

Petrine Vinje | Surfacing Solids
Enactive Aesthetic Investigations in
Memory, Material and Meaning



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ACKNOWLEDGEMENTS

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Paul Scherrer Institute, Viligen, Switzerland

City of Oslo, Agency for Cultural Affairs

KORO - Public Art Norway

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Corinor

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Contributing pupils in research and development - Laboratory RISS

Agnes Lillevold-Vinje, Aarne Bor, Amelie Thiede, Nikolai Kulas, Nora Weber, Selma Subasi Kasbohm,

Selome Abate Damte – from DENOSO - The German-Norwegian School in Oslo.

Copyediting and editorial support

The Clean Copy

Graphic Design

Sandra Kastl

I would like to express my thanks to: my supervisors Melissa Gordon, Andreas Bunte and Sunniva McAlinden for their feedback and overall guidance. Gordon for our discussions, her insights and invaluable feedback during the final two years. Bunte for our conversations, and his patience and relentless support. McAlinden for her encouragements in the first half of the project period. Sara R. Yazdani for our conversations and support in the midterm evaluation and in the writing process.

Warm thanks to: Felix Schlicker at Corinor, Camilla Luihn, Erik Wester, Nicolai Fountain at KHiO and Fellesverkstedet for excellent assistance in the workshops and to Ingrid Kristensen Bjørnaali, Peter Dean, Enrique Guadarrama Solís, Alejandra Caballero, Taylor Smith, Rickard Aall, Ahmed Badry Gad, Piera Shih Ying Chu — for being brilliant artist- assistants.

Carsten Aniksdal, Sofia Jernberg, Tejaswinee Kelkar — for your warmth and knowledge that you brought into the artworks. Louwrien Vijers for your inspiring talks and important contributions.

Colleagues at KHiO and elsewhere: Therese Veier, Victoria Bugge Øye, Simone Neuenschwander, Maria Havstam, Ruth Hege Halstensen, Mara Lee, Nina Schjønsby, Rikke Lundgren, Maria Veie Sandvik, Kjetil Røed, Tine Semb, Ragnhild Aamås, Nina Strand, Hild Borchgrevink, Mike Sperlinger, Theo Barth, Franz Schmidt, Tiril Schrøder, Olaf Tønnesland Hodne, Synne Bull, Dragan Miletic, Maiken Håvarstein, Kjell Rylander, Victoria Browne, Gerd Tinglum, Stephanie von Spreter, Ingrid Halland, Heloisa Amaral, Gjertrud Steinsvåg, Ebba Moi, Prerna Bishnoi, Antonio Cataldo for your contributions along the way. A special thank you to Malin Graesse.

Peers in the Norwegian Artistic Research Programme: Jakob Oredsson, Bjørn Jørund Blikstad, Solveig Styve Holte, Samoa Remy, Shwan dler Quaradaki, Sigrid Espelien, Fernanda Branco — and a particular thank you to companions in the Reading- and writing circles: Rosalind Goldberg, Ida Falck Øien, Magnhild Øen Nordahl, Signe Becker, Lisa Badouin Lie, Sara Eliassen.

Martijn van Beek and Claire Petitmengin for your careful directions towards the source of thoughts. Dominique Baron-Bonarjee and Ema Demsar for exploring the transmodal state with me. Amir Freiman for (y)our hug.

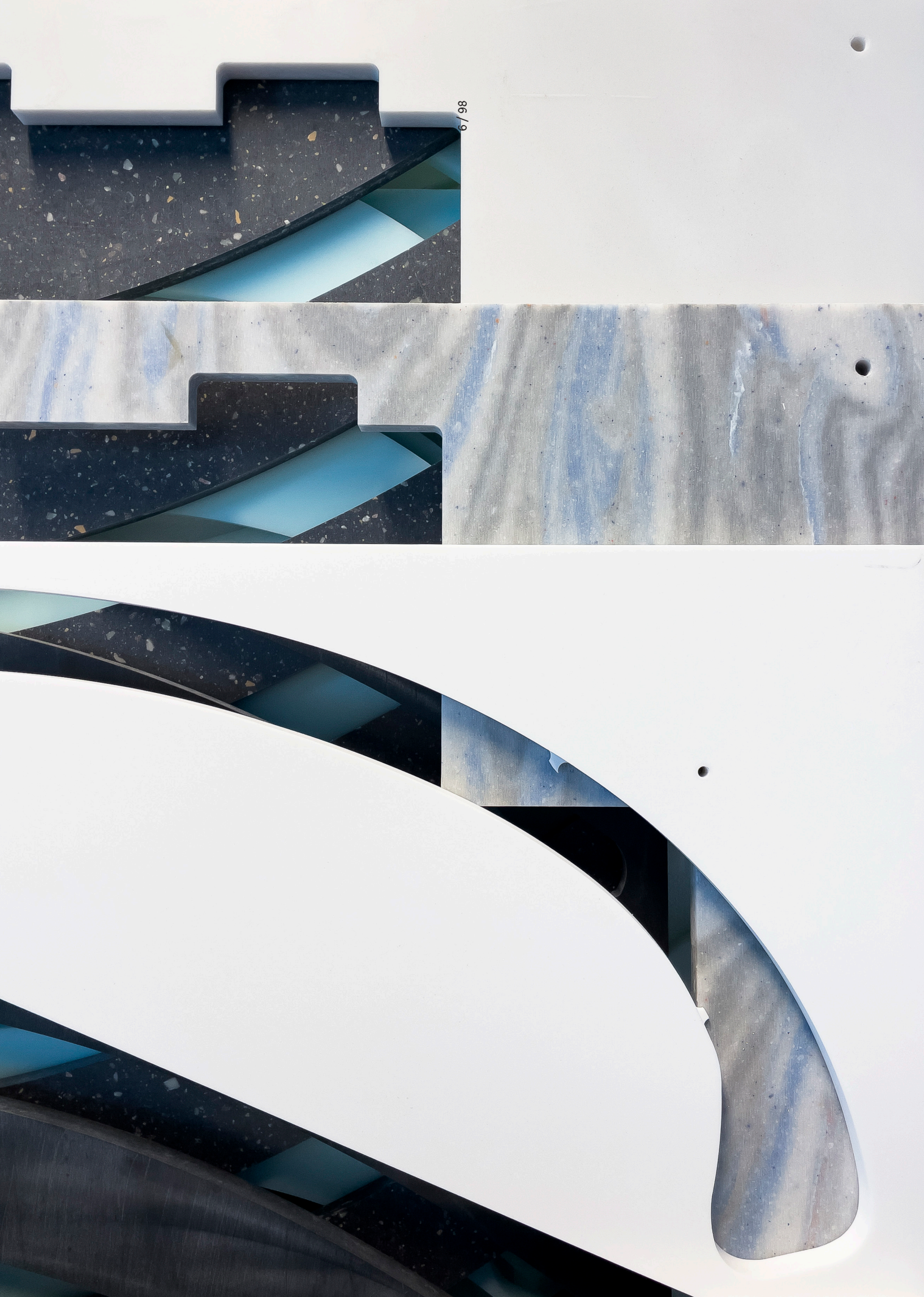
Sandra Kastl — for your tremendous work with all of my ideas, your beautiful book designs, and for the friendship that came along with it.

Friends that kept me grounded and inspired: Marte Johnslie, Tejaswinee Kelkar, Marte Eknæs, Amalie Eek-Hjorthaug, Jannicke Kristoffersen, Roger Eugen P. Egseth, Liv Tandrevold Eriksen, Ingrid Lønningdal, Espen T. Hangård, Maren Dagny Juell, Tine Semb. A special thank you to my sister Karoline.

My deepest thank you to: my beloved family, for your patience and encouragements throughout.

My two darlings Noralf & Agnes, for your stamina, love and investments.

Carsten for your uncompromising search for the elementary particles — and for giving me rest.



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ABSTRACT

Solid Surfaces investigates how we, in our mind-bodies, are touched by and handle artefacts and artworks, which are meaning-bearing entities. The artistic research project maps out new strategies for making artwork. It is informed by and speaks to the ways in which material⁰¹ data are subjected to transfigurative processes in human – technological relations in art, history, and – the ongoing – Information Age. By engaging with a museum artefact – a medieval amulet – multiple artworks surfaced, in the form of text, photography, film, 3D animations, sculptures, and installation, all of which are interrelated in a composite, polyphonic assemblage that constitutes this artistic research project. The object and its connected contexts – an archaeological site, an archive, a conservator’s laboratory, and a nuclear research facility – acted as sites of aggregation in the project, which unfolded as materials research, technological endeavour, and interdisciplinary collaborations, and resulted in investigative, aesthetic works for exhibition and existence in public space. In the project, textual sources from Old Norse poetry and material textculture are surfaced through high-tech materials, with the assistance of digital apparatuses, touchscreens, and algorithms, in an attempt to unite the not-yet-knowns of the past, present, and future and bring them together in the outcomes of the research.

In *Surfacing Solids*, a modular system for building three-dimensional works is developed. This system, which can be fitted to a specific site or constructed as standalone sculptures, arise as parallel entities, commenting on their given situation within the museum or site specificity. Thus, the project aims to question how cultural memory can fulfil its potential to prompt other futures and proposes new ways by which it may do so through practice-led research and processual construction of sculpture.

Surfacing Solids explores going to the origin, or root, of a subject, by enacting an interdependent world of materials, phenomena, technologies, and apparatuses: fossil composites (memories within the Earth) as well as the not-yet-knowns in the archive, in the gibberish in language, in the glitches in the virtual and accidents in computer-run machining, and the means of knowledge in the spiritual and phenomenological epoché, which act alone or together in the process of becoming an *Enactive assemblage*.

⁰¹. With the notion of material in the context of my artistic practice I mean: matter, energy, and information.

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INTRODUCTION

By engaging with a medieval amulet⁰¹ through multiple perspectives, and in various artistic media, *Surfacing Solids* explores the nature of time as it unfolds both backwards in the past and forwards into the future, as understood through various technologies and materials that co-create with man. The research process began as a series of investigations of the university museum⁰² interpreting the process of enrolment of artefacts as the result of a seemingly constant urge to archive and store collective memory. It asks how an artefact, as cultural memory, can fulfil its potential to suggest other futures – or meanings – through the making of artworks in practice-based research. Cultural memory⁰³ is created in society and by individuals, both in the form of collective heritage⁰⁴ preserved in museums, and through personal gestures of inscribing and archiving: we are constantly building history, myths, and truisms. In *Surfacing Solids*, I observe how artefacts are unearthed – or surface – and how data on them is collected, transmitted, created, and subjected to scientific research, leading to the creation of new knowledge as part of building a collection.

I have pursued investigative aesthetic research on interactions with material surfaces and in examining the role of performative gestures of touch in data collection, including in processes of separation, storage, protection, and material agency.

I have equally been informed by how we, in our current society, are using various in

01. *Surfacing Solids* focuses on the collection of pre-modern, semiotic-material artefacts at Kulturhistorisk Museum [Museum of Cultural History] – (KHM), and in particular, on a magic–religious amulet made of lead (catalogued as NR.: C60965/037), which surfaced in 2018 in an archaeological excavation conducted during the construction of a new rail line from the Central Station (the Follo Line). Norsk Institutt for Kulturminneforskning [The Norwegian Institute for Cultural Heritage Research] (NIKU) has since conducted extensive excavations in a tight race with the urban development of the Port of Oslo in Bjørvika, Bispevika, and Gamlebyen, the district adjacent to these areas. The amulet was found in the ground beneath the new train tracks for the Follo Line, in between two pieces of wood that seem to have been part of the pavement of Bispeallmenningen, which was the main street between the bishop’s palace and the harbour in the first urban settlement of Oslo. The amulet is an object from the past paradigm, when people of the North began transitioning from an oral culture to a literate one and learning distant languages (such as Latin, Hebrew, and Greek).

02. Museum of Cultural History is part of the University of Oslo. Its collection can be seen in the Historical Museum as well as the Viking Ship Museum. In the first phase of the project, I researched artefacts in the collection of the Vorderasiatisches Museum [the Museum of the Ancient Near East] in Berlin. Due to the COVID-19 pandemic, I had to abort my research at VAM and decided to focus my research on the artefacts from the archaeological excavation site in Gamle Oslo instead.

03. I apply “cultural memory” as theoretical perspective, as defined by Aleida Assmann and Jan Assmann. It differs from what Maurice Halbwachs defines as “collective memory” in two ways: first, it focuses on cultural characteristics that “communicative” or “everyday memory” lack, like experiences of a group of people. Secondly, it is different from “history”, which does not have the characteristics of memory. Maurice Halbwachs places “collective memory” within a “social frame”, but with a shorter generational cycle than cultural memory. Cultural memory’s function is to unify and stabilize a common identity that spans many generations and is not easy to change. J. Assmann, “Collective Memory and Cultural Identity”, *New German Critique*, no. 65 (1988: 1995).

04. Maurice Halbwachs, *On Collective Memory*. Edited by Lewis A. Coser (Chicago and London: Chicago University Press: 1992 [1925]).

terfaces to inscribe, archive, share, and store data using information technologies, such as digital interfaces, touchscreens, and neutron-tomography. Synergies of images and meanings are circulating at a rapid tempo, and as an artist, I am interested in the dichotomy between the hyper-aesthetic and the endless possibilities of digital fabrication of contemporary aesthetics and the simplicity and rawness of artefacts that have surfaced from previous times. I have explored how artificial materials and non-human technologies co-create representations of the ideological, immaterial, and mystical, tying these to the not-yet-known, non-conscious, and meta states in art, science and spirituality (in the sense that occurs in abstraction and in cultural memory). What I suggest with the artworks created is that this is not a contemporary practice – we have been engaging with these phenomena ever since humans picked up tools to create, build, construct, and communicate.

Object | Artefact

Keeping the artefact itself as a nave to circle the research around, I have observed the transfigurative practices it was subjected to – archiving, virtual scanning, and translation into scientific and museological expressions by scientists and practitioners of fields other than my own. I was interested in how the amulet has certain similarities to material-digital assets, such as smartphones and tablets, which we use to communicate in virtual realities today. What are these similarities? How could I, when engaging with the artefact, learn from the paradigm it is a sample of and let this inform new artworks?

“An artefact is an object that belongs to the material culture that people surround themselves with and depend on. Artefacts include everything from objects of use, such as tools, to decorative items such as jewellery, which are wholly or partly processed or produced by humans (cultural products). This is in contrast to objects in nature (natural creations). An art object is in principle an artefact, but not all artefacts are considered art. Artefacts are objects that can say something about people’s behavior and life of thought and emotion, productivity and customs, and therefore they play an important role in subjects such as archaeology, anthropology and art history.”⁰⁵ In *Surfacing Solids* artefacts play a significant role as ‘sites of aggregation’ for artworks that manifest in society, interacting with sites and in interdisciplinary relationships. I have been interested in the similarities in the ways medieval objects and contemporary works of art are treated in museums, even though the two groups of artefacts belong to stored memory in two different museum traditions. While the artefact C60965/037 is treated in the Kulturhistorisk Museum (Museum of Cultural History), contemporary works of art are stored and exhibited in different art museums. While the Museum of Cultural History is concerned with building a collection of “treasured objects passed down from past generations”,⁰⁶ the National Museum [in Oslo] holds, preserves, exhibits, and promotes knowledge about, Norway’s most extensive collections of art, architecture and design.”⁰⁷ The art museum can perform these actions only because works have been made, exhibited, and developed in small- and medium-sized institutions that do not have museum status, and which are without their own collections, like the ‘Kunsthalle- or verein’ model. It is in dialogue with these art galleries and institutions that my works have been

05. Erik Mørstad, “Artefakt”, Store Norske Leksikon (2005–2007), accessed 18 October 2023, <https://snl.no/artefakt>.

06. Historical Museum, “Heritage – Our Place in History”, 2023, accessed 30 October 2023, <https://www.historiskmuseum.no/english/exhibitions/heritage/index.html>.

07. The National Museum of Norway, “Home Page”, accessed 30 October 2023, <https://www.nasjonalmuseet.no>.

developed. While the art museum collects, preserves, and exhibits its collection, building its collection not in a vacuum, but also in relation to the global art market, smaller institutions do research-with-creation and, to a much greater extent, often facilitates the making of artworks in dialogue with the artist. Thus, the artwork as object in the contemporary art museum relates closer to the object in the historical museum than in the medium sized and smaller institutions. The question of authorship differs across the two object categories, as the authored artwork naturally has a distinct other value, which is in connected with the artist as author, as the historical artefact (object) usually is not ascribed to one. An artwork is more than an object. In "Inclusions: Aesthetics of the Capitaloscene", curator and art-critic Nicolas Bourriaud is countering the OOO-theory,⁰⁸ drawing on artist Pierre Huyghe's work: "Since art is not a category of objects but a specific regime of the human gaze, its existence is inseparable from the presence of the "active witness" Huyghe speaks of. It only exists because the human being uses it, and invents, classifies, conserves, and values a class of objects that correspond to this use."⁰⁹ In a methodological shift in the research period, I moved from archival studies to engaging with the material as 'site of aggregation'. Allowing for an open-ended result that could challenge the subject-object relationship that has structured Western societies for centuries, led to the adoption of 'enaction' as a position to work from. Enaction describes the dynamic interplay between the self and the world, where the mind-body, and environment come into existence through a mutual process of co-dependent arising. An enactive stance and the 'assemblage' became key notions to understand how the resulting artworks could relate to both to cultural memory as phenomenon and the stored objects in the museum. Following this shift, I consider enaction as well as assemblage as new methods that evolved in the project. An assemblage is not only an artwork assembled using various materials, emerging from a given surface — it is an open-ended, fussy system that is in continuous movement. This methodological shift meant undertaking a new kind of engagement with metaphysics, where one can — through what I call an 'enactive assemblage' — potentially can observe a world where the immaterial has a material foundation, that can be experienced as an artwork.

One of my stated goals embarking on this project was to develop novel strategies for creating artwork in the studio. This was stemming from an urgent need to commit to creating [smaller works] in the studio-setting, not necessarily leading to monumental installations, which my practice, so far, had consisted of to a large extent. For this to happen, meant situating my practice in more than one environment — the studio and the university museum (including its connected contexts being an archaeological site, an archive, a conservator's laboratory, and a nuclear research facility). Informed by the theoretical perspective of 'assemblage', and to think of it as how cultural memory is constructed, I developed a modular system for building three-dimensional works. This system, which can be fitted to a specific site or constructed as standalone sculptures, arose as parallel entities, aiming to comment on their given situation within the museum or site specificity. Thus, answering the projects question to how cultural memory can fulfil its potential to prompt other futures and proposes new ways by which it may do so through practice-led research and processual construction of sculpture and installation. Thinking-making enactively has had meaning for how I relate myself and my practice to these environments and to the material I work with, allowing them to inform and release artworks as part of a larger assemblage. It is forever becoming.

08. OOO – Object-oriented ontology maintains that objects exist independently of human perception and are not ontologically exhausted by their relations with humans or other objects. See, for example, Graham Harman, *Object Oriented Ontology: A New Theory of Everything* (London: Penguin Books, 2018).

09. Nicolas Bourriaud *Inclusions: Aesthetics of the Capitaloscene* (London, Sternberg Press, 2023), 58.

Background

I have previously worked with intricate and often obscure historical documents. Through long processes, I have attempted to turn the tables of history and upturn patriarchal ideas and hierarchical structures that are nurtured by the weight of heritage and history. In "Theatres of Language", Neuenschwander writes about "arenas of reflection" or platforms for "enquiry into space and time" in reference to some of my previous installations.¹⁰ My spatial practice until this project was concerned with the deconstruction of what Rosalind Krauss calls the "monumental" ¹¹ in our collective memory: art and architecture built to represent religion or other power structures. I built sculptural installations such as the *Backdrop for Absolute Sovereignty* (2011) and the *Anatomical Theatre* (2013) to facilitate situations that gave the participating spectator a transformative experience, thus exploring sculpture as an alternative to what Krauss calls markers for "a particular place for a specific meaning/event", where sculptures "mediate between actual site and representational sign".¹²

An interest in learning from other fields of knowledge and how this learning could be incorporated into the artwork has been part of my practice since *Anatomical Theatre*. It was the first of a few long-term projects I developed through research processes and interdisciplinary collaborations that expanded, changed, and transformed over time with newly gained insights. The aim of investigating with dialogue, or developing co-dependency with other faculties, is to adopt a method that insists on a commitment to understanding the body – myself – and embodiment in relational terms. It entails viewing the body and embodiment not as pre-existing entities, but rather, as processes emerging from recursive interactions.

The dialogue with the scholars and practitioners of Norwegian Institute for Cultural Heritage and Museum of Cultural History, led to in-depth cooperation and permission to extract materials from the excavation site for use in the installation and sculptures *CSS2022/01-04 Vessel (Arctic Ice)* (2022) and the film *Unravelling a Radical* (2022). It led to the inclusion of the environmental situatedness of the project's protagonist: the medieval amulet from Bispegata. The amulet was lost sometime around the turn of the first millennium and surfaced around a thousand years later, in 2018. By the time NIKU completes its archaeological excavations in 2024,¹³ the once-green turf and smooth-worn paving stones of this part of the Old Town district will have seen massive changes. The Medieval Park was the site of Oslo's first urban settlement, until the fire of 1624, which destroyed much of the town and persuaded Christian IV to establish Christiania on the other side of the fjord. From this site *Ship of the Heart OSSAIT1300–2023* will raise from the ground up — from the soil and the fossil — with artificial materials that communicate the slickness and cleanliness of the contemporary, which the expanding city will entail.

10. Simone Neuenschwander, "Theatres of Language: On the Work of Petrine Vinje," Vinje, *F- U- P- A- R- K* (Oslo: O, 2023), 5–8.

11. Rosalind Krauss, "Sculpture in the Expanded Field," *October*, Vol. 8 (Spring, 1979), 33.

12. Krauss, "Sculpture in the Expanded Field."

13. Estimated, but subject to frequent revisions. Source: conversation with archeologist Mark Oldham, project leader of the Follobane Excavations, NIKU, June 2022.

Overview of work

Surfacing Solids as a project was developed over four years (2019–2023). At the beginning of the research period, I was already involved with research in the Cultural-History Museum, working on the artist book, *F-U-P-A-R-K* (Oslo: O, 2023), where I myself initiated and commissioned textual contributions, over a process that stretches back to 2014. While the project has been completed and my interests have changed, this book was put on hold, but was finally published in Autumn 2023, and is part of the submitted works. The artworks exhibited in *Surfacing Solids*, in Galleri F15, Moss, Norway (22 October 2022–22 January 2023) are documented through video and images. The catalogue published by Galleri F15, forms the third work that I submit, containing writings that are part of the research. The film *Unravelling a Radical* (2022) was also shown here for the first time, and this is the project's fourth submitted work. The project's last public presentation will be installed in the Medieval Park in December 2023, in the vicinity of the archaeological excavation site. This work, entitled *Ship of the Heart OSSAIT1300–2023*, forms the fifth submitted work, and at last, this paper at hand, is the sixth part of artworks/ critical reflections that comprise the whole artistic research project: *Surfacing Solids*. This paper refers to an Appendix II, on the project's homepage www.surfacing Solids.com. This homepage is however subject to change, and the virtual Appendix II will be stored as video- and imagefiles in KHiODA.

Chapters

The paper *Surfacing Solids: Enactive Aesthetic Investigations in Memory, Material and Meaning*, can be read to access my artistic methods and how they move through material, theoretical, and conceptual arrays. The text touches upon parts that are tacit or hidden, while some parts remain just that.

In the first chapter, "Unravelling a Radical", I elaborate on the film *Unravelling a Radical* (2022) and address the larger context of this artwork, which speculates on how science is collecting data and museums are collecting objects — adding to an endless amount of data in physical and digital archives — with the main objective of retrieving knowledge of the 'not-yet-known'. Further, this chapter addresses what a radical artistic practice could mean when we consider the etymological background of the radical as a tool in enacting an interdependent world of materials, phenomena, technologies, and apparatuses in a process that is 'becoming'.

In the second chapter, "Semiotic-material Agents: Contemporary Past in the New Dark Age?", I unfold the parts of my investigative aesthetic practice that focus on the semiotic-material as an entry point. It explains how I started my project and the context of its larger speculation. It draws a line from previous artworks to the initiation of *Surfacing Solids*, highlighting a selection of processual works in the project. The chapter elaborates on how bodies arise as forms, incorporating the past as generative agents, to tell a different story. Further, it touches upon how language and the non-conscious operates in my work.

In the third chapter, "Surfacing Solids", I discuss the artworks I made for the institutional solo show, *Surfacing Solids*, in Galleri F15, and how these works were installed in the exhibition space. I describe my process-based work with the sculptures, and my aim of connecting material processes to contextual and referential materials. The works in the *Surfacing Solids* exhibition were inspired by Old Norse prose and the theory of memory, and this chapter aims to elicit how these textual and conceptual positions influence my work.

In the fourth chapter, "Sleek and Clean", I reflect upon the material that has partly lent its name to the PhD project, the Solid Surfaces composite, and how it works as a material and speculative asset in the process of making with digital fabrication and mechanical processes. I address how I investigate the material aspects, and their agency, as well as how I aim to flatten hierarchies between the different elements and unfold the meanings of the artworks in light of their enactive embodiment.

In the fifth chapter, "Enactive Assemblages", I elicit the meanings of 'enaction' and 'assemblage' for my work, in my aim to develop novel strategies for creating artwork. I address a shift in the project, that happened somewhere along the timeline of the project, where an interest of making processual artworks in the studio, fused with my overall objective for this study: to engage with a museum and its connected environments as contexts, to understand how memory and material generate artworks.

In the Appendix I have included writings that are composites of the research and development. These texts are thought of as material to engage with in the installations and exhibitions, or public spaces, in performative manners or as additional materials from the period of research.

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We walk upon the earthly crust surrounded by historical representations from many hundreds of years ago and from more recent history. The earth bears memories, hidden in stratified layers of humus, clay, minerals, and seawater. We lose our stuff to the ground, leaving behind materials and scraps, structures, motifs, and written words. Scattered beneath the surface of the soil one finds letters, words, and sentences inscribed on oxidized metal chips, wooden sticks, memory cards, and stones. Over time, this material erodes, dissolves, and, eventually, disappears if it does not surface again.

In our minds, a saying, a form, an image, or an object can surface from the network of information that is stored as our memory, and when it surfaces, it sometimes connects to another. A new thought or understanding may occur. When something is surfacing, it is made visible to us, or sensible I would say. It moves from the hidden and is suddenly or slowly made approachable and receptive to our sensory organs. Capable of the human eye to see, fingers to touch. The urge to place these surfaced materials in connection might feel urgent. Meaning is created. Another node connects and is part of the becoming of an assemblage.



Fig. 01 | C60965/037 A multiple folded amulet — part of the Museum of Cultural History, University of Oslo's collection of pre-modern semiotic-material artefacts. The amulet is considered magic-religious and it surfaced in 2018 in an archaeological excavation conducted during the construction of a new rail line from the Central Station (the Follo Line) in City of Oslo.

Image Courtesy: Petrine Vinje, 2019

UNRAVELLING A RADICAL

Delving into the origins of the subject matter and digging down to the core — or the root as revealed by investigative aesthetics — suggests a re-reading of the notion of the radical for the sake of artistic practice. This is made apparent if we look at the etymological meaning of the word “radical”, which stems from the Medieval Latin *radicalis*, meaning “root” or “roots”. For this research, retaining the focus on the medieval amulet, “being radical” meant going to the source and the essence of it as a subject. This is illustrated in the title of my film, *Unravelling a Radical* (2022)⁰¹, which was filmed in November 2021 amidst the upheaval caused by lockdowns imposed to contain the spread of COVID-19, which made research and exchange across borders unpredictable. In the film, we enter the compound of the Swiss research centre, Paul Scherrer Institut (PSI)⁰², which is the largest research institute for natural and engineering sciences in Switzerland. I was permitted to join a scientific experiment, the second of a collaborative exchange between the University of Oslo and PSI, wherein researchers investigate the fundamental structures of matter and perform advanced experiments, research, and treatments based on high-end technology from a decommissioned nuclear power plant.⁰³ I pursued a filmic unravelling of the scientific examination of a small group of medieval artefacts, which were carried from Oslo to Villigen by a conservator.

The urge to uncover and fully comprehend the meaning of amulets composed of various types of metal has traditionally led archaeologists to unfold them. However, doing so often causes the metal to break along the folds. Thus, this practice can be considered a continuation of the process of unearthing objects, removing them from their habitat, and transferring them to a museum. Today, museum conservators often use a digital approach to study amulets. Classified as semiotic-material text culture, the objects depicted in the research in *Unravelling a Radical* constitute some of the earliest text sources found in Norway.⁰⁴ This costly, scientific operation makes it possible to uncover the inscriptions on an object without destroying it. It also allowed the research team to read and transcribe the text on the amulet without damaging its form and causing it harm.

We⁰⁵ filmed the research facilities — kilometres of pipes in copper, nickel, and aluminium; halls filled with enormous hard drives, advanced technological gadgets, and structures; enormous blocks of “Schwerbeton” (heavyweight concrete) that sheltered us from nuclear radiation; control systems; the counter that counts the number of cold neutrons; the proton accelerator — a huge orchestration of buildings, people, and machines.

01. Petrine Vinje, *Unravelling a Radical*, HD 16:00 min (2022).

02. The facility has operated as a nuclear power plant since 1974 and provides the most intense proton beam in the world. PSI conducts cutting-edge research mainly in four fields: future technologies, energy and climate, health innovation, and fundamentals of nature.

03. On January 1, 1988, the Swiss Federal Institute for Reactor Research (EIR) and the Swiss Institute for Nuclear Research (SIN) merged to form the Paul Scherrer Institute (PSI), thus converting the nuclear power plant into a research institute. Source: Interview with Dr Eberhardt Lehmann, PSI, November 2021.

04. C63012: strip of lead in two parts from the Middle Ages; C63014: plate of lead from the Middle Ages; C63623: plate of lead from the Middle Ages; C60964/023 F6539: papal seal from the Middle Ages, all in the Museum of Cultural History, University of Oslo.

05. Photographer Carsten Aniksdal and myself.

Research in the tiniest possible structures we know of is indeed the very basis for the structure of these facilities. The spatial scale and movement were fundamental to the filming and editing of the video. I pursued a dwelling, investigative gaze, allowing for profundity – similar to the neutron-scanner depicting “the inner of the inner” of the artefact under examination – oscillating between the pulsing, human movement in the hallways versus focused images of people interacting with objects and machines in what is a curious and open process. I made audio field recordings of spatial acoustics and noise from the computing infrastructures, which formed the first layer of the audio track for the film. *Unravelling a Radical* speculates further on how science collects data, museums collect objects, and how they nurture each other through these ground-breaking examinations – adding to the endless amount of data in archives both physical and digital – with the main objective of retrieving knowledge of the not-yet-known; in this case, the assumed meaning hidden inside the folded amulet and a few other artefacts. This close reading has brought to the fore a kind of monumentality – the digital archive



Fig. 02 | SING HALL — one of the scientific milieus where research on the amulet and other medieval artefacts were performed.

Image Courtesy: Petrine Vinje, 2021

is infinitely large and highly material. Furthermore, the museum artefacts are handled through traditional as well as advanced technological practices: they are unearthed by archaeologists, scanned and reconstructed in virtual archives, handled by conservators, and interpreted by philologists. Can these practices be said to illustrate a collapse of time – when pre-modernity meets artificial intelligence: for instance, the geo-tracking of excavation sites, the 3D scanning of objects, and the virtual recreations of ancient landscapes currently part of the construction of collective memory and heritage in the museum?



Fig. 03 | COCKROFT WALTON — The source of the proton beam at PSI is a retro-style linear accelerator. Since 1984 it has been the first acceleration stage for protons which are taken up to around 80 percent of the speed of light by two further ring accelerators.

Image Courtesy: Petrine Vinje, 2021



Fig. 04-05 | Paul Scherrer Institute — A state of the art user facility for neutron scattering and imaging with a suite of totally 18 instruments. Capsulated in heavy cement is neutron imaging apparatus BOA. The heavy cement protects human and environment from the radio-active beamline.

Image Courtesy: Petrine Vinje, 2021



Fig. 06-07 | PSI Interiors — materials, objects and instruments.

Image Courtesy: Petrine Vinje, 2021

Touch

In physics, the sense of touch is described as an electromagnetic interaction. When we touch a tool, a material, or a body, what we feel are the electromagnetic repulsions between the electrons in our hands and those in the thing we touch. This is what ‘touch’ is: the electrons do not meet in effect. Rather, they dodge each other. And we will never be able to unite them. This elementary knowledge from quantum field theory is the basis for research on the unknown and the inner structures of everything material — animate and inanimate alike⁰⁶ — thus tying in the scientific practice that is at stake in the film. Touch functions as a verb to describe several aspects of making, perceiving, and engaging with art. The haptic connects the hand and the brain, and it shows how bodily knowledge can be considered a sophisticated form of the digital and how a material can acquire form in the gap between the machine and manual practice. Moreover, in my sculptural work, the technological aspect is often deliberately made apparent by way of showing the traces of the carving tools of the CNC router as the machine’s touch.⁰⁷

Touch functions as a verb to describe several aspects of making, perceiving, and engaging with art. The haptic connects the hand and the brain, and it shows how bodily knowledge can be considered a sophisticated form of the digital and how a material can acquire form in the gap between the machine and manual practice. On a metaphorical level, when ‘being in touch’, we are in a transmodal state — where knowledge is achievable. Phenomenologist Claire Petitmengin developed micro-phenomenology after an idea, advocated by the neurobiologist Francisco Varela, that science has to create a rigorous method to study human experience. At his instigation, the “entretien d’explicitation”, an interview method initially developed by Pierre Vermersch for pedagogical purposes and for analyzing professional practice, was adapted to research in cognitive sciences and supplemented by a method of analysis and validation of data, to become micro-phenomenology. In micro-phenomenology transmodality is the state of where knowledge is retrieved — like being in touch with the core of the experience. Petitmengin describes the transmodal state as something that is happening in the embodied mind when it retrieves the spatio-temporal and sensorial context of an experience. It is “being aware of the moment as it happens” — being in touch. On the contrary, “(...) we spend more than half of the time leaving the situation: projecting ourselves into the future, staying in or replaying moments of the past. Whatever our activity, this straining towards the objective or the content of the activity (the “what”) creates a narrow attentional tunnel which conceals the activity itself (the “how”). In the transmodal state there is the opportunity to see what you really want to see.”⁰⁸

With the reconstruction of the inner folds in neutron tomography, the inscriptions on the different layers of the amulet could be identified and the sheet rolled out, in a virtual sense. The unravelling showed that the content was not as meaningful as the researchers might have hoped for. Runologist Karen Langsholt Holmquist, from the interdisciplinary research team, states in the report,

06. See Karen Barad, “On Touching — The Inhuman That Therefore I Am,” *Differences* 23, no. 3 (2012): 206–223.

07. See t.ex Figures 12, 18

08. Petitmengin, Claire. “Towards the Source of Thoughts: The Gestural and Transmodal Dimension of Lived Experience.” *Journal of Consciousness Studies* 14, no. 3 (2007): 54–82, or Petitmengin, “Anchoring in Lived Experience as an Act of Resistance” (online workshop, Lab of Micro-phenomenology, May 25–29, 2020), <https://www.microphenomenology.com>, and Appendix II.

“[Finally] we can interpret parts of the text, and from this, we know that sequences of nonsense intermingle with Latin and Greek on the amulet. The interpretation also confirms that the amulet, like other amulet finds from across medieval Europe, is likely to have had a magic–religious function. The study of medieval amulets by using neutron tomography will be continued, with the aim to improve the technical methodology as well as the interpretation and to get a deeper insight into the medieval unorthodox beliefs.”⁰⁹

Sequences of nonsense. Alas. Gibberish. A question arises: how do you make meaning of nonsense? How does it relate to the non-conscious states of our mind and the machines? Could this nonsense from the Middle Ages give meaning to the contemporary situation? How does this assist to speculate further in creating a future metaphysic, where non-conscious technologies assist us in creating a reality where the hidden and the imaginary, other real is a substantial part of a complex being? To do so, I invited experimental singer and composer Sofia Jernberg – who evokes a wide range of vocal atmospheres up to the threshold of the more-than-human through modulations in which her body itself is a musical instrument – to a vocal performance.

Jernberg improvised on the transcriptions of the lead amulet, forming the second layer of audio tracks in the film. We listened to the Dadaist work “Die Sonate der Urlauten” by Kurt Schwitters¹⁰ and read the phonetic notations that so clearly demonstrate the short way from meaning to meaningful nonsense.

09. Birgit Wilster-Hansen, David Christian Mannes, Karen Langsholt Holmqvist, Kristine Ødeby, & Hartmut Kutzke, «Virtual unwrapping of the BISPEGATA amulet, a multiple folded medieval lead amulet, by using neutron tomography”, *Archaeometry* 64, 4, (2021): 969–978, 9. <https://doi.org/10.1111/arcm.12734>.

10. Kurt Schwitters, *Die Sonate des Urlauten*, 1922–1932.



Fig. 08 | TOUCH — Conservator from Museum of Cultural History, University of Oslo, place the amulet in the neutron tomography scanner. Still from *Unravelling a Radical* (2022).

Image Courtesy: Petrine Vinje | Carsten Aniksdal, 2021

Dark Material

The five photos, *Black Current Image #1–5* (2020–2022), show cold neutrons against a black background. They represent a visualization of one of science’s greatest challenges. During the examination of medieval objects in the neutron tomography scanner, the computer collects hundreds of X-ray images per object over the course of several hours. Such images are generated when protons from the nuclear source are accelerated in a particle accelerator to the speed of light, whence they split into so-called cold neutrons, which are then sent to a computer-controlled imaging instrument some hundred metres away. Cold neutrons are fired at the apparatus for the duration of the experiment, creating images of the inner structures of the material object. At a few points during the experiment, the number of neutrons reaching the facility drops to a level that renders imaging unfeasible. This phenomenon is inexplicable and subject to studies of the origins of the universe. On the wall in the SINQ (Swiss Spallation Neutron Source) hall, a counter with large digital, red numbers counts the number of cold neutrons per second and jumps from 345 to 1,230 to 1,520 to 54 in what seems to be an intuitive and random sequence. The image series, *Black Current Image #1–5*, captures the five occasions during the experiment when the neutron level fell to 0. Still unable to explain what causes these random fluctuations in output from the proton reactor, the researchers use them as a basis for enquiry into one of the greatest scientific mysteries of our day.

In *Unravelling a Radical*, I played with the epistemological distinction between the subject and the object (or binary) by giving the subjects that handle the object as well as the object the status of semiotic and material actants, respectively. While flattening out the distinction, re-contextualizing the archival artefact, and adding to its fussy boundaries in making artworks that are not comparable in scale, form, shape, and surface, the object turned into a ‘site of aggregation’. Questioning systems of knowledge — learning and unlearning as Donna Haraway’s seminal essay “Situated Knowledges” suggests by reclaiming the metaphor of vision: every vision comes from somewhere — every system of knowledge is always situated. Haraway gives the “object” and the “subject” the status of semiotic-material actors and, in doing so, blurs the epistemological boundary between subject and object. She writes:

“Self-knowledge requires a semiotic-material technology to link meaning and bodies”¹¹

The feminist objectivity, embodiment, and situatedness of technologies, tools, and materials matter in the shaping of our world and how we perceive our surroundings and choose to act in them. When I talk about the body’s position in my work, I refer to what contains both linguistic and physical assets — the embodied mind or mind-body. In this sense, the body is an important yardstick for the work I do. I think about the recipient’s sensory experience of the artwork and how I can use my own bodily experience as a resource in the development of new works. Here, I face the unknown both in myself but also in the surroundings I find myself in or construct.

Surfacing Solids has partly borrowed its title from the man-made composite material grouped as “Solid Surfaces”, often referred to as Corian®, introduced by DuPont™ in 1971, which I have chosen to work with for several of the artworks. Related artificial materials, such as the neo-textile Tyvek® (DuPont™, 1961), are also part of the installations and paperwork and are directly inspired by archiving methods in the museum. These artificial, composite materials, together with aluminium and other metals, act

¹¹ Donna Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective”, *Feminist Studies*, Vol. 14, No. 3 (1988): 585.

as the main components of new sculptures and installations created in the research project. Prepared with computer technologies through various digital fabrication processes, this specific material research, and the refinement of my methods of building structures from sheets (plywood, composites, and aluminium), are informed by the conceptual backdrop of the museum artefact. This is comprised of the entangled, scientific environments connected to the museum, including the archive, archaeological excavation sites, the scientific laboratory, and the materials that are circulating in these milieus. I utilize these materials as sources to engage with aspects of abstraction, form, and scale, further questioning knowledge-retrieval from mineral materials. The same technologies that represent the complexity of post-millennial data streams add to the palimpsest layers in the museum and mirror the virtual representations or facsimiles in the collections and the high-tech procedures performed as research in a museum.



Fig. 09 | BLACK CURRENT IMAGE #1-5 – 2020-2022

(CT foto, giclée print on paper / aluminium, aluminium frame), each 32×47cm, installation view, Surfacing Solids, Galleri F15.

Image Courtesy: Eivind Lauritzen, 2022.



Fig. 10 | BLACK CURRENT IMAGE #1 – 2020–22
(CT foto, giclée print on paper) 32×47cm
Image Courtesy: PSI | Petrine Vinje, 2020-2022.

Object in the Museum

Screening *Unravelling a Radical* in a installation in the exhibition *Surfacing Solids*, with-in an elaborate environment, connecting the living images in the film to the objects exhibited: lying sculptures on the floor on large sacks made of archival Tyvek and polystyrene beads. The sculptures and the installation of them on Tyvek pillows, allude to museum practices that serve to protect objects from damage by touch or other contact with the environment. Museum storerooms are full of objects and images lying on cushions or stacked in boxes and crates, protected from the environments in which they were originally found and used. The practice of handling objects with materials such as archival Tyvek and acid-free cardboard boxes is part of affirming the context in which cultural memory unfolds.

In *Spike Magazine*, sculptor Iman Issa discusses how objects enter the museum, in light of recent debates on de-colonization and museums activating their collections on online platforms and asks,

„Could it not be that objects in museums and those in the outside world live on parallel lines that never intersect, regardless of how similar they sometimes appear to be, and regardless of the numerous conversations in which they can both partake?“¹²

I find that the museum practices of cataloguing, restoring, caretaking, and conserving our collective memory delineate a very particular context with certain socio-economic values that become affixed to objects after they are displayed in the museum. Thinking with Issa here, the project as a whole can be read as a parallel trajectory to discussions of decolonialization of museum practices, arguing that going to the origin of something is a radical practice, if we look to the original meaning of the word. This could potentially be part of a collective de-colonialization process, where we decide to acknowledge the entire biological spectrum, technical devices, objects and materials and their placement in the archive, site specificity in a cognitive ecology that is undergoing rapid transformation, changing the context in which we collect memory of both historical and contemporary positions.

12. Iman Issa, „How is an Object changed by its Context?“, *Spike Magazine*, nr. 66 Therapy (2020): 110-111.



Fig. 11 | UNRAVELLING A RADICAL – 2022
(HD, 5 channel sound), 16:00 min. Installation view Surfacing Solids, Galleri F15.
Image Courtesy: Eivind Lauritzen, F15, 2022.

A Radical

The notion of radical denotes a process that has the ability to effect change. Perhaps at this point, it might be useful to recall that the word “radical” derives from the Latin *radix* or “root”. The term implies going to the origin – and, therefore, the essence – of something. Later, when radical began to be used in a political sense toward the turn of the nineteenth century – such as radical reform – it retained the connotation of a process whose ability to effect change was dependent on its far-reaching nature and ability to penetrate the very foundation of a political system. Going back to the roots is, by definition, a radical practice. Architecture historian and theorist Vittorio di Palma has argued,

“the further it strays from a familiar present, the more radical it becomes. When we seek to analyze large swaths of time, or bridge the gap between a remote age and our own, we are forced out of our zones of intellectual comfort, encouraged to imagine other modes of thinking, being, feeling, and acting, and led to ask the most far-reaching of questions. When framed in this way as a radical form of thought, history (or the root) can fulfil its potential to be a powerful engine of change.”¹⁵

In this way, through artistic practice, one can exercise a radical form of reflecting. In doing so, in going in-depth, a close, if fumbling, reading may emerge. In *Surfacing Solids*, the “radical” became the past, a surfaced artefact that collapsed into becoming a site of aggregation leading to polyphonic artistic results. Artistic research of this kind is addressed in *Investigative Aesthetics*.¹⁶ Here, Matthew Fuller and Eyal Weizmann place the formation of knowledge at the centre of decision-making in a possible new diagram. Their book emphasizes “the creation of a new diagram, a new set of relations between established institutions, organization and practices of different standing that can also work alongside developing forms.”¹⁷ In the unfolding of this project as an assemblage, where human and technological apparatuses, as well as other non-human elements, are united in the process of becoming, of striving towards new knowledge – or making their way towards the construction of a new common sense, a new metaphysics – it is all open-ended.

15. Vittoria di Palma, “Radical Thought,” *e-flux*, December 2017, accessed January 20, 2019, <https://www.e-flux.com/architecture/history-theory/159243/radical-thought/>

16. Matthew Fuller and Eyal Weizman, *Investigate Aesthetics: Conflicts and Commons in the Politics of Truth*, (New York: Verso Books, 2022).

17. Fuller and Weizman, *Investigative Aesthetics*, 27.



Fig. 12 | APT2021 | Blei | 05 – 2021
(Tyvek, ink, cottonpaper) 50×70 cm.
Image Courtesy: Petrine Vlnje, 2023

SEMIOTIC-MATERIAL AGENTS: CONTEMPORARY PAST IN THE NEW DARK AGE?

In this chapter, I will demonstrate how museum artefacts act as sites of aggregation in my artistic research processes, and how I think of them as “cultural persistencies, surviving historical residues in a constant interplay between continuity and change”.⁰¹ I will address the triad of meaning-making – the material, cognitive, and non-conscious – that occurs on multiple levels in processual artworks such as *ASSB201922/C/01*, *ASSB201922/B/01*, and *ASSB201922/A/01* (2022).⁰² These works are informed by and speak to how material data are subjected to transfigurative processes in human–technological relations in art, history, and – the ongoing – Information Age. I contemplate their position as data objects concerning human communication with the immaterial – the hidden, not-yet-known, or mystical. The group of sculptures *ASSB201922/C/01*, *ASSB201922/B/01*, and *ASSB201922/A/01* succeed the relief *Tyri* (2019), which was a public commission for the Rustad Elementary School in Ås.⁰³ Both works are informed by the Norse writing system constituted of runes, the Futhark, as well as by my interdisciplinary collaborations with scholars in the fields of runology or philology. These works simulates the start of a new system of writing based on the Latin alphabet and the runic Futhark. In *Tyri*, the signs exist as heavy bronzes in the school’s common area, which later inspired virtual animations, which was possible due to the photogrammetry of the models, a part of the processual works leading up to casting.

Medieval man carved signs about gods, love, and demonic forces on sheets of lead, slabs of stone, and sticks of wood. In our era, cloud computing, big data analytics, codes, and algorithms have penetrated almost all parts of society and all activities of individuals. Algorithmic matrices on the Internet of Things (IoT)⁰⁴ accompany us in everything we do – we think in metaphysical terms and through non-conscious technology and data – we connect to the inexplicable, imaginative, and immaterial in the Cloud. To me, it seems that, in the current times, the immaterial centre has shifted from the religious–spiritual to the technological sphere for many people. We are observing an increasing interest in understanding the relationships between humans and technology in the virtual world, but also how these relationships influence our life AFK.⁰⁵ The feeling that we live in a turbulent time and under a new paradigm is widespread. Some have described our era as the New Dark Age, a metaphor that might be appropriate here, not referring though to the fact that light is ever-present in the

01. Donna Haraway, *Simians, Cyborgs, and Woman* (New York: Routledge, 1991).

02. Petrine Vinje, ed., *F-U-P-A-R-K* (Oslo: O, 2023), 14–25. See Fig. 13 [The titles, starting with *ASSB* (...), make use of cataloguing practices in the museum, wherein the origins of the object can be deciphered through numbers and letters. In this case, A stands for “atelier”, SSB stands for “solid surface bronze” (the material the artwork is made of), and 201922 refers to the date it was made. B/01 and so on refer to the different parts of the series.]

03. Vinje, *F-U-P-A-R-K*, 12.

04. IoT refers to physical objects with technologies that connect and exchange data with other devices and networks.

05. AFK is an acronym meaning “away from keyboard”. It is often used as a chat function in online multiplayer games when a player wants to declare they are temporarily unavailable.

technologies that make our virtual lives possible ⁰⁶. In the light, not all is visible. In the dark, invisible infrastructures and conspiracy theories arise, and fake news and alternative political movements emerge or are given new life.

Thinking of the times we live in now – and how, in many ways, it reminds us of how we imagine the Dark Ages⁰⁷ – I adapt Assmann’s theory of cultural memory and its potential to prompt other futures and try to understand how it does so.⁰⁸ For me, this adaptation has meant making use of pre-modern material text culture as a source for spatial construction, abstraction in sculptures and installations that are situated in a social context. Material text culture describes the cultures of pre-modern, non-typographic societies, where text was developed and articulated in metals, wood, clay, and stone. Artefacts from a material text culture could be text on pillars, portals, tombstones, potsherds, amulets, scrolls, papyri, parchment, or paper. As I engaged with the archaeological site and the museum archive, the artefacts started acting as sites of aggregation to create new works: the artefacts became subjective through an intuitive study of the material’s aesthetic, social, historical, environmental, and conceptual conditions. I conceptualize the amulet C60965/037 as a contact zone for phenomena that are explicable as well as inexplicable. Thus, the cyber-feminist understanding of the material as “matter, energy and information”⁰⁹ became relevant for my subsequent enquiries. Following this understanding, my artistic process changed to a more responsive and responsible approach toward the artefacts and their position within the museum and their connected contexts.

The runes hold a certain ambiguity, that of being a linguistic system subject to rigorous research as well as the source of hundreds of interpretations of complex symbolic value, representing, for example, paganism, Norse mythology, or witchcraft, and the runes are present in the aesthetics of the subcultures that are informed by such practices.¹⁰ I find that this ambiguity belongs oddly to the metaphor of the New Dark Ages. It feeds off what Armen Avanessian, philosopher and literary and political theorist, calls a “religious return”¹¹ in politics, where religious folklore is increasingly being utilized to support conservative and reactionary politics. In his essayistic book, *Future Metaphysics*,¹² Avanessian argues for a new, future meta physics that traces and opposes theological tendencies in political culture, science, and other discourses. The creation of a future metaphysic is inspiring to think of, while experiencing the urgency of the current time in our life-worlds.

06. The artist James Bridle serves as an example here. His book *The New Dark Age – Technology and the End of the Future* (New York: Verso books, 2019), warns of a future dystopia, “an age of complex uncertainty, predictive algorithms, surveillance, and the hollowing out of empathy”.

07. The Dark Ages refer to the European Middle Ages. The expression draws from the common opinion that the thousand-year period was characterized by poverty and death. While in the English-speaking world, the phrase points to the early Middle Ages, in Norwegian, it is used to describe a later period after the Black Death, when Norway experienced a period of decline. From “De mørke århundrer,” Wikipedia.com, accessed October 2, 2021. https://no.wikipedia.org/wiki/De_m%C3%B8rke_%C3%A5rhundrer

08. Assmann’s theory of cultural memory puts memory as the contemporary past together with culture, on the one hand, and with society on the other. See Jan Assmann (transl. John Czaplicka) “Collective Memory and Cultural Identity”, *New German Critique*, no. 65 (1995): 125–133. <https://doi.org/10.2307/488538>. See chapter “Surfacing Solids” for more on this topic.

09. N. Katherine Hayles, *Unthought: The Power of the Unconscious* (London: Chicago University Press, 2017), 218.

10. See Karoline Kjesrud, “‘Thou Oh Lord, Art Mighty Forever’ Runes from Characters to Magic,” in Vinje, *F-U-P-A-R-K* (Oslo: O, 2023), 41–55.

11. Armen Avanessian, lecture, “Future Metaphysics,” 09 March, 2020, Oslo National Academy of the Arts.

12. Armen Avanessian, *Metaphysik zur Zeit [Future Metaphysics]* (Berlin: Merve Verlag, 2018).



Fig. 13 | ASSB201922/A/01, ASSB201922/B/01, ASSB201922/C/01 – 2022
(Solid Surface composite, archival Tyvek, ink, polyester thread, polyester filling)
62×60×65cm, 100×60×23cm, 73×50×17cm. Installation view at P0, Oslo National Academy of the Arts.
Image Courtesy: Petrine Vinje, 2021.

Allowing myself to speculate further in this regard, giving greater prominence to artificial materials and non-conscious technologies became a natural next step. These materials and technologies assist us in creating a reality where the hidden and imaginary, “the other real”, is a substantial part of a complex experience of being. The sculptures *ASSB201922/C/01*, *ASSB201922/B/01*, and *ASSB201922/A/01*, and the workshop *Laboratory RISS: Meaning Making in Material and Digital Networks* (2021)¹³ question the semiotic material that makes up our reality and make us who we are, inspired by foreign languages and global, spiritual traditions that are older than humans can remember, pointing to modernist ideas of abstraction and to cybernetic questioning and posthuman knowledge. I like to think that these new additions to history – artworks manifested in current times – might suggest that the Dark Ages never existed, just as they may suggest they always did. However, I have learned that most historians and scholars in humanistic practices reject the metaphor of the Dark Middle Ages, considering it to be a stereotypical perception driven by ignorance about a period that was exemplary in so many ways. The Middle Ages were probably not all that different from our era – technology was scaling up at that time as well.¹⁴ It was a true media revolution¹⁵: humanity changed the modality of performance: when combining spoken words with signs and motifs, materiality and intention established the unified agency through which the meaning of objects was constituted.

In the paradigmatic shift when humanity went from oral to literate culture, meaning and intention consequently became material and enduring. Written language systems were created to communicate in a consistent format, reach a wider audience, and connect. Later, semiotics established laws for the relationship between materiality and signs: as long as a sign, independent of whether it is a picture, motif, or word, gives meaning, it can be read through the material as semantic. Hence, the material’s preconditions cannot be excluded from the reading. Turning clay, carving wood, and melting metals have been human activities for thousands of years, ever since we received the “gift of fire”.¹⁶ These materials formed our first tablets, amulets, and other mnemonic devices.

In the process of making the bronzes that form the foundation for *ASSB201922/C/01*, *ASSB201922/B/01*, and *ASSB201922/A/01*, I sand-casted branches from pines. To make a sand mould, a positive figure is pressed into the sand, forming a negative space, which is later filled with liquid metals to create a positive form. The bronze positives from the sand cases were then joined by welding, forming three structures, vaguely simulating Futhark’s successor: the first three letters of the Latin alphabet, A, B, and C. These traditional processes of casting (metals) and shaping (woods) involve specific knowledge about the material and the ability to shape and create a form out of these specific, yet different plasticities, by reducing and transmitting forms and surfaces. In the original rune objects, meaning is created in negative space by reducing the material with tools and forcing it to move and make way for the sign that signifies the content. In the sculptures, the content rises from the floor as singular objects contained in heavy, solid material.¹⁷

13. See Vinje, *F-U-P-A-R-K* (Oslo: O, 2023), 26-32, and Appendix II.

14. Alessia Bauer, “‘Mind–Body–Technology’ and Function: The Multiple Components of Runic Production,” in Vinje, *F-U-P-A-R-K*, 33–39.

15. Runologist Terje Spurkland cited in Marte Spurkland, *Pappas Runer* (Oslo: Cappelen Damm, 2019), 24.

16. Tom Slevin, “Mind-body-Technology: ‘Nosce te Ipsum’ and a Theory of prosthetic ‘Trialism’” in Petrine Vinje, *Anthology: Anatomical Theatre* (Oslo: Uten Tittel, 2018), 36.

17. See *Surfacing Solids* (Moss: F15, 2023), 48-49, and Vinje, *F-U-P-A-R-K*, 22–23.

Meaning making

The amulet, a miniature piece of lead, catalogued as C60965/037, appears dark and rounded on the edges by hands that have held it and by being embraced by oxygen atoms and, in general, by the ravages of time. Some of the runes appear fully readable. The runes on both sides are fine-lined, as if they were carved with a razor. It weighs only a few grams. Once it belonged to an unknown individual. The inscriptions were found to bear words and meaningful expressions in Norse, Latin, and ancient Hebrew. The amulet was apotropaic;¹⁸ it was believed to be protective. Without the runes, the piece of lead would be just that, a piece of lead. However, with the inscription, the material gained meaning. It may also be surmised that the amulet's agency might have been manifested by the person who wore it. Did they generate the agency by believing and trusting the meaning? Through language and imagery, whatever surrounds us – and whatever we believe – becomes real. The artefacts left behind from the material text culture show how pre-modern people, through the sophisticated use of materials and technology, related to the immaterial and positioned themselves in relation to the inexplicable, imaginative, and immaterial. The sign is physically linked to the material through the language inscribed with tools. Taking the lead amulet C60965/037 as a semiotic-material agent, I wonder what this artefact can teach us about intention and creation. What is at stake here, on the surface of this little object? The content is of global origin and deliberately hidden.¹⁹

The alleged ability of amulets and the like to heal or protect lies in the performative act of inscribing the material.²⁰ It is not in the metal, earthenware, linguistics, or motifs alone, the meaning is in the agency. It is not visual, readable, or touchable, it exists in the intention – the meaning is articulated through material and cognitive processes. The amulet and its like were the High Middle Ages' interface, where the lead gained efficacy by being scribbled on. The lead was soft and bendable. Thinking of the surface of the amulet, one could propose an even deeper understanding of it as a connective tissue that operates between different aspects of reality.

For instance, between the

immaterial – material,
 abstract – concrete,
 differential – repetitive,
 representative – original.

In the inscribed runes, one finds words that roll off the tongue, lines with “meaningless but well-sounding and sometimes repetitive text, and it can seem as though this text in this line is primarily construed for its sonorous qualities”.²¹ This also suggests that writing down the spoken word has a much more powerful effect than oral utterances – once the word has left the lips, it vanishes. Writing eternalizes words. If we

18. Apotropaism derives from the Greek αποτρέπεω or “to turn away”, from από-, meaning “away”, and τρέπεω, meaning “to turn”. Apotropaic magic intended to turn away evil spirits, influences, and harm or deflect misfortune. It has been practised in most of the world's cultures through rituals, names, symbols, and objects.

19. Birgit Wilster-Hansen et al., “Virtual Unwrapping of the BISPEGATA Amulet, A Multiple Folded Medieval Lead Amulet, by Using Neutron Tomography,” *Archaeometry* 64, 4 (2021): 1–10, <https://doi.org/10.1111/arc.12734>.

20. Bauer, “Mind–Body–Technology’ and Function,” in Vinje, *F-U-P-A-R-K*, 33–39.

21. Wilster-Hansen et al., “Virtual Unwrapping of the BISPEGATA Amulet,” 1–10.

think that the agency of an artefact is set in motion through a person's intention, exhortation, or urgent prayer, then the subjective experience – the experience of being in contact with the material – is essential for the process. I wonder how this relates to how children learn to communicate through language. Raising my children, I observed that it is as if the body knows before it can even name what it performs. The meaning is somehow already there,

in our bodies – our brains,
our hearts – our limbs,
and our skin.

Boundary Object

We explored these topics in the workshop *Laboratory RISS – Meaning-making in Material and Digital Networks* (2021).²² I initiated this workshop in the second semester of my research fellowship. The workshop involved a group of pre-teens who worked together with art students, me, and runologist Karen L. Holmquist. The workshop revolved around how we could work together on some common interests and questions regarding haptic transmissions on material surfaces, drawing information from both pre-modern and current times. *Laboratory RISS* and the results were largely affected by the COVID-19 pandemic, which jeopardized the potential outcome of our conversations and interests. However, the workshop allowed me to test how we could explore common interests as a way of deep diving into the project, while the main artistic works were made in the workshop and studio. Facilitating the workshop, and being a maker of learning platforms,²³ does require other modes of practice, which are collaborative, social, and becoming – with others. *Laboratory RISS* instigated a turn in the project's modus operandi: moving from the archive to the relational, collaborative or dialogic. Leaning on, or letting the project I had already made in Runearkivet [the Norwegian Runic archive]²⁴ bleed into the first phase of the research project, was necessary somehow, to complete its final gestalt: the artist-researcher-book, *F-U-P-A-R-K* (Oslo: O, 2016–2023). It contains artworks from 2016 and onwards, as well as two papers I have commissioned from scholars of medieval history and runology. These papers address meaning through materialized language in the context of the university museum and in my work. The book lays out the elements underlying *ASSB201922/C/01*, *ASSB201922/B/01*, and *ASSB201922/A/01* and unfolds the artistic process from their creation to installation in an exhibition. This volume is published with a polyphonic fussiness, seemingly attempting to project a common interest. I consider it a sample of what Natalie Loveless, in *How to Make Art at the End of the World* (2019) refers to as a "boundary object"²⁵ or to how Roland Barthes in *Mythologies* (1972) describes: "Interdisciplinary study consists of creating a new object which belongs to no one",²⁶ also referred to by Loveless. Further, she suggests: "If disciplines articulate themselves

22. Vinje, *F-U-P-A-R-K* (Oslo: O, 2023), 26-32.

23. Simone Neuenschwander, "Theatres of Language – On the Work of Petrine Vinje", in Vinje, *F-U-P-A-R-K*, 5-8.

24. In runearkivet [the Runic archive] in the Museum of Cultural History, the project *Agla Hagla* (2012–14) evolved, leading to a publication and exhibition in 2014. *F-U-P-A-R-K* marks the end of this project.

25. Geoffrey C. Bowker and Susan Leigh Star, "Sorting Things Out: Classification and Its Consequences" (Cambridge, MA: MIT Press, 2019), cited in Loveless, *How to Make Art at the End of the World: A Manifesto for Research-Creation* (Durham & London: Duke University Press, 2019), 31.

26. Roland Barthes, *Mythologies* (New York: Farrar, Strauss and Giroux, 1972), cited in Loveless, *How to Make Art at the End of the World*, 31.



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Fig. 14 | APT2022 | Archive | 02 – 2022
(Tyvek, ink, cottonpaper) 50×70 cm.

Image Courtesy: Petrine Vlnje, 2023

by laying claim to specific research objects, methods, modes of attention, questions and lineages of discourse, what a boundaryobject does is create something like an uncanny tie across disciplines, retaining a certain amount of their requirements, without, however, belonging properly to any of them."²⁷ The book, *F-U-P-A-R-K*, and the workshop, *Laboratory RISS – Meaning-making in Material and Digital Networks*, stand as samples of how interdisciplinary collaborations may materialize in the context of an investigative aesthetic practice.

The Cognitive (non-)Conscious

On the amulet C60965/037, we read Hebrew, Latin, and Greek words, although the signs themselves are runic. This shows that the knowledge of languages and their meaning was plastic and expanding at this time. Not only had the amulet been in the ground for 800 years, but it had also been folded seven times to keep the contents hidden. This project was directly informed by this performative gesture: to unfold, to fold in, to make knowledge available, or to hide it.²⁸

Photogrammetry is the extraction of four-dimensional measurements from three-dimensional data, using hundreds of digital images shot of a three-dimensional object. The data are fed into apps that generate new, virtual objects.²⁹ When making these part of the processual unfolding of casting bronzes, I thought of how the virtual allows for connectivity in the Cloud, and how non-conscious technologies, which assisted me in making these animations, also co-create in creating shapes and representations of a new object in a virtual space. The fourth dimension, which may emerge when technology enters the room, may represent abstraction, which for me is led by a thinking of technology through technology spanning from the analogue to the digital.

While reflecting on the possibilities that technology offers my artistic practice, cyber-materialist N. Katherine Hayles' book, *Unthought: The Power of the Unconscious* (2017), became pivotal. Hayles often refers to neurobiologist Francisco Varela, an outspoken scientist who attempted to tie art, science, and spirituality together in the quest for the not-yet-known. Reading Hayles and Varela diffractively was pivotal in developing a new series of sculptural works, where the non-conscious, enaction, and assemblage were key notions I reflected upon and related to while creating.

While reflecting on the self-organizing powers of materials, technologies, semiotics, and gestures, questions about states of consciousness and knowledge arose. Developing works of art is in many ways about confronting the not-yet-known. When I implement a conceptual idea or give form to a space I often emphasize the phenomenological experience, and use the epoché³¹ as tool. For me it means, being in touch with

27. Loveless, *How to Make Art at the End of the World*, 32.

28. Vinje, *F-U-P-A-R-K*, 12, 14–21.

29. Vinje, *F-U-P-A-R-K*, 9, 11–13

30. Francisco Varela (1946–2001) was a Chilean biologist, philosopher, cybernetician, and neuroscientist, who together with his mentor Humberto Maturana, is best known for introducing the concept of autopoiesis to biology. Varela's thoughts on art, science, and spirituality have been influential in my practice since they were introduced to me by professor and artist Gerd Tinglum. Varela took part in the "art-work as conference", *Art Meets Science & Spirituality in a Changing Economy* (Stedelijk Museum, Amsterdam, 1990) by Louvrien Wijers, and the lecture series by the Artificial Intelligence Laboratory at MIT, in 1997, called *God & Computers: Minds, Machines, and Metaphysics*. Both were part of my curriculum at the Institute of Colour, where I received my education in Fine Arts (2000–2005).

the pre-reflective state – a state of knowing – which is embodied and transmodal. In the same way, works of art (and objects) are experienced with different levels of consciousness. We are in contact with the unknown in the face of art. The experience is subjectively grounded and often inexplicable. In human cognition, consciousness is dependent on both sub- and non-conscious cognition for the preprocessing of all the information that streams into the brain from the body and its surroundings. This is similar to how technological systems are dependent on the non-conscious flow of data (for example, the numbers leading to a position of a tool in the CNC machine, or the combination of light and colours that makes up a digital image.)

In early discussions of what cybernetics, networks, and computers can be, as cyberneticians, both Varela and Hayles allow the glitches and non-conscious performances involved in the process of making to unfold.³² The glitches are traces of the unknown. Making sculptures using digital fabrication, I have encountered the unknown in the technical apparatuses that are my non-human, non-conscious cognitive partners – the technology of the CNC router, digital image editing applications, etc. Thus, questions as to how the not-yet-known might lead us in our material and cognitive processes – in the construct of archives, in the search for knowledge, and, in making art and experiencing it arose.

Haraway asks us to attend to the material-semiotic stories we inherit when ethically touching – being in touch with – the world around us. For Haraway, we are always already “becoming-with” and enfolded with all the touches that touch us; what and how we touch and are touched by participates in constituting the stories and the worlds within which we live.³³ I am curious as to what creates transformative arrays of consciousness and wanted to deepen my understanding of the fundamental aspects by which we process information, store knowledge, and create memories – and how these can be stimulated for more sustainable futures. Technology, with its mathematical and allegedly impenetrable scientific models, repeats in a way antique metaphysical distinctions, for example, between the pure commanding spirit and the determined body that fulfils a given task. When operating a CNC machine, one engages with a whole series of technological apparatuses and materials: for example, when asking the computer program to convert the drawings I feed into it to numbers, using which the carving tool can orient itself. With the use of various methods – photogrammetry, CNC carving of surfaces, digital imagery, and vector drawings – *the becoming organic of machines* affects the outcome of the artwork and its preciseness. I enjoy every aspect that unfolds in between the

analogue – digital,
intuitive – calculated.

The glitches that occur when working with technology provide other results and affect the work in ways that are similar to the organic. The etymology of *glitsch* is rooted in the Yiddish *gletshn* (“to slide”, “glide”, “slip”) or German *glitschen* (“to slip”). Glitsch is thus an active word, one that implies movement and change from the outset; this movement triggers errors or non-performance.

31. The process by which biases and assumptions are blocked out in order to explain a phenomenon in terms of its own inherent system of meaning.

32. See the preparational paper, “Not One, Not Two”, for the Mind/Body Dualisms Conference in 1967; the title refers to a stock phrase of East Mahayana Buddhism. Francisco Varela, “Not One, Not Two,” *Co-Evolution Quarterly* 12 (Summer 1967): 62–67.

33. Donna Haraway, *The Companion Species Manifesto* (Chicago: Prickly Paradigm Press, 2003)

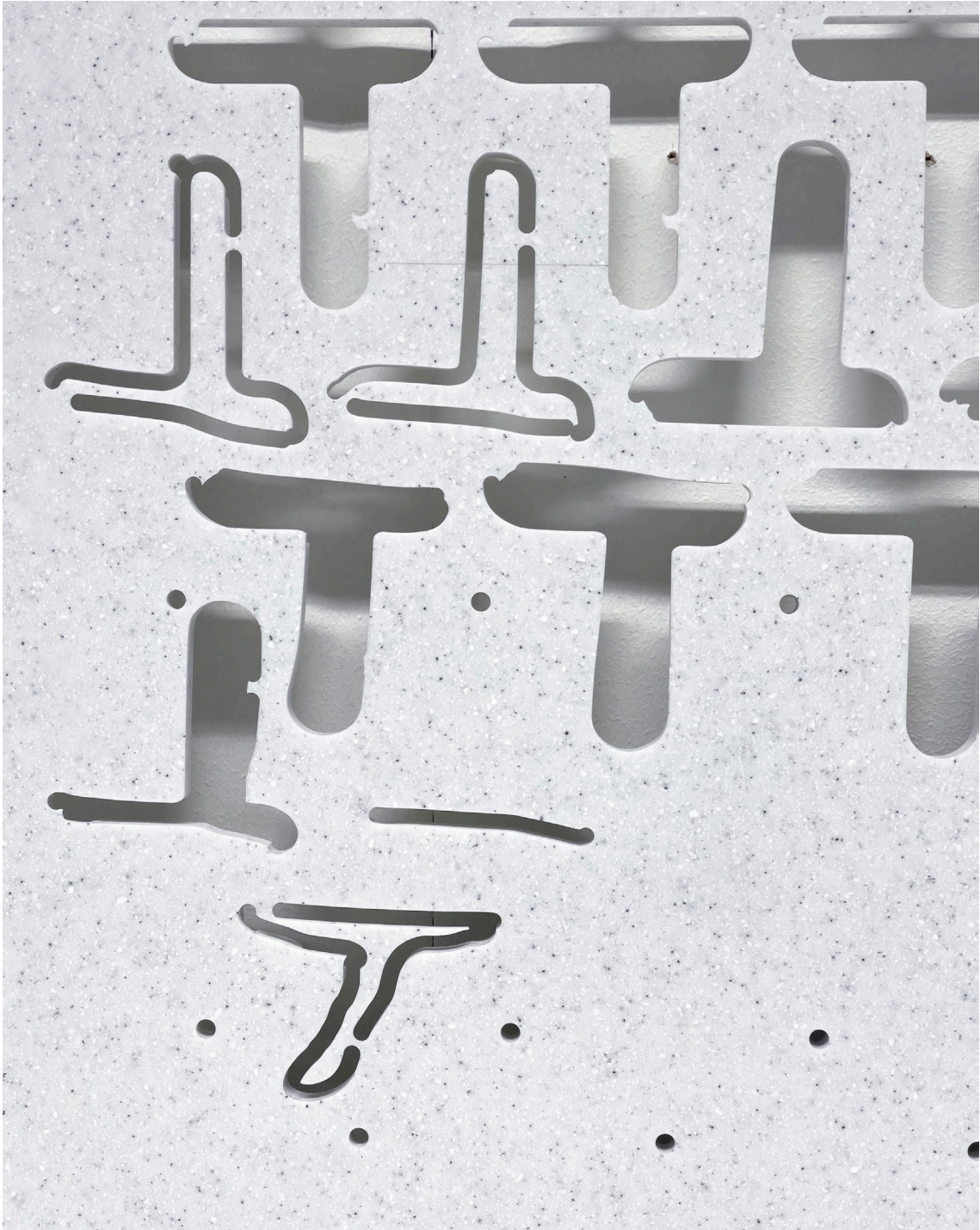


Fig. 15 | Detail of processual work – 2021 (CNC milled Solid Surface composite)

Image Courtesy: Petrine Vinje, 2021

The glitches happen somewhere in between the non-consciousness of the machine and the program it runs, which is decided by me. The glitches are like failures, like protests to perform, like hiccups, hormone imbalances, or stumbling and falling over.

As solid elements, the bronze casts consolidate language into a material constant that is corporeal. Bronze can be remelted and given a new form. By contrast, the Solid Surface composite forms that enclose the bronze elements have impermeable surfaces, are without pores. The gesture of folding and unfolding here is enclosed in the process of becoming: when the flat sheets are thermoformed, they freeze and stay in position. The composite materials are man-made materials consisting of natural minerals and an acrylic matrix filled with epoxy or polyester resins and pigments, offering endless possibilities – it can be bent and shaped and is durable beyond any other material I know of. However, it might as well be a part of what adds to the destructive forces that are threatening the environment, which adds to the metaphor of the Dark Age. Solid Surfaces refuses to be decomposed. I am curious about these artificial materials, what they do when I shape them, cut them and dye them, and how they reflect the living and experiencing of nowness – where, on the one hand, it seems as though material, technological, and natural scientific progress offer nearly unlimited possibilities, and, on the other, they burden the environment in which we live. Meanwhile, the Dark Ages was and still exists as a metaphor, just like the hope for novelty in the future exists.



Fig. 16 | Ship of the Heart (Glacier White) – 2022

(Solid Surface composite, Valchromat composite, adhesive filler, plaster, powdered marble, aluminium, steel), 170×56×56cm. Installation view Surfacing Solids, Galleri F15.

Image Courtesy: Eivind Lauritzen, 2022

SURFACING SOLIDS

The exhibition *Surfacing Solids* was on view from October 22 to January 22, 2023, in Galleri F15, Moss, Norway. Two years into the COVID-19 pandemic, this was the first exhibition in the project-period. The exhibited artworks explored how we are touched by, moved by, and handle objects in museums and artworks, which are forms of cultural memory, and perceive them as meaning-bearing entities in our mind-bodies – through the memory and creative capabilities of the flesh. While making the exhibits, I explored fossil composites – or memories that surfaced from the Earth – as well as practices of knowledge-retrieval, inexplicable phenomena such as dark matter and quanta, and means of knowledge in art, the spiritual domain, and the sciences – all of which act together in the process of becoming.

My impressions on memory and the mnemonic amulet – its ties to non-conscious states and hidden systems of knowledge – were manifested in the sculptural installation *Minni (Mint Ice, Imperial Yellow, Aluminium, Green Marble)* (2022), which ran along the walls through the entire second floor of the gallery space. With this work, I desired to manifest these otherwise hidden structures in a fleshy sense – touching, incorporating, repelling, mutating – but with materials that are hyper-aesthetic, clean and sleek, rather than organic. In this material ambiguity, which is uncanny rather than pleasant, I find myself being restless and curious – not cold, not warm, but in between – moving between the beating heart and the outer surfaces: my limbs, my skin, its sutures and scars.

The *Minni* installation relates to existing architectural structures and the ornamentation of the rooms and was installed while working with the concepts of lightness, spatiality, and context. Made of computer-milled elements of Solid Surface and aluminium pipes, the work studies how a sculptural body can be assembled using a simple principle: assemblage as a three-dimensional technique that gives rise to space. *Minni* is abstract yet hints at a skeletal structure – to be specific, the ribs, or *costa verae* in Latin – that forms a continuous feature: bone-like elements linking the rooms together, running along the walls. The aluminium pipes are mounted between hand height and eye level. They bend around the corners of the rooms, and they lurk around the doorways, simulating the material networks that constitute our technical and neural spheres.

The hundreds of fragments that make up the installation hold the rooms together as they become a bodily beholder, a ribcage, a materialized gesture, pointy and strict, remembering nothing, bearing witness to the process, becoming a new body, a new world. *Minni* is a memory located in the body, a part of a larger assemblage. Just like a cyborg, it is attached to other cognizing beings and the materials of all sorts of hybrids – part industrial, part organic – and could, in a way, be a portrait of what it means to be a contemporary subject. *Minni* is in between, expanding the abstract, chewing on the figurative, and imagining parts of our bodies, but filtered through industrial materials and processes. As Haraway writes, “we are all chimeras, theorised and fabricated hybrids of machines and organisms; in short, we are cyborgs.”⁰¹ Mounting this installation while my own body was crippled and dependent on screws, crutches, and assistants made this exhibition personal – it turned the image of a

01. Donna J. Haraway, *Simians, Cyborgs, and Woman* (Routledge, 1991), 150.

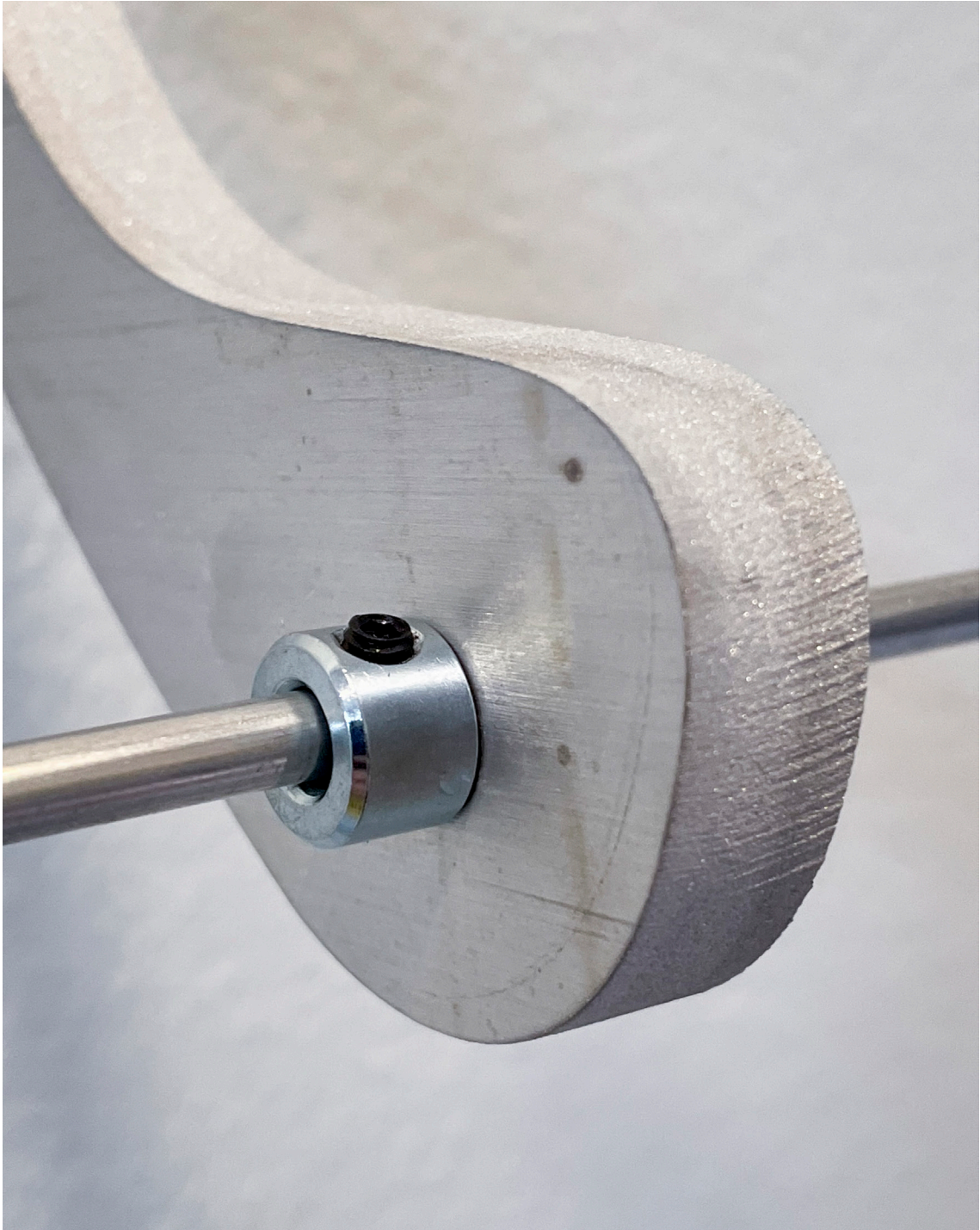


Fig. 17 | Detail – Minni (Aluminium) – 2022
(aluminium, steel), varied dimensions. Installation view, Surfacing Solids, Galleri F15.
Image Courtesy: Petrine Vinje, 2022

cyborg into a living truth.

Art is made from my conscious mind, which enacts the tacit knowledge I inherited, other bodies of knowledge, the environments in which I work, the media, and materials. Making art is a cognitive process. It is impossible to define in which part of myself the artwork originated. In the process of creation, non-consciousness is involved.⁰² How does tacit knowledge, which is apparent when making as well as perceiving art, operate in the creation of mnemonic objects and in storage of collective memory? In the *Handbook of Pre-Modern Nordic Memory Studies* Pernille Hermann et.al, suggests "In the Old Norse tradition, the most common way of referring to memory and acts of remembering is 'minni', a term that has survived well into modern Scandinavian. Minni is used in diverse contexts, occurs across genres and in various texts, and can denote a range of mnemonic activities."⁰³ and in the passage below, "Minni is twice associated with *hugr*, a term with a semantic range encompassing thought, reason, understanding and eloquence."⁰⁴ Minni derives from the Common Germanic root *ga-menphja*, related to the Latin term *mens*, which means "thought" and "meaning". *Mens* corresponds to the Greek *muna*, meaning to "think" or "to intend". Thus, from our ancient languages, we learn that memory is related to cognition, meaning, and intention.

In the "Prose Edda", written ca. 1220 AD in Iceland, there is a passage in "Skáldskaparmál" (the language of poetry) that lists ways of describing parts of the human body as lyrical metaphors, known as "kenning". Here, *minni* is "assigned a specific location in the human body – the breast – and thus becomes localised in a corporeal, i.e., material, way".⁰⁵

Brjóst skal svá kenna at kalla hús eða garð eða skip hjarta, anda eða lifrar, eljunar land, hugar ok minnis. [...] Vit heitir speki, ráð, skilning, minni, ætflun, hyggjandi, tölvisi, langsæi, bragvisi, orðspeki, skörungskapr (Snorri Sturluson. Edda. Skáldskaparmál, 1, 108–109)

[The breast shall be referred to by calling it house or enclosure, or ship of the heart, spirit or liver, land of energy, thought and memory. [...] Wisdom is called sagacity, council, understanding, memory, deliberation, numeracy, farsightedness, subtlety, eloquence, genius. (Snorri Sturlason. Edda. Trans.Faulkes, p.154-155)]⁰⁶

Prose Edda represents a prominent way of connecting memory and corporeality, as well as their implicit associations with cognitive abilities. This became key to how I could unfold memory in three-dimensional works that respond to the metaphysical implications of both memory and the body.

In a dark-painted room, the aluminium pipes and bone-like elements meet a cluster of related bodies, hanging from the ceiling and lying on the floor. In this room, I assembled the Solid Surface elements by joining them in repetitive, circulating rows of three-by-three, held together by rods and stainless-steel screws, which remind me of electronic

02. See the chapter "Semiotic-material Agents(...)", 36.

03. Jürg Glauser, Pernille Hermann, and Stephen A. Mitchell, "Pre-Modern Nordic Memory Studies: An Introduction." In *Handbook of Pre-Modern Nordic Memory Studies: Interdisciplinary Approaches* (Berlin and Boston: De Gruyter, 2019).

04. Glauser, Hermann, and Mitchell, "Pre-Modern Nordic Memory Studies: An Introduction," 1.

05. Glauser, Hermann, and Mitchell, "Pre-Modern Nordic Memory Studies: An Introduction," 1.

06. Glauser, Hermann, and Mitchell, "Pre-Modern Nordic Memory Studies: An Introduction," 1.

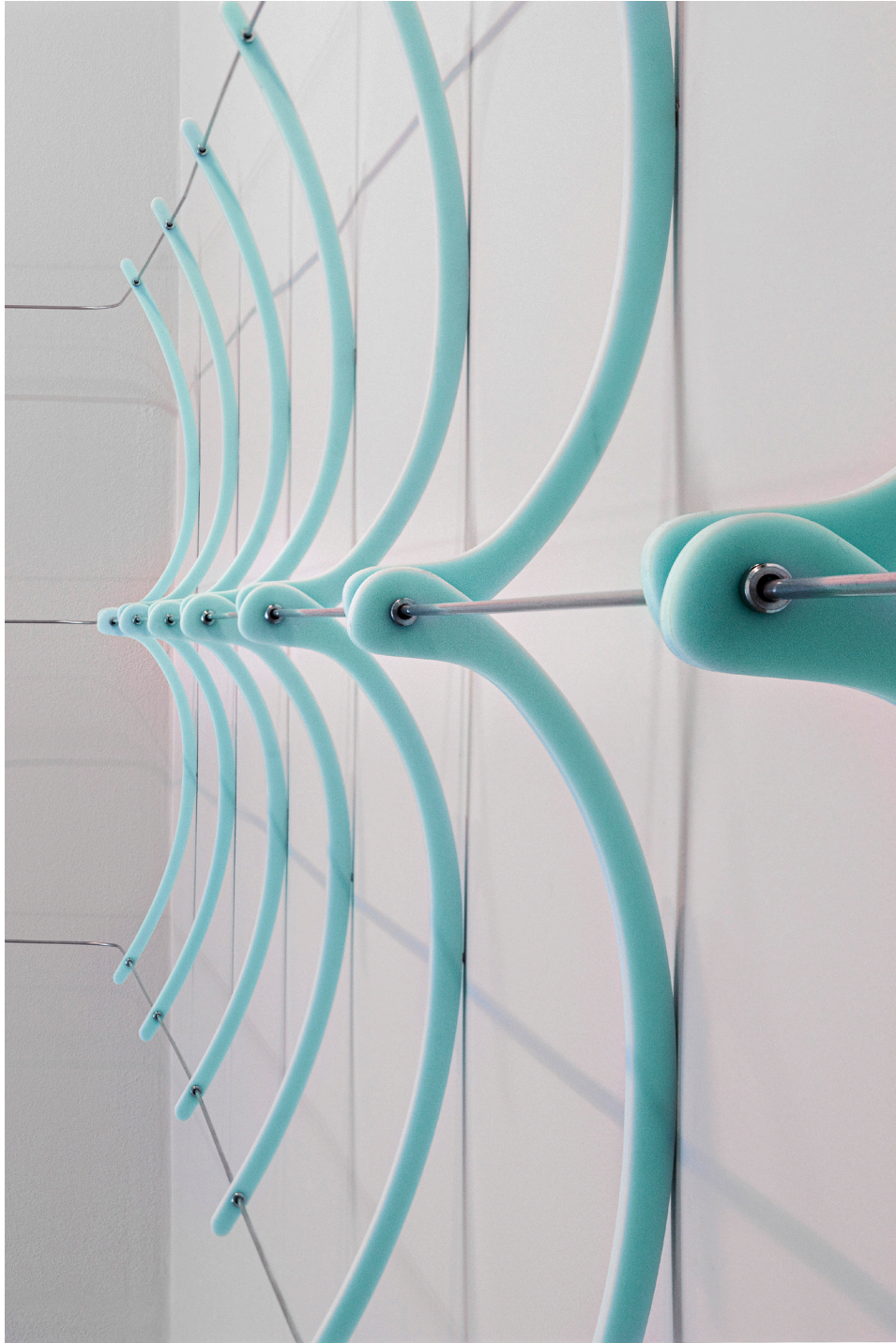


Fig. 18 | Detail – Minni (Mint) – 2022
(Solid Surface composite, aluminium, steel) varied dimensions.
Installation view Surfacing Solids, Galleri F15.
Image Courtesy: Eivind Lauritzen, 2022

circuits, in new patterns wherein interconnectedness and affinity take the lead. In the staircase connecting the first and second floors, a sand-white, fragile body hovered over the stairs, its pipes piercing through the wall and into the connected room, where it built up to a white, skeleton-like structure. *Ship of the Heart (Dune Prima, Sahara), (Glacier White), (Deep Titanium, Gravel), (Deep Black Quartz, Deep Space, Nocturne)* - group (2022) are not specifically referential but contains similarities to a corporal thorax: I can hold them as if they were a body of some kind, like my own thorax if I could remove it from my body.

These (sculptural) bodies speak from the heart: they mumble and whisper their aftermath by "turning away from the limitations of logocentric approach: shifting the emphasis to other ways and modes of representation."⁰⁷ As if they remember the Cartesian split but are concerned about becoming, and thus, thinking differently. As philosopher Rosi Braidotti writes, "The body, or the embodiment, of the subject, is to be understood as a point of overlapping between the physical, the symbolic and the sociological," and further, she asks, "What paradigms can assist us in the elaboration of new schemes? Is the model of scientific rationality totally discredited, or can it still provide some inspiration?"⁰⁹ The group of sculptures hold memories and knowledge of what has been, what is now, and what will be. For, just as the sculpture cannot be touched – or at least should not be touched – our ribcage lies beneath the skin, ligaments, and flesh of the body – inaccessible to direct touch. These sculptures suggest that the sensory perception of materiality and space is essential in the formation of memory.

I delved into Aleida Assmann and Jan Assmann's theory of cultural memory when I embarked on this project. Cultural memory views memory as the contemporary past that is merged with culture on one hand and with society on the other. The theory suggests that cultural memory functions such that it is constantly reconstructing itself because the context surrounding it is always changing. Therefore, cultural memory always views structures of knowledge in relation to both an actual and a contemporary situation, despite the faculty of memory and knowledge having certain fixed structures – like the ones in our brains. Thus, cultural memory suggests that the potentiality of art exists in relation to society as well as the urgency of the current circumstance. Our living, subjective memory gives way to a cultural memory that is underpinned by media: by material carriers such as memorials, monuments, museums, and archives, including texts, rituals, and performances. When defining belonging and identity, such carriers are forms of objectified culture, which mediate the past and give meaning to individuals and movements in the current moment. Further, Jan Assmann suggests that "With cultural memory, the memory spaces of many thousands of years open up, and it is writing that plays the decisive role in this process."¹⁰ I would argue that the practices of artists may make as just an important contribution to such.

Memory is a crucial part of our consciousness; it is pivotal for all of our experiences. When we think, we remember and create systems based on our previous experiences and knowledge. In Greek mythology, the Goddess Mnemosyne is the mother of the muses. Her name Mnemosyne is derived from the same source as "mnemonic", which stems from the Greek word *mnēmē*, meaning "remembrance" or "memory". Thus, myths situate memory at the beginning; it is at the centre of the very matrix for the creation

07. Rosi Braidotti, "Introduction: By Way of Nomadism." In *Nomadic Subjects. Embodiment and Sexual Difference in Contemporary Feminist Theory* (New York: Columbia University Press, 1994), 3–20.

08. Braidotti, "Introduction: By Way of Nomadism."

09. Jan Assmann, *Religion and Cultural Memory: Ten Studies* (Stanford: Stanford University Press, 2006), 28.

of all art and all human creative power, including ideas and opinions: memory and the power of creativity are indivisible. To create and think, humans have mental tools that exist in the intricate network of personal memories. Myths, therefore, tell us that the precondition for creating things is to have memories or consciousness, so to speak. We know that memory is based on the spatio-temporal, as phenomenology suggests. In this way, it is possible to explore how spatial structures affect how we think and react and what we believe. This is a motivation to explore the site in relation to the object, in cultural memory.



Fig. 19 | Detail – Ship of the Heart (Deep Black Quartz, Deep Space, Nocturne) – 2022
(Solid Surface composite, Valchromat composite, aluminium, steel screws)

Image Courtesy: Petrine Vinje, 2022

The Living Core of a Complex Reality

In her epistemic discussions in *What Should We Do with Our Brain?*¹⁰ philosopher Catherine Malabou's states

"One pertinent way of envisaging the "mind-body problem" consists in taking into account the dialectical tension that at once binds and opposes naturalness and intentionality, and in taking an interest in them as inhabiting the living core of a complex reality. Plasticity, rethought philosophically, could be the name of this entre-deux."¹¹

Within this invisible entre-deux, which constitutes plasticity, lies the explosiveness of wanting something with something or someone, of intending a form, a word, a sign, or an image. I wonder if we can understand both surface and interface as that which entails the possibility of what we cannot see. Thus, they constitute a prerequisite for the transfer between the sensory and the imagined – a point of contact where all things come together from time to time. Where art is concerned, it could be at this point of contact that it derives its content from the artist's cognitive work. It is hidden for some and accessible to others. It has a logic of its own and is formed between the creator and the recipient. Speaking of the museum artefacts that I engaged with, the point of contact is situated somewhere between the aspects of the formal, the material, and the semiotic. Thus, they are incomprehensible to me without the support of informants.¹²

Can I render the surface of the artefact as the living core of the relationship between object and subject?

10. Catherine Malabou, *What Should We Do with Our Brain?* (New York: Fordham University Press, 2018).

11. Malabou, *What Should We Do with Our Brain?*, 82

12. Informants meaning runologists, philologists, conservators, archaeologists, and museum and collection directors.



Fig. 20 | Detail – Minni (Mint) – 2022
(Solid Surface composite, aluminium, steel)
Image Courtesy: Petrine Vinje, 2022

Giving Something Form

Taking something that is apparently flat and making it three-dimensional is something that happens often in my work, either through cutting and rejoining the materials as pieces in new angles and positions or transfiguring Solid Surface composites through thermoforming. In the latter, the material is placed in a flatbed oven, which heats it to a degree of 300° Celsius for up to half an hour. The material turns soft and wobbly, a bit like a worn-out bubble gum, which can be given form but only within 60 seconds before it starts to cool down and stiffen in position.

Making the sculptures *CSS2022/01 Vessel (Arctic Ice)*, *CSS2022/02 Vessel (Arctic Ice)*, *CSS2022/03 Vessel (Arctic Ice)*, and *CSS2022/04 Vessel (Arctic Ice)* (2022) were a massive experiment. The sculptural group consist of four large structures, laying on their curved backs in a skeleton made of precise, linear aluminium frames, originally produced as systems for the industrial and technological spheres. In the workshop, I tested the limits of the material in terms of how large and wide the curve could be made, just by being held by itself, resting in the aluminium frames. When joining the curved shapes and sheets (with Corian® Joint Adhesive, a non-sagging, thixotropic, specific glue) the vessels were at a breaking point – between holding together or ripping in the seams. I attempted to imbibe the sculptures with the aesthetic language of the environments the amulet had been exposed to. I wanted them to refer to, but not to narrate. In sculptural traditions, abstraction is always about form. However, I think that the choice of material is also a form of abstraction. For instance, translating an object of a certain material – that I refer to – into another material or choosing two materials that are odd when put together at first, but amalgamate into a new and strange figure – all of it are forms of abstraction to me.

I am also interested in how and why there is a post-industrial time, which is associated with the material agency of Solid Surface, aluminium, and Tyvek, and a pre-industrial time associated with the materials bronze, silver, and copper. In humus and earth, I feel there is either no time or all times are present at once. In including humus as earth-works in the sculptural installation, along with these specific materials, my artworks work against these associations and shuffle modern conceptual art history and the medieval and 21st century process art together.

For me, giving something form is an associative process. I start with an interest in a particular object, text, surface, a form, or construction. This can be a memory. It can be a previously made artefact or architectural element. It is usually something I wish to investigate because I have a feeling that it will lead to something fascinating, something I can dwell on. The starting point, I believe, is neither made from the intellect nor a focused consciousness, but it is an immediate sense that it can take me further, and which I can learn from. The philosopher and psychologist Eugene T. Gendlin called this pre-verbal state “felt sense” or “felt meaning” – the inner knowledge or awareness that has not been consciously thought or verbalised – as something experienced in the body.¹⁴ If one recognizes that an idea is preceded by a felt sense, then, by being conscious of it, we may be more conscious of our actions in a way that can influence the creative process and, on a larger scale, our being in the world.

¹⁴. See t-ex. Eugene T. Gendlin, *Focusing: How to Gain Direct Access to your Body's Knowledge* (London: Pimlico, 2003 [1978]), 8. In my opinion, the felt sense closely relates to what micro-phenomenologist Claire Petitmengin calls the ‘transmodal state’, as earlier mentioned.



Fig. 21 | Detail – CSS2022/01 Vessel (Arctic Ice), CSS2022/02 Vessel (Arctic Ice) – 2022 (Solid Surface composite aluminium profiles, sifted humus from the Folloline excavations in Old City district)

Image Courtesy: Eivind Lauritzen, 2022

For me, the felt sense is the point from which I start my research and to which I want to return on completion of a work. It is plastic and part of a kind of layered consciousness, which is me. It is a place I wish to remain constantly in contact with, in order to ensure meaning in what I make. In sculpting, for instance, the felt sense is followed by the use of the eyes and the hands in the creative work, as it is the sensory organs that transform and think along with me as I search for form in what I have chosen to work with.

Today, sculpture is used to refer almost to any shaped three-dimensional object that is not defined as an installation or has even more dimensions - like the virtual. In the history of European art, three-dimensional artworks have traditionally been categorised using two terms: *Skulptur* and *Plastik* (Ger.). However, these concepts are often forgotten in the North, where we do not differentiate and have one category for all: *skulptur*. Objects defined as sculptures are shaped or carved in or from a given material such as stone or wood. The term originates from the Latin word *sculperre*, which means "to carve", "chisel", and "engrave". The term *plastic* is used for a three-dimensional form that is modelled using a substance before being cast in a durable material such as bronze. Here, the etymological origin of the word lies in the Greek word *plassein*, which means "to shape" or "form". Plastic is therefore defined as an artwork whose production involves the construction of an outer shell around a material body, resulting in a hollow form or mould. These hollow spaces are transformed into a visible body when cast. Thus, the plasticity of the form implies firmness as much as softness; it carries the immutable quality of an imprint, a combining, or a transformation. It entails the potential to become something, to be formed, to give form, to embody an intention through volitional action.

Malabou writes

"The word plasticity thus unfolds its meaning between sculptural molding and deflagration, which is to say explosion. From this perspective, to talk about the plasticity of the brain means to see in it not only the creator and receiver of form, but also the capacity to disobey every constituted form, a refusal to submit a model.¹⁴

She ascribes three conceptual dimensions to plasticity: an aesthetic dimension: how it functions in the construction of a (spatially) three-dimensional form; an ethical dimension: its capacity for repair, treatment, and solicitude; and a political dimension: responsibility in relation to the receiving and giving of form. The term encompasses both the sensitive aspect of plastically giving form but also the explosive. The latter originates from the French word *plastique*, which denotes substances that can catch fire and explode. An explosion is a discharge of energy, a creative eruption, which progressively transforms nature into freedom. Her definitions of the potential of plasticity are enlightening when seeking to understand the complexity of our sensory impressions of imagined and perceptible worlds, and it is equally encouraging to think of research-creation within the museum as plastic gestures that transfigure and contribute to the cultural memory. If plasticity is situated between two extremes - the assumption of form and explosion. What would it mean for the enacting of materials, technologies and fossil composites, as well as the not-yet-knowns in the museum-archive?

At this moment, I think of plasticity as inherent in the surfacing artwork, as a contact zone. It is here that different forms of logic meet, are formed, and give form to each

14. Malabou, *What Should We Do with Our Brain?*, 6.

other – they annihilate and give rise to something new. I picture the heart, which pumps blood out into the arteries of the artwork, which sends and receives signals about what exists in the material body. I picture the neural pathways and synapses of the artwork. I picture the outer shell of the artwork as it comes into contact with my largest sensory organ, the skin. I picture its fascia, a single, long, grey-white fibre, whose form mirrors the body's outer and inner structures, and which constitutes the point of contact between the inner and the outer. But if the plastic is explosive and the fascia is plastic: what does it take for the fascia to self-ignite?

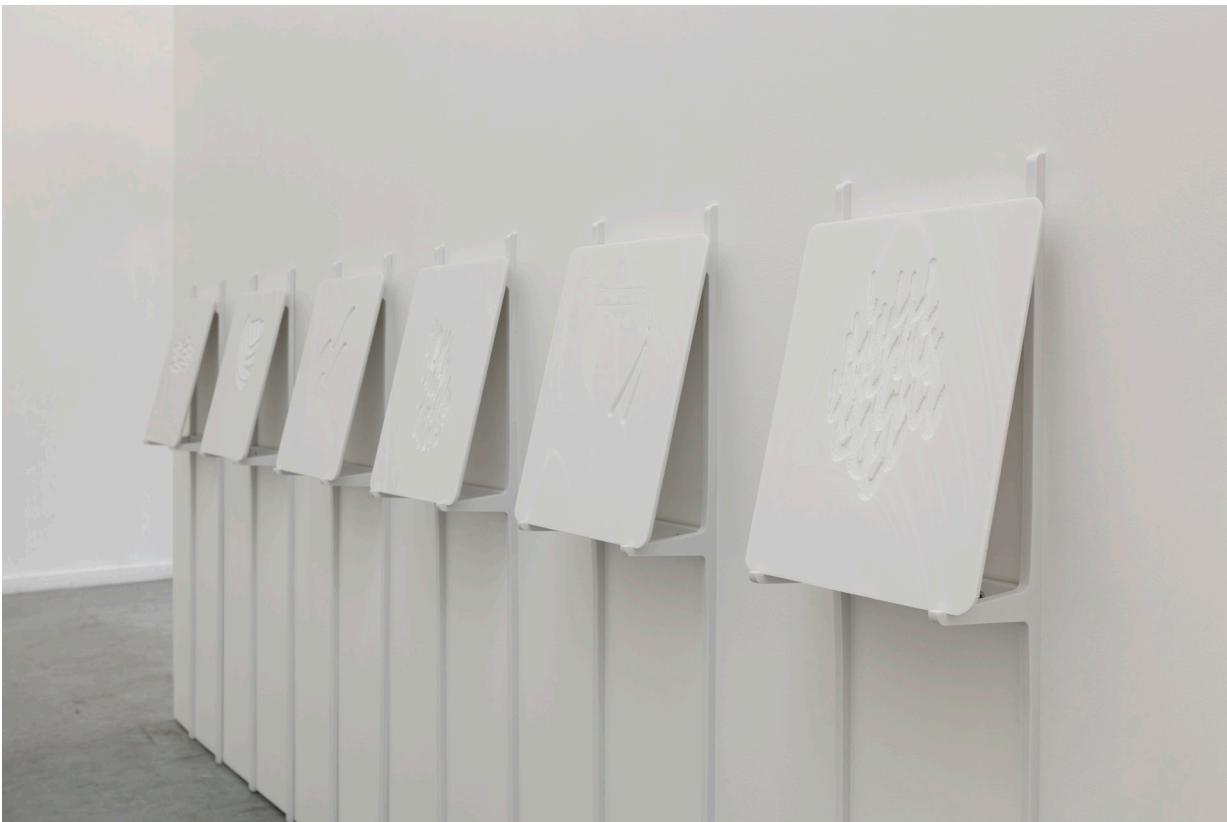


Fig. 22 | HSS 2019-20 (Glacier White | Light Ash) series – 2021

(Solid Surface composite, screws). Each measures 32×122×13,5cm. Installation view, Akademirommet, Kunsternes Hus.

Image Courtesy: Tor S. Ulstein, 2021

SLEEK AND CLEAN

Overall, the works that manifests in *Surfacing Solids* does so as 21st century processual art, authored while engaging with a museum and using its connected environments as context to understand how memory and material generate artworks and to work with the materials that belong to these environments. I have experimented with the materials by subjecting them to mechanical and digital processing and have observed the glitches and mistakes that occur and the waste produced by the process. The composites that make up the artworks are partly mined, quarried, or extracted from the Earth or are grown in plantations via artificial methods and are constantly becoming totalizing, indomitable surfaces. They are cold to the touch and appealing and unpleasant at the same time, leaving me with a familiar feeling of *Unheimlichkeit*, which is strangely seductive to work with. For me, this feeling of ambivalence and undecidability is linked to curiosity. In her manifesto for research-creation, Natalie Loveless writes, "This uncanny instantiates a (curious) drive that hover at the intersection knowing and not knowing, belonging and not."⁰¹ Over the course of my process, I have been introduced to materials that manufacture history and impact the environment, which may lead to new research-creations in the future. These surfaces, sheets of fossil particles, and their connectedness and superficiality are assets that attract and push away.

Understanding the nature of materials and testing their potential are crucial aspects of my practice. The aesthetics of the composites are sleek, hygienic, and sterile, in comparison to the bronze, in which I left raw from the high temperatures in welding and casting pits.⁰² In the sculptures *CSS2022/01 Vessel (Arctic Ice)*, *CSS2022/02 Vessel (Arctic Ice)*, *CSS2022/03 Vessel (Arctic Ice)*, and *CSS2022/04 Vessel (Arctic Ice)* (2022), I assembled different materials, letting the variety of surfaces contrast, support, and shelter each other. The sculptures are made of Solid Surface composite, aluminium profiles, and sifted humus⁰³ from the Follobanen excavations in Gamle, Oslo. The highly controlled mineral and polymer composite, Solid Surface, allows the construction of seamless surfaces and complex forms through skilled fabrication and the use of colour-matched bonding resins. However, it also has the uncanny characteristic of refusing to decompose, thus creating endless amounts of post-industrial and post-consumption waste. This places Solid Surfaces in a problematic relationship with sustainability rules and regulations and environmental concerns. The materials used in scientific laboratories and museum environments to protect and care for objects considered valuable or irreplaceable are, at the same time, an excellent companion for digital fabrication, as their precise surfaces allow for detailed manufacturing.

Solid Surface is a product from the post-war era when synthetic plastic materials were being developed in conjunction with the space race and as a means to provide hygienic environments in terrestrial architecture. The material consists of aluminium trihydrates, acrylic polymers, epoxy or polyester hardeners, and pigments. In other words, the

01. Natalie Loveless, *How to Make Art at the End of the World?* (Durham: Duke University Press Books, 2019), 47.

02. Petrine Vinje, *ASSB201922/C/01*, *ASSB201922/B/01*, and *ASSB201922/A/01* (2022).

03. The extraction and recontextualization of the humus was permitted by NIKU and the Museum of Cultural History's Archaeological Department on 21 April 2022, in case: 2022/9172.

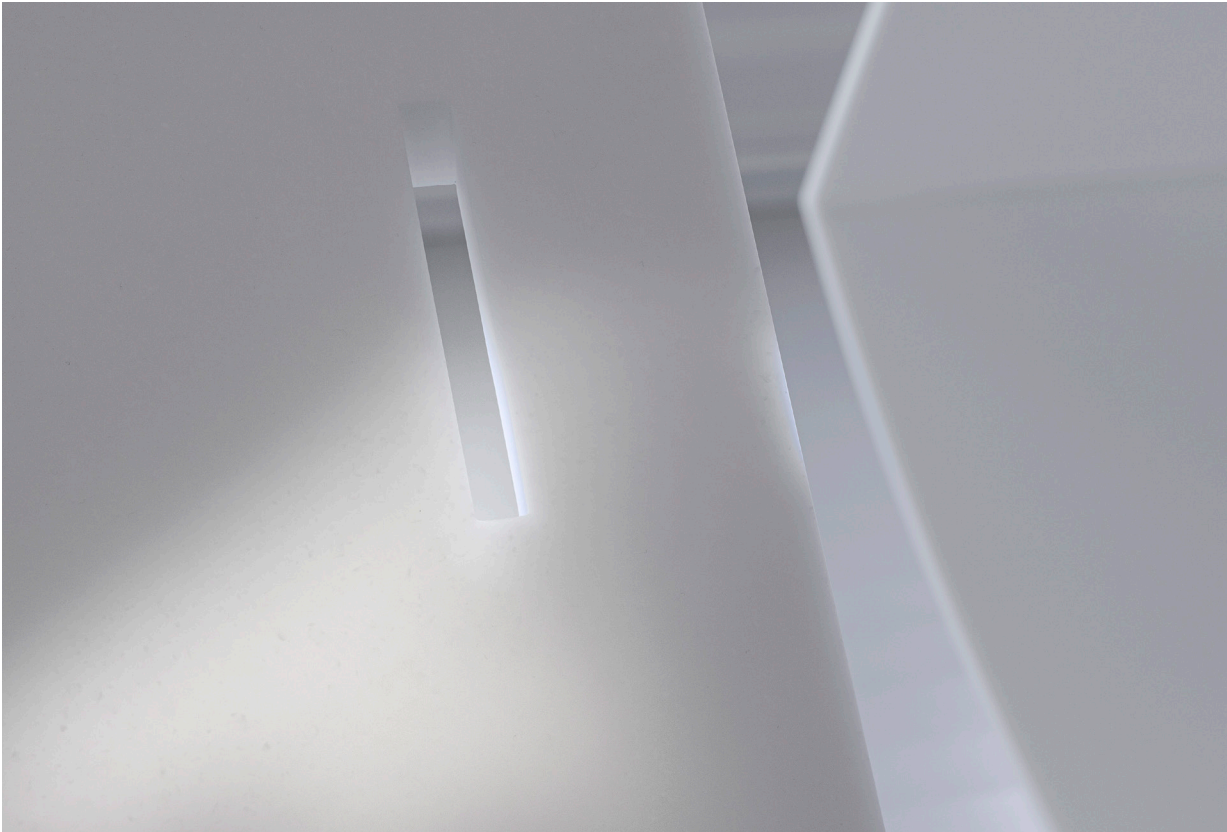


Fig. 23 | Detail CSS2022/01 Vessel (Arctic Ice), CSS2022/02 Vessel (Arctic Ice) – 2022
(Solid Surface composite, aluminium profiles, sifted humus from the Folloline excavations in the Old City district)

Image Courtesy: Eivind Lauritzen, 2022

composite is in itself a veritable assemblage and can be described as fossil memories of the Earth. I made the artwork in collaboration with a manufacturer whose production line includes interior elements for the private and public sectors and is a distributor for DuPont, which is the largest producer of Solid Surface composites in the world. Alongside their regular production line – where counters, cabinets, walls, and hyper-designed objects are made – I was able to test the plasticity of the material through thermoforming, and in joining pieces of the material together a specialized methacrylate-based adhesive, and choose spare parts from their inventory of a versatile selection of colours.

As a direct result of exploring digital fabrication processes for a decade, I have developed works using artificial materials that are specifically suitable for such purposes. For instance, I have experimented with plywood and composite materials such as Valchromat and OSB,⁰⁴ which are engineered woods primarily used for high physical performance in machines, made to work with our technologies. This was my first entry point to the use of these materials. Further, the composite materials interest me due to their haptic qualities and how they are supposedly produced to create a border, an artificial surface with regards the body, to protect and shield our biological system, and at the same time, assist in the hidden operations under the surface of the interface.

Transforming these materials into three-dimensional forms started when I enclosed some leftover bronzes from the public commission *Tyri* (2019) in sparkling, white, folded shapes of milled on the CnC.⁰⁵ The flat sheets of this specific composite were thermoformed using a three-dimensional mould. Later, I installed them on pillows of Archival Tyvek. Made from 100% non-woven polyethylene (high-density polyethylene or HDPE), Tyvek offers complete protection for paintings and sculptures in transit and storage. Museums, galleries, and restoration experts rely on this product to protect their valuable items. It is pH-neutral, lint-free, does not trap moisture, and protects from external damage. There is dust in museums and archives, just as everywhere else. Museum conservators protect papers, objects, and artefacts – the matter that matters – from dust, oxygen, and grease by putting the smaller objects into zippers and boxes and covering larger objects with archival Tyvek. Our surfaces are covered with a fine layer of small particles of different origins, some less than 0.1 millimetres. Tyvek prevents these particles from touching the surface of artefacts. It is soft, flexible, tear- and cut-resistant, breathable, anti-static, tough, very light, and washable. It is easy to cut and suitable for sewing, gluing, and heat-sealing. Moreover, it is long-lasting and cost-efficient. It is also waterproof, resistant to chemical products, and UV-stable. I used Tyvek for the first time in the installation *Depot* (2018)⁰⁶ in Fotogalleriet, Oslo. This time, I was interested in seeing its non-woven reaction to other environments and substances and, so, I dyed it in a diluted drawing ink. I discovered that the Tyvek did not absorb much of the colours without any tear in the material, but it was receptive to some of the colour, particularly in the areas that surfaced the water/ink mixture. The material functioned as the backdrop for a display of a selection of reliefs from the processual, serial work *HSS2019-20* (2019–2020)⁰⁷ in Akademirommet, Kunstneres Hus, in 2021 as well as in a series of collages and as installation elements in the exhibition *Surfacing Solids*.

04. See T.ex Petrine Vinje, *Sort Sol* (2010), *Anatomical Theatre* (2013) and *Backdrop for Absolute Sovereignty* (2011), <http://www.petrinevinje.com>

05. See process of making ASSB201922/C/01, ASSB201922/B/01, and ASSB201922/A/01 (2022) in Vinje, ed., *F-U-P-A-R-K* (Oslo: O, 2023).

06. Petrine Vinje, *Depot* (2008) in *Depot. Depository.Rays*, Fotogalleriet 10.08–10.09.2018

07. See Appendix II on the projects website <http://www.surfacing solids.com>



Fig. 24 | Detail of processual work with archival Tyvek — 2021

From the installation Responsive environment #1 (Archival Tyvek, drawing ink), serving as backdrop for the Laboratory Riss: Meaningmaking in Material and Digital Networks, Akademirommet, Kunstnernes Hus.

Image Courtesy: Tor S. Ulstein, 2021

In the material research I encountered those that are essential for technology to operate: silver, copper, and artificial gems. I am particularly fascinated by the time travel of these materials – from being discovered, extracted, and utilized through the paradigms of human history before and after modernism. I am particularly interested in the refinements these materials have gone through in the post-war years, when cybernetics and scientific developments broke new ground, moving hand-in-hand with and influenced by quantum theories and so-called Eastern philosophies. These developments were happening in an increasing tempo in the context of new market liberalism, where in a larger set of materials came to be, where plastics – or fossil resources – are the main component.⁰⁸ In NASA-supported research, for instance, artificial materials were seen as part of the solution for humanity: we would need these materials when escaping Earth and entering other galaxies. For many individuals, there was an urgent need to find a role within the emerging new conceptions of humanity and the lifeworld in which we exist. In this paradigm, the design and aesthetics of technological apparatuses and materials overlaps with radically shifting models of human consciousness and subjectivity. From the 70s, one started to look at the subject as a contingent, extended, and attenuated entity. Chilean biologists Francisco Varela and Humberto Maturana's autopoiesis theory (coined in 1972)⁰⁹ serves as an example here. Their discovery was influential for cybernetics – the understanding of behavioural patterns and communication between humans and machines. Thus, the overlapping development of contextual, philosophical, material, and aesthetic reflections aimed to reflect on new technologies of the body and representation.

In the case of the artificial composite Solid Surface, I was drawn to it for its technical and aesthetic qualities and the fact that it is advertised as the perfect component for digital manufacturing. It is also a material that is utilized globally in public spaces. I find, the material represents the uncanniness of the nowness. This backdrop suggests a possible connection between material and immaterial positions, and to me, somehow, oddly adds up to the medieval amulet that speaks of mystery and the hidden. The Solid Surface materials are refined to serve specific technological needs and assist in facilitating human-technological networks; and yet, they act as boundaries between the natural (the body) and the artificial (tech).

Currently, communication companies are engaged in a new race as burgeoning technologies drive demand for high-speed communications. Man-made materials are key building blocks in making the promises of faster, thinner, and more powerful a reality. It is the time of digital aesthetics that reigns – “the slick, spotless, smooth, and spick-and-span is the hallmark of our times”.¹⁰ We are living amongst surfaces of the sleek and clean. Surfaces in microprocessors and computers are hard and durable, yet brittle. They have traces of boron, phosphorous, or arsenic. Electrons are an elementary part of electronics, and electron groups transport information in microelectronic artefacts. These technological surfaces define and shape our world. Data storage in the cloud, in

08. My reading of this time have been influenced by t.ex Larry Busbea, *The Responsive Environment* (Minneapolis: University of Minnesota Press, 2020) and Paul B. Preciado, *Testo Junkie: Sex, Drugs, and Biopolitics in the Pharmacopornographic Era*, trans. B Benderson (New York,: Feminist Press, 2013).

09. Humberto Maturana and Francisco Varela, *Autopoiesis and Cognition: The Realization of the Living* (Dordrecht: D. Reidel Publishing, 1980 [1972]). The autopoiesis theory describes the capacity of living cells to reproduce and organize themselves. This means that human knowledge and meaning-making processes are understood and theorized from a biological and evolutionary standpoint.

10. Byung-Chul Han, “The Sleek. Beauty in the Digital Age,” *Arquitectura Viva*, February 29, 2016, accessed 30 January 2023, <https://arquitecturaviva.com/articles/the-sleek>



Fig. 25 | Exhibition hall in Museum of Cultural History, Oslo — artefacts being covered in textile during a period of installing in the museum in 1992.

Image Courtesy: KHM, University of Oslo.

Fig. 26 | Depot — 2018. Installed in the exhibition Depot. Depository.Rays, Fotogalleriet. Artwork in collaboration with Tejaswinee Kelkar.

Image Courtesy: Istvan Virag, 2018.

all available scales, is mostly mineral intelligence. With the help of electromagnetism, information is inscribed on metals, acrylics, and silica. Thus, these materials are the pillars of our current and future society. There are real physical infrastructures behind every single action done online. When a fingertip touches the interface of a tablet and asks a website to open, or an app to run its algorithms, the activity happens in the spinning hard drives, sensors, monitors, air conditioning units, wires, and circuits and electricity lines, as well as in huge data centres.

Memory stored in the cloud is thus more than virtual accessible data, it is also environments and infrastructures. It has an enormous impact on the planetary environment. However, I speculate and wonder if and how we are to deal with the fact that we are dependent on artificial materials and technologies for the extraction of data, and thus, on sourcing of the *natural* – the Earth. Here is an ambivalence that I try to work against, with, and through by observing and taking advantage of industrial leftovers in making. It is a slippery slope – it might be a glitch and I might be *glitching* without knowing. I work with and against the not-yet-known here.

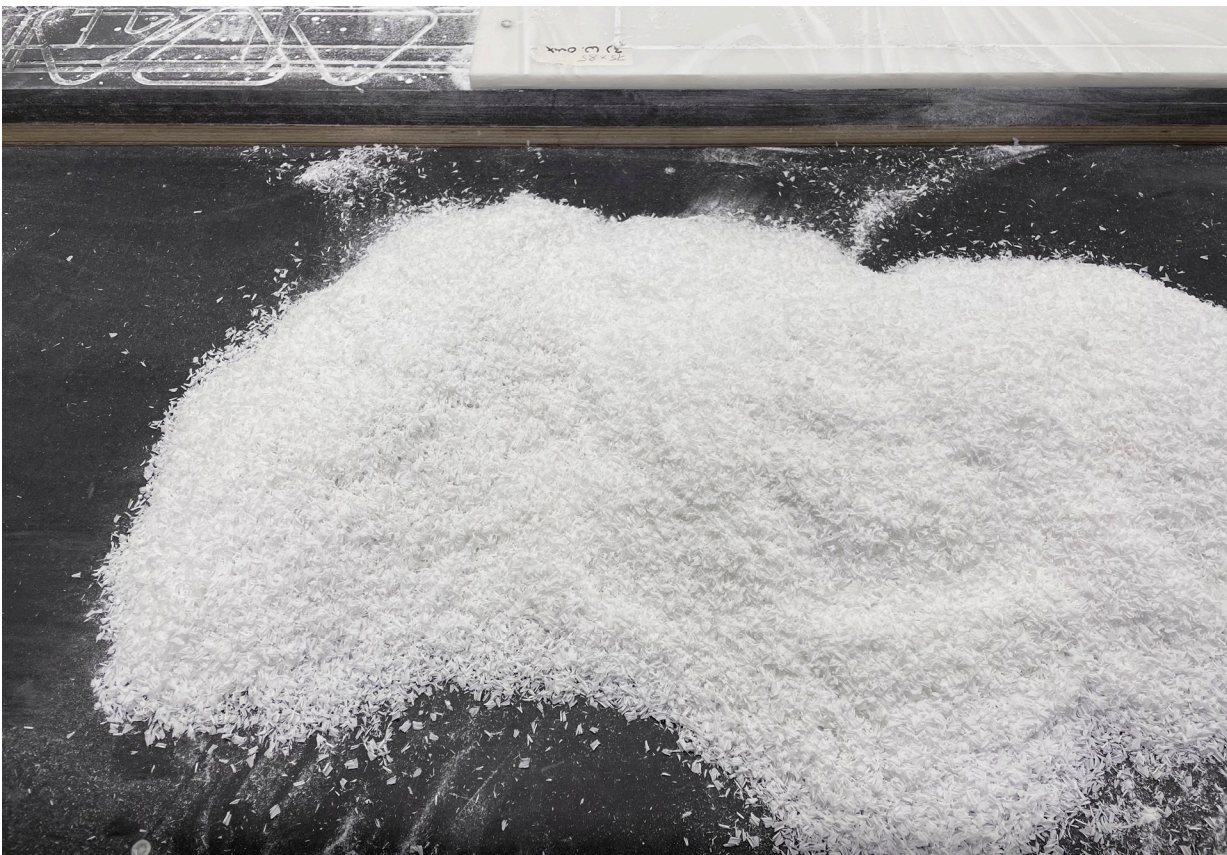


Fig. 27 | From the process of CnC-milling – Corian (solid surface material: acrylic polymer and ATH alumina trihydrate) fabricant DuPont™ in 2020.

Image Courtesy: Petrine Vinje, 2020.

ENACTIVE ASSEMBLAGES

One of my goals during this project has been to develop other strategies for creating artwork. This goal was provoked, I would say, by an urgent need to make artworks in my studio that are more processual and do not necessarily lead to monumental installations – which have formed the majority of my practice until now. Somewhere along the timeline of the project, this interest fused with my overall objective for this study: to engage with a museum and its connected environments as contexts, to understand how memory and material generate artworks, as well as to work with the materials that belong to these environments.

As earlier mentioned, the *Laboratory RISS* workshop instigated a turn in the project's modus operandi: moving from the archive to the relational, collaborative or dialogic. In the project period, I was in dialogue with scholars at UiO, NIKU, and KHM. With their generosity, I have been able to observe their results-driven research closely, which opened up the possibility of looking at the artefacts in the context of the development of the City of Oslo. My dialogue with these scholars led to permission to extract material from the excavation site for use in installations and sculptures and the film, *Unravelling a Radical* (2022). Moving the actual material from the archeological excavation site to the studio, recording and editing hours of audiovisual material from the research environments and letting the architecture and technology inform the choice of materials in new works resulted in a more plastic understanding of how I could look at my process of thinking and making work.

This shift resulted in a modular system for building sculptures, which can be fitted to a specific site or constructed as standalone sculptures. In the process, I focused on the reuse of stock and waste materials from industrial production. The modular sculptural system I have thus developed makes recycling leftover materials possible, or even crucial to the construction of the artworks, and, consequently, prompts new approaches to how cultural memory can fulfil its potential to suggest other futures. This, in turn, may help in deconstructing monumental ideas in a museum setting, data collection processes, and sculpture traditions. The modular system also challenges the *monumental* in sculptural traditions by reconsidering assemblage as a sculptural method: putting elements together in a larger context, and deconstructing and moving elements and objects to construct a new whole. The works explore the possible looseness and openness of artistic research.

When digitally fabricating sculptures from sheets of flat, composite surfaces, assembling can be a practical as well as contextual asset. The possibilities for creating repetitive forms that digital fabrication allows for resulted, for instance, in the sculptural groups, *Ship of the Heart* and *Minni*. These two works, speculate further on how non-conscious technologies assist us in creating a reality where memory surfaces in the flesh and from the Earth.⁰¹

In these speculations, I return to cyber-materialist N. Katherine Hayles who defines assemblage in contrast to the sparse, clean materiality of the network: According to her, "Assemblages (...) allow for contingency in a fleshly sense, touching, incorporating,

⁰¹. As discussed in the chapter "Surfacing Solids", page 49-60.

repelling, mutating."⁰² Reflecting on the possibilities that technologies offer to contemporary art practice, assemblage, when defined as having connotations of connection, transformation, and becoming, resonated with me.⁰³ To quote Hayles further, "assemblages include information transactions across convoluted and involuted surfaces, with multiple volumetric entities interacting with many conspecifics simultaneously".⁰⁴ In art history, an assemblage is usually created on a defined substrate and consists of three-dimensional elements projecting out from the substrate. Assembling allows form, scale, and dimension to arise from flat materials and transforms them into three-dimensional objects. Instead of collecting existing objects and shapes of different kinds, like pioneering artist Louise Nevelson (1899–1988),⁰⁵ I made series of the same shapes in a specific selection of materials and colours. Later, I connected the already assembled and joined sculptures and envisioned the room in which the objects were, as well as the exhibition itself, as a part of this assemblage. Thus, at a larger scale: the research itself could be seen as part of the assemblage.

When dealing with assemblages, we are not sure what can be controlled precisely. Hayles exemplifies this with the Internet: it is the largest communicative human–technical assemblage we know of today. People are logging on and off and adding and deleting material in a continuous, ever-changing flow. Humans have control over the algorithms and the infrastructure that supports these algorithms: this is the precise protocol for when and how this communication can take place. However, since people and automatic systems are logging on and off constantly, we will never know exactly how large the assemblage is. Assemblages have more applications: they demonstrate a looseness, openness, and preciseness in terms of what networks and connections represent.⁰⁶ Lending from the definitions of the assemblage, the sculptures, film, installations, interdisciplinary research, and situated artworks; carry connotations of connections, events, and transformations. To me, artistic, investigative practice is precisely this: bringing forth an interdependent world of materials and phenomena and technologies and apparatuses that act together in the process of *becoming*.

Becoming

Certain parameters are essential to a sculptor. For instance, the body. Once I make a sculptural body, I position my body in relation to it, engaging with more than just my gaze. I ask myself: How is this body part of a larger body? What does this body remember? Which memory does it represent? Where does it belong? Again, returning to the gestures of touch – the haptic sense is key but so is a sensibility that could be described as "haptically visual", which means not haptic⁰⁷ nor visual; rather, it is both –

02. N. Katherine Hayles, *Unthought: The Power of the Unconscious* (London: Chicago University Press, 2017), 118.

03. Hayles refers to Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1987) and to Francisco Varela, "Not One, Not Two," *CoEvolution Quarterly* 12 (Summer 1967): 62–67, where he offers similar conceptualization of connections and becoming.

04. Hayles, *Unthought: The Power of the Unconscious*, 118.

05. See Louise Nevelson in Julia Bryan-Wilson, *Louise Nevelson's Sculpture: Drag, Color, Join, Face* (New Haven: Yale University Press, 2023).

06. Hayles, N. Katherine "Cognitive Assemblages: Technical Agency and Human Interactions", *Critical Inquiry* 43 (2016), 32–55: 32.

07. Giuliana Bruno, "Surface Tension, Screen Space," in *Screen Space Reconfigured*, ed. Susanne Saether and Synne T. Bull (Amsterdam: Amsterdam University Press, 2020), 35–54.

it describes a closeness and intimacy in the sensory apparatus. In my work, making conceptual and aesthetic decisions means performing actions that bring me closer to what I am exploring – it means being in touch. It means peeling away a layered consciousness where mental images – and their rich interactions with lived life – are woven together with newly acquired knowledge from the material

I work with. It is about taking a step out into the unknown and being open to endless possibilities, to coming into contact with the consciousness that lies in the skin, tendons, electrons, plasma, and water, experiencing the body as physical pressure, as in the masses that touch each other. In this sense, the haptic sensation is central to everything we sense, do, and experience as real.⁰⁸ How I am touched by my sense impressions has to do with my intellect as well as my associative, plastic, and creative self. The brain – that which thinks – forms nerve patterns in the nervous system. It then converts these neural patterns into clear mental patterns that constitute “the highest level of biological phenomena”.⁰⁹ According to Antonio Damasio, this means “to make images: visual images soundimages, tactile images, and so on, images for each and every object and each and every concrete or abstract relation, every word or sign.”¹⁰

In the modular system for building sculptures, the exhibition space, or public space is the substrate out of which the elements are projected. For example, *Minni* was suspended from the walls of the gallery, while the sculptures *CSS2022/01 Vessel (Arctic Ice)*, *CSS2022/02 Vessel (Arctic Ice)*, *CSS2022/03 Vessel (Arctic Ice)*, *CSS2022/04 Vessel (Arctic Ice)* became the substrate for a new series of elements, thus becoming an even larger assemblage in the installation *Ship of the Heart OSSAIT1300–2023* (2023) – that is to form the final public presentation of the project. By recalling the archaeological excavation site, in the Medieval Park in the Old Town district¹¹, this installation will rest on the idea of an artwork being an assemblage that is forever becoming with the space it enacts. I believe artworks become embodied in relation to where they are situated. For this, Maurice Merleau-Ponty’s argument that the body’s role in phenomenology is to be the internal horizon of the body’s density: the fact that the body has a front and a back, a left and a right, an up and a down, allows us to surface in a world always already anticipated as meaningful. Thus, the mind is present in the flesh when it questions – What is it like to be a body in space?

Enaction

The unfolding of this project as an assemblage – where human and technological apparatuses, as well as other non-human elements, are united in the process of becoming, of striving towards new knowledge, or making their way towards the construction of a new common sense, a new metaphysics – was entirely open-ended. Then, enaction, or embodied enactment, offered an alternative perspective. I started to think of

07. See more on this in Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses*, 2nd ed. (Chichester: Wiley, 2005).

08. Catherine Malabou, *What Should We Do with Our Brain?* (New York: Fordham University Press, 2018), 131.

09. Antonio R. Damasio, *The Feeling of What Happens: Body and Emotions in the Making of Consciousness* (New York: Harcourt, Brace and Company, 1999), cited in Catherine Malabou, *What Should We Do with Our Brain?* (New York: Fordham University Press, 2018), 131.

10. Antonio R. Damasio, *The Feeling of What Happens: Body and Emotions in the Making of Consciousness* (New York: Harcourt, Brace and Company, 1999), 9.

11. The site was recently named Middelalderparken (the Medieval Park). The park includes the ruins of two churches, St. Mary and St. Clements, and some former train sheds.



Fig. 28 | the Medieval Park towards Bjørnvika – 2020

Image Courtesy: Petrine Vinje, 2020.

this process of assembling as being *enactive*. In the “Embodied Mind: Cognitive Science and Human Experience”, Varela, Thompson, and Rosch write,

“Living beings and their environments stand in relation to each other through mutual specification or codetermination.”¹²

They coined the term *enaction* to describe the dynamic interplay between the self and the world. They envision the mind, body, and environment coming into existence through a mutual process of *co-dependent arising*, which refers to bringing the body in relation to technology, materials, and the environment – all of that which is non-human – to the fore. However, enactive embodiment is not the grasping of an independent, outside world by a brain, a mind, or a self. Rather, it is the bringing forth of an interdependent world through embodied action. Thus, enaction offers an alternative to Cartesian dualism, computationalism,¹³ and cognitivism. Combining the assemblage with the enactive embodiment, thus, establishing “enactive assemblage” as one possibility among the ways to working with cultural memory means moving from being a passive observer and recipient to actively being a part of changing memory. For me, engaging with enaction in relation to the process of assembling sculptures means to approach mind–body, organism and environment, as mutually enfolded in each other: as not one, not two.¹⁴ This means thinking of the museum and the artefacts as part of a larger, monumental system of knowledge or memory, as surfaced through artistic research. The artworks are connected to the research material, and the exhibition – or public space – is connected too, and thus part of, the assemblage. This stance aims not to establish new hierarchies between different elements, but rather to allow the spectators to unfold the meaning of the artworks in light of their enactive embodiment. We enact our mind-bodies through our deep and continuous communion with whatever is becoming. For me, artistic process is trying to root myself in what I experience as my *coming to knowing* – an embodied state where both the subconscious and emotions flow freely. It touches and plays into what is cognitively effective in me and relates to the world outside through my methodological approach. In this process, I allow for everything, but have specific preferences and guidelines, I set frameworks, but in the next moment, I discard them. By understanding this process as something that is *becoming*, and as part of an assemblage, the task I have given myself feels more possible to fulfil, as it unfolds in relationship to environments that are larger than my own. The works that has surfaced in the project period is a system of parts and entities, connected through and referring loosely to the concepts of material, memory, and meaning making. This describes how I understand my artistic process as enactive, and the artwork as an enactive assemblage.

Situatedness

The installation *Ship of the Heart OSSAIT1300–2023* (2023) will explore if the artwork can comment on and upheave space, time and engage with the site (which is in close vicinity to the archeological excavation and overlooking the expanding city in the innermost shore of the Oslo-fjord. With the installation I wonder if it can act as a contact

12. Francisco J. Varela, Eleanor Rosch, and Evan Thompson, *Embodied Mind* (US: The MIT Press, 1992), 198.

13. Computationalism is a philosophical positioning based on the premise that the mind is an information-processing system – that is, perception, cognition, and consciousness are seen as forms of computation.

14. Varela, “Not One, Not Two”, 62–67.



Fig. 29 | NIKU excavation site in the Medieval Park — June 2022. Ingrid Kristensen Bjørnaali assists in collecting sifted humus for the research.

Image Courtesy: Petrine Vinje, 2022.

surface for an enactive engagement with the site, where the objects are only part of the experience, adding to the history of the site and the artefact. It takes in the perceiver and his/ her body as it moves through space, as well as the actual time of the perception of the work and becomes part of an absolute contingency between the artist, research, perceivers, its objects and the situatedness, through human consciousness' hidden structures. The installation aims to articulate phenomena that is circulating around the object as a dynamic process of transfiguration, change, and what happens between the known and the unknown, the scientific and the artistic, and the systematic and the organic. Here, its placement within the actual context of the archaeological excavation site is crucial to the work and serves to explore the nature of cultural memory as it unfolds both backwards in the past and forward into the future as understood through various technologies and materials. Bringing enaction into this overlap of thinking-making means challenging the subject-object relationship that has structured Western societies for centuries, it opens up to a planetary building: Varela, Thompson, and Rosch writes,

"If planetary thinking requires that we embody the realisation of groundlessness in a scientific culture, planetary building requires the embodiment of concern for the other with whom we enact a world."¹⁵

Thinking-making with investigative aesthetics from an enactive position seems like a possible future scenario for artistic research in the museum as well as in the artist's studio. By giving space to contemplation and thoughtfulness through art, one can exercise a radical form of thinking, and cultural memory can thus fulfil its potential to become a force that can change.

Thinking about the unearthing and surfacing of objects, *Ship of the Heart OSSAIT 1300–2023* raises from the ground up – from the soil and the fossil – with artificial materials that communicate the slickness and cleanliness of the contemporary, which the expanding city will entail. It holds, contains, and stores a not-yet-known, something in-between, that aims to offer a change in experience and being. This change of experience through artistic formation and transfiguration of materials is as necessary as the change in our understanding of the way we cultivate our cultural memory and environment. These materials, shapes, scales, and sites see the mind-body, organisms, materials, technology, and environment as mutually enfolded in each other in an assemblage that seemingly unites in the surface of the sculptures but has nodes reaching out to the subjects engaging with the work and in the form of the archaeologists working on the site, the railways that will transport us in and out of the city, the seawater of the fjord, the Museum of Cultural History, and other museums and cultural institutions of Bjørvika – and to the coming generations of the Old City district [Gamlebyen] and the ones threaded along through history.

This is the *enactive assemblage* that makes up an artwork.

15. Francisco J. Varela, Eleanor Rosch, and Evan Thompson, *Embodied Mind* (US: The MIT Press, 1992), 245.



Fig. 30 | NIKU archeological excavation site in Medieval Park — January 2021.

Image Courtesy: Petrine Vinje, 2022.



Fig. 31 | Detail CSS2022/01 Vessel (Arctic Ice) — 2022 (Solid Surface composite, aluminium profiles, sifted humus from the Folloline excavations in Old City district).

Image Courtesy: Petrine Vinje, 2022



Fig. 32 | Ship of the Heart OSSAIT1300–2023 – 2023
(Solid Surface composite, aluminium, steel) 476×200×150 cm
Installation in the Medieval Park, Ladegårdshagen, December 2023.
Image Courtesy: Carsten Aniksdal, 2023



Fig. 33 | Ship of the Heart OSSAIT1300–2023 – 2023
(Solid Surface composite, aluminium, steel) 476×200×150 cm.
Installation in the Medieval Park, Ladegårdshagen, December 2023.
Image Courtesy: Carsten Aniksdal, 2023



Fig. 34 | ASS2023 ARCHIVE (White Onyx, Aztec Gold, Grey Onyx, Smoke Drift Prima, Sagebush, Juniper)
– 2023 (Solid Surface composite, aluminium, steel) 184×240×25cm

Image Courtesy: Petrine Vinje, 2023

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APPENDIX I

On Surfacing

Subject: I propose to you, if you agree, to let a particular moment come back And you will give me a sign when you have found it.

(Silence)

Object: Yes, I have it.

S: When was it?

O: The moment I think of happened four summers ago. The mud had already become warm around me. Another cold winter was over, the ice crystals were melted and the soil dark and warm.

S: Where did you experience this moment?

O: It was on the public road between the fjord and the Bishops castle. Here I laid between two wooden pillars, and felt the soils of the earth moving.

S: If you agree, I would like you to go back to this moment.

S: Take your time, and try to go back to that moment, where you laid between the wooden pillars, and feeling the soils of the earth moving. When you are there, do you see anything?

O: I cannot see. I am sensing beyond seeing.

S: I would like you to describe this place or this scene to me, as you saw it.... Or sensed it, at the time...

O: In my first days between the pillars, the humans were present. They walked over me, with their cattle and carriers, chatting in pairs or larger groups of people. I felt their foot soles, how they pushed me under, then came pebbles, sand and mud to cover me, enclosing me completely. The light from that what warms and the sounds from they who were occupied waling, pushing, dragging became muted, all of myself were covered and over time it was all gone. I heard nothing, I saw nothing, I felt nothing.

S: How do you feel it all be gone?

O: When not being held anymore, when not being close to a body.

S: You feel it all be gone, when you are not being held anymore, when you are not being held close to a body?

O: Yes, that is correct.

S: You say the sounds are muted. How did you realise the sounds are muted?

O: The sounds from the humans, with all their activities, is lowered to low frequencies. Dull and boring. The sound of the beholder, whispering when they held me, is gone. The sound of touch is gone. At times, extremities of sound cut down the earth and reached me. Like bangs. I felt the tremblings of the earth, I too was shaken by the tremor in the inner city. For long swaps of time I laid there, barne, and had no sense of time moving.

S: Look around you again, at what you were seeing then ...

O: Over the year hundreds my surroundings have changed. The wooden pillars I once laid between, after I felt out of someones hand, have by far lost their resilience and hollow clang. By now they are only moist splinters, darker in colour and structure than the soil.

S: And this moment that we are investigating, is when it all changed. Can you tell me what happened?

(Silence)

O: The blue-black colour of my skin is pure illusion: when sunlight, white light, strikes the surface, only blueblack is reflected. With out the sun it is nothing. I know light best in its diluted form: a gentle rain of photons falling from the sun that illuminates and warms. Prismatic surface illuminated with white light – a mixture of all colours, most of the colours are invisible; a few reflect. My surface mirrors that reflect only the colours. I see nothing.

S: What lies hidden in within your tightly squeezed benedictions?

O: My meaning is an organized whole that you have to perceive as more than the sum of my parts. You might interpret me as a “pattern” or a “configuration”. But if you allow yourself to be released from your mind’s self- organizing structures, that constantly forms a global whole, you will perceive me - as a summary of all my parts. All of my parts are just as important as the other.

S: Who are you?

O: «I am what I am».⁰¹

S: What are you?

O: “I become what I become”⁰²

01. Earlier forms of the Hebrew language did not have strictly defined past, present, or future tenses, but merely perfective and imperfective aspects, with past, present, or future connotation depending on context. Later the perfective and imperfective aspects were explicitly refashioned as the past and future tenses, respectively; with the present participle also becoming the present tense. This also happened to the Aramaic language around the same time, and later in some varieties of Arabic (such as Egyptian Arabic).

02. ■ cannot be perceived. ■ cannot be embodied. Refusing. Stop. The transcription of the tetragrammaton ends at the explanation of the meaning and origin of the acronym. What ■ is is not known. Likewise, the quantas does the same in the tomography of the amulets: the neutrons penetrate the material as requested, but occasionally the beam of neutrons drops to 0, and the image result is also equal to 0: a black surface, like Malevich's black square, except for some white little dots, which are the negative of the neutrons themselves? It is not known either. This unknown space, which contains both space and time and is rooted in the material – is essentially immaterial.

And we only reach it by trying to get in touch with it - to touch it - to be in touch. To become - to be forever becoming.

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When the word tetragrammaton⁰¹ makes itself in the mouth
it is from open lips that lets air in,
holding it back to the sides of the oral cavity,
slamming the frontal muscles of the tongue into the palate,
pressing the vocal chords out in a E from the deep of the chest,
rolling the tongue into an R and the palate in G,
closing the lips around MM, opening the lips over the A,
and the word, another name or a code, of an anagram
of which name that shall not be said
the Four letters - is formed.

01. Tetragrammaton is Greek and means: “the Four Letters”. The four letters refers to the four Hebrew consonants JHVH. Since saying the name of is forbidden in Hebrew traditions, one says, referring to the sublime, quite simply “the Four Letters”. This designation is well known on archeological finds in the Middle East, but it also occurs on at least seven amulets, stones and wooden-pegs with Runic letters from the Nordic countries dating from year 1000–1300 CE. Here, in our local variations they are often mixed with words and motifs from Latin and Norse languages. On the amulet C60965/037 it is inscribed (+) t i/e (t̄)/r̄ākramat(ō // n̄) – visible on the frontside. **Source:** Wilster-Hansen, Birgit, David C. Mannes, Karen L. Holmqvist, Kristine Ødeby, and Hartmut Kutzke. “Virtual Unwrapping of the BISPEGATA Amulet, A Multiple Folded Medieval Lead Amulet, by Using Neutron Tomography.” *Archaeometry* 64, no. 4 (2021): 1–10

det harde og det myke

å stå i ett urokkelig forhold til en tid; som opplevelsen av at det jeg lever i er avgjørende; at de valgene jeg gjør for meg selv og de andre er av stor betydning; som i Tidens Ende
det er det harde

å gå etter, undersøkende, det som er inne under huden; inn i hjernens lapper og vikler; inn i marginen, kroppsvæskene, tennene, spyttet, slevet, sæden og blodet, inn i det som er livet, sykdommen, sorgen, bruddene og døden
det er det harde

å stå i ett pustende forhold til en tid; som opplevelsen av at det jeg lever i er avgjørende; at de valgene jeg gjør for meg selv og de andre er av stor betydning; som i Tiden som Kommer
det er det myke

å tillate nye dreininger, å få være hud, og innenfor et stykke kjøtt, og oppleve at huden forsvinner; ikke skiller; og det som berører kan ikke snakkes om, det har ikke språk; er ikke i tiden; det har ikke form eller formale begrensninger
det er det myke

å få være det kjøttet som former det som formes vil, det som hugger i sten, splitter treet, graver seg ned i mineralsk materie; gir språk til det som ikke snakket, gir form til det som ikke har.
å møte det harde med det myke, be om en vekselvirkning

the hard and the soft

to stand in a unshakable relation to a time, as in the experience of the time being decisive,

as in the experience that the choices you make for yourself and the others are significant, as in the End of Time
that is what is hard

to really get under the skin, searching, into the lobes and wrinkles of the brain,
into the teeth, spinal cord, bodily fluids, spit, saliva, semen, and blood, into that which is illness, sorrow, breaches and death
that is what is hard

to stand in a breathing relation to a time, as in the experience of the time being decisive, as in the experience that the choices you make for yourself and the others
are significant, as in the Coming of Time
that is what is soft

to allow new twists and turns, to be a piece of meat, to be allowed to be inside this skin and to experience that it disappears, does not divide, and what touches cannot be talked about, it has no language; it is outside time; it is unmediated by form and formal limits
that is what is soft

to be the meat that forms that which allows itself to be formed, that which splits the wood, digs down in mineral matter, gives language to what does not speak, gives form to what is formless
to meet the hard with the soft, and ask for reciprocal action

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LIST OF WORKS

Ship of the Heart OSSAIT1300–2023

Installation for the Medieval Park, City of Oslo, 05–07 December 2023, with the audiowork Silverlines (2023).

ASS2023 ARCHIVE (White Onyx, Aztec Gold, Grey Onyx, Smoke Drift Prima, Sagebush, Juniper)

Solid Surface composite, aluminium, steel, 2023.

Unravelling a Radical

HD 16:00 min, 5:1 sound, 2022.

Ship of the Heart (Dune Prima, Sahara)

Solid Surface composite, aluminium, steel, 2022.

Ship of the Heart (Glacier White)

Solid Surface composite, Valchromat composite, adhesive filler, plaster, powdered marble, aluminium, steel, 2022

Ship of the Heart (Deep Titanium, Gravel)

Solid Surface composite, Valchromat composite, aluminium, steel screws, 2022.

Ship of the Heart (Deep Black Quartz, Deep Space, Nocturne)

Solid Surface composite, Valchromat composite, aluminium, steel screws, 2022.

Ship of the Heart

Valchromat composite, aluminium, steel screws, 2022.

Black Current Image #1–5

CT foto, giclée print on paper / aluminium, aluminium frame, 2020–22.

Minni (Mint Ice, Imperial Yellow, Aluminium, Green Marble)

Solid Surface composite, aluminium, steel, 2022.

ASSB201922/C/01

Solid Surface composite, solid bronze, Archival Tyvek, ink, polyester thread, polyester filling, 2022.

ASSB201922/B/01

Solid Surface composite, solid bronze, Archival Tyvek, ink, polyester thread, polyester filling, 2022.

ASSB201922/A/01

Solid Surface composite, solid bronze, Archival Tyvek, ink, polyester thread, polyester filling, 2022.

CSS2022/01 Vessel (Arctic Ice)

CSS2022/02 Vessel (Arctic Ice)

Solid Surface composite, aluminium profiles, sifted humus from the Folloline excavations at Gamle Oslo, 2022.

CSS2022/03 Vessel (*Arctic Ice*)

CSS2022/04 Vessel (*Arctic Ice*)

Solid Surface composite, aluminium profiles, sifted humus from the Folloline excavations at Gamle Oslo, 2022.

APT202122/ 1-12

Collage : cotton paper, Archival Tyvek and ink, 2021–22.

F-U-b-A-R-K (Oslo: O, 2023).

Surfacing Solids catalogue (Moss: Galleri F15, 2023).

Works appearing in paper at hand or in the Appendix II:

HSS 201914 (*Glacier White/ Light Ash*)

HSS 202010 (*Glacier White/ Light Ash*)

HSS 202009 (*Glacier White/ Light Ash*)

HSS 202003 (*Glacier White/ Light Ash*)

HSS 201902 (*Glacier White/ Light Ash*)

HSS 201913 (*Glacier White/ Light Ash*)

HSS 202008 (*Venaro White/ Light Ash*)

HSS 202007 (*Venaro White/ Light Ash*)

HSS 202006 (*Venaro White/ Light Ash*)

HSS 202005 (*Venaro White/ Light Ash*)

HSS 201916 (*Venaro White/ Light Ash*)

HSS 201918 (*Venaro White/ Light Ash*)

Solid surface composite), 2021

Responsive environment #1

Archival Tyvek, drawing ink, chipboards, paint, pinewood, screws, stainless steel of unknown origin, 2021.

yellow, translucent feeling of urgency in my chest, fingers chatting while I walk (Light Ash/ Blue Diamond)

Solid surface composite, 2021.

green-red hissing sound in my ear, following the rhythm of my breath (Light Ash/ Blue Diamond)

Solid Surface composite, 2021.

the colour of red, in my throat, that is fear (Light Ash/ Blue Diamond)

Solid Surface composite, 2021.

Two videos documenting the workshop Laboratory RISS - Meaning-Maining in Material and Digital Networks, 2021.

Silverlines, 3D- animation, video, 2022.

ISBN: 978-82-7038-433-4