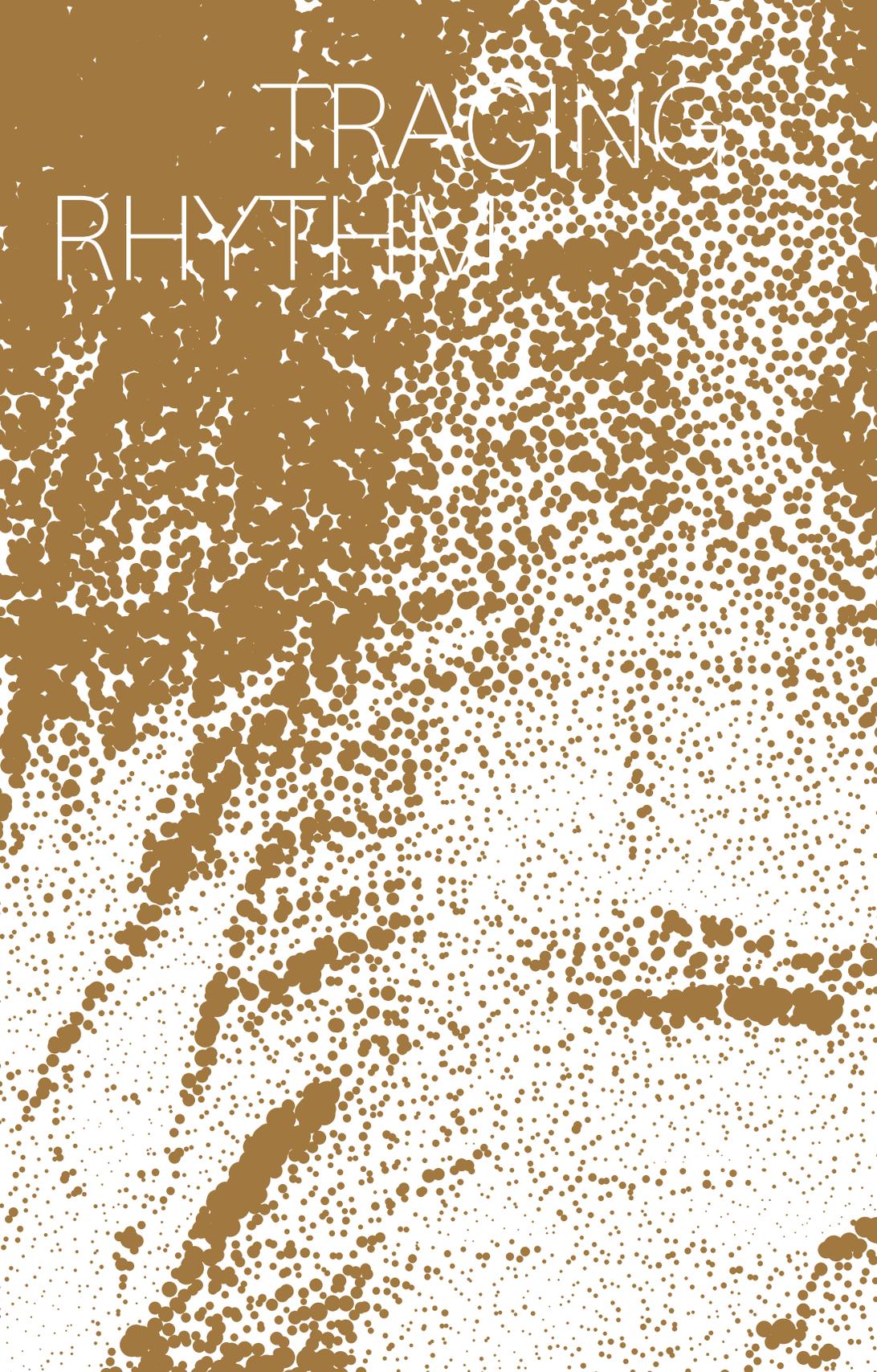


# TRACING RHYTHM



# Tracing Rhythm

*Tracing Rhythm*

Published by the Art Academy  
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# Introduction

Rhythm is everywhere. It is breath and heartbeat; it is the sound of a drum and the repetitive flint carved lines in stone done by a prehistoric human being in Fontainebleau. It is the flickering screen and a million digital processes too small to see. It is engraved in the depth of our minds and bodies. It is how we remember. It is in how we walk, how we talk, how we write, and we act together.

According to Encyclopedia Britannica, rhythm (Greek *rhythmos*, derived from *rhein*, “to flow”) is an ordered alternation of contrasting elements, and according to Roland Barthes, both painting and writing started with the same gesture, one which was neither figurative nor semantic, but simply rhythmic.

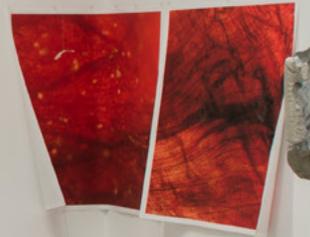
In this publication, exhibition, and seminar (6th of December, 2022 at KMD, Bergen) the contributors have all approached rhythm through contemporary artistic, academic, and archaeological imagination, starting with some engraved and painted lines drawn by our stone age ancestors in France and South Africa.

The initiative for this publication originates from the international artistic research project *Matter, Gesture and Soul*, based at The Art Academy – Department of Contemporary Art, Faculty of Fine Art, Music and Design, at the University of Bergen.

Geir Harald Samuelsen  
Editor and founding leader of  
*Matter Gesture and Soul*  
2023

# Exhibition









La Kahina

2022

Lineup: white & black board, photo (1962), photogravure, prints in *terra d'ombra*, smoke-black and Prussian blue, mounted w/plexiglass and painted wing screws.

*La Kahina* is a lineup featuring a display from an ongoing investigation. The lineup is similar to a detective board, but without a crime to solve. Rather, the possibility of a crime lies in bringing the exhibits of an ongoing investigation to public view: a display of a photogravure based on a photo shot in Brooklyn in 1962. The lineup seeks to query and establish a visibility *between* archival storage and retrieval: The wing-screws can be removed and the order of the elements changed. Photogravure is here used to reveal a photo down to the contents from the moments of the take. The light-conditions, the physiologies performing the light-conditions—making their claims before and behind the camera—the chemistry of the emulsion and the development of the print. Photogravure features a *studio* production of what archaeological excavation does in the *field*: The itinerancy of gestures in a process of discovery alternates between technical and sensorial detection through a myriad of small operations as well as between studio- and fieldwork.

The lineup is part of an investigation into the life of a couple working for the Norwegian Foreign Service—La Kahina and her husband K—using conjointly methods of archaeology and artistic research. The lineup is part of a reflective apparatus including 71 diaries and diplomatic texts.

*Acknowledgements to: prof. Jan Pettersson and Enrique Guadarrama Solis (MA) for introductions to photogravure and artistic research fellow Bjørn Blikstad for cadmium/pattern red.*



The Physics of Grief, I, II, III

2021

Concrete and aluminum

Through fragments originating from personal belongings, these works reflect repeated attempts to anchor memories from the past to present concrete objects. The elements have their sources from a number of inherited objects such as books, clothes, and other personal items. The objects are packed in suitcases and other containers used for transportation and have thereafter gone through numerous processes casting them in concrete. The casts materialize a distance to the original objects; here one can also glimpse remaining fragments from the original elements. As support for the concrete objects, a series of wooden pieces casted in recycled aluminum functions as plinths. They are copies of the wooden construction of the stand underneath a *terrella*, a scientific structure that can simulate the earth's magnetic field. One may perceive the wooden pieces, together with the traces of personal objects, as silent witnesses to the story of the scientist Kristian Birkeland, one of the founders of Norsk Hydroelektrisk Kvælstofaktieselskap (today Norsk Hydro), who lost all his possessions in a shipwreck in the Pacific Ocean. The works appear as physical echoes and sensed history, manifested in objects that can remind one of a place holding remains and traces from the past.

These works were initially made for an exhibition at Rådhusgaten 20 in Oslo, where Birkeland's company was founded in 1905.

Bøthun has for many years worked with material transformation processes involving copying and tracing as recurring themes. She often asks questions about hierarchies of values and how people link these to everyday objects.



Enter Sandstone

2022

Rhythmical Sound Installation

Haptic Drawing (Folded)

2022

Metallic paint, Magnesium and Pastel on paper

*Enter Sandstone* is a performative (musical) sound piece that takes you into the interior of a gogotte, a sandstone found in Fontainebleau, France.

The piece is a composition that consists of several layers of rhythmical soundscapes recorded inside and outside of the stone. A small microphone is placed inside a hole in the stone, a man-made microscopic cave, with two microphones recording in stereo from the outside. A piece of flint is used to trace the surface of the gogotte, recording the sound of the topography and of the different textures of the stone, making it into a joint composition between the gogotte and the artist.

A gogotte is a naturally shaped sandstone concretion consisting of tiny quartz fragments held together by calcium carbonate. The finest specimens are found in Fontainebleau, France—renowned for its extremely fine-grained, porcelain-like sands—and each of these natural mineralogical works of art take on unique forms, often evoking clouds, whirlwinds, animals, or ghosts or the shape of an underground mushroom. The gogotte is created by sand and silicate and shaped by slow-flowing water. It is a small-scale resemblance of the huge sandstone boulders that are scattered around above ground in this forest.

During the Mesolithic period, the population in this area used the caves and shelters underneath these big boulders as boards for abstract, geometric engravings made with flint.

*Enter Sandstone* is an artistic re-enactment of these engraving gestures.

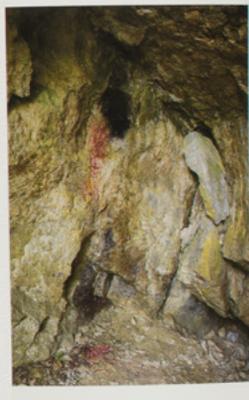
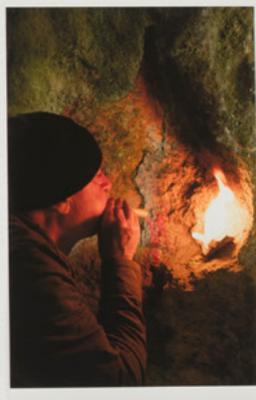
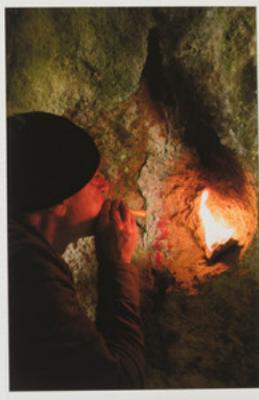
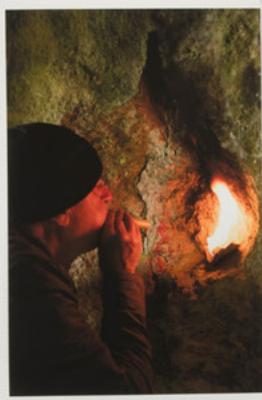
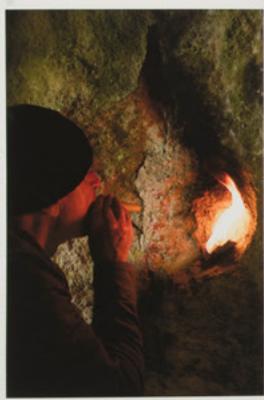
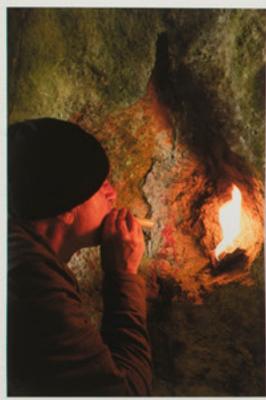


Dragoş Gheorghiu (RO)  
Mihaela Moţăianu (RO)

The Rhythm Of Breathing, Colouring,  
and Lighting Experimenting Palaeolithic Cave Art  
2022  
C - Print

*“I can say that the flame animates and reveals an image to the artist and ‘audience’ in the same sense a live performance does. This contrasts a popular presumption of cave art as being created primarily for an end product. I began to become acutely aware of this relationship as I blew the color toward the stone wall as shown in the pictures. In order to illuminate the place where the color was to be applied, the light source had to be very close both to the wall and the blowing tube. In those moments the flame reacted violently to each exhalation that forcibly emitted air, sounds and color. I found that the movement of the flame materializes the performer’s breath not only for the artist but with the artist as performer for his audience as well. In the same sense as any performance, it is fascinating to watch the unity created between the human breath and the movement of the flame, especially as the flame approaches and then departs with each inspiration and expiration. The fire becomes at this moment a revealer of the vital principle of life—i.e. the breathing—and of the colors and sounds.”*

Dragoş Gheorghiu, 2021, Experimenting prehistoric art. Animated sounds, colours and flames, *Pleistocene Coalition News*, Vol. 13, issue 3, p. 8-9.



Somnifera

2022

Composition of objects from the artistic research process: gilded dandelion leaves and root (*Taraxacum officinale*), honey, poppy seeds (*Papaver somniferum*), dor beetle, a series of ink prints on rice paper, red oxidized magnetite from Rana Gruver, stones, and pieces of asphalt from the shore.

*Somnifera* addresses the opium poppy's abundant quantity of narratives in a society where we are alienated from the cycles of nature, such as life/death, the raw materials of life, and species' own life stories. As much as we originate from the same matter, we are disconnected from our unquestionable interwovenness with nature. Since the dawn of time, we have milked the benefits of the opium plant, while politics, religion, and a cynical multinational drug and pharmaceutical industry have assigned the plant a controversial role on the world stage. The plant's power to both save life and take life is the essence of this art project, with the intention to contribute to a holistic debate about the opium poppy's potential—to lift it out of the shadow of condemnation and give it its rightful bright place among us.

The artwork flows between dream and reality, where astrological consultations and ecstatic trance experiences are part of an artistic research process in which today's imaginary world is intertwined with antiquity and prehistoric times. To guide the artistic process, the artist uses re-enactment inspired by experimental archaeology when she transforms herself into a three-thousand-year-old figurine, "The Poppy Goddess and Patron of Healing".

The knowledge-harvesting is materialized in a visual collection of poppy recipes based on ethnobotanical knowledge from various parts of the world.

*The artwork is co-created with artistic addiction therapist Märtha Soline. Video recorded by Cristián Weidmann Cabrera and Petro Keene. Microscope photos of poppy seeds and petals by Lene Cecilie Hermansen, Imaging Centre NMBU. Thanks to Karsten Benjamin Ekhougen Larsen for help with installing the artwork. Supported by Arts Council Norway.*



Maarten Vanden Eynde (BE)

**Histories of Memories I & II**

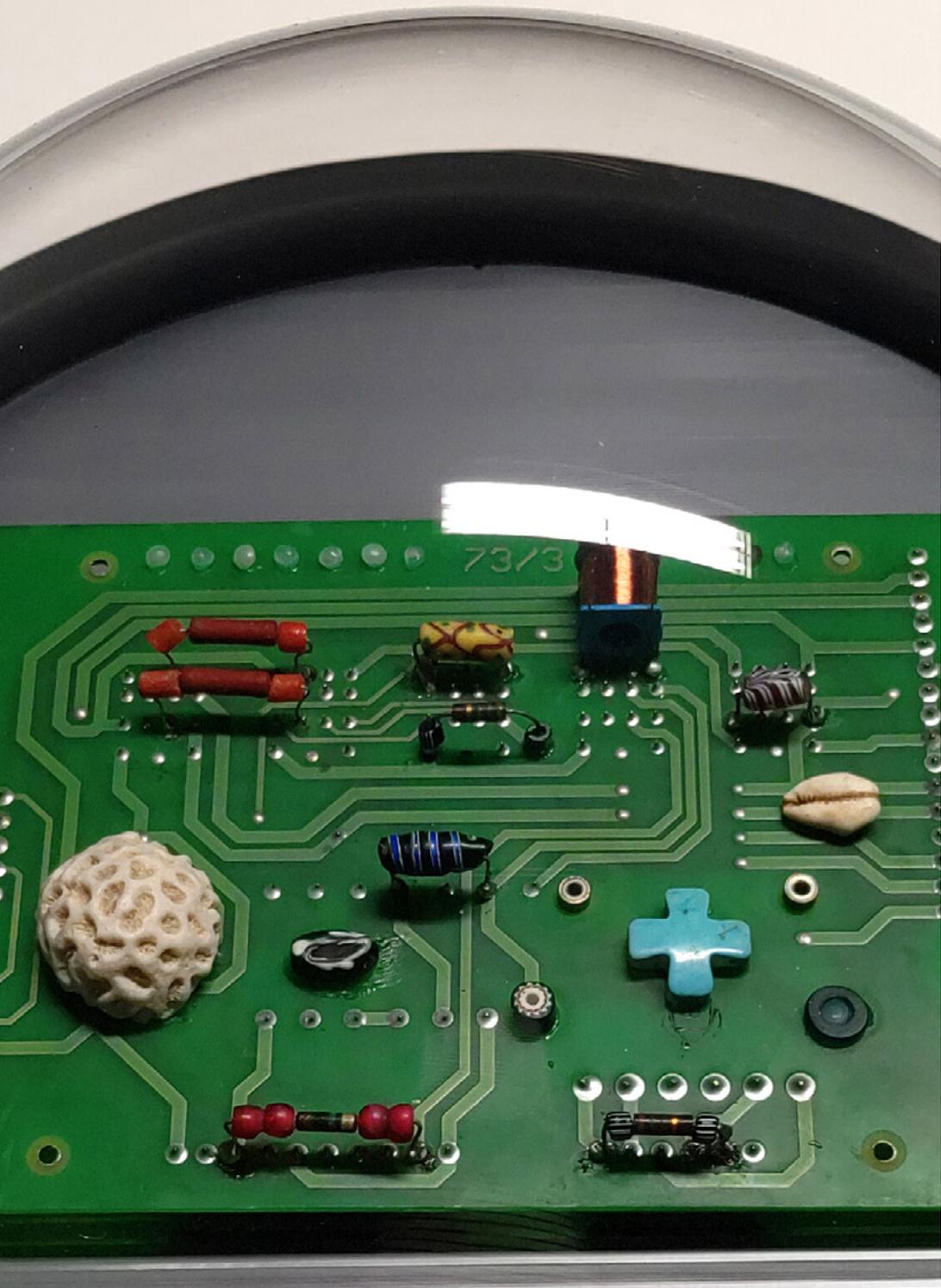
2022

Silicon wafer, printed circuit boards (PCB), brain coral, glass trade beads, shells, resistors, and various electrical components under plexiglass CCTV dome.

35 x 35 x 20 cm

*Histories of Memories I & II* consist of an assemblage of various elements that represent the history of memory. Through the development of mathematics and binary code in Africa, writing and other technologies of remembering and memory storage eventually emerged.

*Unfortunately, the two artworks could not be exhibited as they were lost during flight transportation.*



Research project on the legacy of the artist  
Agnes Susanne Schulz (Leipzig 1892—1973)

Inkjet photos of Agnes Schulz herself and her  
paintings (copies) of prehistoric rock paintings in Scandinavia.

A fundamental aspect of rhythm is movement and conscious awareness thereof being the ebb and flow of our existence, as in the rhythm of our breath. In prehistoric rock paintings, visual expressions in lustrous hues of ochre pigments create a sense of rhythm in many different forms, with illustrations of fascinating depictions—a rhythmical movement of animals, humans, geometrics, and obscure images.

The remarkable life of German artist Agnes Schulz may be viewed in terms of the concept of rhythm or, indeed, Tracing Rhythms. Schulz was no doubt captivated by the beauty and masterfulness of prehistoric rock art. Her remarkable devotion to copying rock paintings with her numerous field trips while transporting her palette of colours and artist's paraphernalia of paper, pen, and brush has resulted in a rich legacy of exquisite watercolour paintings—including those of the expeditions to southern Africa (1928 to 1930) and Scandinavia (1934 to 1935). Her method of copying rock art was inspired and influenced by German ethnologist Leo Frobenius, who in Africa encouraged his artist companions to capture the essence of the spirit of the art.

Agnes Susanne Schulz was born on 6 October, 1892 in Leipzig, where she trained as an artist. Schulz was part of the team of artists associated with the Frobenius Institute from 1923 until her retirement in 1957. During her time there, then known as the Forschungsinstitut für Kulturmorphologie (the Research Institute for Cultural Morphology) in Munich, Schulz produced an impressive number of over 700 rock art paintings and around 450 ethnographic images.

Her expansive fieldwork in Scandinavia (1934 to 1935) as well as in Africa and Australia resulted in a significant contribution to the Frobenius Institute's collections. Schulz, after her schooling, spent six years at the Royal Academy for Graphics and Book Trade (Königliche Akademie für Graphik und Buchgewerbe, today the Academy of Fine Arts/Hochschule für Grafik und Buchkunst, Leipzig), founded in 1764, where she held a keen interest in wood engraving and woodcuts as illustration techniques. In 1917, she moved to Ebenhausen near Munich, where she developed her own

artistic work and carried out art history studies at the Bavarian State Library. In August 1923, Schulz began her Institute activity as the first scientific draughtswoman for Frobenius. After the end of the First World War, the ethnologist Leo Frobenius moved to the Nymphenburg Palace in Munich with the “Afrika-Archiv”, which he had renamed the Research Institute for Cultural Morphology (Forschungsinstitut für Kulturmorphologie) around 1923.

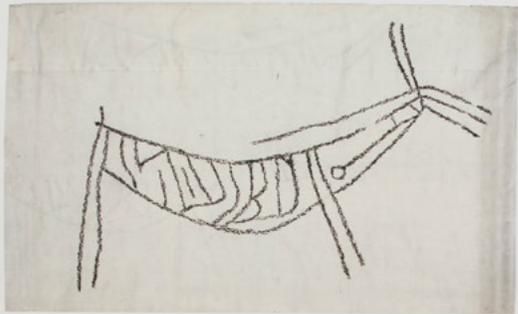
It is remarkable that Schulz undertook the Scandinavian expedition on her own over a period of five months. She was 42 years old at the time. The paintings of engraving sites were created on large canvases and are stored in the pictorial storage facility of the Frobenius Institute. These exquisite artworks have rarely been displayed in exhibitions.

There are 526 photographs by Agnes Schulz of rock engravings and painted sites on the Frobenius Institute’s digital archive website. The photographs pertain to her 1934 to 1935 sole expedition in Sweden and Norway. Interestingly, Schulz also formed part of the team of artists who accompanied Leo Frobenius to southern Africa in 1928 to 1930, which resulted in a collection of over 1100 field copies (watercolour paintings), many in large-scale formats. Schulz copied not only paintings of rock art sites but also engravings. Remarkably, the artists from the southern African expedition continued to record and paint rock art imagery for the remainder of their lives in different regions of the world.

From the mid-1960s, Agnes Susanne Schulz lived in the holiday home of her colleague Elisabeth Pauli in Capoliveri on the island of Elba. Agnes Schulz died on 25 December, 1973, two years after the publication of her last major Australian work.

*Archive of the Frobenius-Institut, Frankfurt am Main,  
published with kind permission.*

*Pictures produced at Studio Technika, Oslo.*



Eamon O’Kane (IE)

Portal Stone

2022

Animation

Passage Series

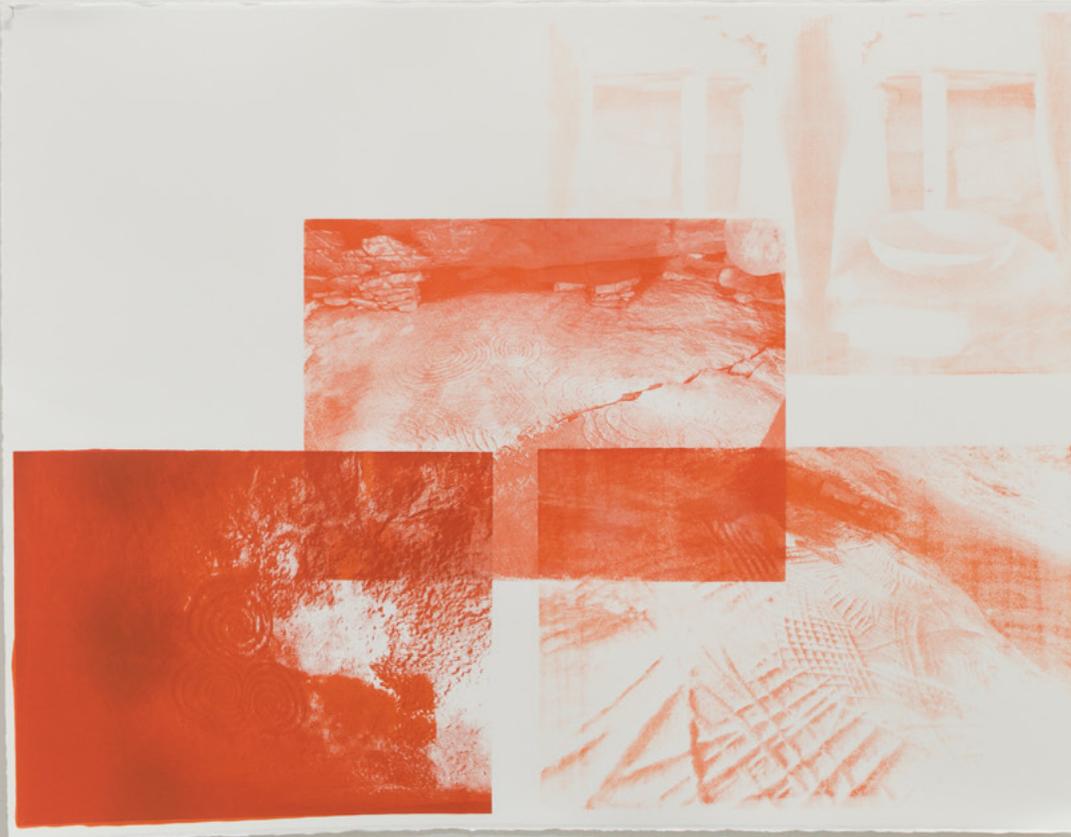
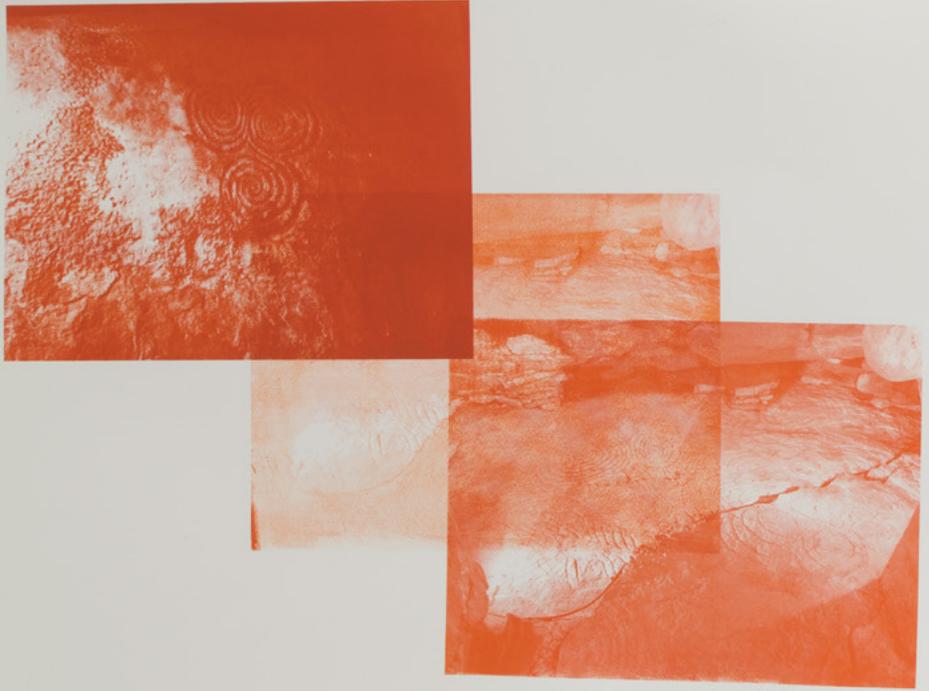
2022

Silkscreen on paper

*Portal Stone* is an animation that presents the entrance stone to the Newgrange Unesco world heritage monument in the Boyne Valley, Ireland.

*Chamber* is a video work that was made performatively in the gallery space with a combination of projection and silkscreen frames. It explores the stone carvings in the interiors of Newgrange, Ireland and sandstone caves in Fontainebleau, France.

*Passage Series* is a sequence of silkscreen prints exploring stone carvings in the interiors of Newgrange, Ireland and sandstone caves in Fontainebleau, France.



# Tracing Rhythm Symposium

Speakers: Elizabeth Velliky, Asbjørn Grønstad,  
Theodor Barth, Torill Christine Lindstrøm,  
Maarten Vanden Eynde, Viggo Krüger

## Rhythm in Moving Image Media

*Nothing is durable but what is caught up in rhythms.  
Bend content to form and sense to rhythms.<sup>1</sup>*

The point of departure for this presentation is the impression that rhythm perhaps has been an underexplored aspect in reflections and research on screen media—cinema, video, and television. As Alma Mileto observes in an interview about Sergei Eisenstein, rhythm may be considered “an anthropological means of organizing experience,” something that is “necessary to enact transformation” (quoted in *Necsus*, July 10, 2018).<sup>2</sup> In film studies, the vast attention given to questions of narrative and visual style has rarely been lavished on the subject of rhythm, despite its inescapable presence across the syntax of cinema. Editing is essentially a rhythmic expression, dialogue is immersed in rhythm, as are gestures and body language, and of course music, whether diegetic or non-diegetic. In this presentation, I will address some of the theoretical work on filmic rhythm that does in fact exist, consider some examples, and attempt to establish a (highly) tentative overview of the ways in which rhythm may be conceptualized and studied.

In the description of this seminar it gets noted that rhythm is something that is omnipresent in the world, incarnated in a diversity of phenomena—the movement of our bodies, the beating of our hearts, the constant automation of inhaling/exhaling, sexual acts, music, the tapping on my laptop keyboard as I write these words, the precise synchronization of individual movements as Ousmane Dembele passes the ball to Kylian Mbappe in France’s win over Australia last week, and many, many more. Maybe it is the degree to which rhythm suffuses so much of our everyday activity that makes us—or me, at least—tend not to think about it very often. In its sheer ubiquity, rhythm in a sense goes unnoticed.

In the domain of art, rhythm is decidedly trans-medial, or transaesthetic. While we might tend to see rhythm

as an intrinsic property of music, it also forms part of the other arts, most certainly film, video, and television. In his *Poetics*, Aristotle considers rhythm as one of the human instincts, a “natural gift,” which along with imitation and harmony eventually gave rise to the medium of poetry.<sup>3</sup> As the linguist Émile Benveniste has pointed out, in pre-Socratic philosophy the term *rhuthmos* referred to a transient and somewhat erratic form or figure. As Domietta Torlasco observes in her book *The Rhythm of Images* (2021), *rhuthmos* was something that would apply to “the form of a letter, the arrangement of a garment, and even a disposition of the character or mood.”<sup>4</sup> It was Plato, Torlasco suggests, that recodified the concept “to define the movement of bodies in a dance according to a *metron* or external measure; thus normalized, rhythm could fulfil the aesthetic requirements of a unified political community.”<sup>5</sup> In other words, before rhythm became something patterned and regimented, it was a form that oscillated, that was defined by improvisation and flow, and that pertained equally to both sound, image, and affects.

The notion of rhythm did not escape the attention of some of the influential French thinkers associated with poststructuralism. Notably, Roland Barthes writes about the idea of *idiorrhythmy* in his 1977 lectures *How to Live Together*. In readings of texts by Thomas Mann, André Gide, Émile Zola and others, Barthes considers different ways in which to live congenially and productively with others through respecting their individual rhythms.<sup>6</sup> In the article “The Echo of the Subject,” Philippe Lacoue-Labarthe claims that the Greek *rhutmos* constitutes one of the aspects, or “traits”, as he calls it, of the principle of differentiation.<sup>7</sup> The concept also gets a mention in Gilles Deleuze and Felix Guattari’s *A Thousand Plateaus* (1987; originally published in 1980), where the authors propose that rhythm acts like an antidote to the chaos inherent in any given environment, which they call “milieu.”<sup>8</sup> But the theorist who has arguably approached the notion of rhythm in the most comprehensive manner, is the poet and translator Henri Meschonnic (1932–2009). Known for his translation of the Hebrew verse of the bible,

Meschonnic wrote a massive study of rhythm, more than 700 pages long. Published in 1982, *Critique de rythme: anthropologie historique du langage* offered nothing less than a novel theory of rhythm.<sup>9</sup> Heavily influenced by existing works in linguistics and in literary poetics (including his own, as well as that of the aforementioned Benveniste), Meschonnic seeks to redress the neglect of rhythm in studies of prose and prosody, proffering the thesis that rhythm in fact governs meaning.<sup>10</sup>

Even though film and media studies have tended to concentrate their analytical and theoretical efforts on matters of graphic composition and narrative, as previously noted, one of the earliest *significant* attempts at crafting a more systematic theory of film was still very much preoccupied with rhythm. Sergei Eisenstein’s *Film Form*—comprised of key essays he wrote between 1928 and 1945—conveys the prominence of rhythm to the aesthetics of dialectical montage that was such a vital contribution of the Soviet cinema of the 1920s. In a frequently quoted essay on Dickens and Griffith, Eisenstein recalls that when this cinema was unleashed in the United States in the mid-1920s, what the critics responded to the most was the films’ “devastating rhythm.”<sup>11</sup> Distinguishing this, which he also calls “affective rhythm,” from Griffith’s “school of tempo,” Eisenstein understands “true rhythm” as something grounded in “organic unity”:

Neither a successive mechanical alternation of cross-cuts nor an interweaving of antagonistic themes, but above all a unity, which in the play of inner contradictions, through a shift of the play in the direction of tracing its organic pulse—that is what lies at the base of rhythm. This is not an outer unity of story, bringing with it also the classical image of the chase-scene, but that inner unity, which can be realized in montage as an entirely different system of construction, in which so-called parallel montage can figure as one of the highest or particularly personal variants.<sup>12</sup>

Elsewhere, Eisenstein observes that as a medium, film possesses a capability for “sensuous thinking,” which it reveals in its incorporation of an array of rhythmic (and ritual) states, from breath to dance, sports, violence, prayer,

and meditation.<sup>13</sup> Paraphrasing Eisenstein, the curators of the exhibition *Sergei Eisenstein: The Anthropology of Rhythm* (Rome, September 20, 2017—January 19, 2018) hold that cinema can transform the human body “into a ‘living medium,’ capable of ‘processing, receiving, and transmitting images.’”<sup>14</sup> Not only that, but rhythm also has the power to reconstitute temporality itself, in that it harbors a potential for the disruption of a “horizontal” or sequential, progress-oriented conception of time. This is because rhythm is prone to repetition and circularity, or what some critics see as “regression.”<sup>15</sup>

The “devastating rhythm” of Eisenstein’s montage, seen in film classics such as *Strike* (1925), *Battleship Potemkin* (1925), and *October: Ten Days That Shook The World* (1928), forms part of a wider historical context. During the heyday of the avant-garde movements in the early decades of the twentieth century, some filmmakers (for example the groundbreaking German cinematographer Guido Seeber) showed an interest in turning cinema into “a rhythmical art analogous to music.”<sup>16</sup> Earlier scholarship has interpreted this fascination as an expression of a passion for aesthetic formalism, whereas more recently it has been suggested that the gravitation toward rhythm in avant-garde cinema should be comprehended in light of what some critics see as “broader debates about rhythm, industrialization, and modern experience.”<sup>17</sup> One source of inspiration for these debates was economist Karl Bücher’s *Arbeit und Rhythmus* (1896, *Labor and Rhythm*), which in its consideration of traditional types of manual work defined rhythm as “the very essence of bodily labor.”<sup>18</sup> Extolling the conjunction of collective labor, work songs, poetry, and rituals before the age of the machine, Bücher painted a utopia of “communal rhythmical labor,” albeit one in the process of being superseded by the many technological breakthroughs of an accelerating modernity (his book came out almost simultaneously with the first film screenings in Paris in 1895). Crucial in this replacement of the human by the machine was the substitution of “the continuous circular motion of factory technology” for “the back-and-forth rhythmical movements of hands.”<sup>19</sup> For Bücher, modernity entailed the subjugation of

the body’s intrinsic rhythms to the temporality of the machine, in the process putting an end to what Cowan terms “the ritual, poetic quality of traditional labor.”<sup>20</sup>

Given the pervasive interest in rhythm in several of the experimental modernist cinemas, it is maybe a little puzzling that the enthrallment seemed to wane in the following decades. My suspicion is that this might, at least subsidiarily, have to do with the transition in the late 1920s from silent film to sound and with the relative prevalence in the art cinema movements of the 1940s, 1950s, and onward for the long take and for what later was dubbed “slow cinema” (not that this kind of filmmaking does not have a rhythm of its own, of course, but that would be material for a different paper).<sup>21</sup> Regardless of the reasons for it oversight, I want to return to my initial statement that rhythm, as both a concept and phenomenon, appears underexamined in cinema studies, media studies, and visual culture, at least in the English-speaking world (one thing that I discovered when researching this topic was a striking discrepancy: A vast majority of the sources that came up in various databases were French). But if we take the supposition that rhythm is the most “originary and all-encompassing sense,” to borrow the words of Rebecchi, it undoubtedly deserves to inform inquiries about aesthetic experiences to a much greater extent than before.<sup>22</sup>

Far be it from me to take a shot at something as gargantuan as some kind of taxonomy of rhythm in film and television; what I will briefly propose here is merely an extremely rough and improvised sketch of possible ways in which to think about rhythm. My starting point is Eisenstein’s claim that film is a vehicle for “sensuous thinking,” which materializes in a set of rhythmic situations (breathing, dancing, meditating, and so forth). In her book *Cinema Today*, Elena Oumano writes that a film’s rhythm may be “written into the script and/or come from many elements within shots—machinery, animals, the movement and language of humans, passing shadows, light flashing through objects, and diegetic music.”<sup>23</sup> Her short inventory is suggestive of the heterogeneous components of the medium, that all entertain some relation or other to rhythm.

(1) Perhaps the most obvious terrain of rhythm in film is montage. In a sense, the art of editing is about the creation of soundless rhythm. The so-called continuity system that has its origins in Griffith and classical Hollywood Cinema, also referred to as “invisible editing,” might not be the most fruitful way of illustrating this principle of “soundless rhythm,” but deviations from it often call attention to the rhythmic aspect. Here are a few examples: This segment from Hitchcock’s *The Birds* (1963) is a form of rhythmic montage that shows more than a little family resemblance to Eisenstein’s “devastating rhythm” or dialectical montage. Hitchcock cuts very rapidly between the progression of the fire and actress Tippi Hedren’s stunned face. A considerably more complex case of aberrant or irregular yet highly rhythmic montage can be seen in Nicolas Roeg’s *Don’t Look Now* (1973).

(2) A second stylistic avenue in which rhythm plays a part is mise-en-scène. An example are the *Rhythmus* films that the German painter, avant-garde filmmaker, and Dadaist Hans Richter made in the first half of the 1920s, which are sometimes taken to be the first fully abstract films in cinema history. The works play around with “elementary geometrical figures in motion organized into patterns,” to cite Malcolm Turvey.<sup>24</sup> But the composition of mise-en-scène could be rhythmic in more conventional films as well. In *Way Down East* (1920), for instance, Lillian Gish plays a girl who has been duped by a man, and filmmaker Griffith’s frames dexterously capture the rush of intense affects visible in her face. Noting how the immediacy of her cascading emotions would be impossible to communicate through a literary text, Erica Carter argues that the “effect of this play of facial expressions lies in its ability to replicate the original tempo of her emotions.”<sup>25</sup>

Furthermore, she contends that the “rhythm of our inner turbulence will inevitably be lost in every literary narrative.”<sup>26</sup> The face as an expressive site constitutes a salient topos in cinema (the Iranian director Abbas Kiarostami made a whole movie about it, *Shirin* (2008)), as does the movement of the body. Some would say that the fullest articulation of cinematic corporeal movement are scenes of violent action and of dance.

(3) A third realm in which rhythm could manifest itself in the screen arts is sound. The employment of music is obviously rhythmic in nature, but character speech and dialogue could likewise inscribe rhythmic patterns. Just consider this brief segment from the screwball comedy classic *Bringing Up Baby*. Finally, there is an additional site of rhythmic communication—besides music, background noise, and speech—that seems kind of overlooked in the critical literature on both film and rhythm: breath. In her treatise on images and rhythm, Torlasco finds that rhythm can be “a mode of being in the sensible—of the sensible” that may help us enunciate what she terms “the relationship between the aesthetic and the political.”<sup>27</sup> Breathing, as Davina Quinlivan has rightfully argued, “is rarely considered in film.”<sup>28</sup> As far as rhythm is concerned, breathing is one of its primary, if not to say primeval, manifestations. Before I started thinking about rhythm in the context of this seminar, I was struck by the significance of breath in the television show *Better Things*. Created for the FX channel by Pamela Adlon and Louis C. K. in 2016, the show—which was brought to its conclusion in April 2022 after five seasons and fifty-two episodes—centers on the character of Sam Fox (played by Adlon), an actress and single mother of three daughters, living in Los Angeles. The series revolves around the everyday lives of this family

and their extensive coterie of friends and relatives, often depicting the trials and tribulations of raising three somewhat unruly daughters with a candor and authenticity rarely seen in televised fiction. Whatever the plot of each single episode consists in, one constant is the cadence of Adlon's breath—indisputably the most uniquely expressive in all of American film and television. Her style of exhaling can assume a plethora of different forms—she alternately sighs, groans, moans, wheezes, and grumbles her way through the events of her day. Her respirational behavior in this short segment is quite representative.

Any of the fifty-two episodes could have been used to illustrate the same point. Yet remarkably, I have not come across any review or article that has even so much as mentioned what to me is quite a conspicuous part of the show. Adlon's persistent sighing throughout is sufficiently elaborate and structured to merit attention as a poetics in itself, one that this seminar's concept of "tracing rhythm" can help me develop further. Her character Sam's diverse techniques of exhaling constitute rhythmic interludes in themselves, whereas their frequency across the show serves to punctuate discrete blocks of narrative action. Her breathing thus generates a sense of rhythm both on a micro- and a macro-level of the show. This aesthetics of the human sigh might be analyzed according to other rhythmic parameters, such as modulation, pulse, and ambient milieu, not to mention that it is infused with other determinants such as gender, class, identity, and narrative placement, to name a few. In her book on breath and cinema, Quinlivan notes how breathing upsets the "opposition" between visibility and invisibility and how it "represents a subtle dimension of our bodies that can be seen to be both inside and outside of ourselves."<sup>29</sup> Wherever the process of breathing gets highlighted in audiovisual media, it may "shape our viewing experience," Quinlivan writes.<sup>30</sup> Moreover, she reasons that breath is, as a matter of fact, a culturally specific

phenomenon that can be both an index of "interior consciousness" and even a symbol of "the soul."<sup>31</sup> Drawing on the work of the French cultural theorist and feminist Luce Irigaray, Quinlivan delineates three thematic frames in which breath might be explored: 1) "the sensory and contemplative nature of breathing," 2) "the spiritual and sensible awakening of the body," and 3) "the body's relationship with the environment and air which comes to represent the communality of sharing breath and living within a shared space of air."<sup>32</sup> Irigaray's model links up with, respectively, the corporeal, spatial, and intersubjective attributes of breath.<sup>33</sup> The latter also seems reminiscent of the points Barthes makes in his lectures on wholesome co-habitation through respecting the rhythms of others. In any case, breath as rhythm and rhythm in the form of breath (in for example *Better Things*) can be examined in all of these three contexts—body, space, and community/environment. That, however, will be the ambition of the second and as of yet unfinished part of this paper.

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### *Background*

On the 6th of December, 2022, I was invited to participate at a seminar hosted by Geir Harald Samuelsen. The venue for the seminar was the Knut Knaus Auditorium at the Faculty of Fine Art, Music and Design. A group of invited scholars would share reflections based on photos of engraved and painted lines carved into stone by our stone age ancestors in France and South Africa (see example image above). The quest for us was to *approach rhythm through contemporary artistic and archaeological imagination*. In my case, as a music therapy researcher with a research interest in music therapy for children and adolescents' health and well-being, the invitation was tempting. In short, my interpretations of the images, as I presented them at the seminar, was a notion building upon an assumption that the early engravings can be understood as a form of “motherese”, a language form occurring between the child and the one rearing the child (Saint-Georges, Chetouani, Cassel, Apicella & Mahdhaoui, 2013). When communicating with their children, parents use what we call motherese, often referred to as “infant-directed speech”. In short, motherese is the spontaneous way in which primary caregivers speak with young children. Motherese is a concept that is relevant not just for small children. A pop song may function as a form of motherese (Murphey & Alber, 1985). Everyone who has had a song stuck in their head, like a riff, knows that this can be quite annoying, or soothing, depending on the listener. Some popsongs involve motherese-like voicings—imitating the voice of a baby or a calming mother.

### *The riff and motherese*

I started my speech with playing the guitar—an old Blind Willy McTell inspired blues riff. I tuned my Gibson Hummingbird acoustic guitar to a drop D open chord, making it sound dark groovy. At first when I started playing, the audience did not listen, but I kept riffing till it was quite difficult for them not to. After a couple of bars, I stopped, and now I had their attention.

In music, the concept of the riff derives from the Italian word *ostinato* (which means to be obstinate or persistent). The riff is a repeated musical phrase or rhythm that is used as a foundation for a piece or section of music. The riff is often used as a compositional technique, where a simple melodic or rhythmic pattern is repeated throughout a piece or a section of a piece, creating a sense of continuity and coherence. Famous writer Umberto Eco pays attention to the riff when he describes musical tools used by the jazz musician:

*In the case of jazz, for instance, the antecedents of a jam session are a certain familiarity with the other players and their work, and the frequent recourse to traditional tricks, such as the riff or other melodic-harmonic formulas borrowed from a common repertoire (Eco, 1989, p. 109).*

The riff can be used to create catchy and memorable hooks, as in the melodic structures of songs such as Rolling Stones' "Satisfaction," Michael Jackson's "Billie Jean," or Edvard Grieg's "The Hall of the Mountains King". Why did I choose to start with demonstrating the riff's genuine effect of grabbing the attention of my audience? The stone carvings, as I interpret them, are simple stubborn structures, just like a hook line in a pop song or a refrain in a ABBA song. The structures found in the caves immediately catch your eye, they drag you in, just like a caramel for the eye to see—instant communication. When looking at the pictures you are invited to imagine, to jam, and to think.

During my talk I went on to present my own professional academic field, music therapy. Looking at historical sources, there is evidence of music therapy in many ancient civilizations (Meymandi, 2009; Thaut, 2015). For example, in ancient Egypt, what is known as "The Ebers Papyrus", a medical text from ancient Egypt, describes the use of music to treat a variety of physical and mental illnesses. In ancient Greece, music was considered to have a powerful effect on the emotions and was used in medical treatments as well as

in religious and cultural rituals (Tsiris and Kalliodi, 2020). Also in ancient China, music was used as a healing art. In modern times, music therapy as an academic discipline is about studying how music is used with the aim of promoting health and quality of life and supporting community participation. During the Second World War, music therapy played an important role both for the physical and mental well-being of soldiers and civilians. For soldiers, music was often used as a form of rehabilitation for those who were injured or suffering from trauma. Music therapy was used in military hospitals to help soldiers recover from physical injuries, such as amputations, and to alleviate symptoms of psychological trauma, such as anxiety and depression. The use of music therapy helped soldiers to manage their pain and promote relaxation, which in turn helped to improve their overall physical and emotional well-being. Today, modern music therapy is an academic field that has grown significantly in recent decades. It is a field of study that focuses on the use of music as a therapeutic tool to address physical, emotional, cognitive, and social needs of individuals. The academic study of music therapy involves a multidisciplinary approach, drawing on knowledge from fields such as psychology and neuroscience.

#### *Communicative musicality*

In music therapy literature the term "communicative musicality" (CM) is used widely. CM is understood as a form of communication, expression, and social interaction (Stern, 1985). The concept CM was originally developed by musicologist and psychologist Stephen Malloch, and the anthropologist Colwyn Trevarthen (Trevarthen, 2004):

*... infants have an "inmate intersubjectivity". By this we mean they are born with a coherent and balanced mental system that is ready to respond actively and emotionally to the presence and communicative advances of another person who express a similar system of feeling (Trevarthen, 1904, p. 13).*

CM implies that without intending to do so the exchanges between a mother (or father) and her (or his) infant follow typical rules of musical performance, with distinct timing and melodic narratives. Speaking and moving in a musical dance-like way is the essential foundation for all. At its core, communicative musicality recognizes that music is not just an art form, but a fundamental aspect of human social interaction (Trehub, 2003).

We know that children are born as altricial beings, meaning that they are born in an immature state and unable to care for themselves (Cross, 2010). This contrasts with precociality, in which offspring are born or hatched in a more developed state and can move around and feed themselves to some extent. While we may never know for certain how stone age children engaged with music and rhythm, we can take for granted that those who reared them needed artifacts and tools to facilitate growth and support. My very subjective interpretation of the gravings is hence that they represent a form of communication that may have had something to do with child rearing, and possibly early infant motherese. Could the cave gravings have the same function, to help in the development of communication skills, social skills? As I see them, the patterns in the engravings create a sense of calm—the structures are man-made to comfort and soothe the beholder. Was the intention to reduce anxiety and create a sense of safety and belonging?

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# Articles

Models as rhythmic investigations  
—the itinerancy of intention through intercession,  
interruption and interception

Theodor Barth

“It is not surprising that the search for interlocutors constitutes the central motif of contemporary art of these last twenty years: first passers-by, neighbours, and communities proceed, for artists belonging to the relational sphere that appeared in the 1990s.” (Bourriaud 2023 p. 67).

In my successive encounters with Geir Harald Samuelsen before, during and after the seminar *Tracing Rhythms* (Nov. 2023, organised under the aegis of the DIKU-project *Matter, gesture and soul* managed by him) my research efforts have been *itinerant* rather than *iterative*: a vagrancy *across* different fields, sites, landscapes and investigations *each* deserving specific attention. But the invitation and conversation on *rhythm* brought a push resembling a tidal wave. The closeness between *tracing* and *creating* rhythm—similar though different—remained a forceful *fulcrum*.

Upstream of the seminar, I submitted a travelogue to Samuelsen from a journey to France and the Performing Arts Forum (in St. Erme, North of Paris): In the travelogue *two* reflective strands joined in the twists and turns of testimonials on the current *precariat* at art-schools—notably ones teaching dance, choreography and performance—relating to late *medi-aeval iconography*: a *theoretical* reflection on redemptive contact metaphors in manufacture of *icons* (received by contact with holy shrouds); an *empirical* reflection as we randomly passed one of these in Laon.

The articulation of coincidental correspondences between theoretical and empirical reflections, on journey and in the travelogue does reverberate with a passage in Bourriaud’s recent work *Inclusions—the aesthetics of the cap-itaocene* (2023, p. 209): “‘The real is only revealed through the ruins of a semblance,’ explains Alain Badiou, taking the example of Molière’s death on stage during a performance of *The Imaginary Invalid*. In other words, it is only glimpsed through a dialectic: one must hold together the two terms, real and semblance.” Echoing the *technique*.

Drilling down, as it were, *from* the coincidental encounter between theoretical and empirical observations on *journey to* the technology of *iconography*: from the holy traces of a corpse on a shroud (*Mandylion*) to the appearance of a face on a ceramic tile (*Keramion*)—a photographic desire before the existence of the the technology (photography, emulsion, gelatine and dark-room). A manufacture involving *reception* as much as production. On this background, my fledgling attempts with *photogravure*<sup>1</sup> became relevant: as a mode of *investigation* of photography.

Or, rather, as an investigative aesthetics on the *light conditions* at their source—a situation of people, space and objects—as they hit the camera lens. An investigation where real and semblance are held together in *fiction* rather than as illusion (Barth 2022/2023). As Samuelsen requested items for an exhibition, hosted alongside the November seminar, I submitted some prints from my experiments in photogravure together with a copper plate, a positive on foil and a photography of a lady—*La Kahina*—on a white plexiglass-covered plate lined with cadmium red.

Since my performance was investigative, the item was conceived as a transparent storage of elements that could be moved and rearranged. To indicate this, the plexiglass plate was fastened with wing-screws that were painted in pigments of different hues. The intention was to query the role of colour in what *categorisation* might be, when the item (as a space of its own), in the words of Artie Vierkant: rooms greet people by name. That is, when people are *interpellated* rather than designated. The work intercepts people at both ends, and intercedes on their behalf.

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1 It is by the encouragement and drive of Prof. Jan Pettersson—who is a specialist in the field—that I embarked on this investigation (and going deeper into the ideological difference between photogravure and heliogravure).

Here, the item occupies a *between-space* rather than pretending to be the *crux* of the matter. Accordingly, in exhibit at *Tracing Rhythms*, the item was conceived in semblance to Aby Warburg's boards, which—in his *Mnemosyne* project (Atlas of memory)—were lined up in what he called *Aufstellung* (that is, not an exhibit, or *Ausstellung*), which were characteristically set up on a backdrop of *books*, which they were intended to categorise by visual means. So, the intention of Warburg's panels were *not* exhibitive, which is also why for convenience I called my item a lineup.

That is, a lineup in the sense of a crime investigation *without* the assumption that there has been committed a crime. Or, a lineup in the sense of fashion, which is used as D-day for *adding* or *removing* elements from a collection to come. If the crime scene investigation is by definition *in progress*, the fashion lineup is in *future anterior*. Neither of them are in the *now*, or present. The conjunction of these at the *events* is received and produced by the attendance, or the visitors. A possibility discussed by Julia Robinson (2009), rounded up by me in a handout (2023):

“Between the structure and content—the signifier and the signified—is located the work of Roman Jakobson's *shifter*: the *virtual* convertibility and *actual* conversion taking place within/beyond the *sign*, on account of its being, in some key aspects, *empty*.” In Bourriaud's words (2023 p.128, my *it.*): “Paradoxically, this first aesthetic lesson of the Anthropocene transforms criticism into a *ballistic* exercise, forcing us to consider works of art as milestones of a *trajectory*, or as machinery whose real dimensions *exceed* those of the space where we discover them.” That is, in *motion*.

At this point I began to realise that the premises of Bourriaud's critical inquiry—and my own—are tethered to motion as an *assignment* rather *than* an assumption: a set of premises deriving or emerging from Fluxus (Thompson, 2011). The delegation of assignments from emotions, gestures and matter all are aspects of motion in Aristotle's understanding: the first mover (emotion), the second mover (agency) and the third mover (matter). But rather than imposed, as in the

Aristotelian concept, applied to a world/reality *in formation*. We can guide and transform, but *not* impose it<sup>2</sup>.

At the November seminar, I elaborated on this point through a lavish selection of examples of the come-and-go between *field investigations*—which Samuelsen and I have in common through our dealings with Dagos Gheorghiu’s experimental archaeology—and *studio work*: the one conducted in the open (*field*) and the other in an enclosure (*studio*). Which have some points in common with D&G’s<sup>3</sup> *smooth* and *striated* spaces, but are also different: since the *smooth* spaces \*, in their conception, appear to be *open* (frictionless) and *striated* spaces are fixed spaces with *borders*.

While the smooth and striated spaces are hatched to reveal the schizoid ways of capitalism, I preferred to move in the apposite direction: looking for *alternatives* to the present human condition which is somehow *bereft* of the environment. Finding ways of docking human ways of engaging with the tripartite levels of motion—the first, second and third—unto reality and lived experience, in ways that do *not* seek to authenticate the relation between land and people, but rather is bent on attending the new materials and policies that come out of joining them.

That is, a lineup of new practices within and beyond the art field that Bourriaud subsumes as follows (2023, p. 210): “Through a permanent back-and-forth between the real and the virtual, material and immaterial, these practices intend to demonstrate a new regime of materiality, in which the screen and lived reality exchange their characteristics, digital formats modify our ways of feeling and exchanging.” Samuelsen and I had the chance to explore these modifications as we met and talked upon several occasions after. After the seminar, the Artistic Research Week at KHiO.

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2 Cf, Simondon, Gilbert. (2020). *Individuation in the light of notions of form and information*. University of Minnesota Press.

3 D&G: Deleuze and Guattari.

By this time—in January 2023—I realised that my itinerant (rather than iterative) approach to our common research questions had to do with an interest of mine in *rhythm* as part natural, part cultural *pattern* which typically upon encounter generates *pattern breaks*: that is, seriality *without* repetition. Something appears to repeat itself a certain number of times, and then something else comes about, whether it *happens* or is *made* to happen: /| | | | | | |...—/ Or said in this way: *If* something repeats itself, *then* it will stop at some point (before it continues). In Bergen, I generated a stop.

Then, in Oslo, I invited Samuelsen to act as a discussant during a presentation hosted by me at KHiO, called depositions: In his rejoinder to me, after my introduction, Samuelsen unexpectedly asked me about my views on *enskilment* in photogravure; the necessity to acquire a certain level of *skill* to hatch the possibilities that the technique has to offer, to operate within the framework of investigative aesthetics. At the time, I found that it was sufficient to declare that my errand was *investigative*, since I am anthropologist and *not* an artist. But maybe I have missed a crucial point.

The way I received his question indicates that I was still thinking about *enskilment* within the framework of art *as* craft (which has been criticised e.g. by Luis Camnitzer, 2020), and also overlooking a still *obscure* matter in my own background as an anthropologist: Tim Ingold’s comparison of art and anthropology through the metaphor/vehicle of *high-mountain walks*—which he did in a lecture at KHiO in 2018, later published in FIELD. It is unclear how this itinerant approach to research in art and anthropology relates to the *enskilment* of the *hands*.

There are a certain number of contemporary publications in which the artist is the *hero*—both in curatorial and anthropological literature—but where artists will be invited to exhibit and exploited as witnesses to theoretical points in the making: These points are largely still made by anthropologists in anthropology, and by humanists within the humanities. The artist does not have to join and sit by the table while these

matters are discussed in panels. In an OSEH<sup>4</sup> panel on education, with Ingold championing art education: no artist nor art-school educator on the panel.

There are likely no ill intention. The problem could be connected to the difference between a *logocentric* approach to research and its dissemination and a *visual* style of research and learning. If so, the question is how to handle what happens at the encounter between these styles: Here *style* is defined as when clarifying the relation between form and content emerges as *work* (Granger, 1989). A labour with a different signature in art work than in university research. The points of encounter between university- vs. art academics readily becomes one of *mutual illiteracy*.

Possibly, this indicates where our efforts should go, since the UNESCO-agenda of MIL (Media and Information Literacy) has not been reached, even at the higher levels of education. Then we are, of course, speaking about ways of *knowing* linked to different *media*, which might be different to the point of being untranslatable. Which is not to say that they cannot be transposed. They can, but it requires a specific knowledge of the terrain, where some artists have been quite succinct in the statement of what the problem is. In the first rank: Marcel Duchamp's lecture The Creative Act.



4 OSEH—Oslo School of Environmental Humanities

Quoted by Robinson (2009, p. 79): “In the creative act, the artist goes from intention to realization through a chain of totally subjective reactions. His struggle toward the realization is a series of efforts, pains, satisfactions, refusals, decisions, which cannot and must not be fully selfconscious, at least on the aesthetic plane. The result of this struggle is a difference between the intention and its realization ... Consequently, in the chain of reactions accompanying the creative act, a link is missing.” The crux: The random of *artwork* and of *reception* are linked.

*Same, similar, different or off:* The compound of 1) the *artwork* and 2) *its reception* is a single artistic material. The three movers: a) the first mover: The artist working, b) the second mover: The encounter of the artist and an audience (as the audience attending Duchamp's lecture at the New School of Social Research in 1957); c) the third mover: The fact of having been seen and interacted with by an *audience*, beyond the precincts of the artists, testifies to an *aspect* of cocreation. It has been a topic for artists, curators and academics since. But let us keep it in mind.

George Brecht and John Cage etc., Rosalind Krauss and Nicolas Bourriaud etc. This is an area where we can agree and where a certain extent of *cross-literacy* can emerge. Clearly, at this level, intercession between university- and art-academia is of *some* avail. But the problem of enskilment that distinguishes the manual vs. the pedestrian—making vs. walking—is yet to be addressed, in aspects relating to interception, which I believe is what Samuelson actually was asking from me. Not in the sense of giving an answer, but opening with a *question* and a possible *assignment*.

I will therefore propose that the way things are going—because there is a *rapprochement* between art education and university education—we may take interest in the kinds of contrast that guide our interest. From Saussure's structural linguistics, meaning conveyed by contrastive pairs could have gone two ways: Historically, the interest in contrast as opposition (e.g. binary opposition) in the analysis of symbolic meaning tended to be emphasised over contrasts with weaker signals.

Owing e.g. to Barbut’s explanation of mathematical structure in the arts and humanities.

He refers to mathematician Felix Klein’s notion of group, later called Klein’s group: It features in anthropologist Claude Lévi-Strauss’ analysis of myth (1964–71), and in Rosalind Krauss’ analysis of sculpture (1979). The definition of the Klein’s group: a term, its opposite and their inversions.

The rhythmic upside of the K-group is that it is easy to generate: *sun, moon, sunset, moonrise*. The disadvantage of its application to humanities is that concrete examples (as the one given) is difficult to *fully* accept: We can accept them... *sort of*, yes, but... it falls short of something.

Of course, the example given is pedestrian. But the question is whether *all* concrete iterations of K-groups might be somewhat pedestrian, and might be better off in the keep of pure math? Be that as it may, the difference between *tracing* and *creating* rhythm—which must concern us here—is *not* oppositional: It runs between the *same* and *similar*. So, rather than being interested in a term and its opposite, we are interested in a term and its *opposite*. We are interested in them because 1) they somewhat *mirror* one another, but 2) conflating them is *oh so consequential*...

Visual similarity, of this kind, is interesting inasmuch as it alerts us of impacts that we *cannot* see. For instance, remaining with the gross logic of the K-group, the inversion of sameness is *difference*, while the inversion of similar is *off*. The ensuing group—made up of *same, similar, different* and *off*—was spotted by artist Alejandro Jodorowsky when working with Philippe Camoin on the restoration of a Marseille Tarot deck from the 15th century. In the *minor arcana* (the part of the deck resembling a regular deck of playing cards), the picture cards exactly rhythm this pattern:

This is not to say that it is superior because “authentic”, but that there is tradition of visual logic that is closer to the art field, which computes differently than the K-group (as defined above). It is clearly based on a *model*—that is, one that can jointly be used to comprehend *and* perform. It is a tendency that we can also see—and much later—in George

Brecht’s score-cards in the *Water Yam* box. According to the protocol that something is scripted, said, enacted and arranged, unified in the expanded field of the artwork (Duchamp, 1957) and dedicated to Rose (Sélavy = Duchamp).

Which is to say that it is *handed off* as an object/item, featuring the *same* (I), the *similar* (II), the *different* (III) and *off* (yellow sheet, or object by dedication to Rose)<sup>5</sup>. Which is how Julia Robinson’s pointing out a 3rd path—between Jackson Pollock’s abstraction and Joseph Kosuth’s conceptualism—is conceived as a *model*, where *seriality without repetition* offers more than a lexical definition of the model, but where a variety of contrasts between the elements above includes *agency* into its “logic”. Whereby computing becomes an emergent property of agency<sup>6</sup>.



5 The *off* element here has a status similar to the reference myth in Lévi-Strauss’ *Mythologiques* (1965–71).

6 Cf, Idel (2011) on the connection between the *agent intellect* in Aristotle’s *philosophy* and the *kabbalistic* notion of *agency* (*natural philosophy*).

This is where Samuelsen's question on enskilment led me. It is quite evident that the computational power of agency—its power to bank/capitalise on script, speech and arrangement—is likely to be marked as *skill* when the model generates something of interest. If what we call a computer not only is docked to the *field* in which we investigate (Barth, 2022/23), but is *also* tethered to the *performance* at work (as defined above), we are better equipped to understand how field investigation and theory development can be brought in *sync* through artistic research.

If investigation can be defined as the *vectorial sum* of intercession *and* interception, as has been ventured here, it would appear that we have a method of exploring *intention*, whether it is our own or in the work of others. The itinerant approach to research—championed by Ingold—is therefore dependent on a critical combination between *generosity* (because it is demanding) and disciplined *acuity* (which is also demanding), if to achieve results of some importance—that is, the combination between *itinerancy* and *dirt under one's nails* as the dual requirement of making.

The dual requirement of the Journey(wo)man. What is at play here is a *turning point from 1*) where *striated* space (D & G) is sustained as an enclosure and the *smooth* space (open space) features a loop without an exterior/outside (the current functioning of the monetary system, according to Bourriaud), and *2*) where the *striated* space is in walking and making (in the come-and-go between the field and the studio), and the *smooth* space is the realm of opening practices and passages (cf, annex). In the latter case, the *skin* is a vehicle of knowledge: comprehending.

In the art field Bourriaud (2023: 105) relevantly draws on a discussion of theatricality in the art field: “The declared enemy [of minimalism] is theatre, and we understand why: nothing more unacceptable, according to Fried, than relations between bodies, objects and language unfolding in a specific space-time.” Further on (p. 110): “In the work of remembrance, the sign makes its way through layers of screen memories, in a jumble of heterogeneous images.” The learning

theatre is a model I have developed in which these investigations are bent to educational goals.

In a piece published in Frieze, Eyal Weizman (Forensic architecture) makes this point about the conceptual framework of D&G, along with other post-structural theoreticians: Their work has been studied and applied by military headquarters—not in critique of military aggression, but to make it effective. Notably, in the Middle East. For instance, the use of drills/wall-piercing grenades have been used to move through private spaces in urban warfare (instead of streetwise operations), shifting the internal relation between striated and smooth spaces to some strategic advantage.

From which we may infer that the theoretical framework of striated and smooth spaces may *not* have been intended for application, but rather posed to build a ground-work of critical assumptions than an instruction for assignments. The art-world, of course, may relate to this critique as it will.

By altering the sense of striated and smooth spaces—as has been attempted here—we may be ready to move beyond the infantilisation accused by Bourriaud (p. 65): the frenetic stasis of subjectivity without exteriority, a world in a frictionless bubble of consumerism (Bill Gates).

That is, moving from the dreams of omnipotent *containership* to more mature forms of comprehension: ones that will *comprehend* and *not* contain, in the wake of the altered ratio of striated/smooth in which the interception of *skins*—in a transindividual space-time—is the basis for practices of intercession in *political* articulations, discovery and house-clearing of intentions. Moving *from* how artists sell their work *to* how they *secure* it. The movement to *politics* (the rights and duties in partaking of city life) is also a movement within and beyond infantilisation.

The materials laid out in conclusion of this short essay came together in the wake of a conversation with Samuelsen *downstream* of the Artistic Research Conference in 2023, and in the context of his preparation of the next November conference in 2023, with Nicolas Bourriaud. Bourriaud came to visit us at KHiO in 2009, for a reading

and discussion of *The radican* (2009) at the Deichman library branch in the Oslo suburb Romsås. It is therefore with great pleasure and expectation that I am awaiting the November seminar dedicated to *ochre* as the Earth-skin.

*Annex—two-in-one*

“There is something else in Chaitin’s definition: the program (or the sign, or the coded message) is a meeting point where writer and artist encounter reader and viewer. The sign—or combination of signs—is therefore not only a product or object: it is also a —passage.” (Camnitzer, 2020 p.61)

What if the the passage is a *performance*, and thereby not only a part of the programme (or the sign, or the coded message), but the *programming instance* that does not execute the code, but prompts the actual *coding*? With the example of the Jodorowsky Camoin series—which is consistent in *all* the picture-cards of the minor arcana—as a candidate model: The *off*-card is the programming card; without it there will be no significant or coded relation between the 3 other cards (only a permutable structure). A coded structure being what we call *content*. But of which kind?

Which sense of content? Well, precisely the content in the sense that will be *named* (rather than a concept or thing, cf. Kripke 1972). At the one end *docked to a field*—and calls on it to reveal itself an investigator; on the other end a *room greeting people by name*: establishing the come and go between the field and the studio as something *else* than a solitary quest (i.e. romanticist idealism). A candidate approach to screen, intercept and frame what Cvejic (2023) has explored as *trans-individual processes* in a field search of some artistic projects as performatives of *solidarity*.

It makes it possible to ponder on what might be the specific competence of artists in artistic projects where there are no artworks and audience, but an initiative and its agglomerators, or, programmers and encoders. A problem to be addressed, however, is the risk of simply moving the problem of domestication to other areas *than* what we call *home*, which is the problem of *economics*. That is, the problem of the unknown:

the *exteriority* requiring us to get dirt under our nails, even as we reflect and speculate. What goes beyond aesthetics, or sensorial learning (Agamben, 2009).

Duchamp’s experiments with what might be called the ‘movements of the chess-board’ is a case in point. Playing chess with a nude model backgrounded by the Large glass (*The bride stripped naked by her bachelors, even*), the exploration of painting (e.g. Titian’s and Böcklin) in glass that took Duchamp eight years to work on (Didi-Huberman, 2008). Then, after 1946, as he officially had left art in favour of chess, his playing chess in tournaments at a high level. Then the 1957 lecture at the New School of Social Research where an audience was addressed as readers and viewers (Camnitzer). And finally *Étant donnés*, the work he had been working on secretly till 1966—it was shown posthumously in 1969.

All part of his chessboard in movement project (note the checkered floor of *Étant donnés*). It is not so much a question of being right in comparing these four instances of the board in movement with the Jodorowsky-Camoin sequence above, but whether we have the right to do so (in view of what the consequence might be): *same, similar, different* and *off*. Duchamp’s posthumous work is definitely *off* in the sense that it was shown the year after Duchamp’s departure<sup>7</sup>. The question then is what is achieved if it is a *coding* instance: Who is then the performer? It is the audience.

This was one of Duchamp’s key points in the 1957 lecture: the creative act. Abandoning art in favour of chess in 1948 was his *exit* from the white cube, not his artistic activity, since it was continued in hiding, while sustaining his act with counterparts outside the art-world in games of chess. Then

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7 Let us recall the epitaph on Marcel Duchamp’s tombstone in a cemetery in Rouen: “D’ailleurs c’est toujours les autres qui meurent.” (Eng. moreover, it’s always the others who die). What was meant? After death there is nothing? Or, the art work dies with the other (cf, Chris Marker, Alain Resnais, Ghislain Cloquet *Les statues meurent aussi*, 1953).



back to the game of chess with a nude model, before the translucent exploration of painting in glass, where his inquiry was directed e.g. to the machineoperations in painting: featuring his inquiry on Albrecht Dürer's *perspective machines* (Didi-Huberman, 2008). That is, optical devices buried into paintings which was the field of Duchamp's 'archaeological dig'.



The final point is the machine concept that Duchamp put into *Étant donnés* till 1968. Like his boxes, the machine is dual: *Étant donnés* is constituted by two artworks boxed into each other: (1) *Le gaz d'éclairage* (the illumination gas) and (2) *la chute d'eau* (the waterfall). The protocol of the viewer here differs from the voyeur's: two vantage points between which the people visiting the work is likely to shift, somewhat randomly. To the viewer, the door to the work is a *shutter mechanism* (1) while the waterfall is the after-image on the retina, after gazing at the lamp (2).

Like a camera, *Étant donnés* results from the dual action of *exposure* (illumination) and *print* (shutter): the printed media being the human eye and perceptual apparatus of after-image. According to Didi-Huberman, Duchamp engaged for a period as a printmaker to avoid being eligible for military draft during World War One, before he moved to the US in 1915<sup>8</sup>. In Didi-Huberman's perspective his work with printing and editions pervaded Duchamp's work. Ranging *from* the two big works (the *Large glass* and *Étant donnés*), *through* the boxes to his ready-mades.

In sum, there is a connection in Duchamp's last work between *domesticating* the idea in the artistic solutions featuring in the disconnected/randomly connected two works within a single one, subject to a variety of exposure and print by its users (the public). And *securing* his work the protocol of the series (sequence/consequence) of the *moving chessboard*, above, which involved a change of emphasis between foreground/background activities (bringing chess to the foreground while sustaining artwork *secretly*), a point made in the *lecture* and *posthumously*.

By doing so, he shifted the relation between the artist as a programmer and the audience as encoders (from the prevalent contract of the artist as programmer and encoder). In Bourriaud's perspective, the art field—after the relational turn in the 1990s, featuring the search for interlocutors—remains indebted to Duchamp's foundation (Bourriaud, 2009), featuring the trail of artists selected by Bourriaud in his work as a theorising curator. The strong point of his latest book being in relation to understanding and changing the odds: moving *from* the anthropocene *to* a critical practice of the capitalocene. My errand with heliogravure comes in this wake.

8 Duchamp left for the US by the throw of a dice, establishing a connection between random processes in art work and in life. As he left he bought a glass vile in Le Havre, which he signed and presented as a ready-made in the US: *Air de Paris*. Which means: *looks like Paris, or air from Paris*.

## CONCLUSIONS—a two-tiered revolution



SAME  
Original  
(transparent).



SIMILAR  
Photo-print  
(Finn's photography):  
La Kahina (1962)  
Brooklyn.



DIFFERENT  
Photogravure  
(print).



OFF  
Photogravure  
(sensitised &  
exposed gelatine  
paper on copper).

*“In other words, it is when we understand nothing that we begin to understand something, and the presence of an otherness represents the very condition of anthropological thought. This other that the anthropologist interrogates is not simply there to be deciphered like a riddle, but to contribute to our knowledge of human being in its environment. To put it like Maniglier, ‘otherness is therefore not the object of anthropology, it is its instrument.’”*  
(Bourriaud, p. 191).

In the sense that *revolve* means to turn, this essay proposes a two-tiered revolution: (1) first tier: establishing itinerancy in *striated* spaces (defined as an open space rather than as an enclosure), and hospitality in *smooth* spaces (partaking of solidarity in formation); (2) second tier: establishing the model as a kind of problem-solving where a *new* assignment is part of the solution (where the point of the model is made as one moves on, rather than discursively in argument/demonstration). In sum: a relation where the dialectics of *walking and making* (1) is echoed by the *techno-logic* (2).

In the wake of this model—as a non-repetitive series—we will care for the distinction between artistic choices (*securing* the work) and aesthetic choices (*domesticating* the

work). From the case on Marcel Duchamp's work on *Étant donnés* we may consider as acquired that artistic choices concerned with securing the work is *not* concerned with its domestication (since it is going on behind the scenes, removed from the gaze of appreciation). Securing the work is, in some sense, the other or *obverse* (Blikstad, *forthcoming*) of the domestication of the art work.

This is where Bourriaud also locates the incorporation of anthropology into the artistic repertoire: as the *art of alterity*. Which is largely anticipated by the itinerancy of both the anthropological and artistic work. The two-in-one model that brings us one step beyond the rhythmic pattern (same, similar, different and other), features also in the two-in-one model of the spatiotemporal and techno-logic explored in the manufacture of this walkabout: concluded with Marcel Duchamp's two-in-one *artwork* (*Étant donnés*) and the idea of *exposure* (in the *Grand verre/The large glass*). These two dimensions—*sculptural* and *pictorial*—may be pursued with great detail when moving to photogravure, where the two boxed-in elements, *engraving* and *exposure*, feature an artistic plasticity in its techno-logic (2), which can be used as an *echo-chamber* for investigations in the spatiotemporal tier (1). Thereby giving access to *resonance* where there is *no* repetition. The point being that there is a *two-way* resonance—that is, the spatiotemporal investigation (1) may also provide a resonance to the techno-logic level (2). Passages are based on such co-incidences.

For instance, trailing a roadmap of photogravure may start with the preparation of the copperplate and end with the printing. That is, following the steps in chronological order of how the operations, instruments and materials are connected in the production of a photogravure. However, it may also start with the chemistry, building the foundation of knowledge from the engraving to the chemistry linked to different aspects of exposure. Here, the sculptural approach takes precedence over the pictorial (Schilz, 1899). But there is also a *third* possibility (fig. above).

The third possibility features in the rhythmic sequence above: *same, similar, different* and *off*. Here *neither* the

chronological timeline *nor* the chemical store constitute the organising principle: The chronological order is jumbled and the chemistry is ambiguous (since the off element is a turningpoint from exposure to engraving). Here the organising principle is simply the size of the plate and print. In prof. Jan Pettersson's work, the passage from a mainstreamed pedagogical method to teach/learn photogravure moves unto the challenges of size in *both* exposure *and* engraving.

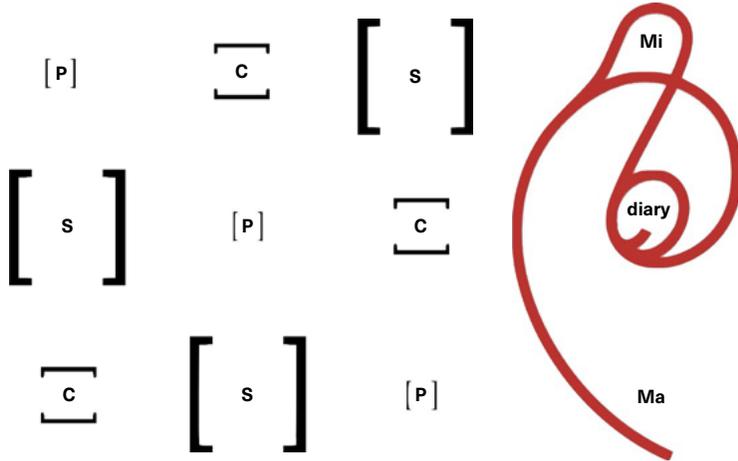
Here, size is not a matter of conquest, but a real challenge to reconfigure the understanding of the whole technique, because it changes the relation between all the other elements. In other words, size is a *gamechanger*. A moment where the practitioner bootstraps the understanding of the technique and leapfrogs from craft to an artform. Which, at this juncture, is to bridge between the microscopic level of the technique—in observable and invisible aspects—and the macroscopic level of photogravure. Increasing the size here offers the possibility to triangulate.

So, the organising principle in the third rhythmic sequence is pictorial: The photography is therefore not the original, but the transparent which now constitutes the point of departure for exposure and engraving. The point of the exercise being to obtain a photogravure print that differs from the photograph print. The relation between the original and the photograph is now a relation of similarity, while the proof of the pudding are the differences featuring in the photogravure print. The turning point from exposure to engraving is where the plate is programmed and encoded.

This sequence therefore serves to locate *the art*. In any real photogravure production the process can be seen from these three sides: *chronological, chemical* and *pictorial*. But this multi-modal way of understanding photogravure—according to the modes of steps, chemistry and picture—has a number of consequences for a different tier of the practice, which is in the keeping of a *diary*. All practitioners have to keep one: both to manage the complexity of the process and to keep track of discoveries. As a novice one is likely to take a jumbled note of everything in a huge gumbo.

However, by organising the knowledge of photogravure with e.g. the above categories—steps, chemistry and picture—it comes out more like a matrix that can in principle scale up and down (which is why the actual change of size is of experimental value, where the *learning outcomes* are located in the seam *between* exposure *and* engraving). In sum: If the steps (S) feature production, chemistry (C) features the manufacture and keep of the workshop (in performative aspects), the pictorial aspect (P) is the visual learning from the original to the actual print.

If we conceive photogravure in terms of the variety of three *sequences* in the matrix, the diary is a *consequence* that if managed or processed with the matrix, will assist in comprehending a technique too complex to be contained. A systematic approach combined with trial and error ensues. While the three sequences of the matrix allows us to intercept a variety of turns in the application of the technique, the diary keeps a log of the detail needed to intercede between them. The interception and intercession allows to discover artistic intentions over time.



Categories used to organise a diary that will be generative of model understandings that subsequently can be tested. S, C, P: steps, chemistry and picture. It is read horizontally right-left/top-down (right-left).

The two dimensions of macro- (Ma) and microscopy (Mi) brought together in a two-in-one loop, called SWIRL.

At this point we are no longer considering the securing nor domestication of artwork, but art as a categorising cultural agent, moving from the techno-logic (2) to the spatiotemporal (1) tier of the two-in-one model. We may ask: What if the diary in motion—the diary as a *vade-me-cum* of a life on journey—is comparable to the chessboard in motion (Duchamp)? That is, it is inscribed in the itinerancy of the *owner*, where the premises and conclusions are drawn from the latter, while the diary features as an *intermezzo*. An area of free-play between premises and conclusion.

It is then tethered to the itinerancy of its *keeper*. At the level of experimental technologic, the diary has a different status since it is entrusted the keep of a *record* (which when replayed will yield a variety of learning outcomes). It alternates between operating as a *stowaway interlocutor* on the journey of its keeper and a *ventrilocutor* speaking from a place of *expertise*. One could see artificial intelligence as the digitisation of this alternating function: either manual operations and pedestrian experience for itself, or docked to intercept these as they evolve.

In the latter case, the prerogative of rhythmic investigation is to claim art in a sense the former alternative doesn't. If the two tiers are held together in one—the spatiotemporal tier and the techno-logic tier—the diary (like AI) will articulate as the *skin* between the two tiers, in a way which is mirrored in the example of photogravure, in the *off* instance: the sensitised and exposed gelatine on copper as a *skin* between exposure and engraving. Hence the value of photogravure beyond the study of photographs: It offers a model of a practice of diaries in a broader sense.

This broader sense I explore<sup>9</sup> on the collection of 71 diaries kept by *La Kahina* (the female in portrait): Photogravure offers a background to how the *analysis* of these diaries articulate with *portraiture*. The logic is different from

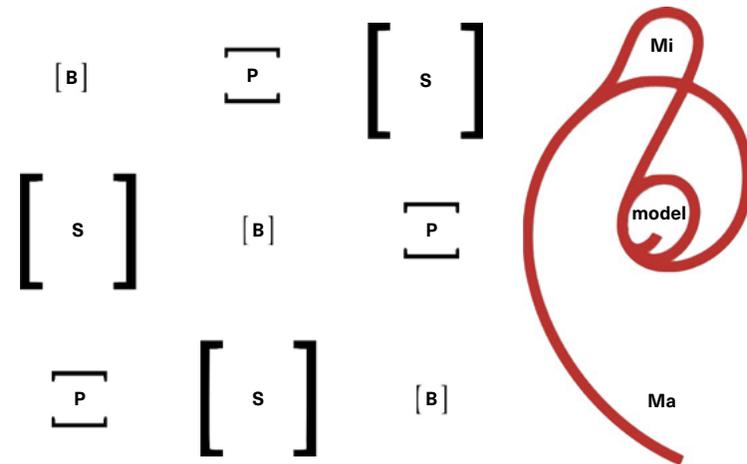
9 Research in residence project at the National Library of Norway. Working title: Trolling words. Linked to the NLN project *The Norwegian oil adventure*.

the regular hermeneutics of diary materials: laying them out, living into them, reaping understandings and interpreting them. Modelling moves from *meaning* and *value* (the subject matter of hermeneutics) to *agency* (the subject matter of art). Performance as the programming invitation to encoding is a platform of knowledge—an artistic proposition.

From an anthropologist's vantage point it is interesting to note that it is in conversations with Samuelsen that the question of enskilment emerged, while in conversations with Pettersson the practice of photogravure emerged as a theatre. Samuelsen being a fine artist and Pettersson teaching at the art & craft dept. of KHiO, I became locked into a crossroads between two different takes on art practice, each addressed to the other through my practice as an anthropologist, who attempts to take Bourriaud at face value, connecting the *parcours* and the *discours* of the other.

Is it possible to be a nomadic dweller in the empty space of the *shifter*: The place of virtual convertibility and actual conversion between structure and content (signifier and signified)? Is it possible to operate in that space? Is that where we can foresee passages where programming and encoding articulate solidarity? Is it where Derrida's dehiscence—or opening—where one is interpellated rather than indicated, where someone says 'come!' and one is enabled to respond? With that I will close here: *itinerancy = intercession + interception*.

Tyin, July 2nd-12th 2023.



The present piece B (Barth) in a trielectric (Asger Jorn) model and a three-way dialogue between: between S (Samuelsen), P (Pettersson) and Barth (B). A third dialogue between S and P is implied from the two others: the dialogue between S and B, and the dialogue between P and B.

The two dimensions of macro- (Ma) and microscopy (Mi) moving from how the model performs (left) to what it performs (above). Cf, notes below.

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\* NOTE—usages of smooth and striated spaces

“In striated space, lines or trajectories tend to be subordinated to points: one goes from one point to another. In the smooth, it is the opposite: the points are subordinated to the trajectory. ... There are stops and trajectories in both the smooth and the striated. But in smooth space, the stop follows from the trajectory; once again, the interval takes all, the interval is substance ... In smooth space, the line is therefore a vector, a direction and not a dimension or metrical determination. It is a space constructed by local operations involving changes in direction ... Whereas in the striated forms organize a matter, in the smooth materials signal forces and serve as symptoms for them.” Deleuze and Guattari. (1987). *A thousand plateaux. Capitalism and Schizophrenia*. (p. 478-9).

An example of an applied usage is found in Weizman’s Frieze essay: “I asked Naveh why Deleuze and Guattari were so popular with the Israeli military. He replied that ‘several of the concepts in A Thousand Plateaux became instrumental for us [...] allowing us to explain contemporary situations in a way that we could not have otherwise. It problematized our own paradigms. Most important was the distinction they have pointed out between the concepts of “smooth” and “striated” space [which accordingly reflect] the organizational concepts of the “war machine” and the “state apparatus”. In the IDF we now often use the term “to smooth out space” when we want to refer to operation in a space as if it had no borders. [...] Palestinian areas could indeed be thought of as “striated” in the sense that they are enclosed by fences, walls, ditches, roads blocks and so on.’ When I asked him if moving through walls was part of it, he explained that, ‘In Nablus the IDF understood urban fighting as a spatial problem. [...] Travelling through walls is a simple mechanical solution that connects theory and practice.’” The application of D&G appears to be straight on.

Though the topic is too extant to receive the treatment it deserves in this format—it exceeds the scope of this *causerie*—the notions of smooth and striated championed, with more nuance, goes beyond a mainstream applied sense, which

remains undefined in the geometric sense that D&G ascribe to it in *A thousand plateaus*. That is, it is referred to Riemann's geometry: in Calamari's sense (2017), however, D&G's usage of smooth and striated is *not* strictly geometric, but is *topological*. Or, it refers to the underlying topology ascribed to Riemannian geometry. Calamari writes referring to Lautman and Plotnitsky (p. 329) "A smooth space is a non-metric multiplicity, an 'amorphous', non-formal, heterogeneous space in 'continuous variation', constructed by local operations and 'accumulation of this proximities' (voisinages) that can be multiply linked in all directions; its primary mathematical model is Riemannian space. A striated space is a metric multiplicity, a formal, everywhere fixed and homogeneous space of constant directions; its primary mathematical model is Euclidean space." A dis/connected patchy, or patch-work, space.

Furthermore, Calamari suggests a precisation of Riemann's geometry, which he situates beyond D&G's scope (p. 331): "The architecture of Riemannian spaces indeed implies rather a 'mixture' of non-metric (topological) and metric (geometrical) structures, and a complex 'interaction' between the smooth and the striated. While the presence of a metric involves that Riemannian space is in fact a striated space (or metric multiplicity), its underlying smooth manifold, however, allows but importantly does not require any *metri-sation*." This acquired, means that we can move beyond the simplified definition of smooth and striated as open and closed: a framework that grows brittle in the main body of this essay, but we have left that way to let it evolve within the framework of the model as a rhythmic investigation: a itinerant rather than an iterative practice of modelling.

A turning-point comes with the application of smooth and striated as laid out by Weizman, from his conversation with IDF staff. The metric is here not defined in an abstract geometrical sense, since the metric is defined in relation to walled (architectural) structures, that can be pierced and traversed (thus changing from striated to smooth). If we pursue this line of thinking into fractal geometry, the situation changes: the point of fractal geometry is that dimensions

do not need to be whole, but can for instance be 1,5 (or, 3.1415926... pi). Fractal geometry is descriptive and thereby closer to the antique notion of geometry which is land-surveying. The consequence of fractal geometry (Mandelbrot, 1994) is that any object can be dimensional, in the sense of determining the appearance, description and mathematical equations of the space around it. Resulting in an aggregate of possible descriptions—relating to different objects—resembling Riemann's geometry. The question is whether the mathematical language of fractal geometry implies that Riemann, contrary to Calamari's assertion, can be within the scope of Felix Klein's transformation groups.

My provisional assumption (since the argument is logical and *not* mathematical) is that it can. Which means that the difference between smooth and striated is not strictly open vs. closed. But rather opening vs. receptive. Opening: striated space I define in the come-and-go—back and forth—between the field and the studio (which is metric in the fractal sense). Receptive: smooth space is an occasional enclosure (such as a white cube) based on the type of hospitality and generosity between programming and encoding (as discussed in the main body of this causerie). The absence of solidarity, under this definition, could be exemplified by our current presentism: a smooth space bereft of the striated space alongside it, and expanding in denial or violence as it develops. A case-example would be the story of how Øyvind Aamodt lost his memory of names and faces—but not of languages or skills—on a fatal journey from China to Tibet. In a movie portraying this enigma, Øyvind Aamodt is challenged to re/enact with the possibility to reconstruct the loss and its cause. The movie invites us to ponder: why names and faces?

And also: is this only a psychological riddle, or is some sort of *neuro-philosophical plight rooted in physical properties of space-time*? If smooth space is absolutely heterogeneous and striated space is correspondingly homogeneous, to what extent can they blend, emerge in different ratios, and hence slide laterally between extremes? What determines the blend? It certainly does not appear to be determined by the state of the

mind alone, but also on the state of the matter. But something else too, which is neither virtual nor actual, but rather something *lodged* in their vectorial sum. It is off-mind and off-matter. It doesn't change according to mechanical laws. Neither does it readily change through analysis. The question whether it is dialectical brings us the question of what we mean by dialectics. If we by dialectics mean mediations within and beyond contradiction, perhaps. Yet an alternative, is to conceive of fractal coordinates that become hooked to each other, and only can change, or shift, occasionally... at a high cost. In short, the riddle is that of *occasional cause*.

Let us postulate that certain causes are only effective under certain micro-macro alignments, and otherwise not. And that under such conditions elements, in a configuration of 3+, *alternate* between being associated and disruptive. Without the collusive micro-macro alignment, they simply fall apart. What can be foreseen from this set of premises, is a different ways of thinking about wholes and operating with them. The dark side is that the way we are operating on the world is affecting the number and kind of micro-macro alignments. If the life-world becomes poorer in alignments that allow configurations in which occasional cause can take effect, the *communicative chains* (Kripke) fostering the affordances of *rigid designators* (names) will, in some cases, simply collapse. That is, because the name, faces and their connective events fall apart, it will be possible to *lose* memories of this kind (while not losing skills and languages because these are *regular* and *not* occasional). Then the question is how/whether *occasional* and *regular* relate to *smooth/striated*. If the descriptive orientation is a constraint applied to the axiomatic-deductive protocol, whereby the geometric venture is not abstracted from the world, it can apply within that constraint. But let us come back to some questions about models that have been hovering for a while.

Whether the push-and-pull between intercession and interception come to be defined and apply under conditions of itinerancy (rather than iteratively), is a sequel to the preceding paragraph; in the aspect that has to do with whether we—as investigators—are part of the equation/not. With the

fractal pledge to geometry as a descriptive endeavour, the striated space is made up of dimensional vantage points that will shift with *movement*: that is, with some point in common with smooth spaces in D&G's definition. For instance, a mountain-climber will experience that the whole situation around changes when moving from one grip to another: which means that each grip is dimensional in the fractal sense. Which means that a striated space (which is striated because it is its own measure) will also be heterogeneous in the Riemannian sense. It avoids us the confusion that smooth is in fact heterogeneous, and striated is in fact homogeneous. In sum, the fractal premise takes smooth in the sense of homogenous and the striated in the sense of heterogeneous: which is intuitively more consistent<sup>10</sup>. Moreover, the example with the mountain-climber shows that involving the hands in itinerancy as a reflective practice is consistent with the fractal premise.

In this scope: if the actual is short term, the virtual is long term—in the sense of actual and virtual discussed by Henri Bergson (1908)—then the active model, as the entity lodged between the actual and the virtual is mean term. Resuming oneself to the question: *what do I do in the meantime?* Which is a core issue in the anthropo-/capitalocene. Perhaps even *the* question at the individual level: not in the sense that we should ask that question, but that a good number of people, perhaps everyone, is asking it these days. Or, what can I do in the meantime: the anthropology of the possible, that Masquelier and Durham have written about recently (2023). It raises the question of what happens at the edge of the smooth space of generosity and accommodation: of intercession and interception. What happens at the edge, and the impact on the core. In other words, the consequences of a model that includes itinerancy: that is, the model as the 3rd mover *between* the actual *and* virtual *I*. One that mirrors—screens, intercepts, and frames—micro-macro alignments, and hatches alongside by an initial vertigo. One that grazes unto the edge of the present (the actual): short term—in progress. The other that scouts

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10 Cf, Geir Harald Samuelsen's haptic drawings series.

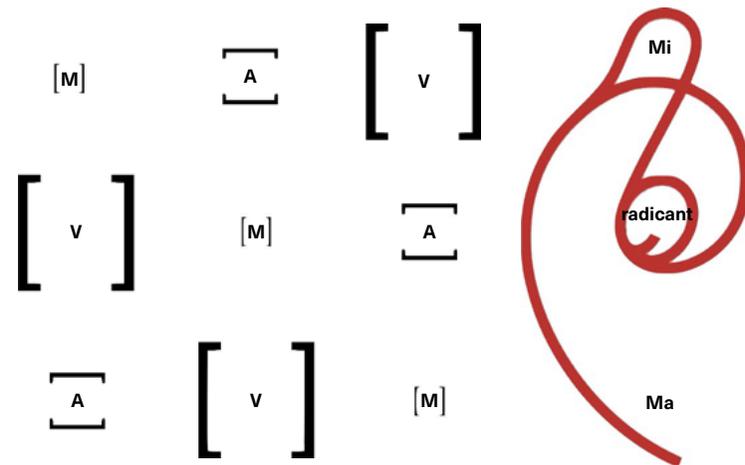
the moments unto completion (the virtual): long term—future anterior. Between short term in progress and the long term in future anterior, the leeway of the active model in search of alignments.

Itinerancy—in the sense of the chessboard, diary and model in motion—adds self-similarity to the equation: that is, modelling the real (which is a fictional endeavour) is the *same*, modelling the itinerancy of the model is *similar*, acting (moving and making) is *different*, and the vertiginous point of micro-macro alignment is *off* (and exit from the model through *completion*). In this conception, agency is a phase-shifter: *empty* (by the standards of the actual and the virtual) but *not* void (by the standards of the meandering paths of the model). When random (stochastic) processes are involved in the generation of self-similarity the question is whether modelling belongs together with the ethnographic experiment in field-work situations, or in the studio where modelling amounts to simulation (F. Barth 1966a), or whether modelling belongs to the experimental repertoire of fieldwork (partnered with theory-development in studio). The latter being the edge of striated/ smooth explored in this piece. But also indicating a possible path in bringing together the generative analysis of transactions (F. Barth 1966b) together with the anthropology of knowledge (F. Barth 1987) according to the analytical dimensions of task, occasion and encounter (F. Barth, 1972) in a unified model of disordered systems (1992)<sup>11</sup>. His positive answer to the challenge, however, was tempered by his injunction of being cautious about including modelling into the ethnographic experiment, in that it would bring natural history all over the place. Which the present piece certainly serves to demonstrate. It brings natural history into inter-sectional studies.

The question is what are options are—catering to the need of tidying up every once in a while— when modelling

11 Which in personal communication (tutorial) he said would be preferable but yet not achieved. He later testified to what had been achieved in a statement of appreciation.

is part of the experimental repertoire (which it certainly is in artistic research)? Does theorising fill this need? And, if so, of which kind? Are we back to philosophy and D&G? Or, are we in right of assuming the model as an entity lodged between the virtual and the actual I, that can be tilted between illusion and fiction. The *illusion being a world unto itself, containing its own reality* (“schizophrenia”). While *fiction being a spectral entity which characterised, first and foremost, by that it can and will be marked by reality*. Our notion of the I, the subject, the ego is thereby no longer binary (actual and virtual), but ternary: i.e., actual (A), virtual (V) and modellary (M). Here, exteriority is not something that can be added or removed, but is simply part of a constellation of 3, that may either collude or fall apart. At any rate: it shouldn’t come as a surprise that global destruction put humanity at peril. Before the body, humanity as such. Which is why the present attempt should be seen as a shift in the natural history approach to disordered systems, within and beyond anthropology to propose *anthroponomy* as a branch of intersectional studies.



The configuration of the virtual, actual and modellary I/subject/ego: V, A and M. This configuration should be conceived as a holding pattern, depending on the success at “drilling” for micro-macro alignments to the right. Following the logic of the radicant (Bourriaud, 2009).

The two dimensions of macro- (Ma) and microscopy (Mi) moving from how the model performs (left), to the itinerancy (art by journey) discussed by Bourriaud.

Rhythm in Mysteries – Mysteries of Rhythms.  
The Great Dionysiac Fresco in Villa dei Misteri, Pompeii.  
In the beginning was rhythm...

We find rhythms everywhere: in the body, in dance, in music, in patterns in nature, in days and nights, in the seasons, in textiles, landscapes, and many other places, – ubiquitous!

Still, I was surprised when I discovered a rhythm in the ancient fresco in Villa dei Misteri, located close to Pompeii (FIG 1, 2). This fresco is one of the largest and most famous paintings from Roman antiquity. It has been, and still is, studied and analysed, and interpreted from various perspectives: in particular history of art and history of religion, and even psychology. I will take a step outside these perspectives and identify the rhythm, and speculate on why it was made and what it may have meant.

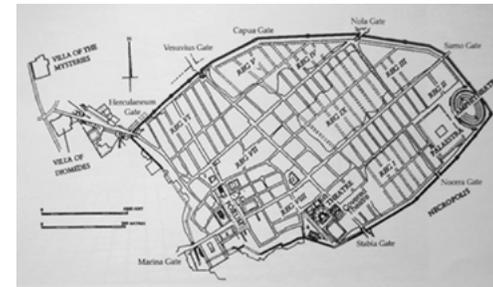


FIG. 1

Map over Pompeii, with Villa of the Mysteries up to the left.



FIG. 2

Villa dei Misteri

Torill Christine Lindstrøm, Ph.D. prof. emer.  
University of Bergen

*The Villa dei Misteri (Villa of the Mysteries) and its Fresco*

The Villa dei Misteri (Villa of the Mysteries) was originally a Samnite rural house, situated somewhat outside the northern city wall around Pompeii. But particularly after the Roman colonialization of Pompeii in 89 BC, and when general Lucius Cornelius Sulla “founded” Pompeii as a Roman colony in 80 BC (Potter 1987, 83), this house underwent several refurbishments and changes, including painted wall-decorations in several rooms. The painted decorations on the walls of the two *triclinia* (dining rooms) are particularly beautiful. But the most famous one is the Great Fresco, often called the Dionysiac Fresco (FIG. 3, 4).

When this Dionysiac fresco was painted is debated, but the period between 60 and 40 BC seems to be the most likely (Gazda 2000, 13), and it is painted in the Roman painting Style II phase 1b (Beyen 1938, 86 sq). The *triclinium* (dining room) where the fresco is painted, is situated at the south-western end of the house, and is probably the least accessible room in the house. It has a beautiful view. This may mean that the room was reserved for special occasions and for special guests.

The fresco is traditionally, and by most researchers, seen as being composed of 10 scenes, with 29 persons (human, semi-divine, and divine) and 2 herbivore animals. (Here, the persons are labelled P1 to P29 in the text and on the figures). However, there is no absolute consensus regarding what persons belong to what scene, because there are no visible, distinct divisions between the scenes. And many persons in one scene overlap with persons commonly regarded to belong to the next scene. In this way, the whole fresco has a certain “flow” and close interconnections. The interconnection between the persons is also evident in that many of them co-operate quite intensely or look at each other (FIG. 5, 6, 7, 8).

The fresco is called “Dionysiac”. This is because the god of wine and vegetation (and many other areas) Dionysos, is depicted, together with a female companion (most likely his wife, Ariadne, but possibly his mother, Semele), in the middle of the central, eastern wall. This wall is thus at the end of the



FIG. 3  
Reconstruction of the room of the fresco  
(Reconstruction saved by Catria D. Flynn at  
Pompeii B&B Pompei Il Fauno)

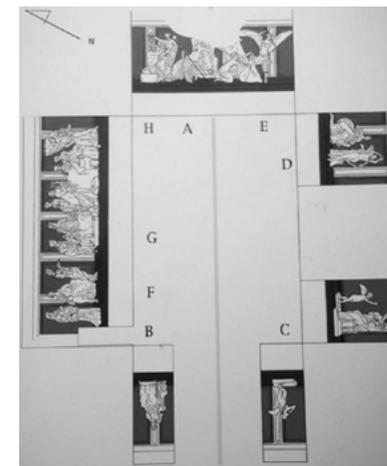


FIG. 4  
Overview of the fresco  
(From Sauron, 1998, with permission)

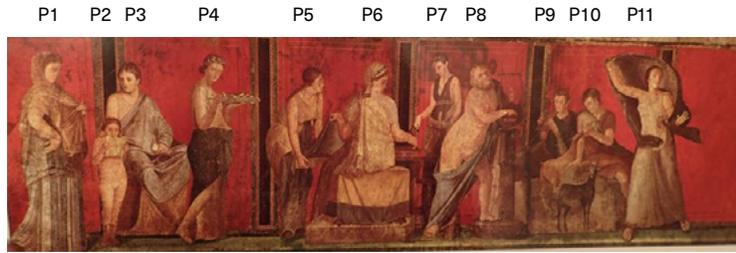


FIG. 5  
Northern wall



FIG. 6  
Eastern (central) wall

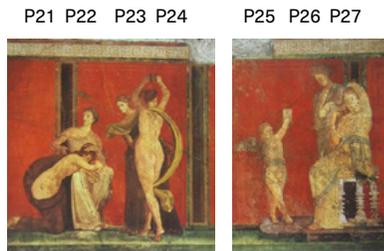


FIG. 7  
Southern wall

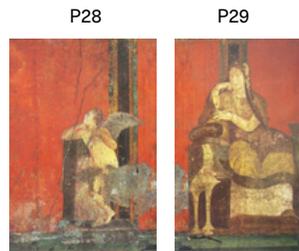


FIG. 8  
Western wall

room, but is most likely to be perceived first by anybody who enters the room through its main door, whereas the longer walls, to the north and south, are on the sides. The walls, and then the fresco, is only interrupted by a large window (to the south), and the large entrance door. Yet, there is also a small door in the north-western corner of the northern wall, but this door does not “interrupt” the fresco; the fresco to the right of this door is, (by most researchers), regarded as starting point of the fresco and its themes. The fresco covers all four walls of the room.

In addition to Dionysos’ central position, something that adds to the Dionysiac label of the fresco is the fact that there are several other persons and animals who are closely connected to Dionysos (two representations of Silenos, four satyrs, a buck (male goat), and a fawn). All these factors have led most interpreters to conclude that the fresco not only show typical Dionysiac scenes and figures, but also that the scenes show Dionysiac initiation ceremonies (Bradway 1982, Maiuri 1931, Seaford 1991, Sauron 1998, and many others). Other popular interpretations are the Jungian one that claims that a woman’s maturation process is shown (Fierz-David 1988), a psycho-analytical interpretation (Benvenuto 1994) that it shows a woman’s natural stage transitions (Reis 1991), that a bridal preparation is taking place (Veyne 1998), in particular a pre-nuptial initiation of a bride and prophesying in that connection (Little 1972), and finally, it is suggested that the fresco shows initiations of both males and females into the Dionysiac mysteries and inclusion into a Dionysiac *thiasos* (congregation) (Seaford 1991). Dionysos was an exceptionally popular god, he had numerous epithets (describing and attributing names), and Dionysiac motifs are found all around Pompeii, Campania, and in the Greek-Roman world in general. The Dionysiac worship, rites, cults, and ceremonies varied a lot, from orgiastic feasts (factual or overestimated) to processions, theatre performances, sacrificial rites, and to meetings in closed social circles and congregations (*thiasoi*).

The persons in the fresco have close to natural size, considering the average height of people at the time when it

was painted. This size of the persons thus defines the fresco as a megalography (Sauron 1998). The style is typical Hellenistic, shown among other things by some of the persons showing vivacious movements, and in that some persons seem to be “stepping out of” the painting, almost as “coming into” the room itself. This creates a strong feeling of closeness between the persons in the fresco and the onlooker.

The interpretations of the fresco are still being discussed, and no absolute conclusions have been made. And it is possible that this fresco was intentionally made multivocal, with several possible “readings”—be that as it may.

### *The rhythm of the Dionysiac Fresco*

In each scene there is one person who detaches him-/herself from the others (first described by Wesenberg 1997). Without referring to, or being restricted to, the traditionally defined “scenes”, one can claim that there is repetitiously one figure who detaches themselves from the group of other figures that they are spatially, thematically, or activity-wise co-located with. Each detaching person or figure walks away or looks away from, or beyond, their surroundings, and always in the same direction: towards the right. This phenomenon seems to serve two functions: It serves to direct the onlookers’ attention towards the next activity (scene), and it serves to make connections between the various activities, activities that are traditionally conceived of as belonging to different “scenes”.

Based on this observation, I will claim that the figures form a rhythm, a minuet- or waltz-like  $\frac{3}{4}$  rhythm, (1-2-3-4), with the person on the “fourth stroke” leading the spectators’ gaze onto the next activity. This rhythm also contributes to create a unity in the fresco. This pattern is repeated throughout the whole fresco, apart from the divine couple (Dionysos and Ariadne), which is the centre, and one might say, is the axis, of the whole fresco.

This rhythm does not quite follow the traditional division of the fresco into ten scenes. While transcending some of the traditional scenes, there are also a few adaptations to

the  $\frac{3}{4}$  system: Silenos (P8) with the lyre functions as the fourth figure (“the fourth stroke”) in Scene II, despite him often being regarded as belonging to Scene III. In Scene III (“Silenos and a pastoral scene”) one must count the suckling fawn or the standing goat as one of those who takes part in the ongoing activities of the scene, and add “The woman running” (P11), who is commonly regarded as a separate scene. She functions as “the fourth stroke”. In Scene V, “Silenos and satyrs”, one has to count the mask as one of the scene’s “persons”. Finally, in Scene IX, “The toilet of a bride”, it is the third person, P27 (a woman doing her hair, commonly called “The bride”), who looks out of the scene, who represents the fourth stroke, whereas the Eros (P28) represents the third stroke. In the case of Scene IX this adaptation was obviously necessary since this second Eros (P28) is located across the corner; if he was not placed there, that part of the wall would be left undecorated, and the three-dimensional effect of the corner would be lost. In addition, given his role as a person who shows the conventional meditative posture connected to listening to divinations (De Grummond 2000, 2002), he must look towards the others in that scene (Scene IX).

So, in each activity, there are four figures. In each activity, only three of the figures fully take part in or observe the activities. The fourth has, or also has, the function of connecting the activity (scene) that he or she is regarded to be located within, with the following activity (scene). This is done partly by two-directional movements and partly by divided attentions:



FIG. 9  
Rhythm in the northern wall

Starting with Scene I (traditionally called “The reading of the ritual”), P1, P2, and P3 are engaged in the activity of reading (or chanting) and listening to it, and thus seem to have some contact, whereas P4, usually defined as belonging to this scene, walks away from it. Her body slightly overlaps with P3, thereby giving her a connection to the activity of Scene I, and she turns her head as if being attentive to what goes on there, but by following the direction of her gait, the onlooker’s attention is led on to Scene II. And the fact that P4 is carrying a tray or plate makes her fit in better with the activities of Scene II, which contains various other household utensils, as also noted by Pappalardo (2004).

In Scene II, (traditionally called “The Sacrifice”), the women (P5, P6, P7) are engaged in an activity together. Silenos, (P8) who is often regarded as belonging to the next scene, is so close to the three women in Scene II, and considerably overlaps with P7, that he can also be seen as belonging to Scene II. He is turning his back to the women’s activities and looks in the direction of Scene III. So, his body is spatially situated in Scene II, but nevertheless he is often regarded as belonging to Scene III with the bucolic idyll with satyrs, where he, as Silenos, more appropriately belongs. The direction of his gaze and body draws the onlooker’s attention over to Scene III.

In Scene III, (traditionally called “Silenos and a pastoral scene”), the two very young satyrs (P9, P10) and the suckling animal form a unity of activity, and there is eye contact between them as P9 looks at, or towards, P10. But right next to them, and overlapping the satyr P10, is a woman running (P11), traditionally called “The horrorstruck woman”. She is actually closer to them than Silenos (P8) is, who is said to belong to their scene. Still, she is usually defined as representing a scene of her own, Scene IV, but in this connection she functions at “the fourth stroke” of the rhythm of the activity in Scene III.

In Scene IV (traditionally called “The horrorstruck woman”), P11, as mentioned above, overlaps one of the small satyrs (P10) of Scene III. She is moving in their direction, but her attention is directed in the opposite direction, towards the

scenes on the next wall, (across the corner), most probably Scene V. She may actually be seen as exchanging looks with the Silenos of that scene.

On the eastern wall, in Scene V (traditionally called “Silenos and satyrs”), one may count four figures as: Silenos (P12), two satyrs (P13, P14), and a theatrical mask. The essential actants are Silenos and the satyr looking into Silenos’ bowl (P13). The other satyr’s function in the scene is (at least) to hold up the mask, but his eyes and attention are directed towards the next scene, so he connects Scene V with Scene VI. Here, his divided attention is a bit subtle, but is still there.

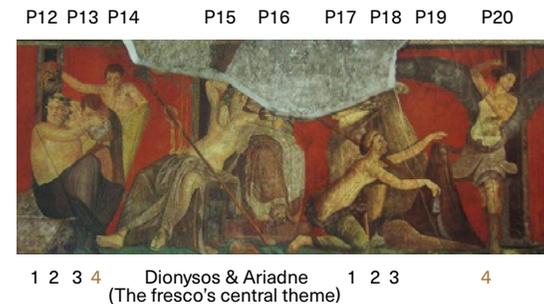


FIG. 10  
Rhythm in the eastern (central) wall

In Scene VI (Dionysos and Ariadne), the divine couple is attentive only to each other. The scene consists only of this couple. The rhythm stops at this point, again a signal of the centrality of this scene; yet the  $\frac{3}{4}$  rhythm of the fresco continues in the next scene.

In Scene VII (traditionally called “The unveiling of the mystic vannus”), again there appears to be four persons, as the most accepted count of figures is to see two females (P18, P19) behind the woman (P17) who appears to unveil a phallos. Her right foot is overlapping the podium under P16, giving her a touch of connection with Scene VI. The fourth figure, the winged female (P20), is again the one with divided attention. Her lower body is turned towards P17, and her left

hand makes a gesture towards her (or the phallos), but her upper body and head is directed towards the next scene, and her whip-stroke is also clearly directed towards it, and towards P21, who will receive it. As the following scene is located on the next wall, the vigour of P20's directedness towards it has the effect of binding the two scenes close together. In addition, it makes the spectator want to see what, or whom, her whiplash is directed towards (FIG. 11).

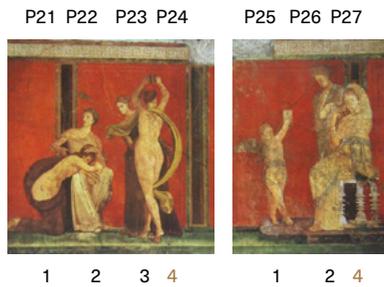


FIG. 11  
Rhythm in the southern wall, see also Fig. 12.

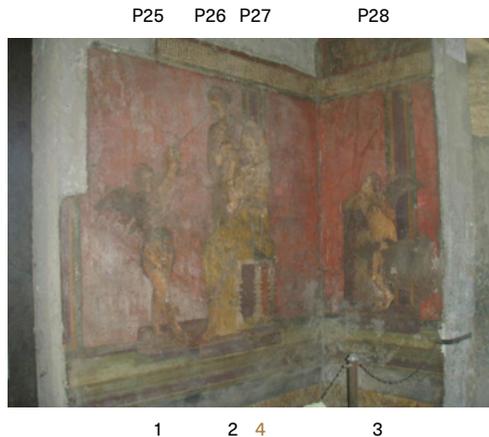


FIG. 12  
Rhythm in the southern wall with one stroke on the western wall

On the southern wall, in Scene VIII there are again four female figures. Two, P21 and P22, are not looking at each other, but are having physical contact. P24 (a dancing woman, commonly called “The maenad”) overlaps with P23 (a woman holding a *thyrsos*-staff), thereby giving the impression of, at least, spatial contact between them. They may seem to be interacting, but P23 is actually more attentive to the whipping-scene than to the dance, both in the directedness of her body and of her gaze, making her more part of that interaction. And again, the fourth person’s attention (P24, dancing woman, “The maenad”) is directed towards the next scene. In this case, her face is mostly hidden as she is seen from behind, but her head is clearly turned to the right, towards Scene IX, located at the other side of the window. She seems not to be interested in, or aware of, the activities to her left.

Scene IX, the scene that the woman dancing (P24) is turning her head towards, also contains four persons (P25, P26, P27, P28) (FIG. 11). Three of them are situated on the southern wall, and one Eros (P28) is placed across the corner, on the eastern wall (FIG. 12). If anything might be interpreted as having the function of “filling in of vacant space on the wall” (as some claim Scene IX and Scene X to be), it could be him. Still, he clearly is connected to Scene IX. He is looking towards that scene, and he has a “colleague” there, another Eros. And as mentioned above, he is suggested to have a particular role in the divination process and pictorial composition. It might be argued that the  $\frac{3}{4}$  rhythm is broken in this scene, as it is not the figure situated to the farthest right who looks towards the next scene. In this case it is the third person, P27 (a woman doing her hair, “The bride”) who connects to the next scene (Scene X). I regard this as an adaptation to the corner of the room. She may be listening to whatever P26 is saying, but with regard to where she looks, she appears inattentive to all the other figures in her scene. She looks away from the Eros to her left, who could be seen as trying to attract her attention to the mirror or picture that he holds up, and she looks beyond the second Eros (P28) towards Scene X.

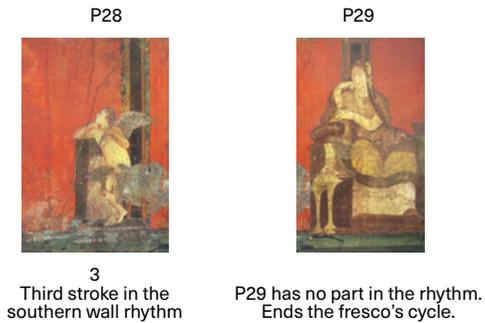


FIG. 13  
Rhythm in the western wall

On the western wall, scene X ends the cycle of, and the cyclic viewing, of the fresco. There P29 (a seated woman) closes the cycle by looking back towards Scene IX, perhaps looking directly at P27 (a woman doing her hair, “The bride”).

#### *Why a rhythm?*

One may ask why there should be a rhythm in this fresco when a rhythm, to my knowledge, is not a characteristic of other Roman paintings. There is one possibility: The rhythm may be an illustration of, or inspired by, the rhythm of a dithyramb.

The dithyramb (διθύραμβος, *dithyrambos*) was a hymn in honour of Dionysos (Harrison 1997). It was sung by a vocalist and a chorus, and frequently accompanied by an *aulos*. A dithyramb was not only sung but also danced to, and its tradition was very ancient in Greece. The connection with Dionysos is also shown in that Dithyrambos was also used as an epithet (one of many) to the god. An *aulos* has two pipes at an angle, joined only at the mouth-piece, and was very often used in Dionysiac contexts, as shown in numerous representations (such as paintings, sculptures, reliefs). Yet it is absent in this Dionysiac fresco.

The term dithyramb is believed to have a non-Greek origin. An old hypothesis suggests it to be Phrygian or Pelasgian and literally meaning “four-step”, which would be

interesting as it would match the rhythm of this fresco, yet is not likely. Anyhow, whatever the rhythms of various dithyramb-songs and dances, rhythms were essential elements in the various Dionysiac performances, theatre, processions, singing, and more.

So, to conclude: Although the connection between dithyramb and the rhythm of the fresco is very vague, it is still possible that the phenomenon of the *dithyrambos* might have inspired the painter to make a rhythm in this fresco.

Whatever the reason for it: The Dionysiac Fresco in Villa dei Misteri has a distinct rhythm, a minuet- or waltz-like  $\frac{3}{4}$  rhythm, with a stress on the fourth stroke: 1-2-3-4, 1-2-3-4, 1-2-3-4...

You may dance to it...

You may dance it!

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*First Study*

In March 2022, a research team from France and from abroad—with, among others, Alain Bénard, Patrick Dubreucq, Médard Thiry, Boris Valentin (France), Eamon O’Kane (Ireland), Geir Harald Samuelsen (Norway), and myself—visited and studied some rock shelters in the forest of Fontainebleau and around, in the south of Paris. These engraved prehistoric rock shelters are among the most important of its kind, with geometric motives of mostly deeply incised grids (FIG. 1), dated from the Mesolithic-Chalcolithic period and up to the Iron Age (FIG. 1). Naturally, the friable sandstone rocks are the most engraved, contrary to those of hard sandstone. The aim of the study was mainly, and particularly for the author of this report, to test the *sound resonance* of these shelters—mostly narrow shelters with niches—possibly *in connection with the engravings and pictures*, which is the case for many Prehistoric caves and painted rocks (FIG. 2, 3 AND 4).

Vocal sounds were used for the study. The advantage of the vocal and aural technique is that using the voice (and ears) is the most manageable technique, particularly in narrow tunnels or niches where computers, loudspeakers or other devices do not fit or cannot be used. Moreover, it is obviously the most natural method and was certainly practiced by prehistoric tribes; the voice is the first musical instrument. A male voice is necessary because rather low pitches are needed to produce resonance effects. The process is strictly scientific: The pitches were controlled with a tuning fork, and the same intensities of about 60 and 80 dB (occasionally 90 in open spaces) were used, which is sufficient in relatively small spaces, and for duration, an ordinary chronometer is convenient. There is no point in using results up to micro intervals, dBs or seconds in this kind of study. The main pitch of a resonance is easily found because this pitch is immediately and strongly amplified.

- a) *At Huison-Longueville, Essone (91)*
- 1) Shelter *Bulon 11* (friable sandstone, many engravings). Very good resonance, sounding on deep *E* and *D* (around 80Hz). The sound is strongly amplified, particularly close to the engravings.
  - 2) Shelter *Bulon 4* (friable sandstone with engravings). Good resonance between 2 adjacent rocks. The ground was full of dry leaves and had to be cleared out. Resonance is also on *E* and fills the whole space.

Both resonances are short in duration, less than a second, which is normal since the spaces are relatively small.

- b) *At Boissy-aux-Cailles, Seine-et-Marne (77)*
- 3) Shelter *Vieille Vigne 1* (partly engraved friable sandstone and partly not engraved hard sandstone). Well-sounding long space mostly in the engraved part despite leaves and sand on the ground.
  - 4) Small shelter or niche, located at 30 meters east from the previous shelter. Hard sandstone, only few engravings, almost no resonance.

We studied, in the vicinity of those mentioned above, some non-friable sandstone shelters, where the resonance happened to be naught and there are no engravings. The number of shelters in this area being high, these negative results are not definitely significant. However, this first study clearly supports the hypothesis of a correlation between engravings and the acoustic quality of their locations.



FIG. 1  
Typical engraved grids  
(Photo: D. Caldwell)

#### Second Study

On October the 12th, 2022, under the leadership of Médard Thiry, we studied shelters with important engraved figurative pictures, possibly from the Palaeolithic period, as well as shelters with geometric engravings.

- 1) Rock *LFO 01*, named place *Le Paradis*, at Courdimanche (Essone, 91). In the cavity, with a very narrow entrance of about 1 m diameter, appears a mainly natural engraving representing a female sexual picture, clearly a vulva with flow furrows, actually leaking water coming from outside when it rains. The sandstone is not friable, and the shelter has a resonance in *A* (110Hz) and *C#*, a third above *A*, and a resonance in *E* at the lower fourth from *A*. This *E* is an important tone, as a fifth above the low *A* (55Hz), since at the entrance of the shelter, the sound *B* (above the *A*) sounds clearly as a fifth of *E*.

- 2) The Rock *LFO 02* is about 20m from the previous one. In the shelter, at the higher part, a ‘well’ was built on its base with two small niches (about 50cm depth), where on a non-friable sandstone some engraved lines appear. The left niche (south-east when entering) clearly sounds in *E* and *D* (under *A* 110Hz), while at the right niche, we find the resonance in the same *D* as in the left niche. These resonances are obvious, although of rather short duration (less than a second), as remarked above.
- 3) Shelter Ségognole SEG3, at Noissy-sur-Ecole (Seine-et-Marne, 77). This shelter also has a female sexual symbol with a vulva (FIG. 2), and with facilities to further a flow in case of rain. This very apparent symbol is surrounded by two fine engravings of horses (apparently of Palaeolithic style). A half natural, half engraved bison can be seen to the right of the right horse (see the detailed paper).



FIG. 2  
Ségognole 3, Female sexual symbol  
(Photo: D.Caldwell)



FIG. 3  
Ségognole 3, Head of Horse;  
the mane is much more apparent in reality  
(Photo: M. Thirty)

This cave of hard non-friable sandstone, and therefore with not so deep engravings but featuring a remarkable composition, has a clear and strong resonance already at the main entrance, where the head of a horse emerges from a natural relief <sup>1</sup> (FIG. 3). This resonance, *F#* (under *A* 110), dominates, particularly at the two horses and at the bison engraved at the left and right of the main female picture. At the opposite higher side of this shelter, there is a second entrance. On the left from this entrance, the cave sounds in *A*, fifth of the low *D*, which could be the fundament giving this *A*, but sounds also in *F#* are heard at the other side. A resonance in *B*, a second above *A*, can be perceived also. In this shelter, we find an impressive richness of resonance as well of intensity, filling the whole cave. The correlation between pictures and sound is quite remarkable here (although, as noticed above, the duration of resonant sounds is short).

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<sup>1</sup> Natural relief amazingly recalling the embossed horse's head at the *Paintings Hall* in the Kapova Cave (Ural), see the picture in both papers (2).

These three examples, 1—3, where the shelters are of hard sandstone, include, however, important pieces of figurative art; therefore, it appears that besides the obvious natural data, one of the main reasons for these engravings to be there is the strong resonance, or what we call *sound dimension* of these shelters.

3) Shelter Ségognole SEG2bis, in front of the second entrance of the previous shelter. The sandstone is hard and it shows only one shallow geometric engraving. The resonance is weak. This negative result confirms the previous remark on the sound and engravings relationship.

*Notice:*

For a photographic overview of engravings and pictures in the studied area, one may look at this extraordinary panorama: [https://www.duncancaldwell.com/Site/Rock\\_Art\\_Photos/Pages/Rock\\_art\\_near\\_Paris,\\_France.html#273](https://www.duncancaldwell.com/Site/Rock_Art_Photos/Pages/Rock_art_near_Paris,_France.html#273)

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