Making Skopéin

An autoethnographic report about the interplay between space and media art

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Art installations that engage in a dialogical relationship with their surrounding environment, transcending the confines of an isolated existence, demand a nuanced articulation of the dynamic interplay among the artwork, the spatial context, and the observer. The following report endeavors to delineate and investigate the central elements of reception and the aesthetic of production pivotal to the media art installation 'Skopéin', exhibited at the Evangelische Stadtkirche Karlsruhe during the late summer of 2022, through the lens of ethnographic introspection ('autoethnography'). Given that the authors of this discourse are concurrently the creators of the aforementioned installation, the following text serves as an exploratory analysis into the fabrication process of a media art installation, employing anthropological methods.

Introduction

Engaging with space, especially in sacred contexts such as a church, requires a profound understanding of its historical, cultural, and artistic dimensions. In this chapter, we elaborate how spaces can be viewed not just as physical locations but as 'living artworks' that provoke a multitude of practices while also providing room for personal interpretation and reflection. We delve into concepts of historicity, the status quo, scope, and discrepancies, and how staging these aspects can create a space that functions as an affordance for a self-reflective narrative experience.

The architectural atmosphere of a church exemplifies how space can function as an (unfinished) artwork: Sacred spaces are not merely venues for worship or religious practice but also profound attempts to translate 'the metaphysical'—an immeasurable and inarticulable entity—into a form and format perceivable by the senses. This transformation should not be seen as an isomorphic translation but rather as a metaphorical affordance to every subject interacting with the space, to evoke the ineffable within themselves through a specific practice of reception.

These introductory thoughts lead us to the research subject to be discussed here: the protestant city church in Karlsruhe ('Evangelische Stadtkirche Karlsruhe', Germany), whose architecture and atmosphere were utilized for the media art installation '*Skop*éin' by Michael Johansson (SWE) and Andreas Siess (GER). The church itself was constructed by Friedrich Weinbrenner from 1807 to 1816,[1] therefore it is embedded—in regard to its cultural as well as aesthetic properties—in the epoch of

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1   Schumann 2005, p. 247.

German Romanticism, although its architectural design language can be considered neoclassical.[2]

Fig. 1: *The exterior of the church.*

Nonetheless, key ideas of this time period provide the context to revisit the transformation of the incommensurable, an aspect also aesthetically explored around 1800, where the uncanny and the sublime—two emotions of incommensurable nature—were examined from various perspectives.

Given these premises, it is obvious that an art installation in a sacred space must create an 'atmosphere' that avoids providing final answers but rather fosters a place conducive to reflection and personal interpretation. Michel de Certeau's distinction between place and space is particularly pertinent here, viewing space as a place that is acted upon, a transformation facilitated by narratives, stories, and mythologies.[3] The choice of the term 'atmosphere' is deliberate, referencing both the "atmosphere of architecture"[4] and the philosophy of the lived body according to Hermann Schmitz.[5] However, it is important to emphasize that Schmitz perceives the atmosphere of the individual body as a sensory impression that is not tied to any specific sense(s).[6] As we will demonstrate later, this concept of atmosphere does not align with the initial intentions of the church's architect Weinbrenner, nor does it match the ambition pursued in the media art installation Skopéin.

METHOD

This paper endeavors to navigate the intricate conundrum inherent in the praxeological study of art. It posits that the genesis of artistic endeavors frequently shrouds itself in opacity, eluding comprehensive dissection through conventional methodologies such as observation and the like.[7] The processes underpinning the creation of art remain enigmatic, often veiled in a realm beyond the reach of standard analytical tools. Even techniques employed by cultural anthropology, such as participant observation, encounter their limitations here, as they fail to penetrate the artist's inner sanctum, instead lingering on the periphery of observable phenomena. In light of these challenges, we, the creators behind the installation *Skopéin* in Karlsruhe, propose to embark on an introspective journey. Our aim is to pioneer a form of 'autoethnogra-

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2   Weinbrenner himself writes that he had the architecture of Greek temples in mind, when he designed the church's facade. Original quote from *Bemerkungen des Baumeisters zur Kritik eines Miniatur-Mahlers über einige baukünstlerische Gegenstände*: "Bei den hiesigen Lutherischen [...] Kirchen habe ich zwar [...] die alten länglichten Tempel oder Basiliken [...] im Auge gehabt" (Weinbrenner 1817, p. 14).

3   Certeau 2015, pp. 343–344.

4   Böhme 2006.

5   Schmitz 2016.

6   See Schmitz (2016), p. 11 and Hahn 2008, p. 150.

7   This phenomenon is also part of the perceived 'crisis of representation' in ethnographic research that was examined since the late 1980ies (Clifford 1988).

phy'[8] that straddles the domains of diaristic reflection, camera-based ethnography, and self-scrutiny. This endeavor seeks to meticulously document the contemplations, operational steps, and underlying rationales that culminated in the creation of *Skopéin*. Through this self-reflective narrative, we aspire to illuminate the nebulous pathways of artistic creation, offering a unique vantage point that transcends the superficiality of traditional observational techniques. By delving into the introspective dimensions of artistic practice, this paper aims to contribute to the broader discourse on the epistemology of art, challenging the boundaries of how artistic processes are understood and articulated within academic spheres.

Contours of the installation

Skopéin is part of a larger complex implemented by the artist collective *Ideal Spaces Working Group* within the church, centering around the concept of the 'Holy Jerusalem' as its core theme. To visitors, *Skopéin* appears as an immersive ceiling projection set 19 meters high, covering an area of approximately 4 x 4 meters. The projection is executed using a high-lumen cinema projector, inconspicuously placed on the church's first gallery. At first glance, *Skopéin* resembles a fractal, endlessly unfolding kaleidoscope, which, through animation, creates a strong upward pull. However, it is later explained why the metaphor of a kaleidoscope is aesthetically problematic and fails to fully capture the installation's ambition, concept, and scope.
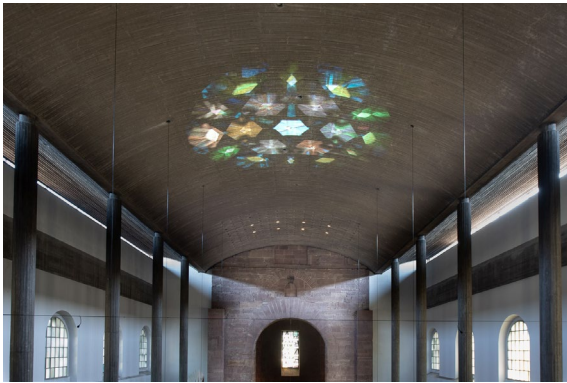

Fig. 2: *Skopéin projected on the ceiling.*

THEME AND CONCEPT

Building on the overarching theme of the 'Heavenly Jerusalem', our installation also explores the motif of the celestial city, interpreting the 'Heavenly Jerusalem' as an extension of the attempt to translate an immeasurable ideal into a subjectively conceivable image.

The architecture of the protestant church in Karlsruhe features several unique characteristics: as mentioned, its façade is neoclassical, inspired by the classical ideal of an ancient Greek temple. However, the building conceived by Weinbrenner was largely destroyed by a bomb during World War II and was rebuilt in the 1950s. While the exterior was reconstructed according to Weinbrenner's original design, the interior was redesigned under the direction of Horst Linde, who opted not to restore it to its

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8   Weir and Clarke 2018, p. 127; Butz and Besino 2009.

original state but instead rebuilt the interior architecture and furniture in a (semi-) brutalist and post-modern style.[9]

Fig. 3: *Stark contrast between the exterior and interior of the church.*

This unusual combination of styles results in a stark contrast between Weinbrenner's Neoclassicism and Linde's Brutalism. This dualism is not only considered in the conceived installation but also seeks to mediate between these two contrasting styles. Given the intricate entanglement of two diametrically opposed styles, our intention is not merely to reflect this juxtaposition within our installation, but also to interpret the artwork as an 'interface'—or a mediator—between these contrasts. Specifically, this means that the installation assimilates the visual morphology of the interior space, while its aesthetic functional principle is grounded in ideals that were established around the year 1800. These are, consequently, notions that find resonance within the church's historical architecture—i.e. the façade's 'pattern language'[10]—of Weinbrenner.

ON THE IMPORTANCE OF ON-SITE PLANNING

Despite the considerable distance we had to travel, an on-site visit about two months before the opening of the exhibition proved to be crucial for any further planning endeavors. On the one hand this visit allowed us to assess the technical conditions (such as: measuring the interior using a laser rangefinder, assess the required equipment, local infrastructure, etc.) but also to get a firsthand sense of the space's *atmosphere*.

This visit also sparked the central idea behind our installation: the church's ceiling, with its slightly concave arch shape and plain, uniform design, seemed like a sealed, finite form. We aimed to break through this 'lid' by projecting onto the ceiling, effectively creating a 'window' upwards to reveal 'the beyond', quite literally pointing the way to heaven. This notion resonates with the aspirations harbored by Horst Linde, the architect responsible for the interior's refurbishment in the 1950ies. To illustrate, it has been documented that the design of the interior was meticulously conceived with the express purpose of facilitating the ingress of skylight from above ('letting the sky into the building').[11] Indeed, our installation plays and cites the motif of a 'celestial pathway', representing constant movement and unfolding that not only generates

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9   Kappel 2004, p. 254.

10   Alexander 1977.

11   Cf. Kappel 2004, p. 254.

the previously mentioned upward pull but also illustrates the individual's continuous effort needed to embark on this journey.

As mentioned earlier, it was important to us that the visual language of the installation complements the interior's aesthetics: *Skopéin* was not to be an alien element within the church space but rather to extend the metaphor and metaphoricity of the church's architecture. Speaking from a technical standpoint the homogeneous surface of the ceiling and its neutral gray color make it an excellent projection surface, with the concave shape adding a sense of dimensionality. In planning and conceptualizing *Skopéin*, we produced numerous photographs, sketches, on-site and off-site tests, and simulations, which led to *Skopéin's* final form through an extensive (design) process.[12]

AESTHETICS AND SEMIOTICS

As previously discussed, the church's interior adopts a unique aesthetic language, a hybrid of late Bauhaus/post-modern style and Brutalism, softened by colorful accents in numerous details. During our visit, the distinct color climates of the church's 1950s windows caught our attention, prompting us to incorporate this chromaticity into *Skopéin*.
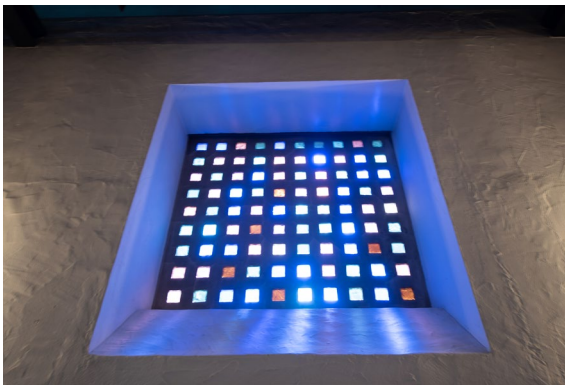

Fig. 4: *The color scheme of the windows.*

Moreover, the building's morphology draws on mid-20th-century cybernetic models, showcasing its mathematical construction without hiding it behind ornaments, but rather staging and externalizing it. The rough, untreated surfaces of the exposed concrete, where the grain of the formwork is still visible, the unadorned furniture reduced to pure functionality, and the clear, sharp lines of German post-war modernism create a stark contrast to the neoclassical exterior as well as a quirky atmosphere marked by contradictions and contrasts: the building 'unfolds' in a way that, despite the Brutalist interior, the architecture seemingly feels familiar and 'human'. However, these experiences can only be made by being physically present and 'feeling' the atmospheres, in the words of Hermann Schmitz.[13]

With *Skopéin*, we aimed to implement a similar visual language, so visitors would not perceive an alien object in 'their' church but rather interpret the installation as a 'catalyst' that enhances and augments the present atmosphere.

For this reason, we also wish to discuss *Skopéin* in the context of its semiotic characteristics: Given the overarching theme of the exhibition being 'the Heavenly Jerusalem', a place that cannot be visually represented but only described through metaphors, *Skopéin* plays with these properties of incommensurability. Hence, our installation is not meant to be decoded isomorphically but rather reinterpreted in each individual act of reception. As a consequence, the outcome is not a singular significance emanating from the artwork, but rather a multiplicity of interpretations that are augmented with each act of reception. This phenomenon (i.e. the plurality of

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12   We further elaborate on a more precise differentiation between iterative and parallel design processes in the sections below.

13   Schmitz (2016), p. 11.

meanings) is not perceived as a shortfall, but rather as an essential component of the artwork's functioning principle. This interpretation is neither new nor revolutionary but deliberately draws on the aesthetics of Romantic literature at the beginning of the 19th century. By combining the 1950s church interior's visual language with the functioning principle of Romantic poetics, we create an intertwining of two opposites, analogous to the dual characteristic of the church's architecture itself.

We consciously adopt the functioning principle of Romantic literature, even though the installation has a visual character. Since in the 1800s the imagination—the main domain where 'meaning' is constructed—was interpreted as a distinct visual phenomenon, we do not see this media discrepancy as a deficit to be resolved but deliberately play with the typically Romantic motif of the substitutability of media. In a Romantic interpretation, text is concretized into images, while images, in turn, possess qualities that can be construed as text (and as texture).

Therefore, as *Skopéin* features a 'readable' mediality, it must also be discussed in the context of a semiotic principle. As Juri Lotman noted, for the reception of a work's secondary encoding, a subject requires "ignorance (or rather: incomplete knowledge) of the secondary code used",[14] which, as Umberto Eco outlined, consists of fragments of a preceding code.[15] In the case of *Skopéin*, we interpret the design language ('morphology') of the church's interior as a preceding code in Eco's sense, leading to a type of ambivalence in the perceiving subject: This ambivalence between incomplete knowledge and the fundamental need for decryption leads visitors to assume significance, or to use Lotman's terminology, 'contentfulness'[16] in all elements of expression. In *Skopéin*, this significance is particularly located in the indeterminacies, encouraging visitors not to ignore these voids but to understand them as affordances to resolve the uncertainty with their imagination.[17] Thus, *Skopéin* strives not to be a finite installation nor a final answer but rather to offer an invitation to concretize the 'Heavenly Jerusalem' in the imaginary and therefore to continue writing the story/myth of the heavenly paradise. To achieve this balance between familiarity and alienation as well as between concreteness and indeterminateness *Skopéin* adopts the morphology (i.e. the aesthetic design language) of the church space as a familiar semiotic system to refer to the aforementioned unfamiliar 'beyond'.

EXCURSUS: THE AESTHETICS OF RECEPTION IN GERMAN ROMANTICISM

At this juncture, it is pertinent to revisit the profound interconnection between Romanticism and *Skopéin*: Around 1804, Jean Paul remarked that subjective imagination is not characterized by its (medial) form but rather by its potential to set a framework.[18] Specifically, this implies that romantic poetry and aesthetics, while employing the 'appearance' of established—and therefore familiar—forms, interpret them as 'hieroglyphic script' pointing towards 'something else'.[19] This 'other' is an incommensurable entity, that remains inarticulable since the 'thoughts' that emerge in the imagination of each perceiving subject possess no distinct mediality. Michel Foucault notably identifies Romanticism as a realm of imagination, distinguished by its potency from its predecessors.[20] The link between Romanticism and *Skopéin* is found both in the historical construction narrative of the church architecture—i.e. the exhibition space—and in our own processual engagement with Romantic ideals. As already outlined Romantic aesthetics particularly address a plurality of meanings[21] to realize the ideal of an infinite artwork that always strives to an unattainable ideal that can never

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14   Original quote: "Unkenntnis (genauer: die unvollständige Kenntnis) des dabei verwendeten sekundären Codes" (Lotman 1981, p. 129).

15   Eco 2002, p. 310.

16   Lotman 1981, p. 129.

17   Cf. Ryan 2016, p. 33; Iser 1994, p. 228.

18   Jean Paul 1804, p. 69.

19   Matt 1971, p. 22.

20   Foucault 2008, p. 121.

21   Antor 2016, p. 621.

be consummated (known as the 'approximation principle').[22] Around 1800, this infinite strive could be achieved through two approaches: one where the artwork exists solely in the mind, in the imaginary, making the 'physical' (i.e. the present) artwork, merely the initial fragmentary and incomplete affordance that unfolds into a plurality of meanings with each individual act of reception. Alternatively, this unfolding could also be conceptualized towards a mechanistic aesthetic, a motif also explored in Romanticism. In this context, it is apt to argue with Leibniz, who posited that God, as the 'supreme engineer', inscribes laws of change into monads, constructing a sort of Cartesian 'world machine' that algorithmically executes the virtual laws of change like clockwork.[23] This machine thus creates a mathematically constructed infinity, which, however, can be traced back to a concrete formula, a 'calculus'.[24] Leibniz documented this thought around 1714, so the artists of Romanticism (around 1800) can be credited with questioning this mechanistic view of the world and human nature. We will briefly illustrate this idea using the concept of the human as machine: While a lot of artists of Romanticism assume a mechanical foundation in each individual as well,[25] they attribute a central quality to the subject that tames this inner machine: Prudence. The prudent individual separates its self from the (mechanical) inner realm[26] and thus can, in a meta- or introspective manner, observe its instinctual (i.e. its mechanical) self and intervene in, modify, alienate, and redirect its processes. Therefore, the sensible individual acts not as a remote controlled automaton but rather as a self-determined subject. Hence, for the *Skopéin* project, it is likewise essential to implement a mechanical foundation, which, akin to the Romantic ideal, does not function 'automatically' but relies on the intervention and interaction (i.e. the 'prudence') of an individual artist. Therefore we created this device acting as the aforementioned mechanical foundation and named it the '*Wandering Landscape Machine*'.

The aesthetics of production: Making Skopéin

ABOUT THE ARTWORK ITSELF

At its core, *Skopéin* is a film sequence created using 3D tools such as *Modo* and *Blender*, featuring an algorithmically generated and animated object placed within a special environment. A (virtual) camera captures this animation in a central perspective, resembling a progressive unfolding.
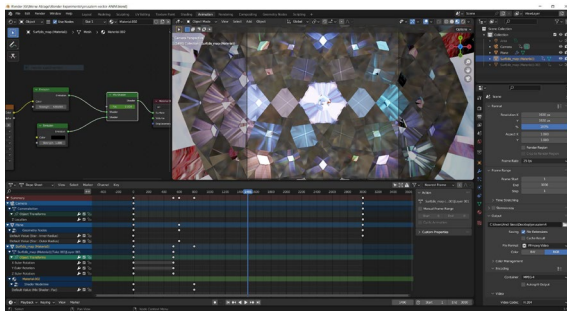

Fig. 5: *Screenshot of the animation in Blender.*

The surrounding environment, never visible in itself but reflected on the object's surface, presents a cascade of multiple reflections, creating a faceted and refracted aesthetic that invokes classic Romantic motifs of mirrors and crystals.[27] The created object features a physically impossible, perfectly reflective surface, making it appear

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22 Novalis 1901, p. 527.

23 Leibniz 1847, p. 50.

24 Schleiermacher 1838, p. 14.

25 Cf. La Mettrie 1875, p. 25.

26 Hoffmann 1810, column 633.

27 Cf. Novalis 1901, p. 33; Hoffmann 2006, p. 229.

largely transparent,[28] characterized by its disappearance and the modification/distortion of its environment, thereby highlighting the significance of this 'environment'.
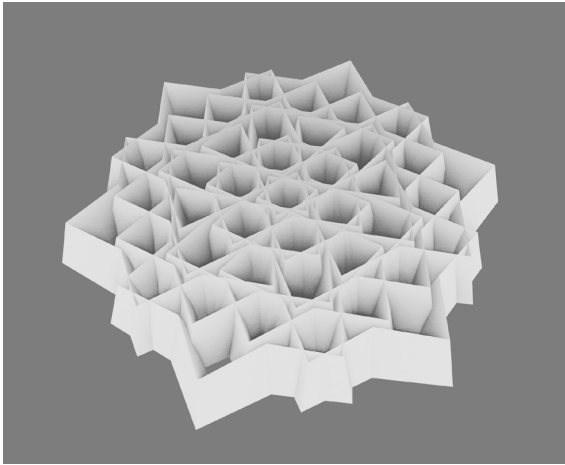

Fig. 6: *Standstill image of the untextured object without its surrounding.*

Ontologically, this environment consists of a 'cave', formed by a specifically designed polygon mesh (topology). The shape of this polygon mesh was not generated through generative methods, such as noise generators, but by the aforementioned *Landscape Wandering Machine*.
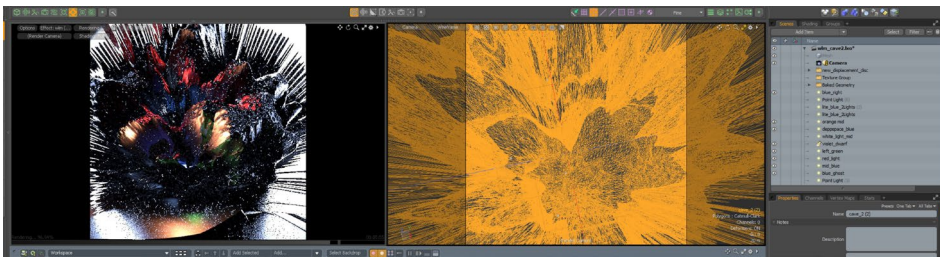

Fig. 7a: *Polygon mesh ('topography') of the 'cave', generated with the Landscape Wandering machine (screenshot).*
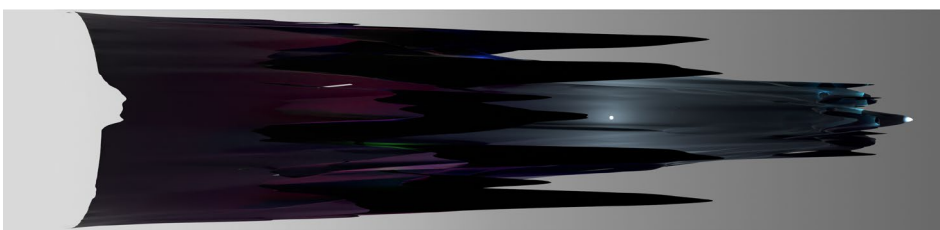

Fig. 7b: *Cross-section of the cave.*

The operational specifics and conceptual foundations of this 'machine', which serves as both an implicit machine providing a framework for creative processes affecting certain interaction paradigms and practices, and as a 'real' machine in the literal sense, have been elaborated in our paper "*New patterns of prototyping*"[29]. In short, this machine attempts to translate the Romantic metaphor of imagination as a machine into an actual artifact. Its core comprises shadow images evoked by specific configurations, employing the metaphor of the shadow image by Romantic authors to conceptualize individual memory. Since these shadow images are meant to gain

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28   Bolter and Grusin 2002, p. 23.

29   Johansson and Siess 2023.

plasticity, color, and vibrancy in the Romantic vision, they are to be *transformed*: in its aesthetics as well as in its mediacy. Medial transformations, e.g. the conversion of an image into text, are always accompanied by estrangements, disturbances, and incommensurabilities, which in modern perspective is considered a central flaw.[30] Conversely, the Romantics perceive these medial losses as a pivotal source of indeterminacies, which in turn play a prominent role in the functioning of Romantic aesthetics.

Thus, we constructed a machine that generates shadow images, intentionally using silhouettes of 'real' objects as shadow casters.

Fig. 8: *The physical Wandering Landscape Machine.*

We utilize the morphology—Jean Paul would say 'form'[31]—of 'real reality' to point to 'something else', semiotically separating the sign from its referent.[32] Within our machine, silhouettes emerge, inherently devoid of chromaticity, vivacity, or dimensionality. Aligning with the romantic ideal, which posits that memories preserved within these shadow images necessitate a particular mode of reception and articulation to imbue them with color, depth, and vitality, it is imperative that these silhouettes from our machine also undergo transformation into a new medial form, one markedly more enriched than the initial silhouette itself. While the Romantics understood this plasticity (as well as the *concept* of 'the machine') metaphorically, we interpret this ideal literally, employing the *displacement* functionality of our 3D tools. This process displaces the vertices of a polygon mesh along the vertical axis, depending on the darkness of the corresponding pixel on the displacement map (i.e. our shadow image), creating a three-dimensional topography from a two-dimensional shadow image.

We placed variously colored light sources within this topography, distributing them according to our preference, deliberately breaking the mechanistic/algorithmic characteristic of our production process by contrasting the material's inherent nature with our own idiosyncrasy[33] and prudency. This process creates an 'interesting' en-

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30   Shannon and Weaver 1964.

31   Jean Paul 1804, p. 69.

32   Cf. Montandon 1979; Kittler 1995; Kremer 2003, p. 198.

33   We refer here to the concept of 'Eigensinn' and 'Eigensinnigkeit' (i.e. wilfulness and idiosyncrasy) as outlined by Schiesser (2003, pp. 371–372). See also Schiesser 2008, p. 112.

vironment within the polygonal cave, oscillating between algorithmic and analog (humane?) aesthetics.
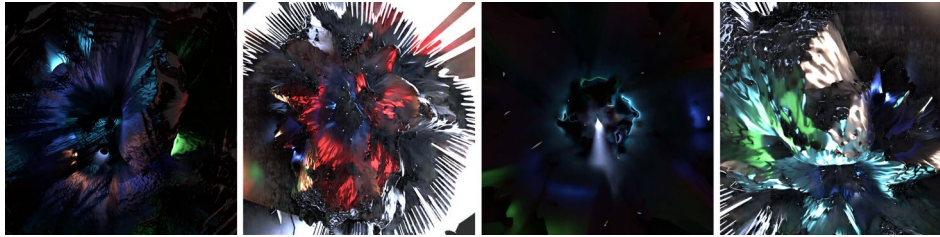

Fig. 9: *Images from the inside of the cave with different placed light sources.*

Within this created 'cave', we placed the generatively created object, which, in addition to unfolding, slowly moved along its longitudinal axis through the environment, reflecting different facets and details of its surrounding.

The 'cave' can thus be conceptualized as a 'landscape', representing a symbiotic connection between two opposing entities: culture on one hand and nature on the other.[34] The aspect of 'nature' is located in the entropy of the *Landscape Wandering Machine*, while the 'cultural' aspect resides in the manual intervention of the artists. This nature, created by a machine or a *Machina mundi*, echoes motifs found in the mechanistic worldview of Descartes or La Mettrie.[35] However, this adoption is not a claim of ownership but rather a 'play' with these popular ideas around 1800. We identify a 'cultivated nature' where, in Leibniz's terms, laws of change have been inscribed, unfolding successively.[36] At first glance, *Skopéin's* aesthetics, visual language and functionality may remind one of a kaleidoscope, a comparison we as artists reject. The reason for this rejection is echoed in a quote from a famous German Romanticist, who wrote about the kaleidoscope that "The smallest, most ordinary, miserable, trivial thoughts need only be thrown in, to be properly shaken and stirred, to form the strangest images."[37] This is why so much attention was given to the creation of the environment in which the unfolding object was placed: to prevent the multiplication of arbitrary and ultimately inconsequential images, devoid of history and meaning. In the development of *Skopéin*, we intentionally intervened in the algorithmic process, a practice we refer to as 'artistic intervention', with the aim of disrupting the emergent symmetry and introducing an 'organic'/'humanist' element. This deliberate incursion was executed through the use of digital masking techniques, which obfuscated segments of the algorithmically generated imagery. Concurrently, in a manner akin to a digital collage, other elements were integrated into the resultant voids. Therefore, although *Skopéin* presents an appearance of symmetry, a closer inspection reveals its asymmetrical nature. By embedding 'disruptive elements'—a phenomenon that can be interpreted in alignment with Brecht's concept of estrangement/alienation—within the otherwise perfect images, we engender points of friction where visually engaging phenomena can unfold.[38]

Despite these interventions, *Skopéin* retains its overarching *Gestalt*—while individual elements are unique in their own right, collectively, they compose a form that trans-

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34 Ruf and Siess 2023, pp. 254–255.

35 La Mettrie 1875, pp. 24–26.

36 Leibniz 1847, p. 50.

37 Original quote: "Sollte ein munterer Kopf von Mechanikus nicht leichtlich ein Kaleidoskop für preßhafte Dichter zu erfinden vermögen? Die kleinsten, ordinairsten, miserabelsten, läppischten Gedanken dürften nur hineingeworfen werden, um sich, gehörig gerüttelt und geschüttelt, zu den sonderbarsten Bildern zu fügen." (Hoffmann 1839, pp. 12–13) [Translation: Could not a lively-minded mechanic easily invent a kaleidoscope for beleaguered poets? The smallest, most commonplace, most miserable, most trivial thoughts need only be thrown in, to, when properly shaken and stirred, arrange themselves into the most peculiar images.]

38 We conceptualize *Skopéin* as an interface, a conduit of translation through which visitors are afforded a glimpse into an alternate reality—accessed via their imagination into their own realm of the imaginary—by engaging with a reflection of it through *Skopéin*. The imaginary, as highlighted not only by the Romantics around the 1800s (cf. Caduff 2003, p. 153) but also by contemporary research, resides within the incommensurable, eluding direct

cends the sum of its parts. In this regard, *Skopéin* serves as a metaphor for community, which, though superficially appearing as a homogeneous and unified whole, is in fact a composite of numerous individuals who disrupt this symmetry. This conceptual underpinning not only highlights the tension between uniformity and individuality but also reflects the dynamic interplay between algorithmic precision and human creativity.

FORMS AND FORMATS OF CO-WORKING: ITERATIVE VS. PARALLEL

As it has become evident, *Skopéin* emerged from the collaboration between two artists, each based in different countries/locations. This setup prompts an inquiry into the modalities of such a partnership, which, apart from a brief preliminary on-site visit (referenced in a previous chapter), unfolded entirely via digital means. Our experience has illuminated that the creation of such an art piece, intertwining multiple media techniques and formats and distinguished by its experimental nature, is optimally facilitated through a design methodology characterized by iterative and parallel processes. The iterative approach proved particularly efficacious due to the unique conception of the artwork: Unlike conventional design tasks where the final product is largely predetermined, *Skopéin* was defined only by the framework of the installation, with the actual final product—the installation itself—evolving from this process. A fundamental divergence lies in the fact that traditional design tasks typically separate conception from production, whereas our approach intertwined them through continuous iteration. In other words, we regarded the conceptual elements such as inspiration and ideation as so central to our artistic process that they were integrated into all creative activities, including production.

In addition to this iterative process, a second characteristic emerged in our approach, describable as 'parallel design'. The geographical separation necessitated working in isolation on various ideas, concepts, or implementations for the most part—a trait often observed among artists. To maintain the collaborative spirit, we instituted weekly online meetings where we would present, discuss, and interlace the previous week's work. A significant advantage was that all of *Skopéin's* means of production were available in digital format (such as 3D models, movies, renderings, sketches etc.), enabling us to exchange and evolve them bilaterally by challenging the machine and software logic and our limits and conventions, to produce something that is both unexpected and valuable, and in the end, will point out possible new directions.

Nonetheless, we did not wish to forsake the tactile experience of analog artistic experiments in *Skopéin*, as exemplified by the *Landscape Wandering Machine*. For this reason, we extensively utilized 3D printing technology, allowing us to create a physical version of this 'machine' that mirrors its 'digital twin'.

Both design methodologies demonstrated their specific strengths in our practice: While iterative design excels at sequentially refining an idea, parallel working is conducive to simultaneously exploring multiple concepts. Ultimately, both methods are instrumental in the creative process, yet they function optimally in tandem, balanced sensibly. Designers and artists, therefore, must cultivate an intuition for when to ex-

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articulation or verbalization, it can only be grasped through its reflections. Thus, *Skopéin* should be regarded as a 'medium', and in the parlance of Marshall McLuhan, it is a 'cool medium' characterized by its referential nature (cf. McLuhan 1994, p. 22–23). Analogous to the shadow images in Plato's Cave, which present a sensory-deprived reflection of the world, *Skopéin* too was made out of shadow images and should be interpreted as a shadow image. Its reception is not predicated on isomorphic decryption but rather on a self-reflective introspection. This conceptual framework positions *Skopéin* not merely as a passive recipient of sensory impressions but as an active participant in the construction of meaning, inviting viewers to navigate the interstice between the tangible and the intangible, the seen and the unseen, thereby enriching the interpretive process through a personal engagement with the imaginary.

plore a field of ideas (parallel working) and when to exploit a specific idea (iterative working).[39]

Fig. 10: *Example of parallel work and further developments by exploring the possibilities of the Landscape Wandering Machine: Experiments with the shilouettes, 3D printing and water color.*

The aesthetics of reception: Staging Skopéin

While, as previously mentioned, Leibniz described a scenario where God inscribes laws of change into monads that then unfold 'like a clockwork',[40] *Skopéin's* engagement with these motifs is complementary. Once again, it is essential to refer to the Romantic concept of a 'universal artwork' that forms exclusively within the individual reception process and remains situated in the imaginary. Consequently, recipients are endowed with a role of 'extended authorship',[41] implying that an artwork, regardless of its medial form, is never complete but always requires interaction with its viewer. The subject thus transcends, in the words of Novalis, "not in actu but potentia",[42] into the *creator* of their own reality. Recipients thus become 'extended artists' themselves—an aspect we particularly wish to highlight in *Skopéin*. The installation can only function if visitors see themselves in this role and interact with the artwork accordingly. In designing *Skopéin*, we developed a model for creative processes named the *Knowledge Horizon Model*.[43] The model became a cumulative way forward for recording and sharing our explorative and transformative processes, thereby illuminating our path in our endeavors.[44]

In essence, we argue that creative processes invariably involve a 'leap into the unknown' to look 'beyond the horizon' of what has been done and experienced. This leap into the unknown is necessary not only for us as the initial artists of the installation but also for the 'extended artists' (i.e. the visitors of the exhibition/church).

Therefore, a specific staging is required that affects this 'leap into the unknown' through certain interaction paradigms. More precisely, the staging affects a particular practice of interaction with the installation, which in turn facilitates a specific mode of perception. In 'conventional' settings, different types of museum visitors were identified, exploring an exhibition space in distinct patterns.[45] However, since *Skopéin* was not shown in the context of a museum but functions within and with the church space, these concepts of museum visitors, who perceive the architecture of the museum as mere infrastructure, do not apply. Instead, architectural theory suggests that "the primary focus of spatial design lays not on a product, but on behavior. Not architecture […] is at the center of architectural theory, but the human

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39   Johansson and Siess 2023.

40   Leibniz 1847, p. 50.

41   Novalis 1901, p. 34.

42   Novalis 1901, p. 25. (Note: this quote was translated from German to English.)

43   We described this idea in detail in our article "*New patterns of prototyping: developing concepts with playful exploration and probing. A case study within arts and design.*" (Johansson and Siess 2023).

44   cf. Boden 2003.

45   Sookhanaphibarn and Thawonmas 2009; Kim and Lee 2016.

behavior that relates to architecture."[46] Every subject thus has a specific practice and preference in their interaction with architecture and thus with the installation *Skopéin*. Therefore, we find the *Audience Funnel* a more suitable concept for designing interaction practices with the installation. In a previous paper we discussed an extension of the *Audience Funnel* for staging media art exhibits which proved to be also beneficial for the *Skopéin* project.[47] In short the *Audience Funnel* differentiates between five different states of interaction, ranging from the non-involved visitor to voice-driven interaction.

In conceptualizing *Skopéin*, we placed great importance on not affecting the church's function as a space of tranquility and contemplation, as well as a site for Christian services. Skopéin was intended to be perceived as an 'extension' of the church. Since the projection took place 19 meters high on the church ceiling, it was well beyond the typical field of view[48] of a church visitor.

Fig. 11: *Skopéin within the context of the church.*

Having deliberately refrained from using sound to not disturb the church's atmosphere, consequently the installation lacked an omnidirectional mediality to draw visitors' attention. Therefore this conception of Skopéin was a calculated risk we took: between an attention-seeking, visually and audibly 'loud' installation that would need to be switched off for services and devotions, and a subtle and restrained installation, we opted for a concept that highlights its subtle characteristics, even at the risk that the installation—despite its large projection area of about 16 square meters—might not be noticed by every visitor. This led to the phenomenon that Skopéin could be 'discovered' by individual visitors, as if by chance. These spontaneous discoveries then led to visitors pointing upwards with deictic gestures, thus drawing other visitors' attention to the installation. Using the phraseology of the *Audience Funnel*,

46   Hahn 2008, p. 30. (Note: this quote was translated from German to English.)

47   Siess, Hepperle, Wölfel and Johansson 2019; Hepperle, Siess and Wölfel 2019

48   Kim and Lee 2016.

it can be noted that these interaction practices established an 'organic' conversion from formerly "uninvolved visitors" to "voyeurs",[49] who in turn pointed other visitors to the exhibition.

By venturing into the comparatively high risk of implementing a rather unobtrusive installation within the space of a church, which, in the worst case, might have remained entirely unnoticed by visitors, we concurrently created the opportunity for individuals who typically do not engage with media art to encounter and interact with the installation. Once again it is important to acknowledge the profound influence that specific spaces—and particularly their *atmospheres*—exert on shaping and structuring the interaction practices[50] of visitors. Although Skopéin was conceptualized as an art exhibition, visitors primarily continued to perceive their experience as one of visiting a church, thereby allowing them to persist in their customary daily practices without the need to acclimate to the potentially unfamiliar atmosphere of a museum. Through this approach, we significantly lowered the barrier for potential target groups who might not typically resonate with the ambiance of a museum, thereby granting them access to a museum-like experience within a familiar setting.

This finding is particularly salient against the backdrop of the exhibition being showcased during the 'Assembly of the World Council of Churches', an event that draws thousands of visitors from across the globe and from diverse sociocultural backgrounds. However, a common thread among these visitors is their familiarity with attending church. For this reason, it is paramount from our perspective to not disrupt this familiar practice but rather, as previously mentioned, to enrich or augment the church visit with a media art installation.

Nevertheless, this does not imply that practices within the space cannot also be subtly modified, provided that the standard customary practice is not rendered impossible. Specifically, Skopéin took place outside the typical field of view of a human. Thus, engaging with the installation required a prolonged gaze towards the ceiling of the church, a posture that becomes uncomfortable over time. Consequently, we observed that many visitors chose to lie flat on the church pews to fully experience the projection. This practice markedly diverges from the typical interaction patterns within the church space, yet it does not interfere with the usual daily practices such as devotion, prayer, sitting, etc. Simultaneously, the act of lying down itself becomes a deictic gesture, leading other previously uninvolved visitors to direct their gaze upwards and thus engage with the installation.

Fig. 12: *Visitors lying on the church pews, experiencing Skopéin.*

Further work

The next steps in iterating, developing and experimenting with *Skopéin* involve its transposition into the realm of Virtual Reality (VR). Primarily, we plan recreating the church visitor's experience within a VR environment, thereby translating *Skopéin* into a virtual architectural space. Preliminary experiments have underscored the pivotal role of structural elements, particularly the columns sustaining the roof of the urban church, in shaping perceptual experience. These columns, by directing the gaze upwards, craft central perspective vanishing lines, enhancing and substantiating the immersive 'pull' of the installation. Since *Skopéin*, is inherently a two-dimensional film,

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49   Siess, Hepperle, Wölfel and Johansson 2019, p. 63.

50   Cf. Certeau 2015.

it derives its essence from spatial context, rendering it incongruent to confine it solely within a medium celebrated for its three-dimensionality. Hence, the importance of reconstructing this spatial context within the virtual domain.

Additionally, the church's dual galleries facilitate a layered depth arrangement, enriching the three-dimensional experience in VR. Observations revealed a preference among many visitors for positions within the church that incorporated the galleries into their peripheral vision, thereby introducing a fascinating depth leveling through differential parallax, a feature replicable and potentially enriching in VR that we want to investigate.[51]

This VR experiment serves as a conduit to further scrutinize the symbiosis and interconnectedness between artwork and spatiality, a connection deemed quintessential for *Skopéin*. Given the ease of modifying spatial topographies in VR, it also facilitates an exploration into the spatial or infrastructural constraints that may be pivotal in the art-making and creative process for media art installations.

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51   Contrary to our deliberate omission of an audio layer in the Stadtkirche Karlsruhe to preserve the intrinsic character and dynamics of the space (i.e. its 'atmosphere'), the VR adaptation will be augmented with a bespoke audio track. For its creation, we revert to employing the *Wandering Landscape Machine*, similar to our approach for the visual elements of *Skopéin*. However, in this instance, the machine's shadow projections are not visually interpreted but converted into MIDI control signals to operate a hardware synthesizer.

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