

P / REFERENCES OF DESIGN

‘THE ART OF THE INVISIBLE: PNEUMA’– EXPLORING THE PHENOMENON OF DARK MATTER THROUGH ARTISTIC SPECULATIONS.

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ABSTRACT | My research, called 'The Art of The Invisible: PNEUMA' (working title), is based on the cosmological phenomenon of dark matter. According to current models, this mysterious mass makes up the vast majority of the universe - while the material world as we know it only accounts for 5%. Science assumes that mystical matter does not interact with light but can only be perceived through its gravitational effect. Scientists can only detect this invisible matter indirectly through instruments. I aim to use the tools of speculative art to make the phenomenon of invisible matter experienceable directly to human perception. The main objective of the research is to create an experimental simulation in the form of a spatial installation in which the unknown phenomenon can be experienced through an interdisciplinary environment. It could open new and unexpected channels for human understanding, which refers to one of the main aims in the section summary, 'More-than-human spatial complexities.'

One then might wonder, how can a perceptual interaction between the human body and invisible matter be created? In the timeless space alongside visual deprivation, the only point of reference for human perception would be matter. In this attempt, space and time would form a unity shaped by the 'dark matter' from within, which would enter into discussion with the human body. In the isolated situation, space, matter, and time would expand the boundaries of human perception as a non-linear entity.

The biggest challenge is to try to make an astrophysical phenomenon tangible at a more profound level. The most crucial questions in the research process are: How can 'dark matter' be experienced? How can the unknown take shape if we do not have the necessary material knowledge? How far can fiction and intuition go? What makes an interdisciplinary experiment a true empirical experience? Can it be collective and universal, or does every one of us decode stimuli according to their understanding? The interdisciplinary approach provides a methodological basis for understanding the work in a complex way. The different aspects of science (especially astrophysics and cosmology) and art provide an opportunity to examine the phenomenon from multiple perspectives. While physics emphasises an analytical, rational, and logical method, creative arts approach the process from a more intuitive and abstract perspective. With these tools, I aspire to create a discourse and experimental situation in which cosmology and installation art can form a common entity, bringing the abstract scientific idea closer to the spectrum of human perception.

At several points, the research is inspired by and connected to ancient Greek material theories and cosmologies (e.g., Anaximander's theory of apeiron), various ancient mythologies about darkness (e.g., the Māori creation myth, the phenomenon of primordial chaos), the Zen Buddhist ideology of 'vacuity,' sensory-deprivation experiments, and the work of contemporary artists such as Yves Klein, Ad Reinhardt, Anish Kapoor, and James Turrell.

All this to say that my ultimate vision is to make the invisible material world tangible to human perception through the discipline of art.

RESEARCH FOCUS

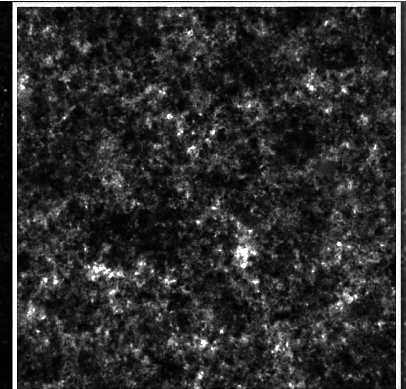
DARK MATTER — invisible mysterious mass: 26% of the universe

How to use the tools of **speculative art** to make the phenomenon of invisible matter **noticeable and experienceable directly to human perception?**

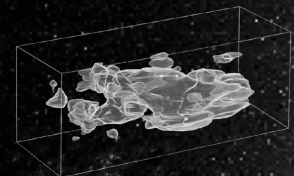
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PERCIEVING THE INVISIBLE: WHAT IS DARK MATTER?

- ◇ Current theories claim that **dark matter does not interact with light**, but can be **perceived** only **through its gravitational effect**.
- ◇ The **filamentary structure** of this invisible matter **weaves through the cosmos, as well as the human body**.
Without this defining mass, the Universe would fall apart, and so would we.
- ◇ How can dark matter **be sensed somatically**, if scientists can only detect this phenomenon through instruments?



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MAIN QUESTIONS AND GOAL

QUESTIONS:

- ◇ How can **the unknown take shape**, if we do not have the necessary material knowledge?
- ◇ How far can **fiction and intuition** go?
- ◇ What makes **an interdisciplinary experiment a true empirical experience**? Can it be **collective and universal** or does each and every one of us decode stimuli according to their **individual understanding**?

GOAL:

- ◇ Based on the relationship between **ART** and **SCIENCE**: create an **art research process** that, beyond the representation of the observed phenomenon, can help science to **understand the unknown from a creative perspective**.

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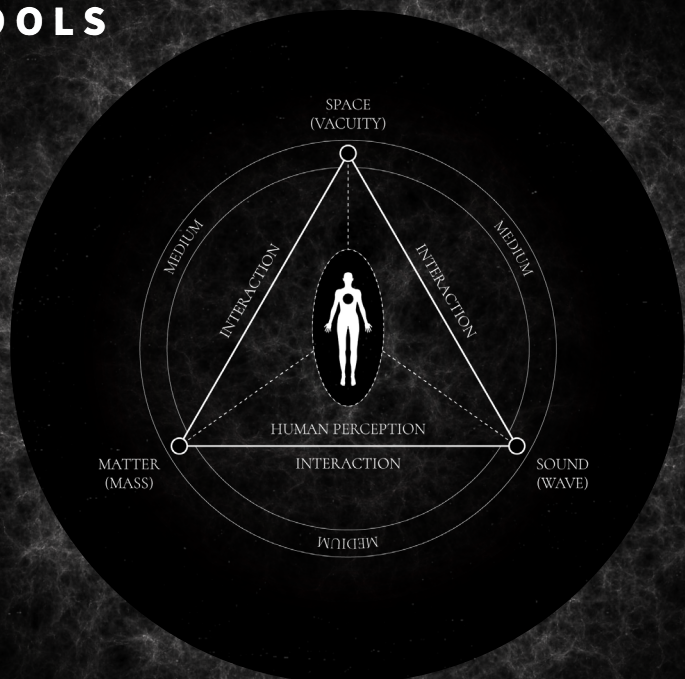
METHODOLOGY AND TOOLS

METHODS:

- ◇ Collaboration with different scientific fields and institutions
- ◇ Fieldwork: empirical data and information gathering
- ◇ Interview technique
- ◇ 'Waste-book' — researcher's diary

TOOLS:

- ◇ Interdisciplinarity
- ◇ Perception experiments
- ◇ Installation format

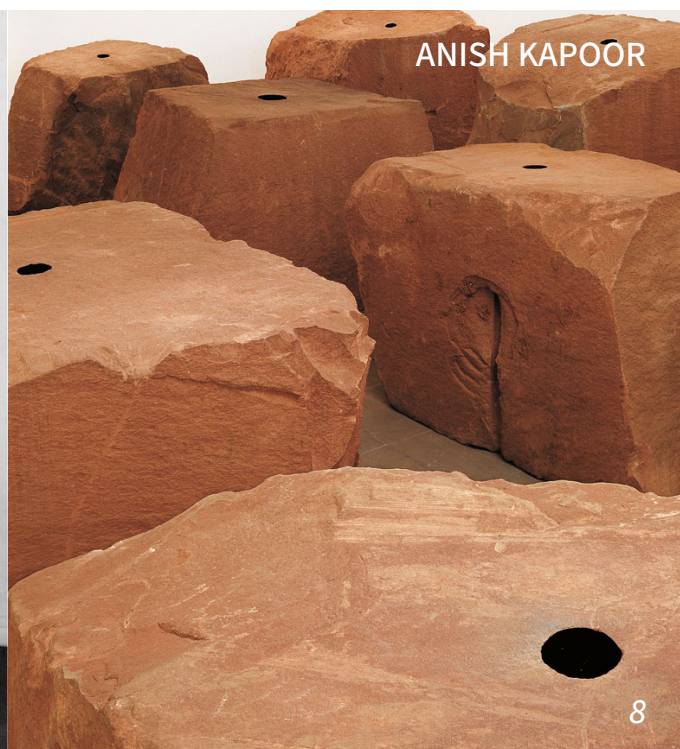
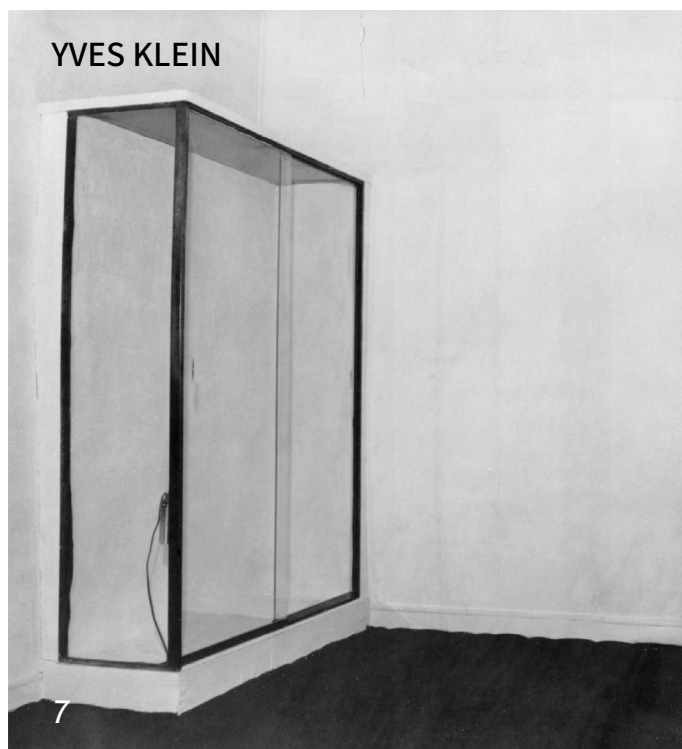
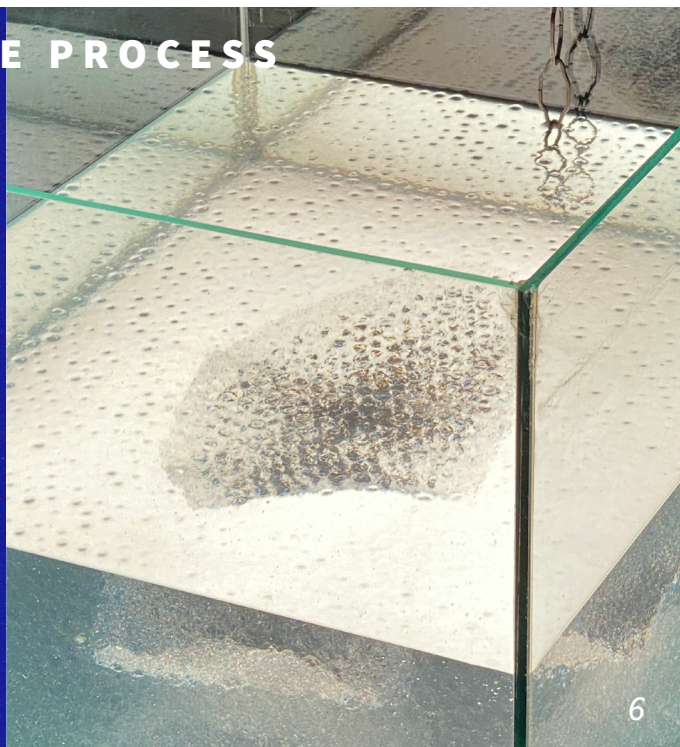


RESEARCH AND CREATIVE PROCESS

PRIORITY TOPICS IN THEORETICAL RESEARCH:

- ◇ **INVISIBLE MATTER** IN Anaximander's *apeiron* theory, Yves Klein's work, own works (URFORM/II performance-installation & APEIRON installation)
- ◇ **VACUITY/VOID** IN Vincent Keisen Vuillemin's (zen master & quantum physicist) and Yvon Myoken Bec's (zen master & philosopher) thoughts about zen, quantum and intuition (interviews), Anish Kapoor's work

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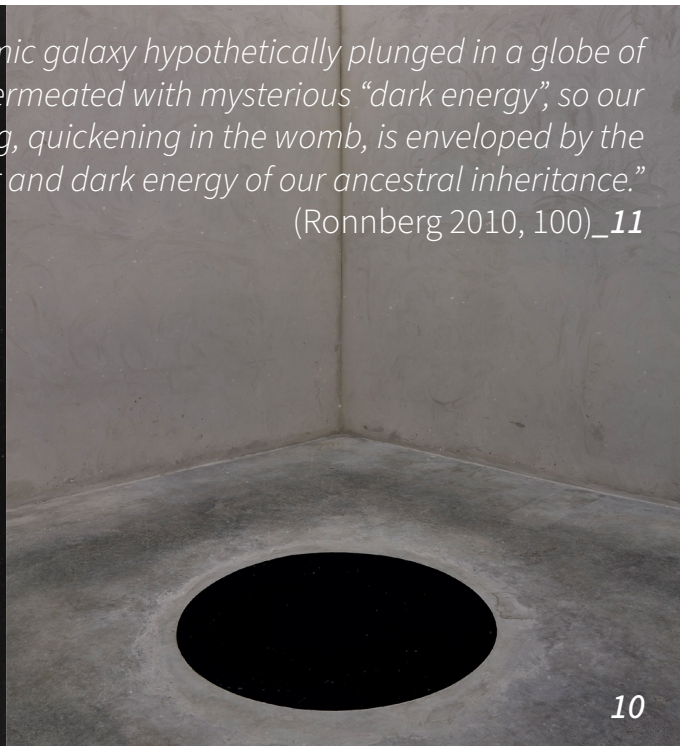


“Like the macrocosmic galaxy hypothetically plunged in a globe of “dark matter” and permeated with mysterious “dark energy,” so our own microcosmic being, quickening in the womb, is enveloped by the dark matter and dark energy of our ancestral inheritance.”
(Ronnberg 2010, 100)_11

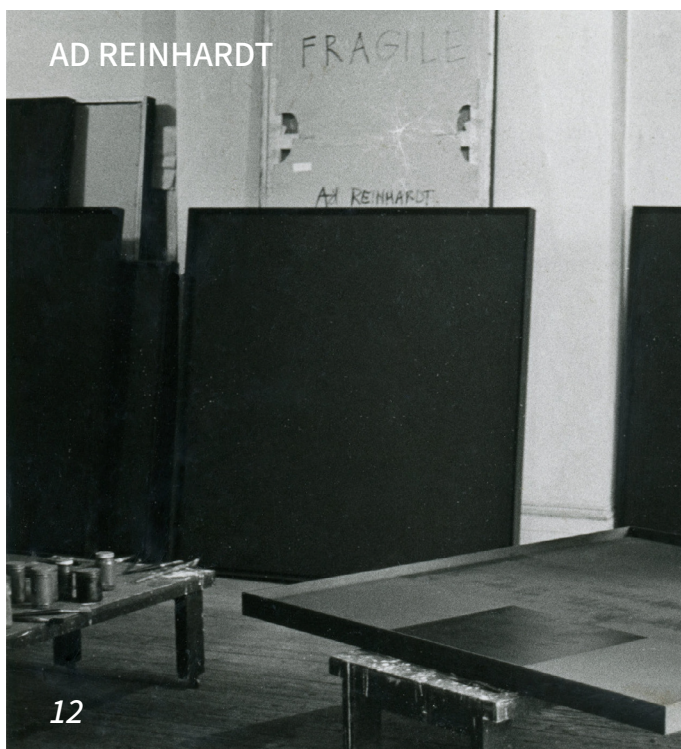
◇ **DARKNESS** /N Symbolism of darkness, Primordial Chaos, Maori creation myth, the dark matter theory, Ad Reinhardt's Work

◇ **ART AND SCIENCE** /N Sensory deprivations, empirical context creation, interdisciplinarity, James Turrell's work

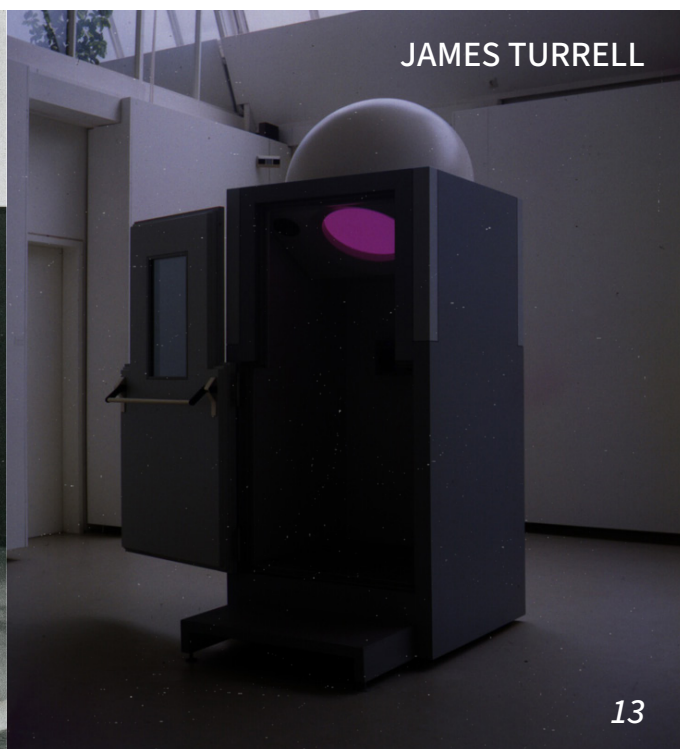
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*PRIORITY TOPICS IN
PRACTICAL RESEARCH:*

- ◇ SENSORY DEPRIVATION
- ◇ PERCEPTUAL EXTENSION

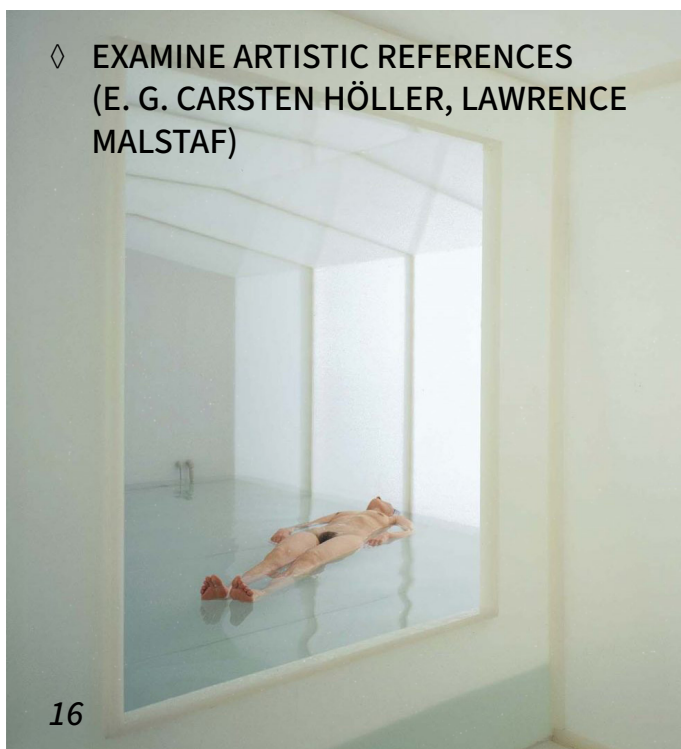
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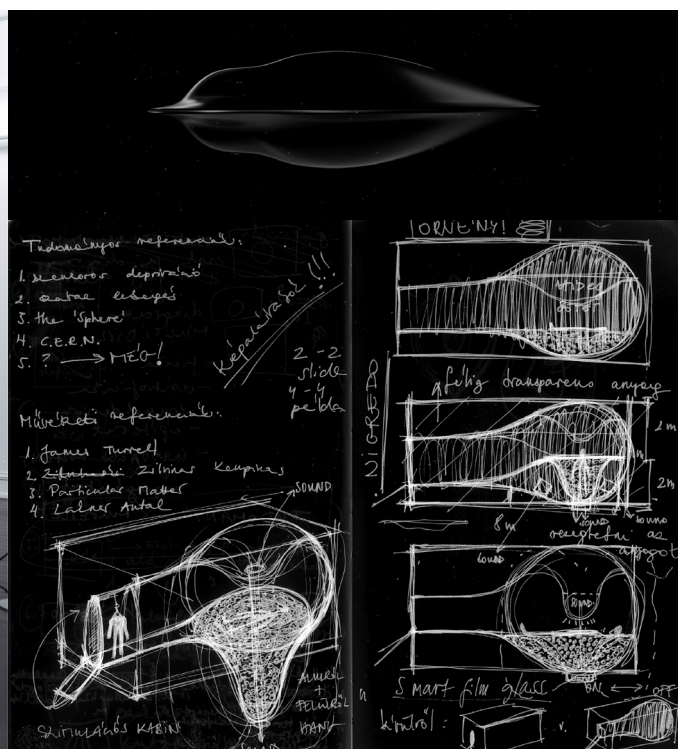
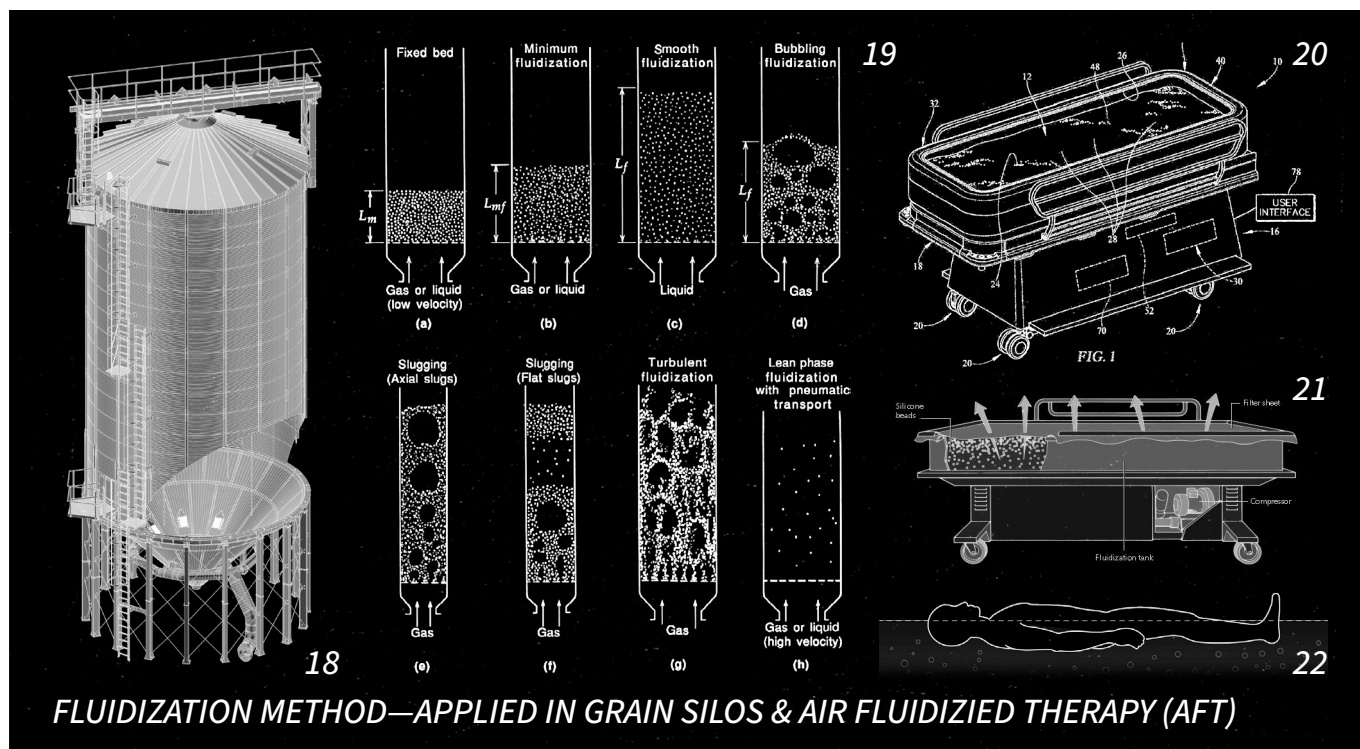
- ◇ EXAMINE ARTISTIC REFERENCES
(E. G. CARSTEN HÖLLER, LAWRENCE
MALSTAF)

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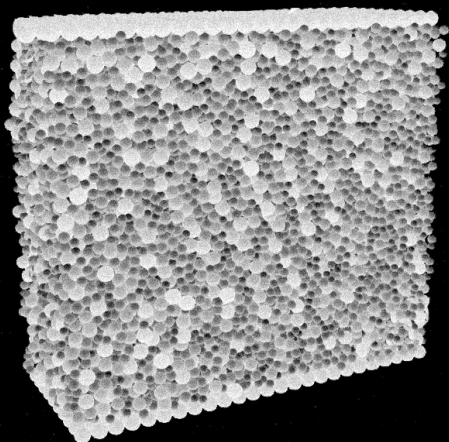


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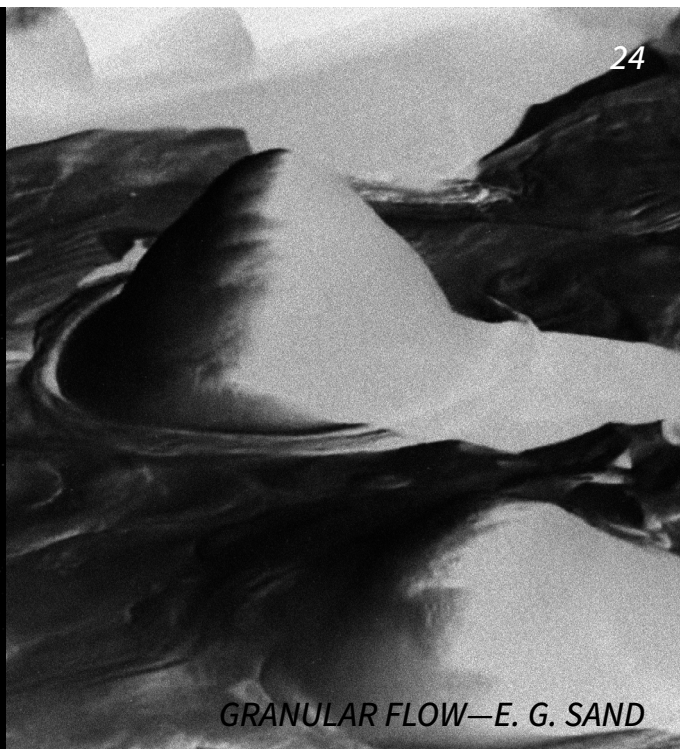


GRANULAR MASS



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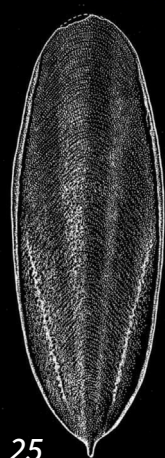
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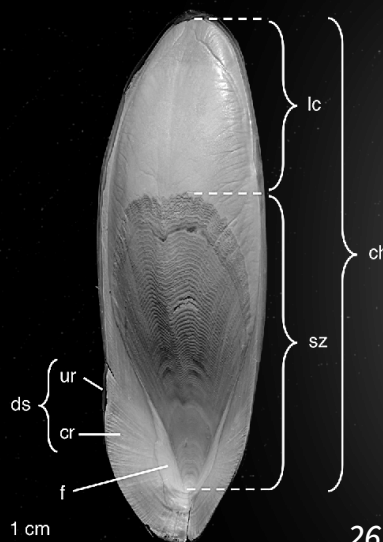
GRANULAR FLOW—E. G. SAND

FORMAL INSPIRATION: "We are not contained within an invisible, rigid scaffolding: we are immersed in a gigantic, flexible mollusc (the metaphor is Einstein's)."
 ◇ **mollusc** form (Rovelli 2016, 59)

◇ **pneumatic**
system



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