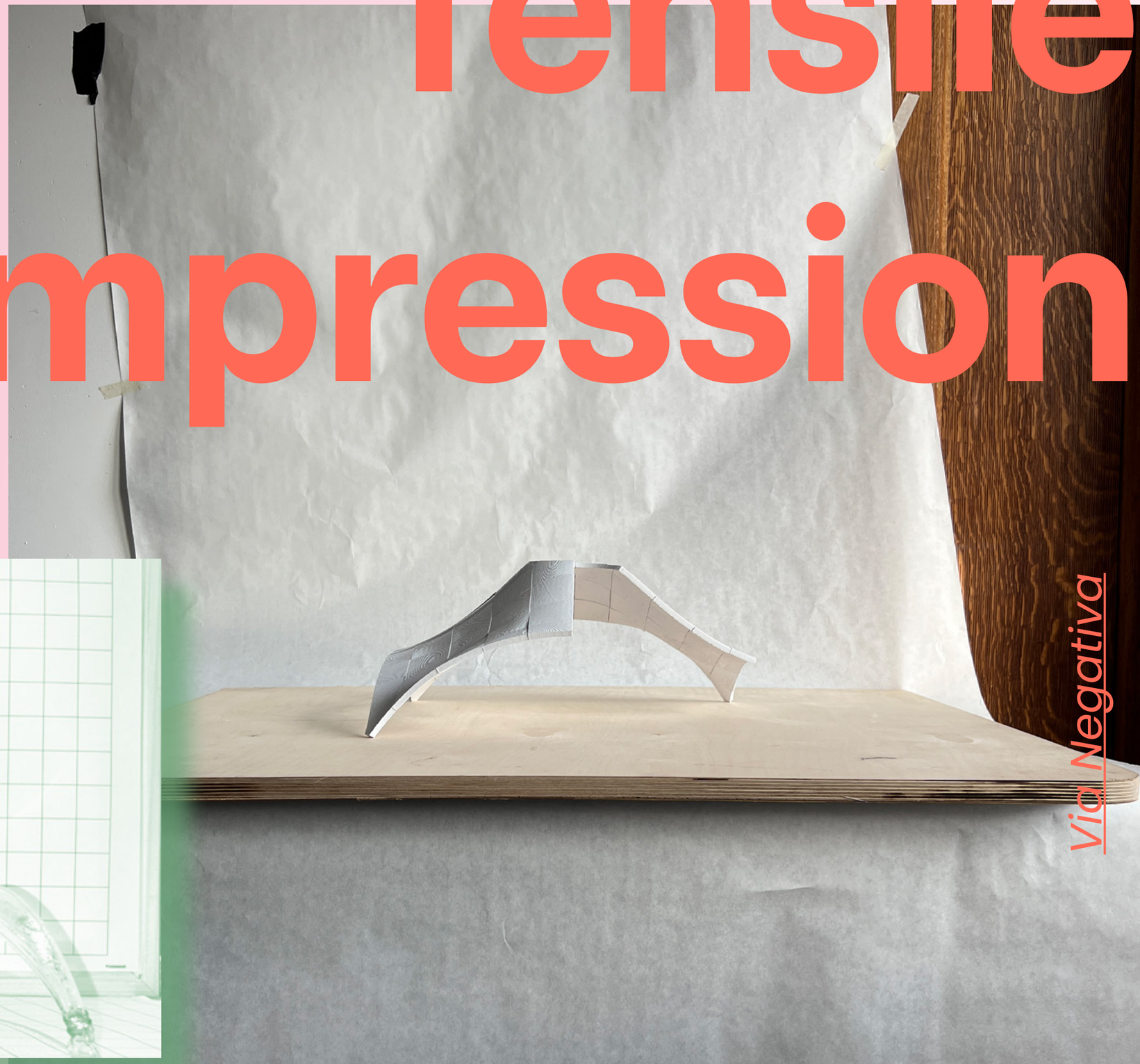
Intervention through omission

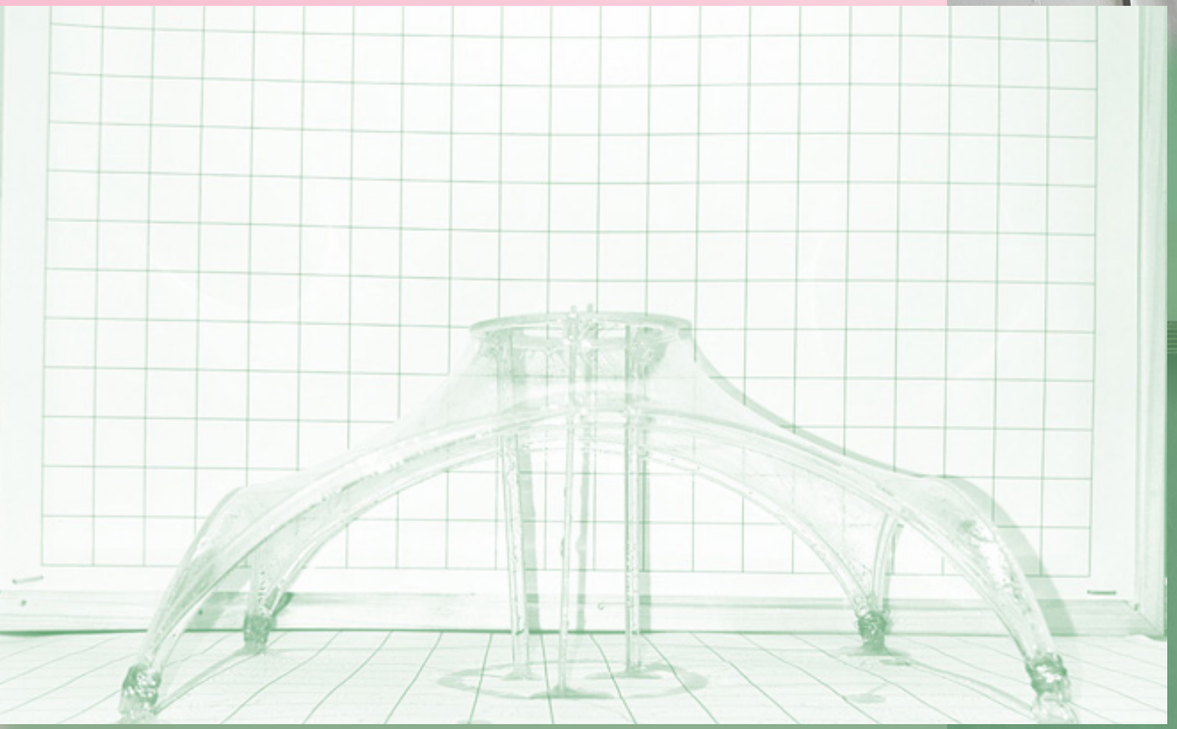
The power of improvement through subtraction rather than addition. It suggests that removing negative elements, such as bad habits, unnecessary complexities, and harmful practices, can lead to better outcomes and more robust systems. This approach aligns with the idea that often, less is more, and simplification can lead to greater clarity, efficiency, and overall well-being. The concept advocates for focusing on what to avoid or eliminate rather than interneve with an additive solution.

Tensile Compression

Tensile/Compression
Surfaces
Bob Marino, Fall 2023
With Sizhe Wang
& Ammar Rassai

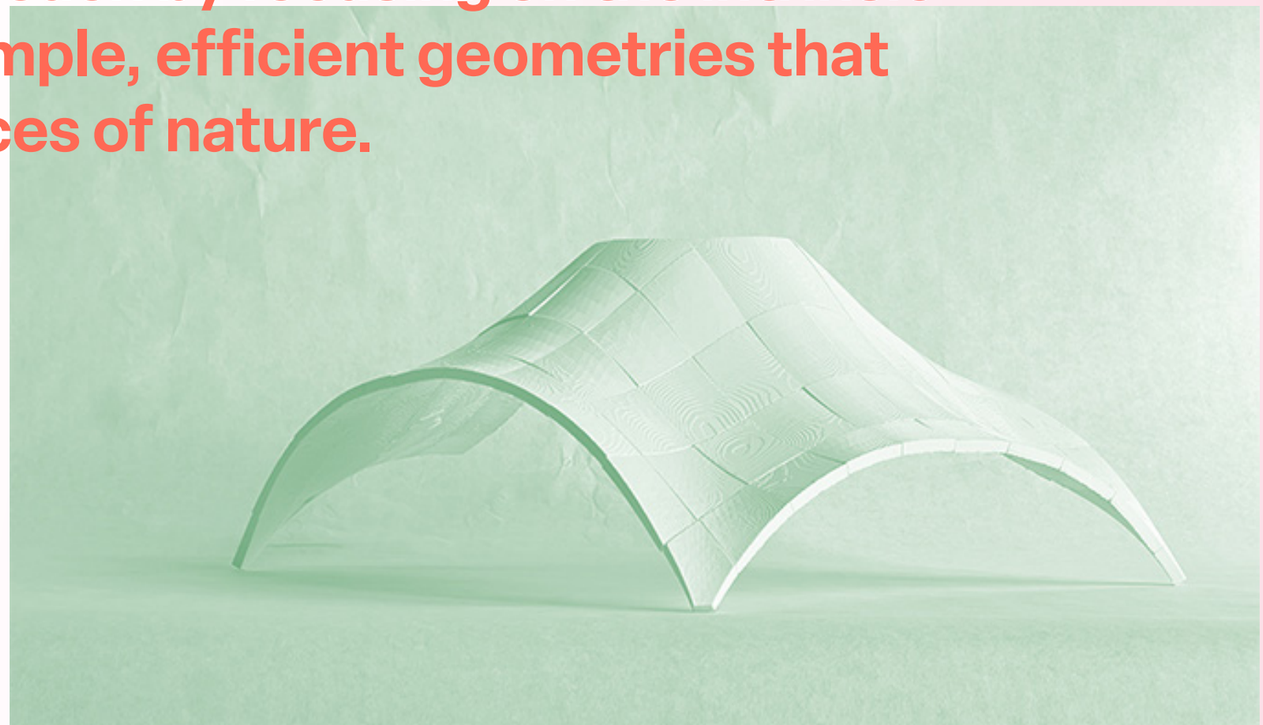
Inspired by the form-finding techniques of Architect Frei Otto, this project explores the art of discovering optimal structural shapes through soap film experiments. By observing how soap films naturally form minimal surfaces, the project identifies efficient geometric configurations that balance tension and compression. These experimentally derived forms are then translated into a 3D-printed paneled shell structure, showcasing the elegant and efficient interplay between tensile and compressive forces in architectural design.





Structural efficiency in design prioritizes the optimal use of materials and forms to create buildings that are both functional and sustainable. Architects like Frei Otto and Félix Candela exemplify this approach through their innovative designs, which often draw inspiration from nature and utilize advanced engineering techniques. By minimizing material use while maximizing structural performance, these architects create iconic structures that not only reduce environmental impact but also demonstrate the beauty of simplicity and efficiency in architecture. From lightweight tensile structures to thin-shell concrete roofs, their work showcases the potential of structural efficiency to create buildings that are both aesthetically pleasing and environmentally responsible.

Frei Otto and Félix Candela exemplify the Via Negativa approach by focusing on the intrinsic strength of simple, efficient geometries that follow the forces of nature.



Via Negativa

The Coming Community

For quite some time, architecture›s fascination with starting anew – with fresh forms, materials, and absolutes – has drawn a clear distinction between the past and the future. Yet, this division is more theoretical than practical. In reality, old and new elements coexist, often intertwined for various reasons, from practicality to nostalgia. Ideas persist across time, flowing in a continuous stream. Indeed, stepping into a space devoid of either old or new feels stifling. The old records history for the new, while the new thrusts the old into the present. In this studio, we delve into the passionate relationship between the past and the future. We take architectural elements deemed «outdated» or «disdained» due to their obsolete forms, expired materials, or antiquated systems and breathe new life into them. Through embedding, bonding, tracing, and transforming, we rejuvenate these elements, infusing them with fresh relevance and vitality.

Via Negativa

THE COMING COMMUNITY FALL 2023 WITH ZAHA MADDAN

JING LIU

Prompt: Objects of the Guggenheim

Installation,Loading, Unloading, Storing,Surveilling, Eating, Socailizing, Shopping, Measuring, Lecturing, Walking, Observing,Sitting, Standing...

Food Truck, Art Vendors, Souvenirs Carts , Plants, Mold,Pigeons, Rats, Moss, Birds...

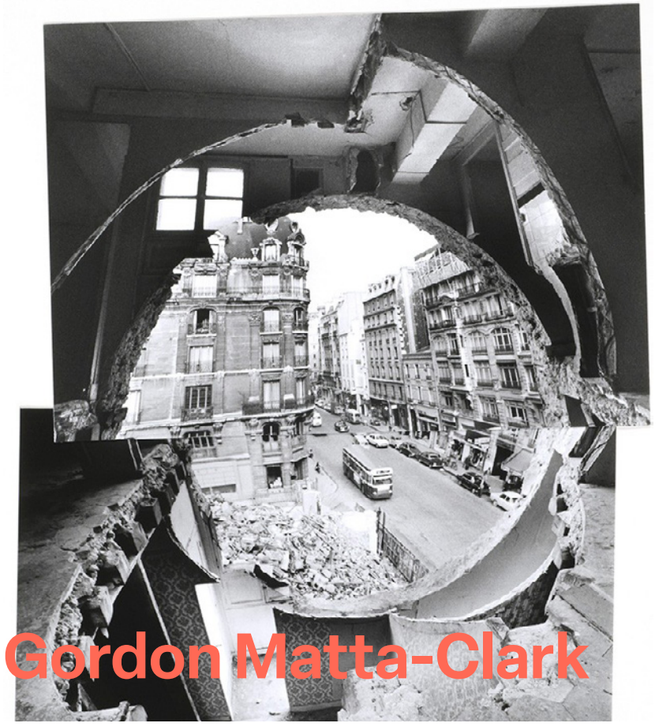
The performance objects of the Guggenheim encompass the dynamic acts and events that unfold within and around the architectural space of the museum. These performances, both planned and spontaneous, shape and utilize Guggenheim's spaces in formal and informal ways. Whether it's a carefully curated exhibition, a live art installation, a theatrical performance, or simply the movements and interactions of visitors navigating the museum's iconic spiral structure, these performances animate the space and contribute to its identity as a cultural engine.

The contingent objects are the actors within and around the Guggenheim—both living and nonliving, human and transhuman—that depend on the events occurring within the museum's space for their existence. While they may initially appear parasitic, in truth, they exist in a symbiotic relationship with the architecture. These entities thrive on the energy and activities generated by the Guggenheim's events and performances, finding sustenance and purpose within its vibrant cultural ecosystem. They contribute to the dynamic vitality of the Guggenheim, enriching its identity and function as a nexus of creativity and interaction.

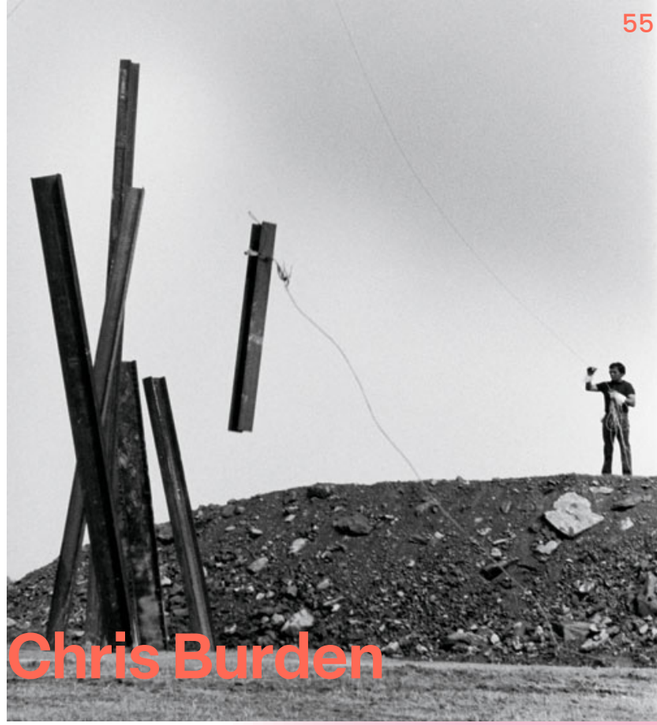
Via Negativa

Creative chaos and heroic acts

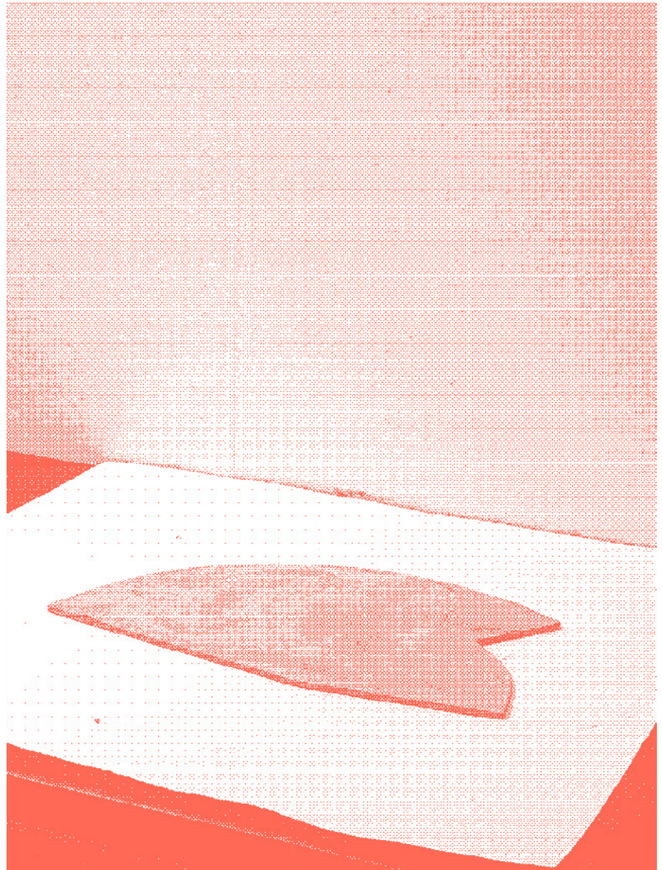
Embracing uncertainty and drawing inspiration from the works of artists like Gordon Matta-Clark and Chris Burden, our approach delves into experimentation and study through physical models of concrete slabs. Inspired by Matta-Clark's deconstructive interventions and Burden's daring performances, we challenge conventional notions of stability and form in architectural design. By subjecting concrete slabs to deliberate acts of breaking and reinforcing, we explore the dynamic interplay between strength and vulnerability, order and chaos. These heroic acts of creation and destruction generate high energy and attention, captivating both participants and observers alike. Through these experiments, we seek not only to uncover unexpected aesthetic expressions but also to interrogate the material properties of concrete and the structural principles that govern it. In embracing uncertainty, we open ourselves to the possibility of discovery, pushing the boundaries of conventional design methodologies to forge new paths of creative exploration.



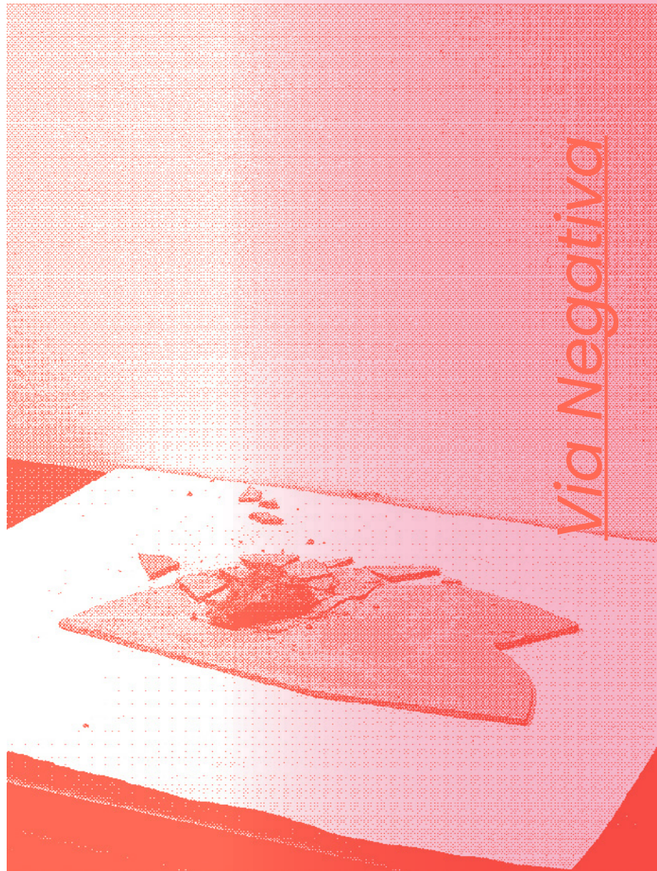
Gordon Matta-Clark



Chris Burden



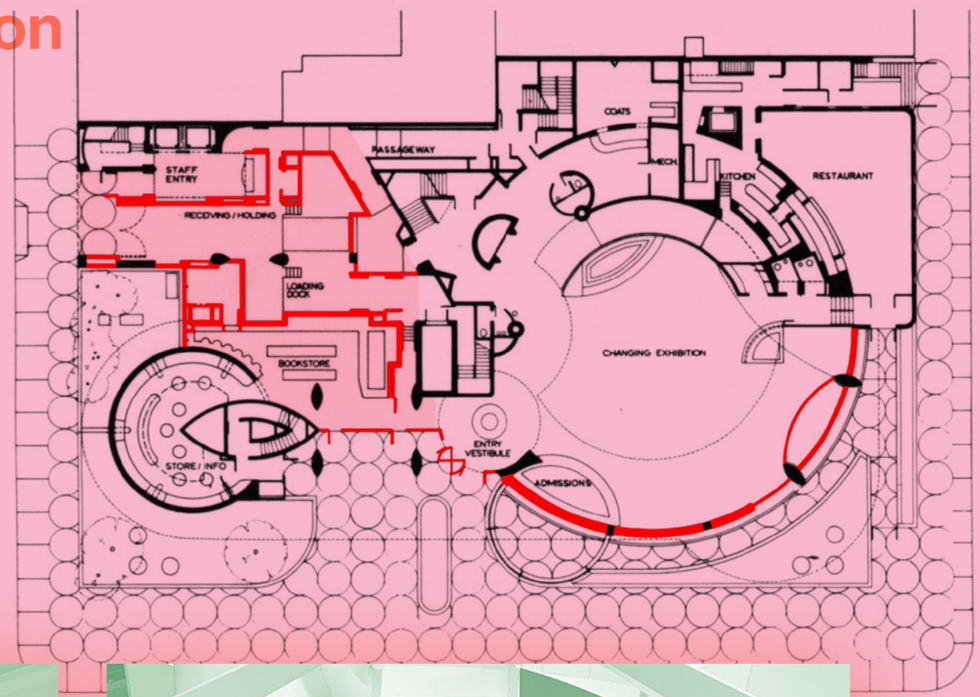
Rehearsals



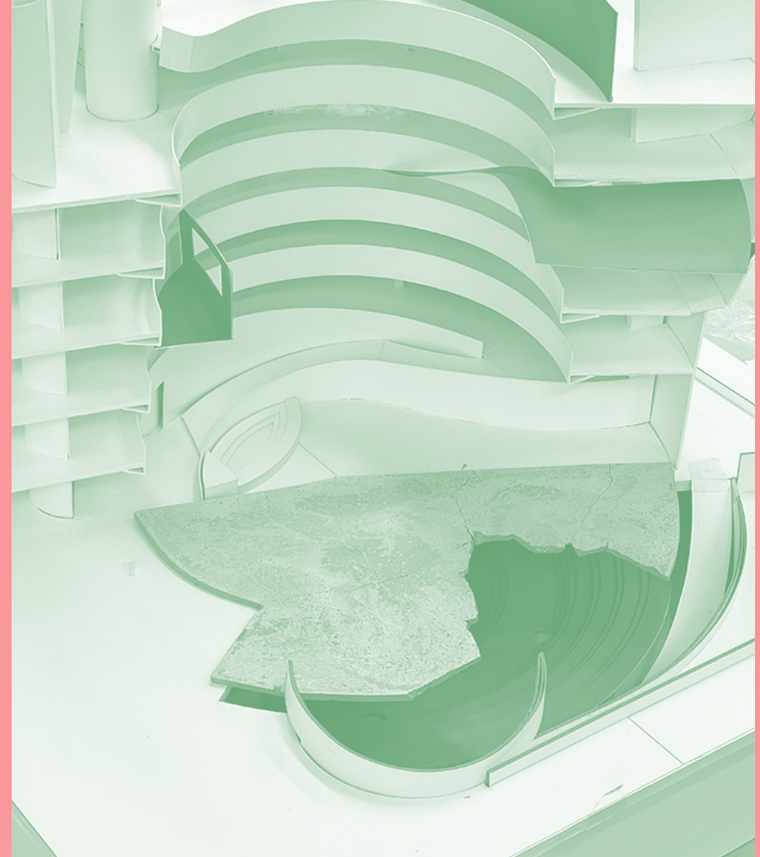
Via Negativa

Iatrogenics and intervention thorugh omission

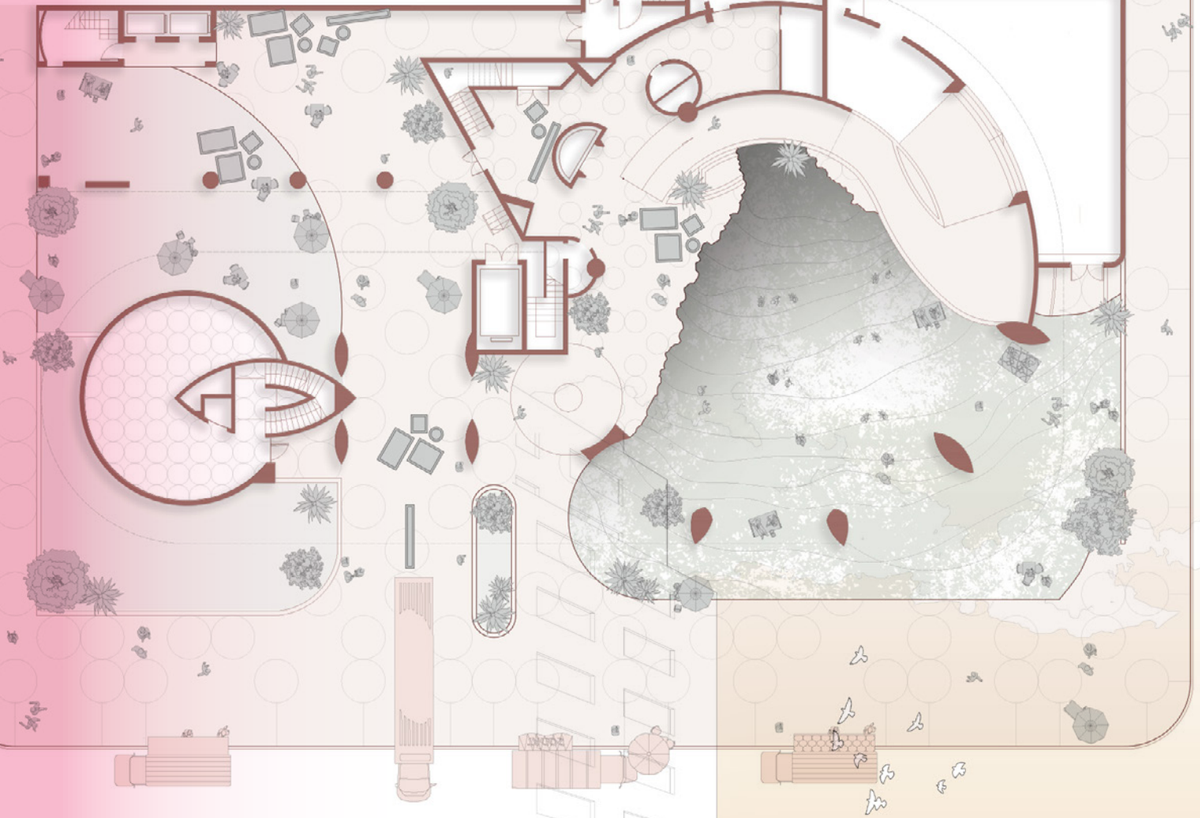
Navigating the complexities of intervention and mitigating the potential for iatrogenics often leads us to consider the power of omission. From a skeptical stance regarding the limitations of human knowledge, grasping control over outcomes within intricate systems proves challenging. The Guggenheim, operating as a complex ecosystem, underscores this challenge. Rather than assertive manipulation, our approach hinges on strategic omissions, recognizing that attempts at improvement may inadvertently trigger unforeseen consequences. By carefully selecting where and when to intervene, we aim to navigate the intricacies of the Guggenheim›s ecosystem, fostering progress while minimizing the risk of unintended side effects



Iatrogenics refers to unintended harm or adverse effects caused by medical treatment or interventions.

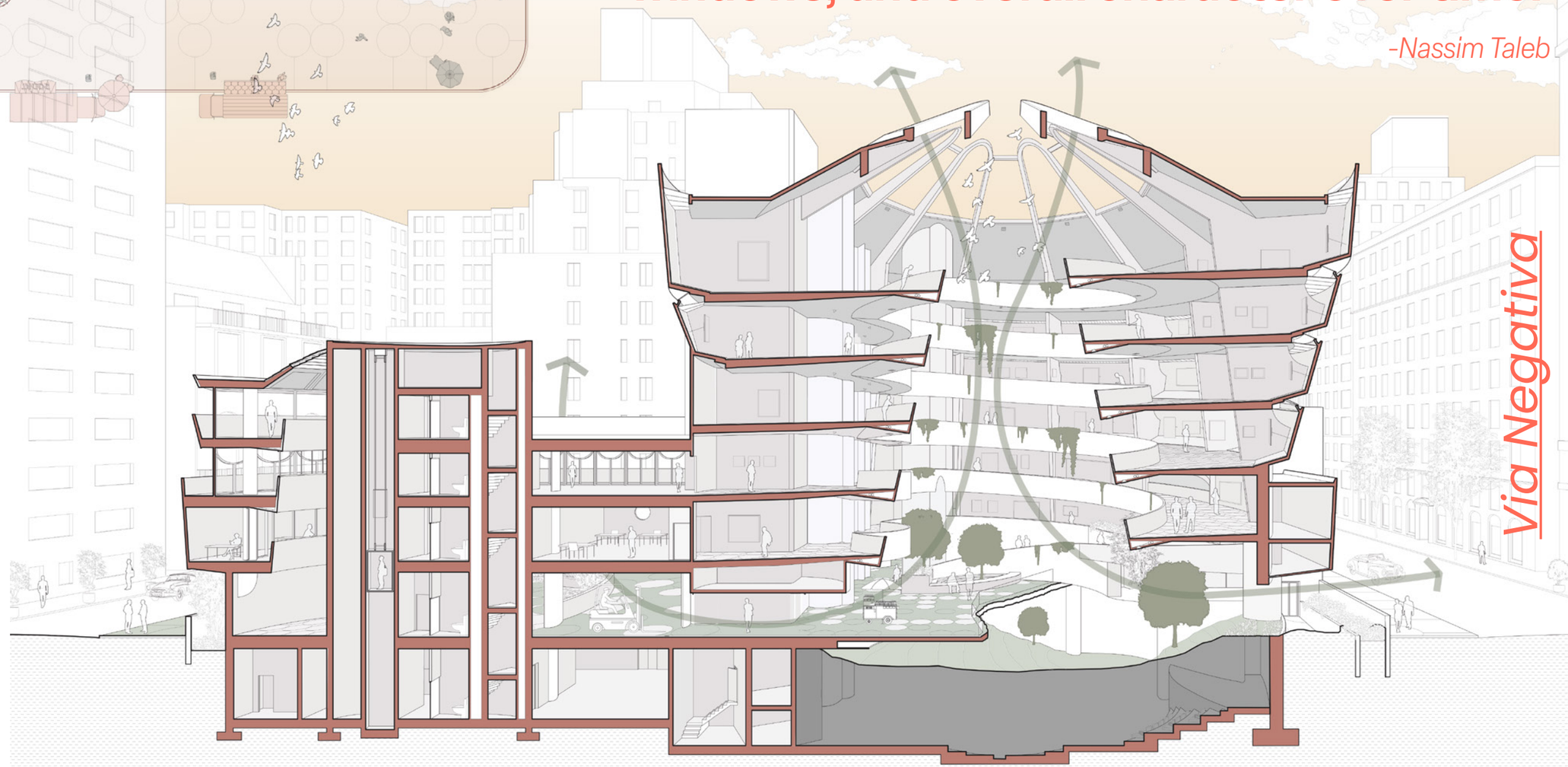


Via Negativa



The most compelling argument against teleological design is that buildings, even after being constructed, continue to change and adapt as if evolving in response to their dynamic surroundings. They modify their colors, shapes, windows, and overall character over time.

-Nassim Taleb



Via Negativa

IV.

SKIN IN THE GAME

Live by the sword, die by the sword

The importance of accountability and alignment of interests. It asserts that decision-makers should bear personal risks and consequences from their actions, ensuring responsible and ethical behavior. This alignment fosters fairness and efficiency, as individuals with a personal stake are more likely to act in the best interest of all stakeholders. It is bullshit identification and filtering

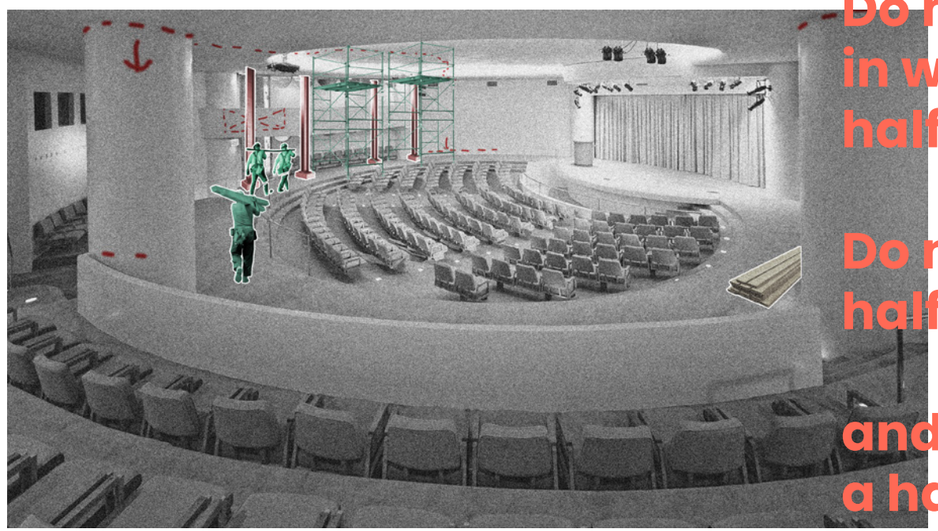
Do not love
half lovers

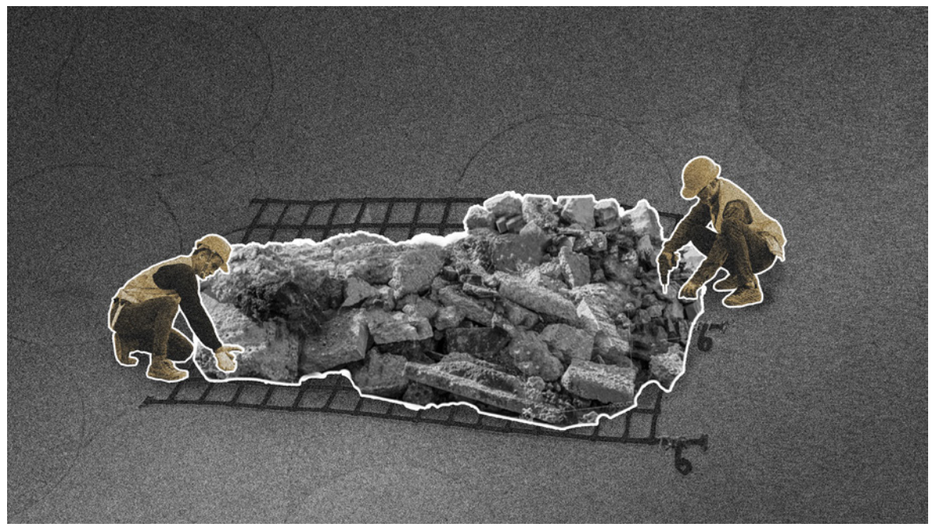
Do not
entertain half
friends

Do not indulge
in works of the
half talented

Do not live
half a life

and do not die
a half death





If you choose
silence, then
be silent

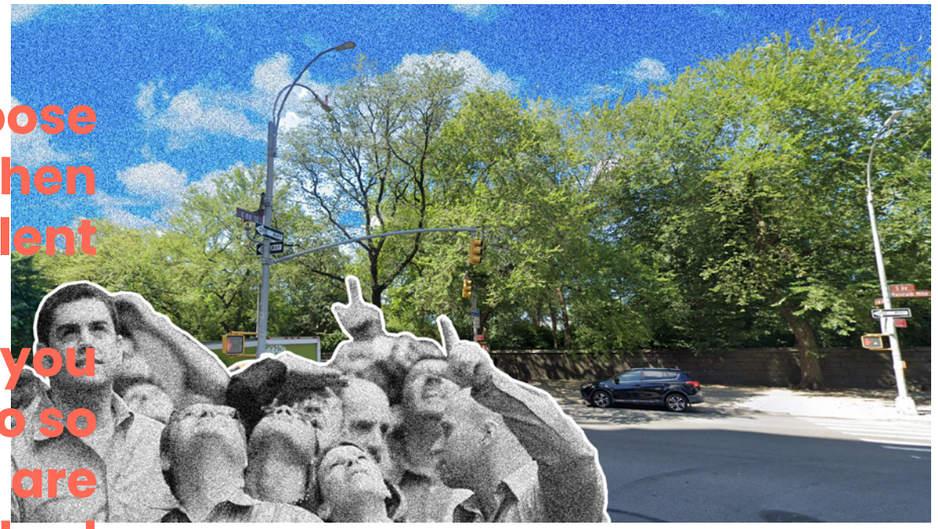
When you
speak, do so
until you are
finished

Do not silence
yourself to
say
something

And do not
speak to be
silent

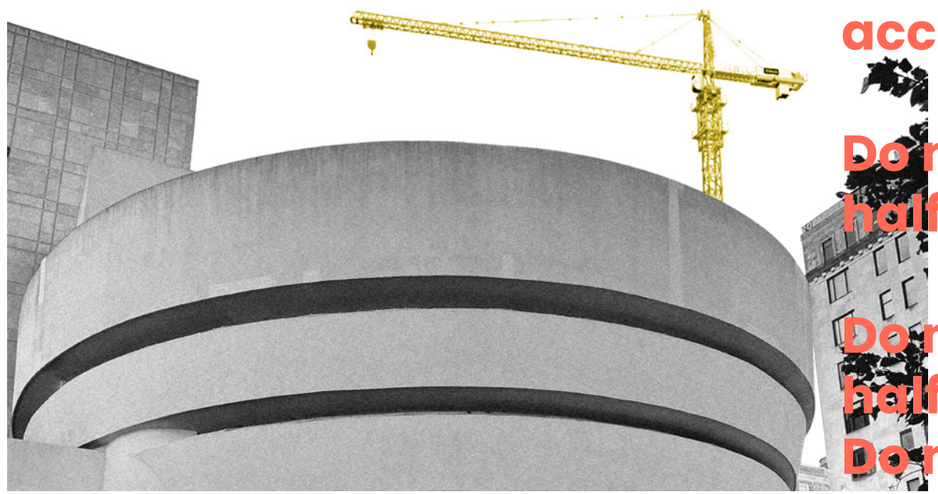
If you accept,
then express
it bluntly

Do not mask it



If you refuse
then be clear
about it

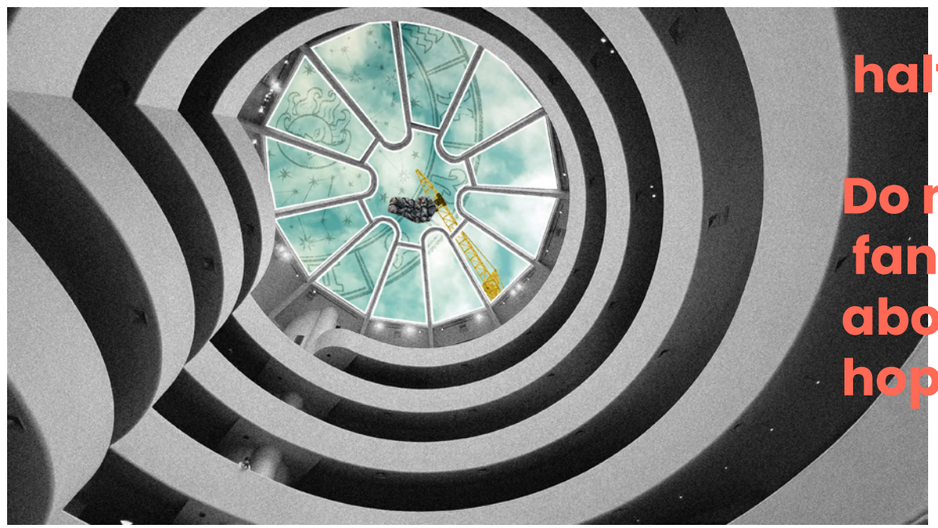
for an
ambiguous
refusal is but
a weak
acceptance



Do not accept
half a solution

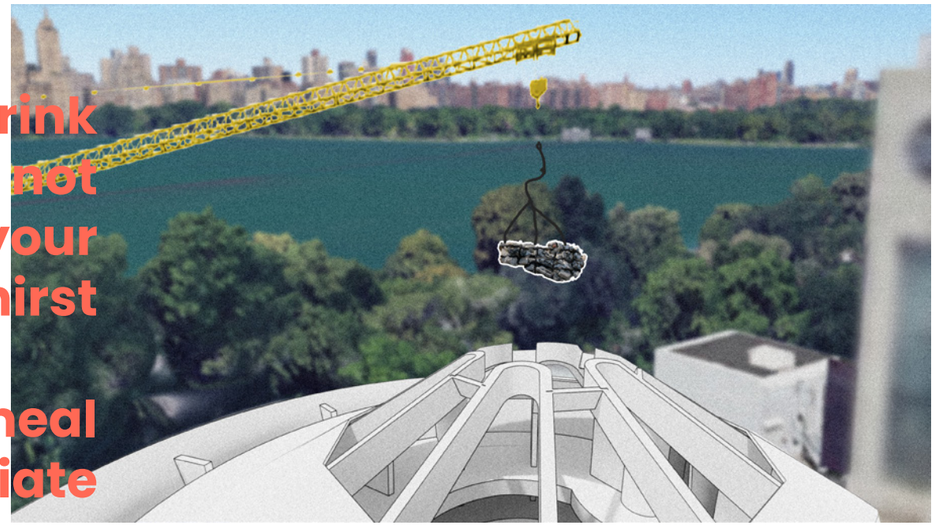
Do not believe
half truths
Do not dream

half a dream



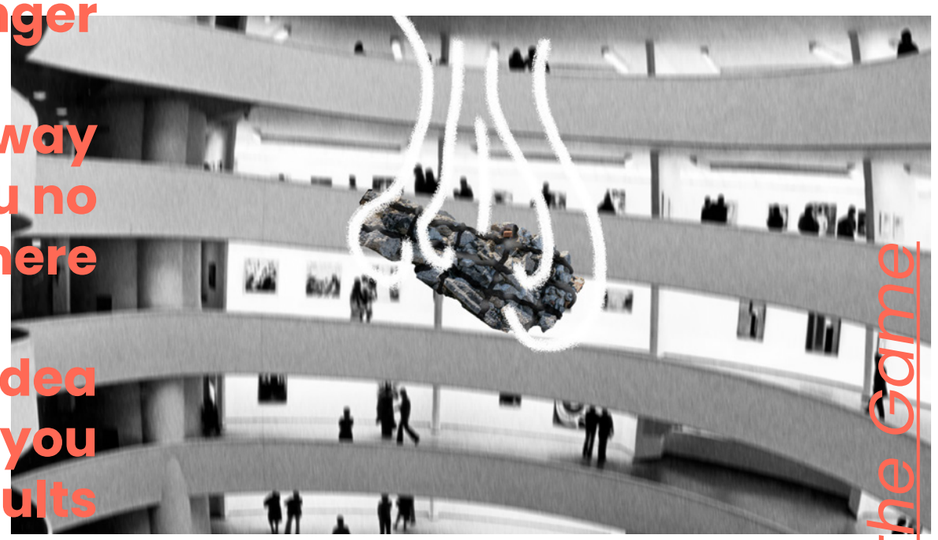
Do not
fantasize
about half
hopes

Half a drink
will not
quench your
thirst

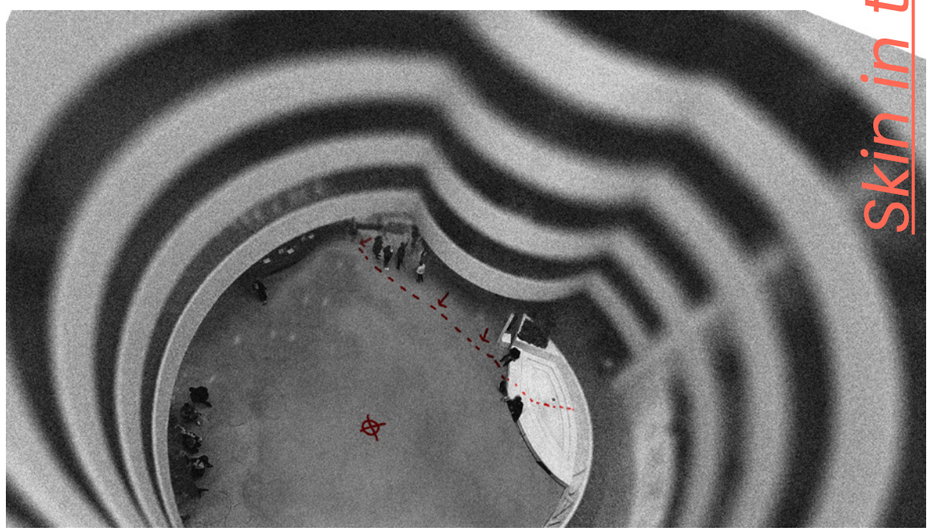


Half a meal
will not satiate
your hunger

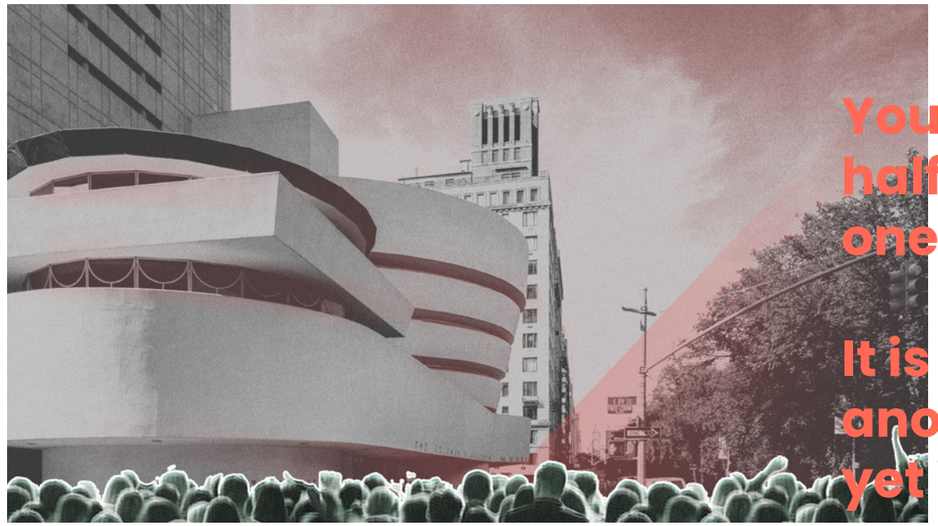
Half the way
will get you no
where



Half an idea
will bear you
no results

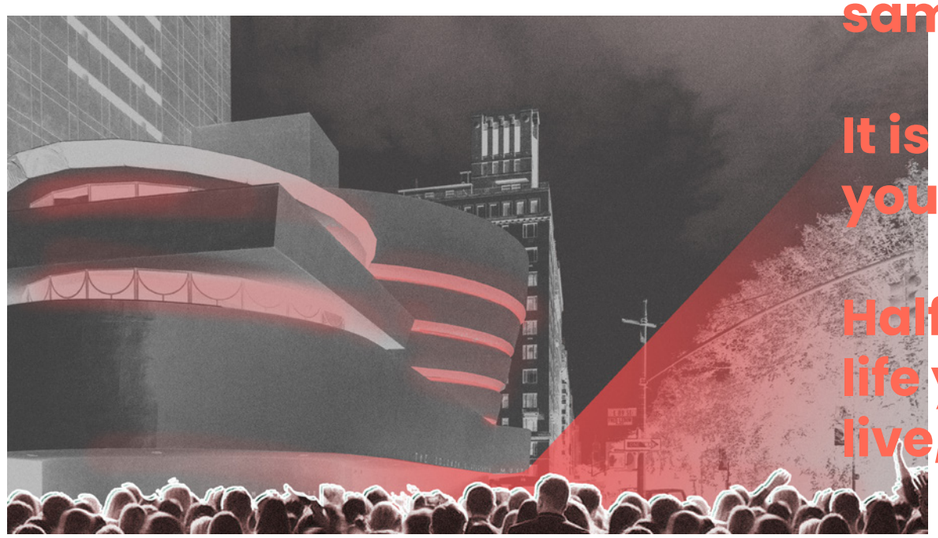


Skin in the Game



Your other
half is not the
one you love

It is you in
another time
yet in the
same space



It is you when
you are not

Half a life is a
life you didnt
live,

A word you
have not said

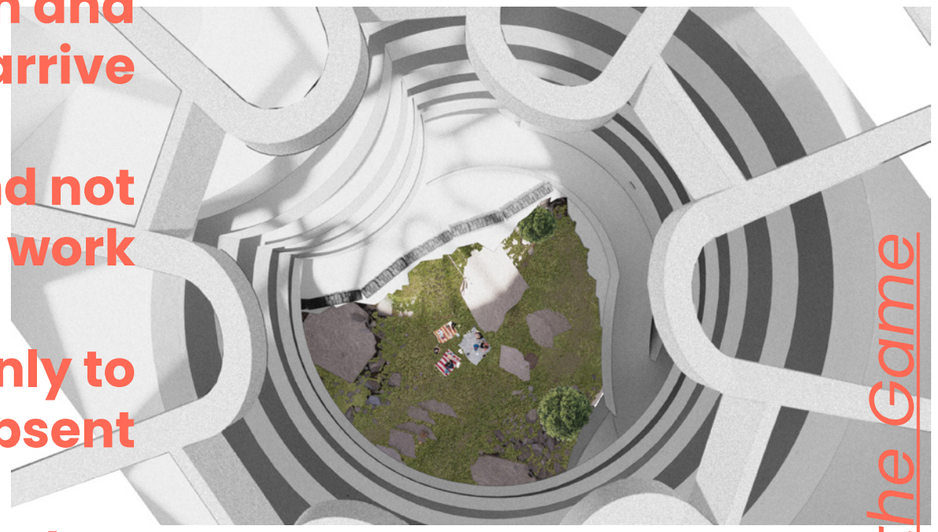
A smile you
postponed

A love you
have not had

A friendship
you did not
know

To reach and
not arrive

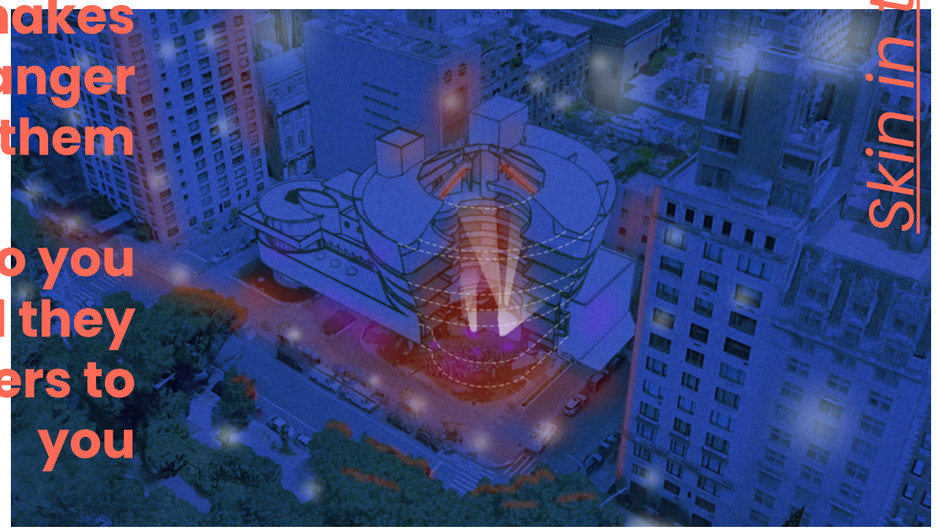
Work and not
work



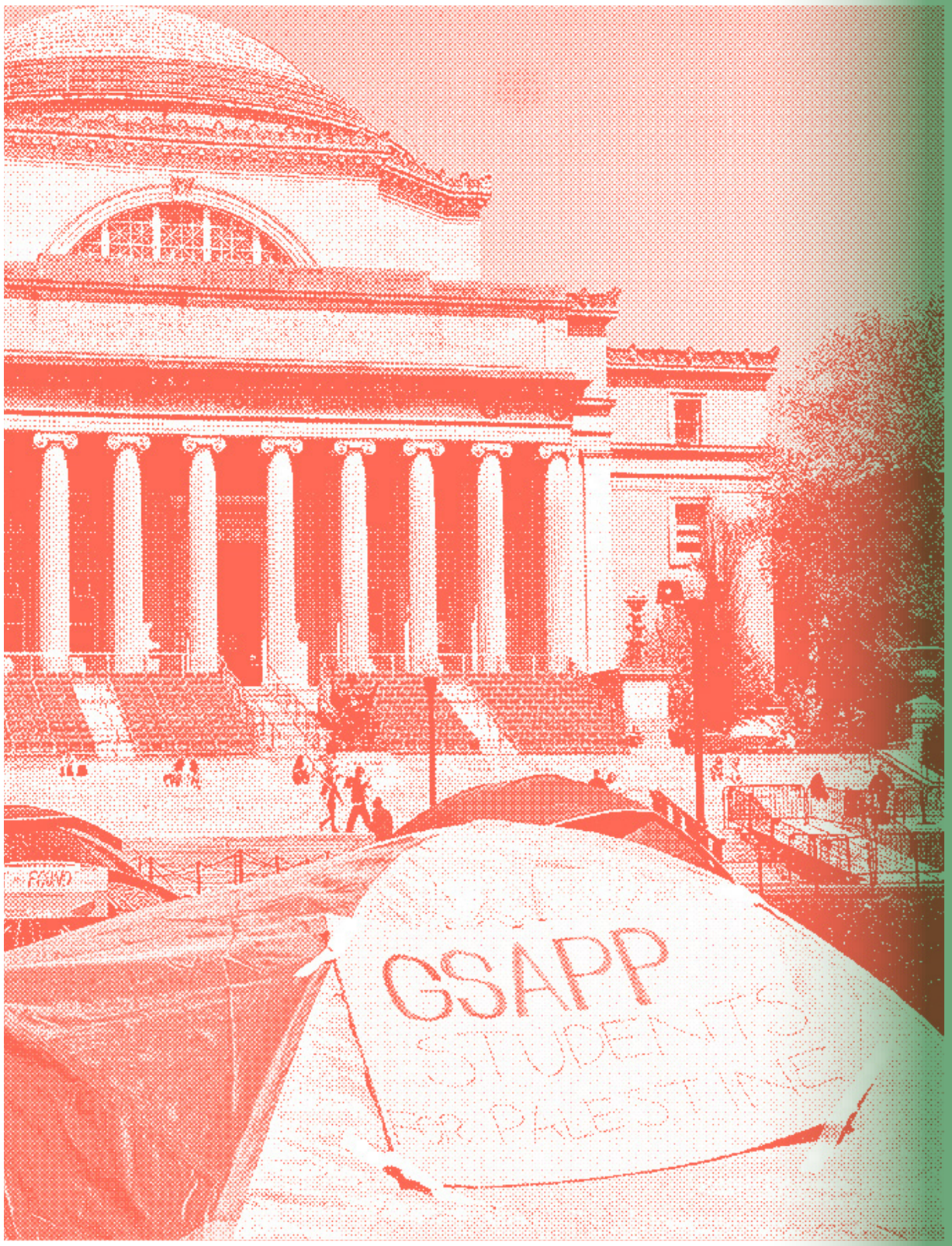
Attend only to
be absent

What makes
you a stranger
to them

closest to you
and they
strangers to
you



Skin in the Game



The half is a mere moment of inability

but you are able for you are not half a being

You are a whole that exists to live a life

not half a life

Kahlil Gibran

Acknowledgment

Embarking on this explorational journey and producing this work required the generous assistance and support of many individuals, some of whom made significant sacrifices to enable its completion. For their invaluable contributions, I am profoundly grateful to my colleagues, friends, and family.

May 2024