Traces, Fantastical Futures and the Crystalline.

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Abstract.

Traces, Fantastical Futures and the Crystalline employs digital modelling and analogue drawing process to propose speculative utopian architectures. The thesis examines the relationship of the creative works to the German Expressionist and Crystalline movement that arose in the early 20th Century. Key figures like the architects and artists Bruno Taut and Wenzel Hablik, envisioned crystalline cities and architectures and proposed societal transformation through the use of glass in architecture to create utopian cities and buildings.

The presented multi-discipline work exploits and interrogates the interplay between the physical and non-physical and postulates a biography and abstraction of the body beyond materiality through the generative constructive art process.

Drawing upon a variety of precedent strategies, the creative work ultimately presents a speculative, fantastical, crystalline architecture as a digital projection of virtual space in an actual installation.

Declaration.

This is to certify that

(i) *the thesis comprises only my original work towards the masters except where indicated in the Preface*,*

(ii) *due acknowledgement has been made in the text to all other material used,*

(iii) *the thesis is 10796 words In length, exclusive of tables, maps, bibliographies and appendices.*

Brendan R. Lee.

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Introduction.

An exchange of fantastical utopian ideas and creativity emerged in the early-Twentieth-Century during Europe's transitionary, Modernist period that was further accelerated by the German 1918 Revolution, the Russian Revolution 1917 and the end of the First World War in 1918. The European-avant-garde established a commonality of ideas, deliberations and hopes for societal change through new transformative architectures and theorised future utopian existences.

Chapter One examines key works from Bruno Taut and Wenzel Hablik. These two influential art and architectural practitioners speculated on the transformation of society through their ideas of crystalline architecture.

The German Expressionist architectural movement derived many of its proposals and thinking from theorist, poet and science-fiction writer Paul Scheerbart and in particular his seminal manifesto text *Glasarchitektur,* 1914. The Crystal Chain and the group's founder, Bruno Taut utilized and expanded upon Scheerbart's text. The case studies examined during the research and creative practice include Taut's illustrated text *Alpine Architektur* 1914, and proto-architecture, *Glashaus* 1914, Hablik's drawings of exhibition towers and etchings titled, *Cyklus Ausstellungs-Bauten,* 1919.

Chapter 2 documents my art practice and processes. Drawing, digital photography, 3D digital modelling and rendering, animation, sound and autobiographical writing visions fantastical fictions through art studio explorations.

Creative work in 2017 visualized an adaptation of my studio cubicle at VCA. A second wall and partial area of floor were assembled using high density polystyrene, utilizing the existing structure as an armature. New configurations posed ideas of art installation within the studio, where art works on plinth and on walls were absorbed and merged into the polystyrene structure and into a virtual exhibitory room. Taut and Hablik speculated on the idea of the art-exhibition-building which presented work within a purpose built, immersive architectural space. After several iterations, a configuration was measured and mapped into CAD software with the aim to build a digital virtual reality of the room. The relationship of the physical object and virtual object would be an ongoing investigation expanded upon in additional future works.

In the concluding Chapter, the abstraction of the human body in the digital work is considered as a reoccurring motif. Further interplays between the animation and soundtrack also produced additional creative outcomes and strategies. Viewing the human body through medical CT/PET scan diagnostics (an autobiographical narrative) suggested employing these imaging technologies. Their connection to the illusionary qualities of the cinematic prompted new ideas and outcomes in the video work. The mirror objects or the cinema-screen-surface in the preliminary polystyrene models were identified as extensions of the moving image and its illusionary effect, these mirror screens and artworks melded when imported into the digital realm and became inseparable form of the final model. These concerns prompted further questions towards the conclusion of my current research and these are also presented in this final chapter.

Chapter 1. Precedents.

1. The Crystalline Utopias and Proto-Buildings of German Expressionism: Bruno Taut and Wenzel Hablik.

In 1914, Paul Scheerbart's manifesto text *Glasarchitektur* was published, a key work that inspired the German Expressionist architectural movement. The manifesto described buildings and cities constructed almost entirely of coloured glass, a material considered spiritually symbolic of transmutation and transcendence. Scheerbart proposed glass utopias that would have a transformative effect on a post-World War 1 European society. His writings were highly influential, in particularly amongst a group of artists, architects and craftsmen in the early period of 20th Century Germany. Scheerbart's 1914 fictional novel *Gray Cloth*, also published in 1914, describes future societies living in glass architectures and cities.[1] His short novel *Rakkóx der Billionär,* 1901, is also considered a seminal text specifically to the Crystal Chain group (Glaserne Kette).[2] A collective of thirteen members who corresponded in 1919, presented ideas of a crystalline glass utopia. Christine Angela Knoop writes in her article concerned with Scheerbart's fantastical short novel and its influence on architects:

> Nevertheless, its architectural vision has had a discernible impact on the designs of the Glaserne Kette group and also of later architects (see, e.g., Brunn and Haag Bletter; see also Kaltefleiter, Lörwald, Schardt. [3]

[1] Knoop, Christine Angela. "Architecture and Utopia in Scheerbart's Rakkóx Der Billionär." In Text and Image in Modern European Culture, edited by Grigorian Natasha, Baldwin Thomas, and Rigaud-Drayton Margaret, 115-30. West Lafayette, Indiana: Purdue University Press, 2012. 117. Accessed September 17, 2020.
[2] Ibid,.117.
[3] Ibid,.116.

The Crystal Chain members including Bruno Taut and Wenzel Hablik viewed Scheerbart's texts as significant to their own proposals and writings of a crystalline utopia. Transparent and translucent glass, crystals and gems, water, mirror, coloured tiles and light itself were the materials of a future architecture and imagined urbanities. The use of these materials and the immaterial (light) elements were apparent in Scheerbart's writings and subsequent creative output of the Crystal Chain members including Bruno Taut. Knoop writes about Scheerbart's texts, *Rakkóx* and *Glasarchitektur* and its influence on Taut's *Glasshaus* 1914 glass domed pavilion:

> The pavilion is an interesting example as it represents the only instance where a building confirming exactly to Scheerbart's ideas was actually realized, although other members of the group later created buildings which confirmed only partly to Scheerbart's vision.[4]

Bruno Taut's illustrated theoretical text *Alpine Architektur* first published in 1919-1920 second publication in Japan 1944, speculates on mountain crystal/glass utopias. This fantastical work, Matthias Schirren writes, was envisioned by Taut towards the end of World War 1 and in the year immediately after. [5] The German architect resided in the garden city of Gronauer Wald where he compiled a series of 30 drawings and accompanying texts from 1917. The pacifist, spiritualist themes within the written component reveals a religious messaging, envisions a living-natural-force throughout the cosmos and considered all things as a living organism. Matthias Schirren writes about

[4] Rigaud-Drayton, Margaret, and Baldwin, Thomas, eds. 2012. Text and Image in Modern European Culture. West Lafayette, IN: Purdue University Press. Accessed October 3, 2020. ProQuest Ebook Central.
[5] Schirren Matthias, Bruno Taut Alpine Architektur, (Berlin: Prestel Vertag 2004), 9.

Taut's themes associated with the relationship between the natural, the living and the inorganic:

> To shed light on the covert links between this enthusiasm and artistic processes, links that, in decisive phases of life during and shortly after the World War 1, led a serious middle class and socialy committed architect and practitioner to think it plausible to imagine buildings and mountains, in fact the Earth and planets as living organisms, if not active personas and finally to completely merge life with architecture.[6]

The drawings illustrated a journey along a pathway through a mountainous landscape of summits, cascades, valleys and grottoes. The view alternates to high-altitude points-of-view and positions in Earth orbit and finally into the outer cosmos. Investigations of exterior and interior crystal forms and glass constructions link back to influences of Paul Scheerbart and his fictional texts of glass cities and architecture.

In the publication of 1919-1920 Germany, Taut's original drawings were reproduced at a reduced size from a wide horizontal format to conform with a vertically orientated book. The widescreen dimensions of the coloured lithographs were compressed to a portrait layout (39.4 x 33.4 cm.) The 1944 Japanese publication, titled in silver Japanese lettering, contained 29 monochrome reproductions and 8 lithographs in colour. Both rare publications were in portrait layout. Taut's decision to reproduce the work in this format

[6] Schirren Matthias, *Bruno Taut Alpine Architektur*, (Berlin: Prestel Vertag 2004), 9.

was unclear however Mattias Schirren considered such a decision offered plausibility, and that perhaps such a future utopian society was possible.

> Why Taut decided on this format is not recorded, but presumably it was with an eye to lending the work the character of a veritable book and to distinguish it from the runoff conventional portfolios.[7]

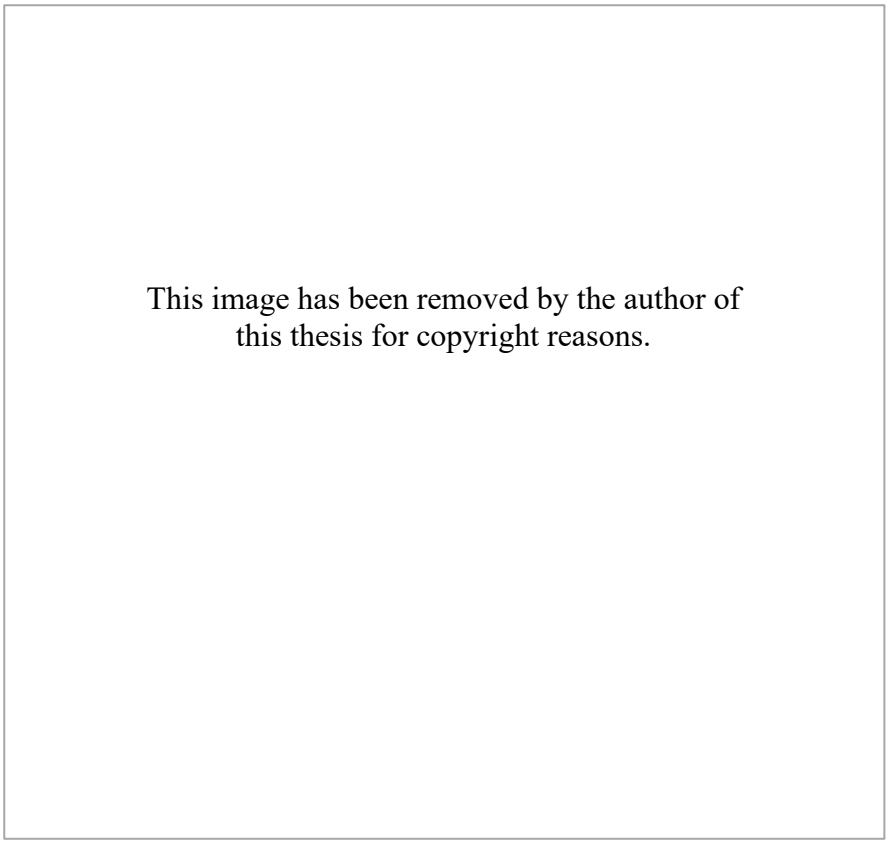


Figure 1. Bruno Taut, *The Construction Area*, 1914. Schirren Matthias, Bruno Taut Alpine Architektur (Berlin: Prestel Vertag 2004), 77.

[7] Schirren Matthias, Bruno Taut Alpine Architektur, (Berlin: Prestel Vertag 2004), 27

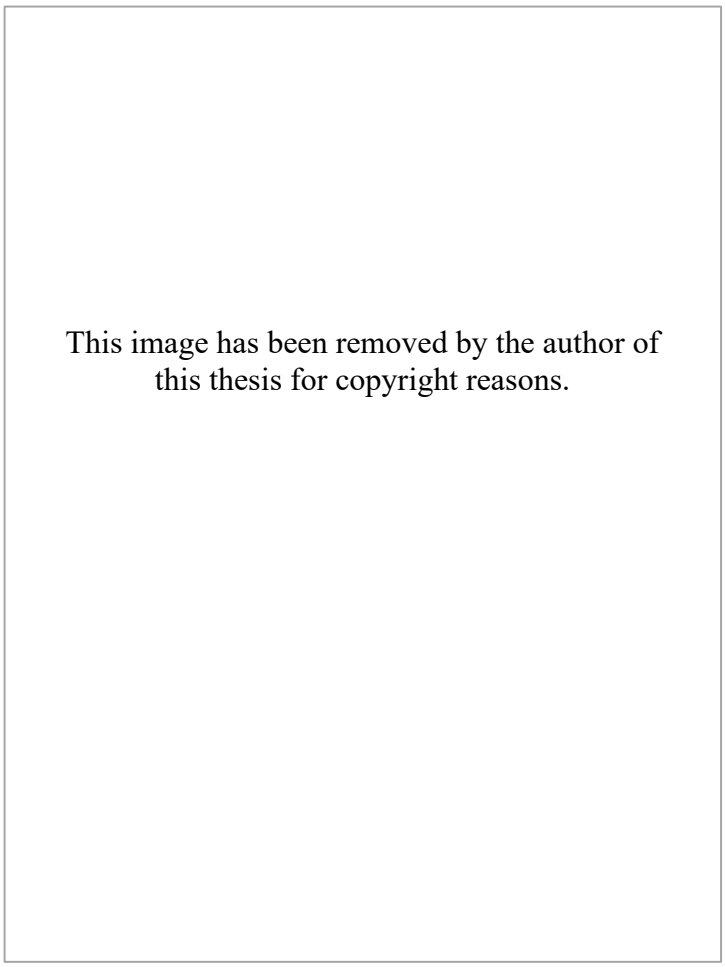


Figure 2. Bruno Taut, *Inside the Crystal Building*, 1914. Schirren Matthias, Bruno Taut Alpine Architektur (Berlin: Prestel Vertag 2004), 40.

The multiple viewpoints of the drawings positioned the camera angle from outside the observer and from the first person, creating a dynamic sequence of movement and the architectural speculations and its fantastical environment. These voyages evoke a narrative of cinematic exploration, and provide knowledge of how inhabitants would live in this alpine city, the behaviour of those who entered the glass temples. Taut's accompanying texts to the drawings indicate silence must be adhered to, allowing the appreciation of the orchestral and choir music. Visitors could observe the sculptural and cosmic paintings that would be positioned inside the cathedral scale building. The texts also reveal the utility considerations embedded in the architecture. Such detail suggests a

reality and plausibility to the project. Taut's inscription from the drawing titled *Inside the Crystal Building* reads:

> Between the glass skin of the space and the external glass skin of the building is a large inter space for heating and ventilation. [8]

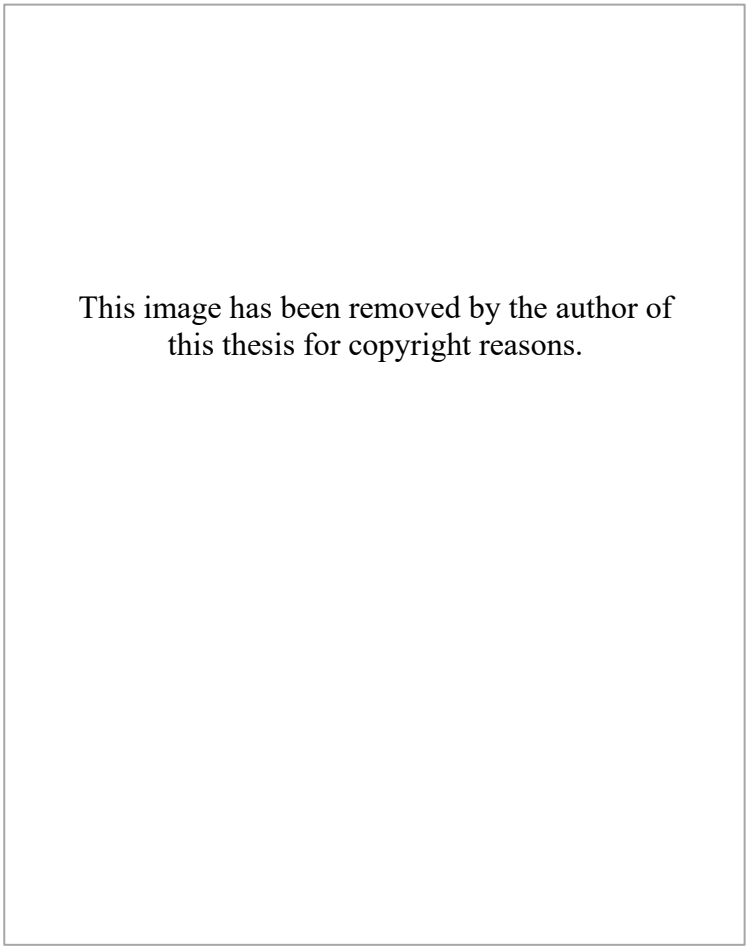


Figure 3. Bruno Taut, *Rocky Areas in Tyrol*, 1914. Schirren Matthias, Bruno Taut Alpine Architektur (Berlin: Prestel Vertag 2004), 66.

Taut and Scheerbart reiterated examples of glass used in architecture from the late Gothic cathedrals and Islamic mosques. The transformative effect on those who entered and

[8] Taut Bruno, Schirren Matthias, Bruno Taut Alpine Architektur, (Berlin: Prestel Vertag 2004),38 tran.. Worpswede John Gabriel

observed light entering through the stained-glass windows of the Gothic super structures was reconceived in their utopian visions and fictions. Taut's impermanent proto-building *Glashaus* 1914 constructed in Cologne Germany for the Werkbund Exposition, embodied many of the early architectural ideas of the religious structures and temples, and embraced Scheerbart's ideas of glass as architectural material that had transformative qualities. The *Glashuas* would be one of three exhibition type buildings Taut would design, the first constructed in 1910 (figure 4). The building's function is diminished and the structure itself became an art-object. Kai Gutschow writes about the art-object relationship that existed in Taut's earlier example of an exhibition pavilion for a steel beam manufacturer, Trager-Verkaufs:

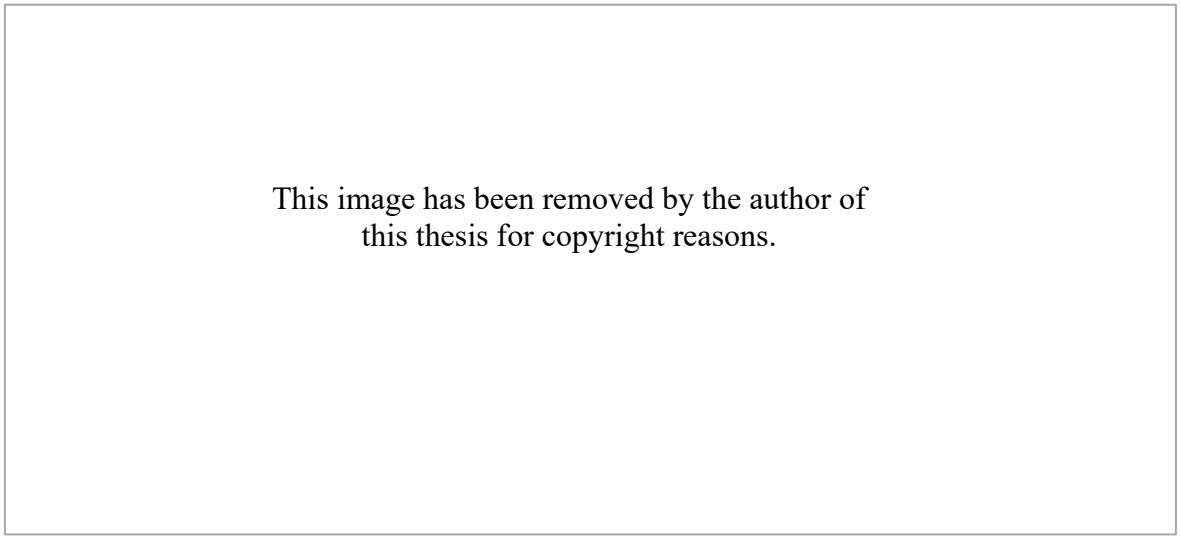


Figure 4. Bruno Taut, *Pavilion for the Träger-Verkaufs*, 1910. Kai Gutschow, From Object to Installation in Bruno Taut's Exhibit Pavilions, Journal of Architectural Education (1984-), May 2006, Vol. 59, No. 4, Installations by Architects: Ephemeral Environments, Lasting Contributions (May, 2006), p 64. https://www.jstor.org/stable/40480632

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> Here the exhibit building itself became the exhibit object. But the experience remained graphic and two-dimensional. With no interior,

> there was little difference between the view from afar and the experience of moving among the frames.[9]

Taut devoted very little of the building to functionality, intending an alternative for the pavilion beyond manufacturer product display. Taut's second iteration of an exhibition building, *Monument to Iron*, 1913, included darkened spaces that employed cinematic strategies to display products, including photographic transparencies and filmic solutions to inform attendees of current construction methods. Gutschow writes the following in reference to the new technologies utilized in the pavilion and the introduction of the cinematic and sensorial experience of the art-object of Taut's architecture:

> The dematerialization of the exhibition, represented in the transition from models to transparencies to moving images, was an important step in Taut's development beyond both the conventional exhibit hall, and architecture as object. Here was the elusive multisensory experience that could only be fully understood if experienced in person.[10]

These two earlier pavilions illustrated the convergence of art-object and architecture and anticipated the aims of the *Glashaus* in 1914.

[9] Gutschow Kai K, *From Object to Installation in Bruno Taut's Exhibit Pavilions,* Journal of Architectural Education (1984-) , May, 2006, Vol. 59, No. 4, Installations by Architects: Ephemeral Environments, Lasting Contributions (May, 2006), p 63-70. https://www.jstor.org/stable/40480632
[10] Ibid., 65.

Inscribed in the exterior walls of the conical dome of the *Glashaus* were Scheerbart's words from a letter written to Taut:

> Light seeks to penetrate the whole cosmos and is alive in the crystal.[11]

The *Glashaus,* 1914 consisted of two spaces over two levels linked by circular glass staircase which led to the upper chamber exhibition space. The walls of the lower space consisted of prismatic Luxfer glass bricks and areas of coloured, mirrored, and metallic tiles. From the upper chamber, sunlight entered through an oculus in the ceiling. This lower space housed a seven stepped tiled cascade and circular platform at the summit (figure 6). An adjoining darkened room at the ground level housed a hidden kaleidoscope that projected abstractions onto a screen (1.2m across.) This colourful symmetrical imagery presented in a darkened cavernous space evoked the architecture of early cinematic space that was emerging in Europe. The cascade replicated waterfalls from the earlier work of *Alpine Architektur* however in this actualized three-dimensional context the waterfalls had movement and an auditory component. The mirroring of reflective surfaces of water, prismatic glass bricks and tiles created a world of mirages analogous to other rudimentary forms of cinematic illusion such as the Kinetoscope and thaumatrope.

These performative elements within the *Glashaus* were intended to be immersive and demonstrate the beauty and transformative quality of a kaleidoscopic-glass-architecture.

[11] Taut Bruno, Glashaus--Werkbund-Ausstellung Coin 1914, Berlin (1914)"Glashausbriefe," Frühlicht, supplement of Stadtbaukunst Alter und Neuer Zeit, No. 3, 1920, 45-48 quoted in Rosemarie Haag Bletter, Journal of the Society of Architectural Historians , Mar., 1981, Vol. 40, No. 1 (Mar., 1981), pp. 20-43 URL: http://www.jstor.com/stable/989612

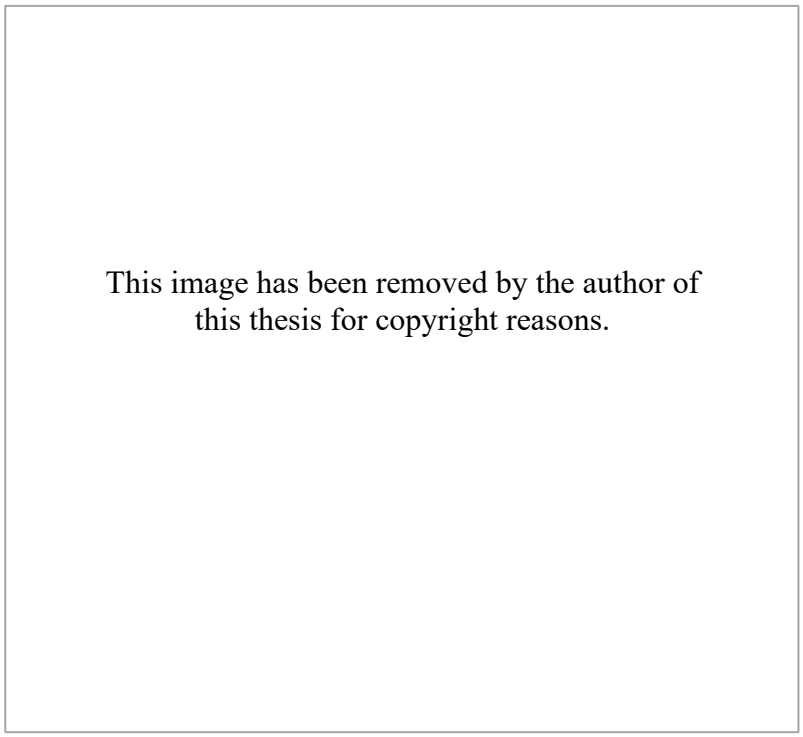


Figure 5. Bruno Taut, *Glashaus* Werkbund Exhibition, Cologne, 1914. Avery/GSAPP Architectural Plans and Sections (Columbia University), https://www.jstor.org/action/doImageSearch?Query=Bruno+Taut

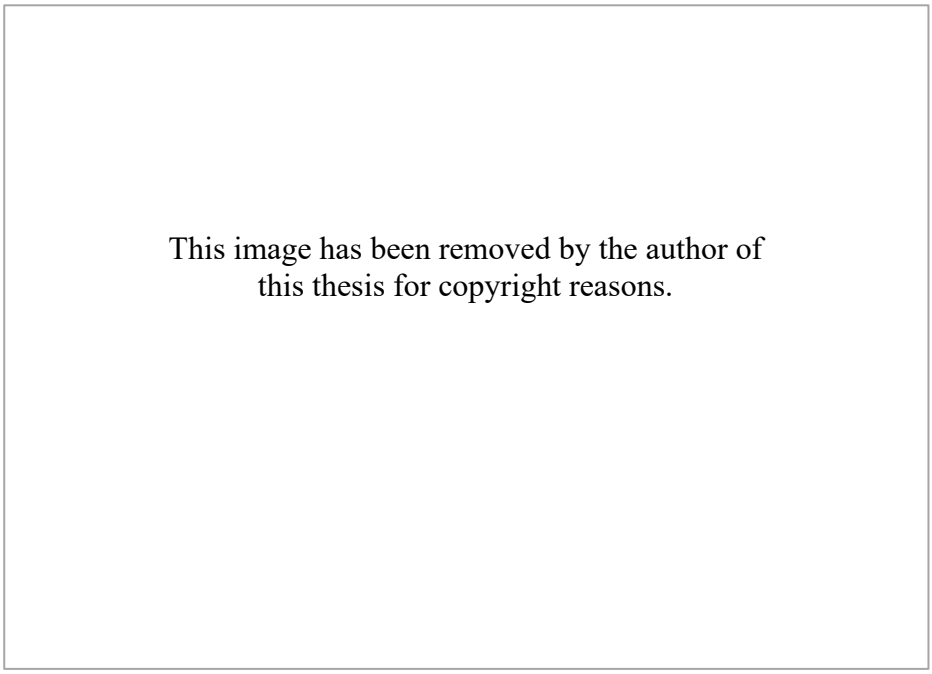


Figure 6. Bruno Taut, .*Glashaus,* Werkbund Exhibition, Cologne, 1914. Avery/GSAPP Architectural Plans and Sections (Columbia University), https://www.jstor.org/action/doImageSearch?Query=Bruno+Taut

Rosemarie Haag Bletter in her article on the crystalline architectural movement within German Expressionism describes properties of glass and crystal material as being malleable and illusory:

> A recurring motif in many of these designs (in addition to glass and crystal as material) is transparency and flexibility. Such projects, had they been built, would have produced a rich, shimmering, and illusory world of reflections.[12]

Wenzel Hablik (1881-1934) was a painter, etcher and practitioner within the Arts and Crafts movement. He was born in Brux and grew up in a nearby alpine region, studying cabinet making at the age of eleven. By the time he was in his early twenties he was studying fine arts in Vienna at the Staatliche Kunstgewerbeschule (School of Arts and Crafts). It was in this early period of his life however that his interest in natural forms developed after finding a quartz mineral on a trek in the mountains near his hometown. Subsequently throughout his adult life, Hablik studied crystals and collected these mineral forms as well as seashells and corals, however it would be the crystal object that would be the primary source for his proto-architectures and fantastical landscapes and cities.[13] Hablik identified the cubic structures of crystals to manifest creative forces evident throughout the universe. His ideas of the crystalline remained unbuilt except for several interior renovations and examples of domestic and personal objects such as cutlery, fabrics, furniture,

[12] Haag Bletter Rosemarie, Journal of the Society of Architectural Historians , Mar., 1981, Vol. 40, No. 1 (Mar., 1981), pp. 20-43 URL: http://www.jstor.com/stable/989612
[13] Santomasso Eugene A, Schaffende Krafte, W. Hablik 1881-1934, quarterly (London: Architectural Association, 1980.) p15.

jewellery and wallpaper designs. His oeuvre of oil paintings and a series of etching prints titled *Schaffende Krafte* (Creative Forces) 1909, materialized his fantastical vision of crystalline architecture and utopias, (figure 11). Anthony Tischhauser in an Architectural Association publication on Hablik's work describes the ideas behind *Schaffende Krafte*:

> *Schaffende Krafte* is an amalgam of reality and fantasy. Hablik believed that the study of natural phenomena for their intrinsic laws of form and structure would inspire new possibilities of expression.[14]

Hablik's drawing series, *Cyklus Ausstellungs-Bauten, Wurfel Variante* (Cycle Exhibition Buildings Cubic Variant), proposed several examples of cubic exhibition towers and temples devoted to the display of artworks. These drawings would be reiterated as an etching series in 1925. The drawing, Wurfel Variante 3, A11, 1914 (figure 7) illustrates one of these towers. Hablik intended the towers or domes to be located prominently within a city aiming to attract its inhabitants to visit the buildings and view artworks and hear background orchestral music. This musicality correlates with Bruno Taut's notes accompanying his drawings of alpine architecture and exhibition halls. The rotated octagon tower, positioned on a hilltop, radiates light and is surrounded by atmospheric cloud formations. Hablik was a member of the *Crystal Chain* correspondence group founded by Bruno Taut. They wrote letters to each other and exchanged ideas of the crystalline and the possibility of a future utopia. Many commonalities existed in their work including the proposition that the art-exhibition building could be a type of transformative

[14] Tischhauser, Anthony, *W. Hablik 1881-1934*, quarterly (London: Architectural Association, 1980.) p16.

catalyst and inspire the construction of the new architecture and advocate the expansive art concept of Gesámtkunstwerk (a total art work). Anthony Tischhauser in an Architectural Association journal article describes Hablik's *Variante 3* tower's relationship to Bruno Taut's *Glashaus* pavilion:

> Special attention was paid to light and in many ways resemble Taut's *Glasspavillion* built for the Werkbund Exhibition in Cologne in 1914.[15]

The immersive characteristics of these proposals, realized temporarily in Taut's pavilion, Tischhauser further posits on the purpose of Hablik's art-exhibition buildings:

> Through creativity, he believed one might discover the forces in nature. Having been disillusioned by the War, he had come to realize that an inner world might only be revealed through the outer world or through creative activity.[16]

Hablik proposed creativity could transform a post-World War 1 society. This idea that creativity and its associated forces could be a catalyst for change was developed in the etching series titled, *Zyklus Architektur,* 1925. The twenty etchings were separated into *Transitionary Buildings* and *Utopian Structures.* The eight etchings of the *Transitionary*

[15] Tischhauser, Anthony, *Wenzel Hablik: Crystal Utopias,* AA. Architectural Association quarterly (London: AA Publication, 1980.) p4.
[16] Ibid.,

Buildings works, (figures 9 and 10) would reiterate and highlight the art-exhibition building as having transformative qualities for society.

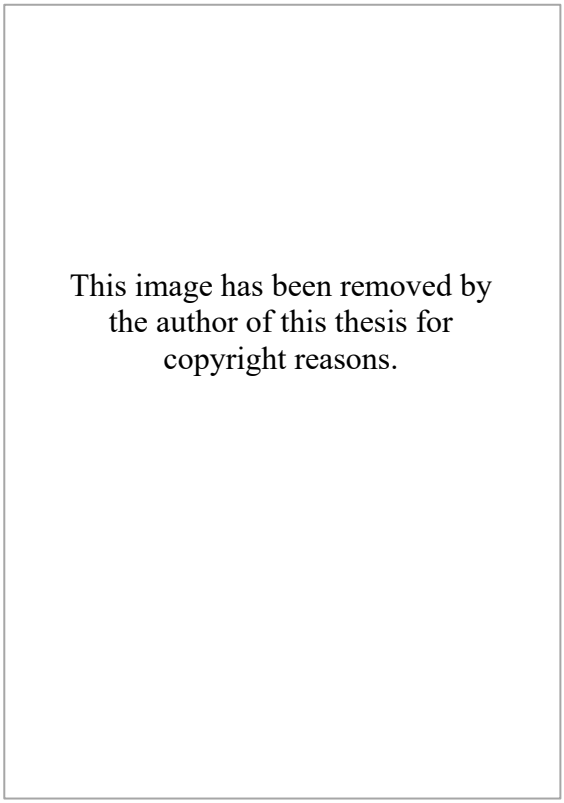


Figure 7. *Cyklus Ausstellungs-Bauten Variante 3, A11,* Wenzel Hablik, 1914. *Wenzel Hablik Expressionistische Utopien, (Munchen: Prestel, 2017.) p103.*

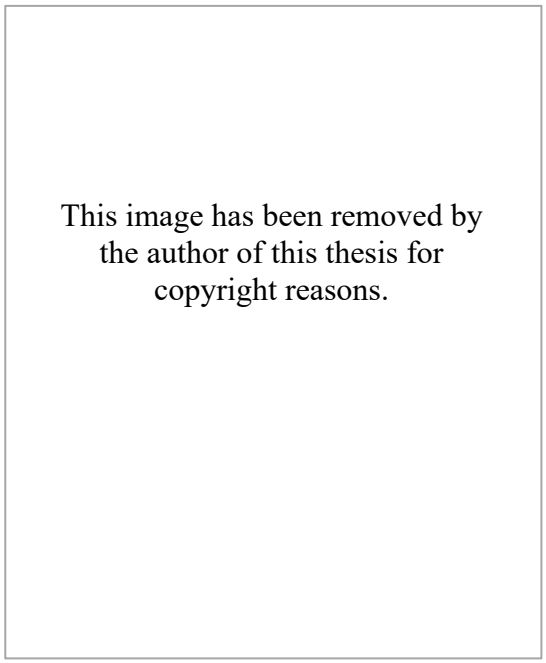


Figure 8. *Cyklus Ausstellungs-Bauten Variante von A11, pencil and ink,* Wenzel Hablik, 1919. Wenzel Hablik Expressionistische Utopien*, (Munchen: Prestel, 2017.) p102.*

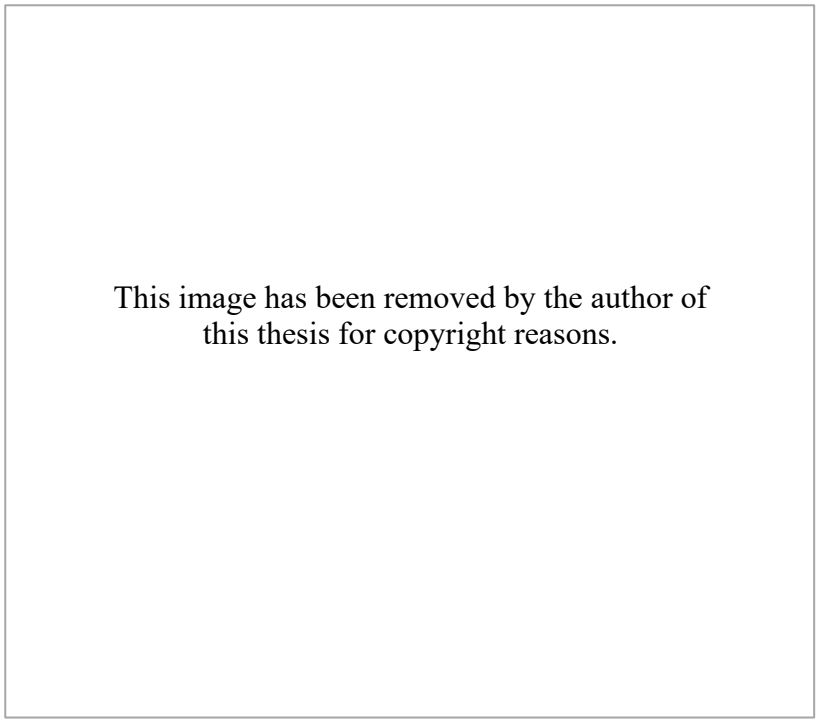


Figure 9. *Zyklus Architektur, sheet 11, Freitragende Konstrukton (Free Construction)*, etching, Wenzel Hablik, 1925. Wenzel Hablik Expressionistische Utopien, (Munchen: Prestel, 2017.) p108.

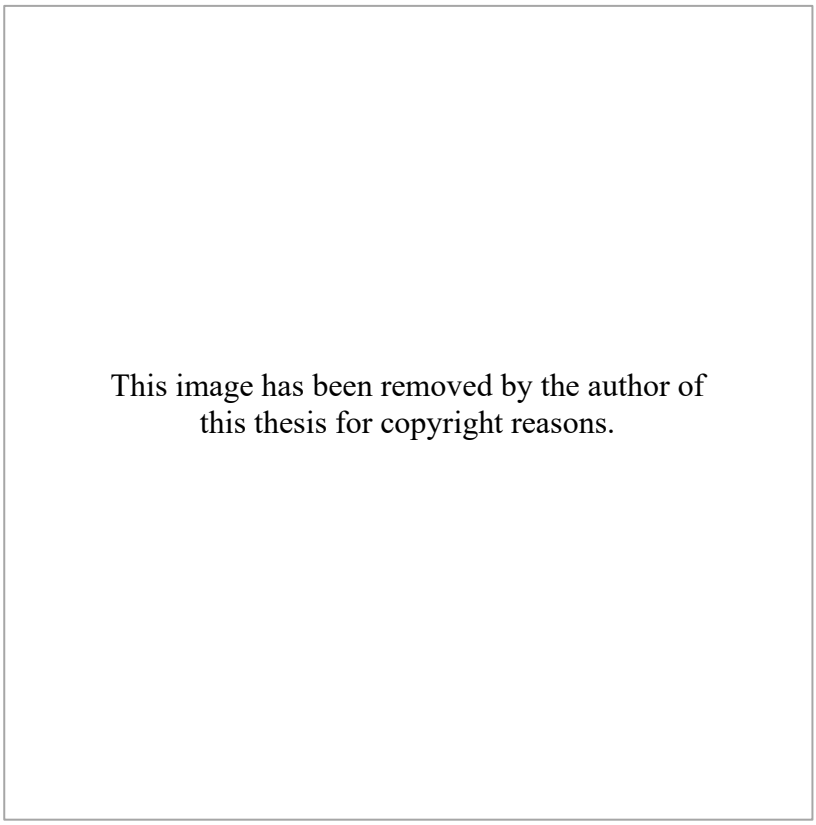


Figure 10. *Zyklus Architektur, Sheet 1,* etching, Wenzel Hablik, 1925. Wenzel Hablik Expressionistische Utopien, (Munchen: Prestel, 2017.) p108.

A motif in Hablik's work is the protagonist's journey to crystalline structures, cities and mountain top castles, and even to outer space. He would often depict these castles and structures on high mountain tops as if to make a physical journey even more difficult. It is through this outward journey that transformation of the protagonist is achieved. Angela Koop writes about the narrative space in Hablik's oil paintings and the figures depicted, arms outstretched towards elevated and floating architectural dream-scapes which appear to almost merge with the dramatic atmospheres and further into the cosmos:

> I argue that Hablik's suggestion is to take a dangerous, utopian, yet utterly and immensely rewarding path to a place which promises the

> greatest possible proximity to the stars, an approach we see reflected in Wright's dream to take architecture out of the ground and into the light.[17]

Hablik's floating fantastical architectures utilized imagined future technologies to defy gravity and permit space travel to other planets. Tischhauser writes about Hablik's etching series that depicted *Fliegende Siedlungen* (Flying Colonies):

> In his *Flying Colonies* an ideal society could be created; if enlightenment were not possible through a spiritual journey, it might be achieved through a physical one. [18]

Axel Feuss posits in his essay from the Wenzel Hablik retrospective exhibition catalogue, that Hablik may have read science-fiction novels from the 19th Century such as Jules Verne and H.G Wells.

> The artist may have found colonizers in utopian literature of the 19th Century. In his novels, Jules Verne not only describes the famous journey from the earth to the moon in 1865, but also in 1895 a propeller island with a settlement of ten thousand people.[19]

[17] Knoop, Christine Angela. "Architecture and Utopia in Scheerbart's Rakkóx Der Billionär." In Text and Image in Modern European Culture, edited by Grigorian Natasha, Baldwin Thomas, and Rigaud-Drayton Margaret, 115-30. West Lafayette, Indiana: Purdue University Press, 2012. Accessed September 17, 2020.
[18]Tischhauser, Anthony, *W. Hablik 1881-1934*, (London: Architectural Association, 1980.) p10.
[19] Feuss Axel, *Wenzel Hablik Expressionistische Utopien,* (Munchen: Prestel, 2017.) p61.

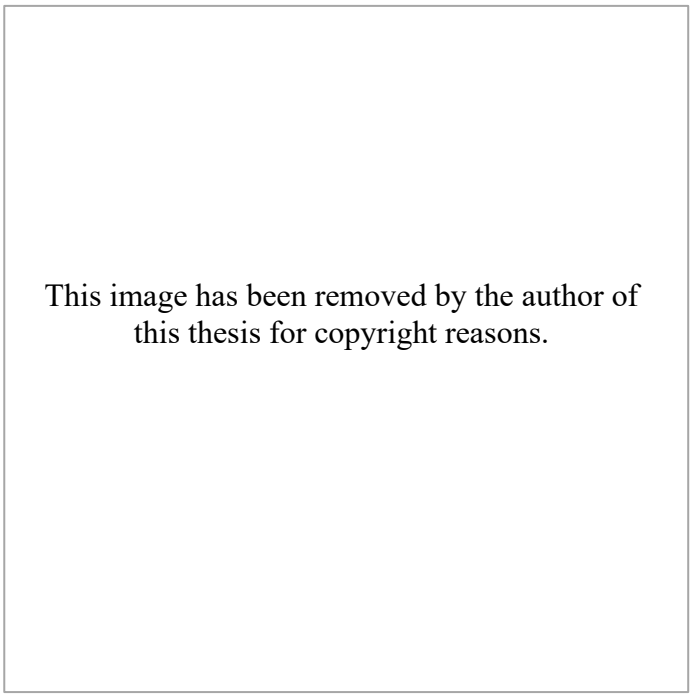


Figure 11. *Zyklus Shaffende Krafte,* sheet 3, etching, Wenzel Hablik, 1909. Wenzel Hablik Expressionistische Utopien, (Munchen: Prestel, 2017.) p47.

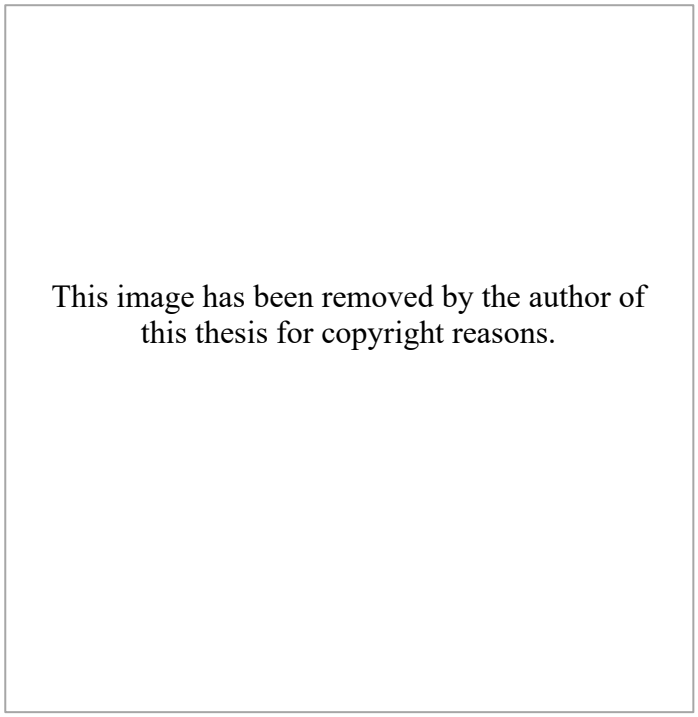


Figure 12. *Freitragende Kuppel (Cantilever Dome) with Five Mountain Peaks at Base*, oil on canvas, Wenzel Hablik, 1924. Wenzel Hablik Expressionistische Utopien, (Munchen: Prestel, 2017.) p107.

Chapter 2. Creative Works and Processes.

2.1 Light and Shadow Architectonics. (Preliminary Video and Photographic Works.)

While preparing for a series of photographic works, I built a number of model maquettes and configurations in my VCA art studio space. The architectonic forms were made from polystyrene, plasterboard plinths, carboard, mirror and transparent and black acrylic panels. Positioning lamps at various angles, shadow and light effects were produced on surfaces, expanding, and shadows delineated perspectival lines. This merged architectonic field of actual model (figure 13) and the light effects upon its surfaces were recorded using a digital still camera.

This initial period of research investigated the sculptural paintings, stage designs and abstract filmic works of László Moholy-Nagy. Working with a multi-medium practice, Moholy captured the effects of shadow and light by incorporating reflective and translucent materials such as metallics, glass, nitrocellulose plastics and plexiglass. His technologically reliant works aimed to assemble art and the photographic to explore ideas relating to abstraction and multiple views.

Moholy's black and white abstract film, *A Lightplay: Black White Gray,* 1926, records the light upon surfaces and their shadow effects, shifting and distorting perspectives, and dispersing viewpoints into multiple spatial abstractions.

An additional polystyrene model was made in the studio and a digital animated model was projected onto its surface (figure 15). This doubling of image enabled a type of uncertainty in what was being perceived and what could be identified as actual and virtual.

The digital forms were projected and were subsequently video recorded as moving images on the physical model surfaces.

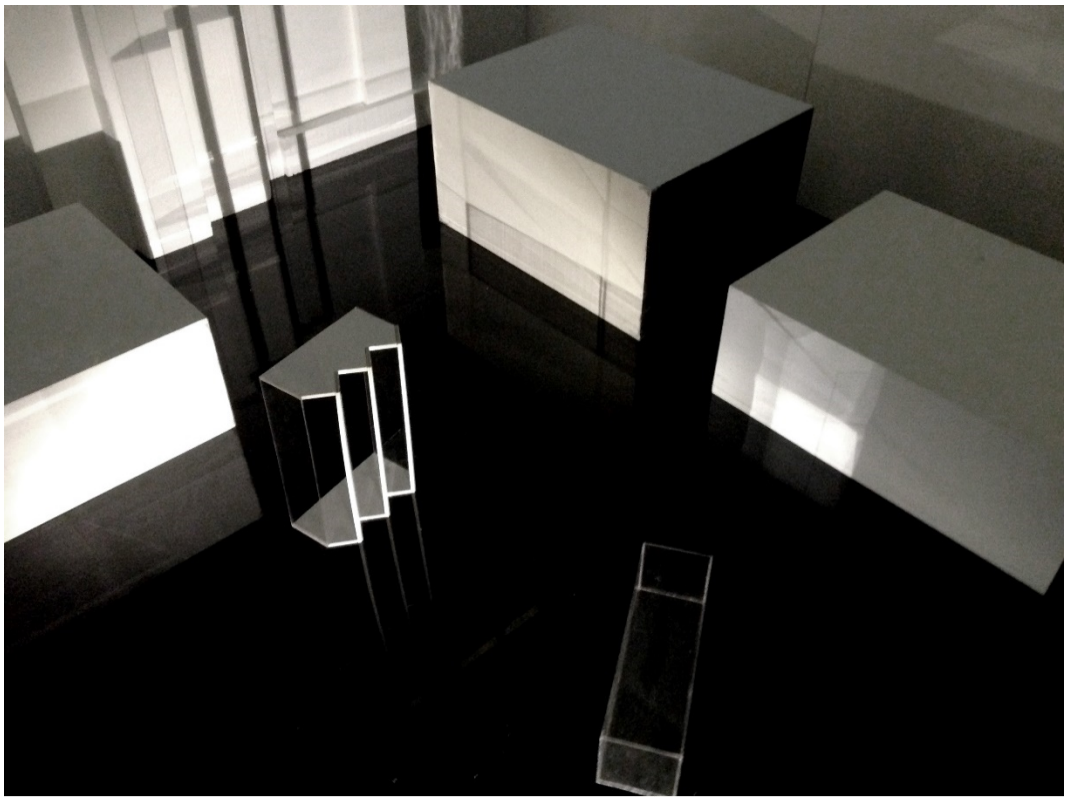


Figure 13 . Brendan Lee, *Set A for Crystalline City,* 2016, digital still, acrylic, plasterboard, cardboard, polystyrene.



Figure 14. Brendan Lee, *Kaleidoscope City*, 2016, digital still from video, 2 minutes 30 seconds.



Figure 15. Brendan Lee, *Kaleidoscope City*, 2016, digital still from video, 2 minutes 30 seconds.

Light sources from the lamp and projector shaped and defined spatial forms and integrated digital architectonic projections with the physically material acrylic and polystyrene objects.

The image was inverted in video editing software (figure 15). This generated multiple illuminated architectural bodies and perspectival lines, allowing them to be visible. The

effect of the inverted image and use of photomontage, the materials seemed alchemically transformed into glass substances. Patrizia McBride examines Molohy's work and text, *Von Material zu Architektur* (From Material to Architecture), 1929, a collection of images and diagrams positing his architectural thinking. McBride writes on Moholy's use of the pioneering modernist photographer, Jan Kamman's image (figure 16) in his text *From Material to Architecture*:

> The image consists of the superimposed negatives of two massive buildings whose luminous silhouettes seem to float into one another. [20]

McBride continues, referring to Moholy's caption text below the Kamman photograph he appropriated for *Von Material zu Architektur*:

> The accompanying caption highlights the illusion of spatial interpenetration that is produced by the overlapping negatives, offering it as an experiential paradigm that will perhaps be realized by a future generation through the architectural deployment of glass.[21]

[20] McBride, Patrizia C. "Narrating in Three Dimensions: László Moholy-Nagy's "Vision in Motion"." In The Chatter of the Visible: Montage and Narrative in Weimar Germany, 83-110. Ann Arbor: University of Michigan Press, 2016. Accessed September 20, 2020. doi:10.2307/j.ctt1gk08k8.9.
[21] Ibid,. 108.

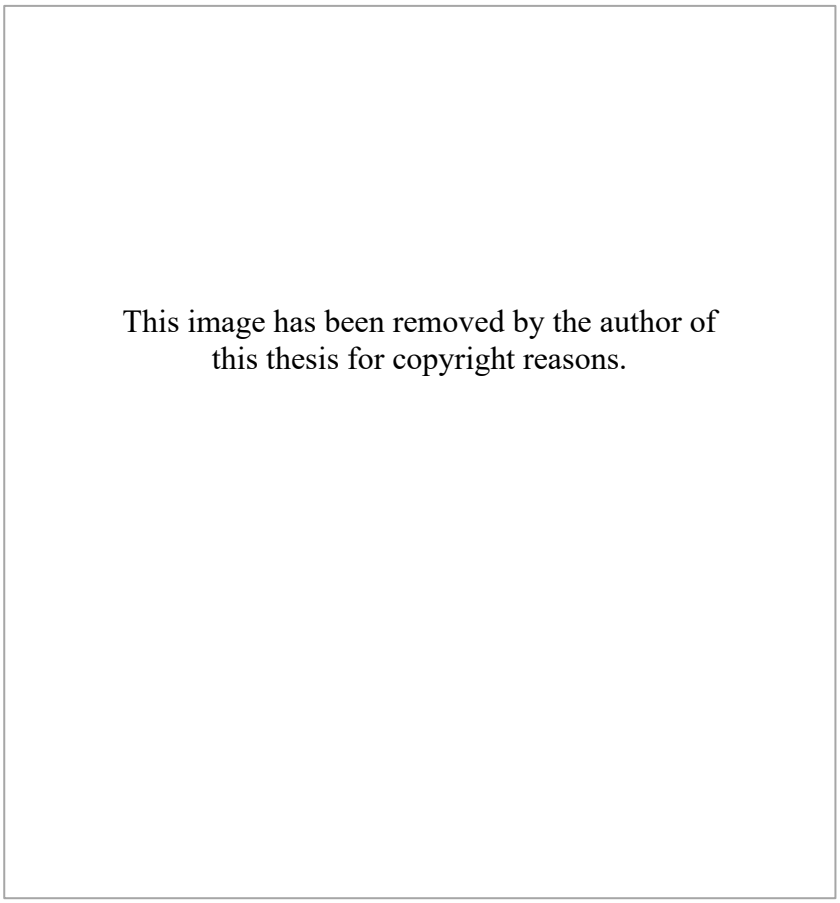


Figure 16. *Van nelle Factory*, Rotterdam, 1931, Jan Kamman. McBride, Patrizia C. "Narrating in Three Dimensions: László Moholy-Nagy's "Vision in Motion"." In The Chatter of the Visible: Montage and Narrative in Weimar Germany, 83-110. Ann Arbor: University of Michigan Press, 2016. Accessed October 22, 2020. doi:10.2307/j.ctt1gk08k8.9. p109.

The 2016 video work, titled *Kaleidoscope City* (2 minutes and 30 seconds), consisted of two edited scenes without audio-track. Scene A (figure 14) recorded a right to left camera track of the model. Scene B (figure 15) records a forward and backward camera view. These movements within an architectural space create a multiplication of space, existing in reflective mirrored surfaces. The projected virtual model rotated, expanded, and contracted, integrating the virtual digital space with the physical surfaces of the studio models. The *Kaleidoscope City* monochromatic video would anticipate further architectonic works and creative practice in digital modelling.

2.2 In Proximity to Cyklus Ausstellungs-Bauten.

In 2017, I reconstructed the walls and floor of my art-studio cubicle in polystyrene. The dimensions of the actual cubicle was approximately 2m high x 3m long and was made of plasterboard. A heater was positioned beneath the single window.

The wall and partial section of the floor were assembled using white high-density polystyrene squares and timber panels that I had collected from previous model making works. Several plinths and mirror panels were also incorporated. Several reconfigurations of the polystyrene imitated the studio cubicle. A polystyrene window had no void and therefore had no function. The colourless material and the non-functionality of the window simulated a room that was being viewed and experienced simultaneously from its exterior and interior.

The art-studio had been transfigured into art-exhibition-studio where plinth, art hangings and walls were progressively absorbed, merged into the second structure, into a virtual exhibition room for art, linking back to Taut and Hablik's art-exhibition-building speculations. After several iterations, a configuration was measured and mapped into CAD software with the aim to build a digital virtual version of the room. The relationship of the physical object and virtual object would be an ongoing investigation expanded upon in additional future works.

The art-exhibition-studio reiterated previous constructive processes in digital and paper modelling.



Figure 17. Brendan Lee, *Art-Exhibition-Studio*. 2017, high density polystyrene, timber, mirror, approx. 2m H x 3m L x 2m W.



Figure 18. Brendan Lee, *Art-Exhibition-Studio*, 2017, water Colour on paper, 12cm x 8cm.



Figure 19. Brendan Lee*, Art-Exhibition-Studio*, 2017, high density polystyrene, timber, plinths, mirror, cardboard, approx. 2m H x 3m L x 2m W.

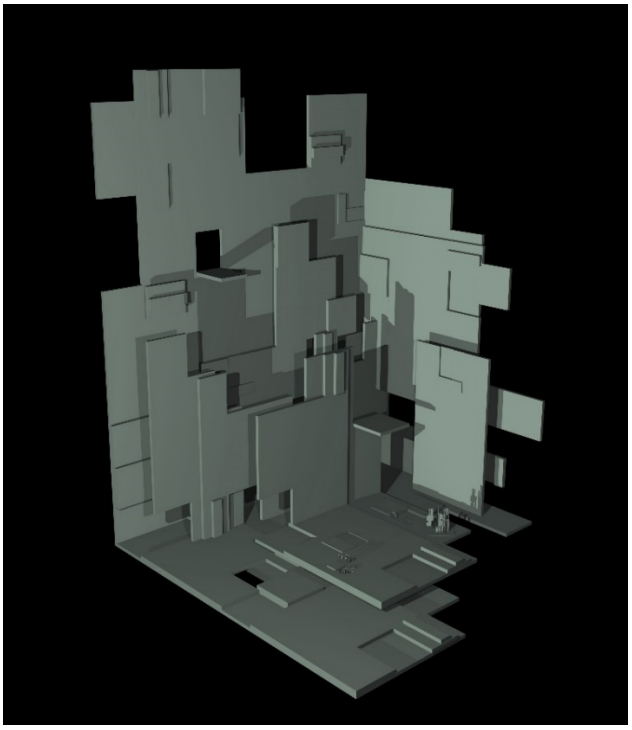


Figure 20. Brendan Lee, 2017, digital construct, unspecified dimensions.

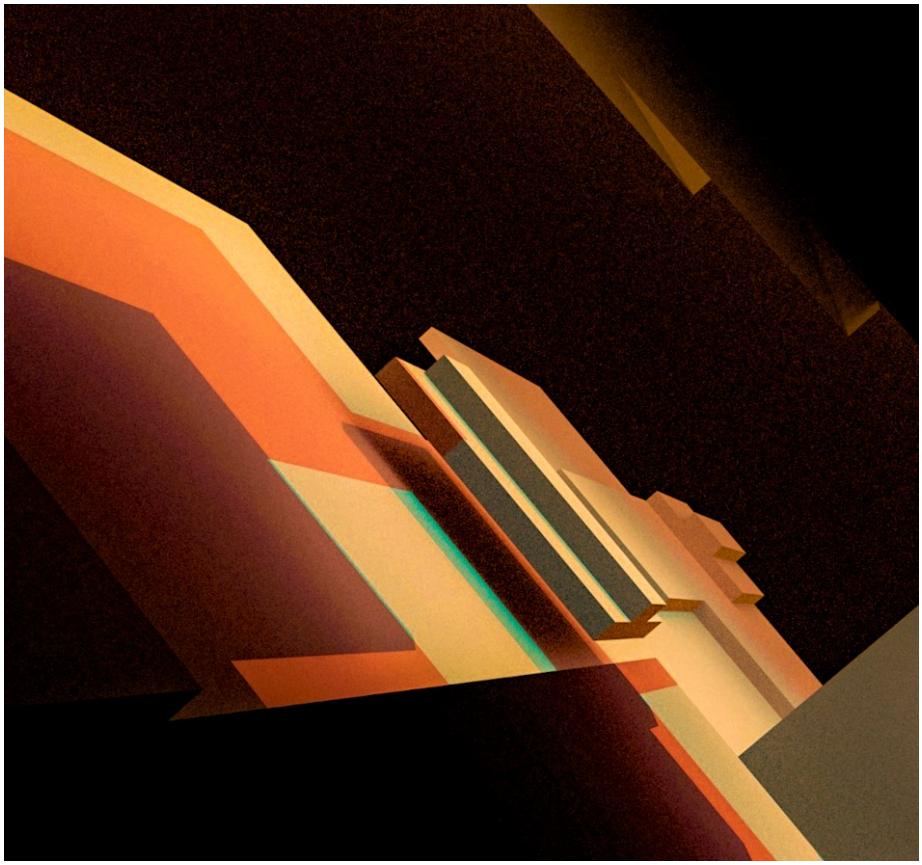


Figure 21. Brendan Lee, 2017, *Still A*, preliminary digital construct, unspecified dimensions.

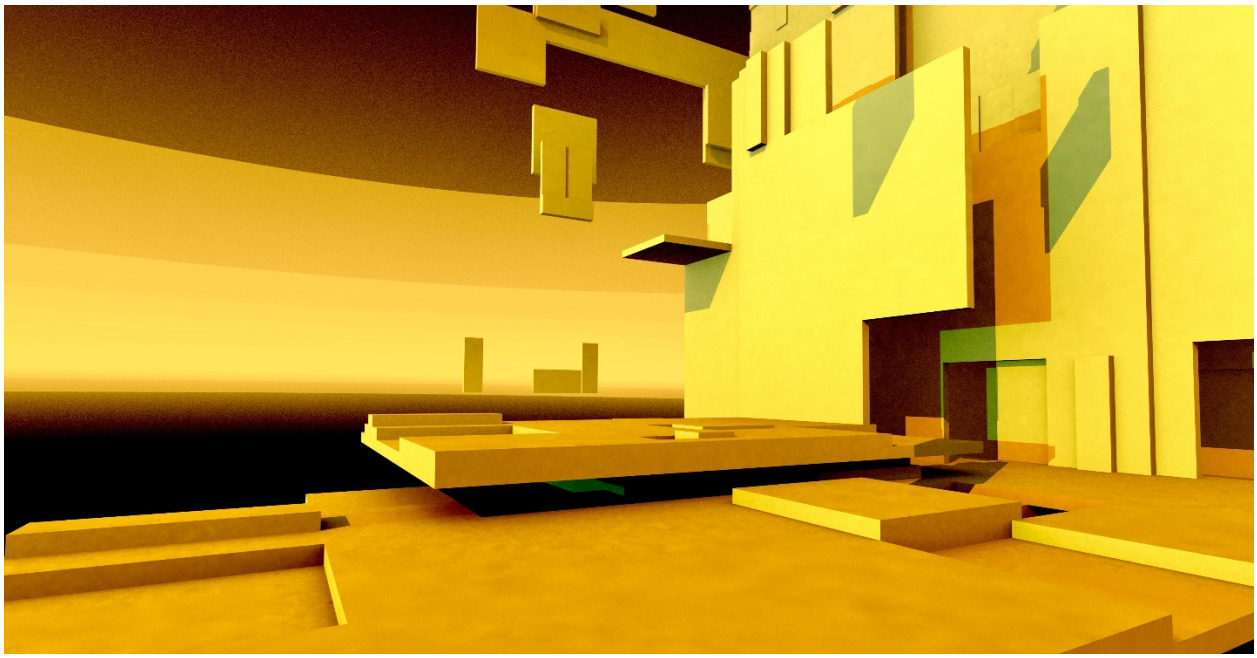


Figure 22. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* still from digital projection.



Figure 23. Brendan lee, *Digital Alpine Landscape*, 2017, Still from video, 30 seconds.

A digital animation of a virtual alpine landscape aimed to reiterate Bruno Taut's *Alpine Architektur*. On page 13, an illustration titled *Rocky Areas In Tyrol* (fig 3), showed a montage of summits from the Tyrolean Alps, Austria. Taut reimagined these peaks with his crystalline architectures. Matthias Schirren's writes about Taut's accompanying text to the drawings. The translation of Taut's Romantic text:

> We do not merely want to be grotesque/we want to be become beautiful /through the human spirit/build the/universal architecture![22]

[22]Schirren Matthias, Bruno Taut Alpine Architektur, (Berlin: Prestel Vertag 2004), 64.

In the animation I wanted to depict a landscape using digital rendering processes. The camera view in the animation tracked over a still body of water that mirrored the mountain forms and clouds in the background. The mountain peaks, immersed in storm cloud formations and high-altitude atmospheres, evoked the image of the Alps that Taut rendered in his ink and pen drawings.

The dimensions of the rectangular metallic form in *Digital Alpine Landscape* (fig 24) correlates with the mirrored foam and cardboard sculpture (fig 19). This sculptural form (cut in half) and positioned on a plinth, had the appearance of pyrite (iron sulphide), a mineral specimen that I collected from Crystal World.

The digital rectangular shape reflects the virtual environment. The virtual camera renders this environment on the surface of the mirrored shape. This other virtual space exists on surface of the virtual object. The mirror forms would be used in future digital works and raised questions in regard to digital mirrors and their comparative qualities to actual mirrors and position in space. Henri Lefebvre writes about mirrors and their ability to spatialize and inform our position in space.[23] He also writes about the mirror and its dual qualities relating to the imaginary and the actual:

> Into that space which is produced first by natural and later by social life the mirror introduces a truly dual spatiality: a space which is imaginary with respect to origin and separation but also concrete and practical with respect to coexistence and differentiation.[24]

[23] Lefebvre, Henri, The Production of Space, trans. Nicholson- Smith, (Cambridge: Blackwell 1991) 186
[24] Ibid., 186.



Figure 24. Brendan Lee, *Digital Alpine Landscape*, 2017, still from video, 30 seconds.

The landscape world was visualized as a circular 360 degrees (fig 25) space, and in a second iteration was intended to utilize virtual reality to experience the construct in an immersive mode. The virtual reality video, tracks from left to right and completes a full-circle of the landscape. The immense crystalline forms are positioned in the mountains and over the water. Several structures appear weightless, since they mirror the landscape and atmospheres on their reflective surfaces. The forms' immense scale, metallic materiality and suggestion of weightlessness intended to evoke other planetary existences.

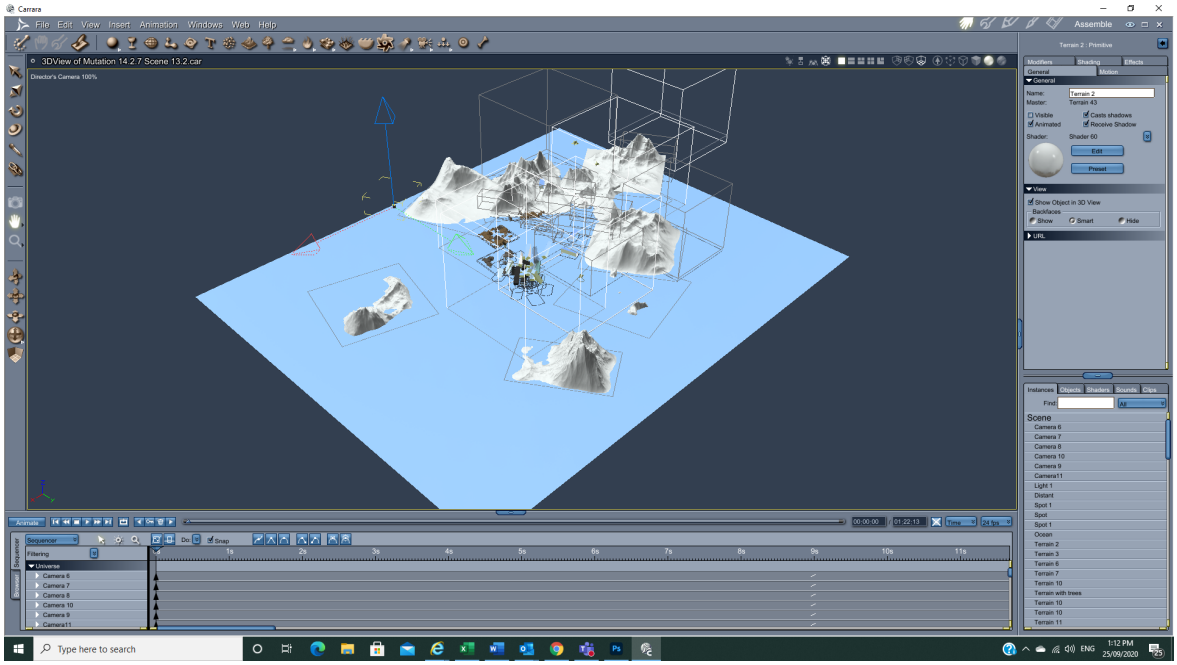


Figure 25. Brendan Lee, Screen shot of 360° model, 2017, Carrara 3D.

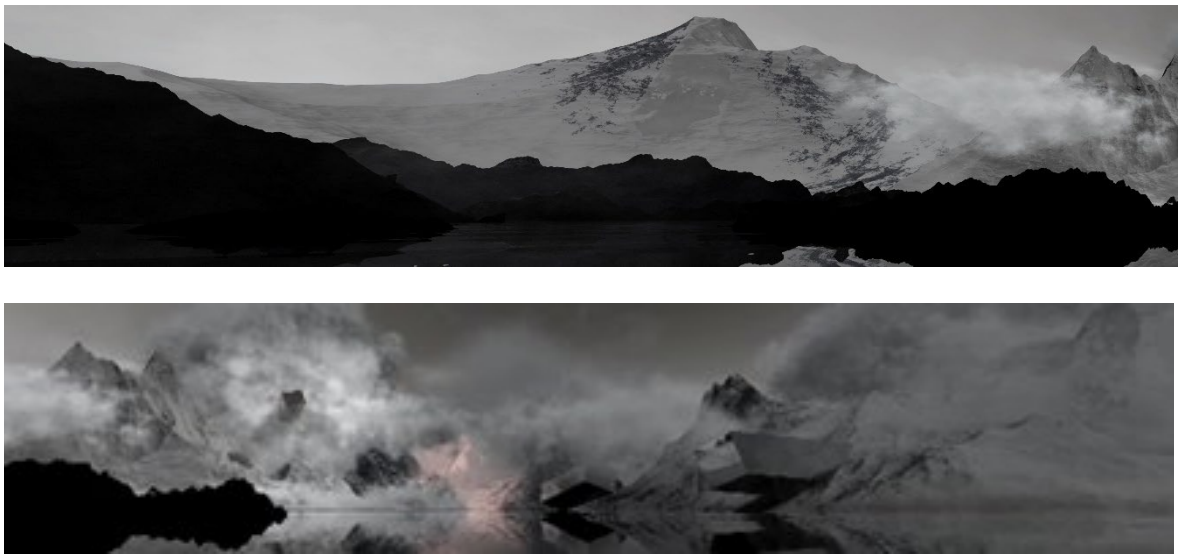


Figure 26. Brendan Lee, *Digital Alpine Landscape*, 2017, still, section from VR video.

The use of virtual reality technology and its immersive quality has a relationship to the visual and sound components Bruno Taut's *Glashaus* pavilion. The experience of the interior of the temporary pavilion's dome could be considered an early 20th Century virtual reality experience. Indeed, since the building itself no longer exists (it might be considered

as an imagined virtual reality space.) The pavilion was also a revolutionary concept and incorporated new building materials such as glass prismatic bricks, and early cinema technology. According to written and photographic documentation of the *Glashaus'* lower chamber (fig 6), it was an immersive sensorial space of illusion; the sound of cascading water, multiple effects of light on mirrored tiles and prismatic glass, and the kaleidoscopic projection immersively engaged the observer.[25] Josh Siegel writes of these sensory elements in Taut and Scheerbart's glass architectural proposals in his essay on Josiah Mcelheny's MOMA exhibition titled, *The Alpine Cathedral and the City-Crown:*

> Scheerbart and Taut sought nothing less than individual salvation and the regeneration of society. They envisioned a synesthetic envi-ronment of trembling light, flowing water, dulcet music, and crystalline glass to bedazzle the senses and effect a spiritual and political transformation.[26]

The surface reflections on the water and on the architectonic forms attempt to mimic the interior cascade inside Taut's glass-dome and the mountain crystal palaces described in Scheerbart's novel *Rakkox*. Christine Angela Knoop writes about these links between Scheerbart's fictional narrative and Taut's *Glashaus* pavilion:

> The pavilion features colourful tiles which shine in different shades and colours depending on the force and direction of the light. The colored

[25] Siegel Josh, "Projects 84 Josiah Mcelheny The Alpine Cathedral and the City-Crown," MOMA, published Feb, 2007, Https://www.moma.org/d/pdfs/W1siZiIsIjIwMTYvMDcvMDEvMWVvZGJsc3kzX3Byb2plY3RzODRfcmUucGRmIl1d/projects84_re.pdf?sha=79803bcd019c47db

[26] Ibid.

> glass at the rear of the room we seen in figure 2 is backlighted, reminding us of the illuminated gemstones in Rakkox's house. Further a water cascade, reminiscent of the cascades in Stummel's palace (Rakkox 28) is installed in the middle of what looks like a stone and tile staircase, moving water and polished stone being materials which are not transparent but reflective.[27]

Like Taut's non-utilitarian lower chamber of the pavilion (the upper chamber was an exhibition space), the rectangular architectonic forms in my digital landscape have no windows nor doors, no utility perhaps except to mirror the environment and reflections on the water. This causes a double reflection and a further virtual space a virtual imagen within an imaginary space.

The construction of the 3D primitives in these works - such as mountains, water surface, clouds and lighting was a process of manipulation and trial over a period of 12 months. Within the software, mountains are designed to specification in the terrain builder. Elements such as rock type and texture, the amount of snow coverage, alpine vegetation quantity and species, summit height, valley depth and steepness, are determined according to preference. The design of cloud and atmospheres required inputs to determine size, volume, shape, density, and opacity. The water required specific wave height and motion, which established reflectivity and its mirroring quantity. Light sources and their specific attributes including tint and colour, light strength and angle controlled the highlighting and shadowing of forms and composed the overall atmospheric condition and its affect

[27] Knoop, Christine Angela. "Architecture and Utopia in Scheerbart's Rakkóx Der Billionär." In Text and Image in Modern European Culture, edited by Grigorian Natasha, Baldwin Thomas, and Rigaud-Drayton Margaret, 115-30. West Lafayette, Indiana: Purdue University Press, 2012. Accessed September 17, 2020

qualities on the virtual reality participant. Each element had to be positioned and adjusted within the scene and according to the interaction of each virtual object and how they operate together and on their own. The computer mouse was the tool, - that manipulated the elements, and could be considered an extension of the artist's hand and cognitive decisions. To even greater extend, the VR headset, intensified bodily presence. A 360-degree immersion in the digital imaginary space was manipulated by the participant's movement of head and body.

Using virtual reality, the flat screen space observed through the headset could be considered an extension of the physical body. The participant perceives and interacts with an imaginary field that simulates a three-dimensional environment. The headset screen could be thought of as a mirror, a symmetrical representation of what was generated in the computer 3D software, mirroring an imagined environment. The participant can no longer see nor hear the outside world. Perhaps they can hear their breathing and heartbeat. In this virtual space, immaterial projections and existences operate. It is as though they are projecting an image of their body in this virtual space or possibly a presence without material form, a type of disembodied presence. Henri Lefebvre writes about presence and absence in regard to the qualities of the mirror.

> The mirror discloses the relationship between me and myself, my body and the consciousness of my body - not because the reflection constitutes my unity qua subject, as many psychoanalysts and psychologists apparently believe, but because it transforms what I am into the sign of what I am. This ice-smooth barrier, itself merely an inert sheen,

> reproduces and displays what I am - in a word, signifies what I am - within an imaginary sphere which is yet quite real.[28]

Mirroring the virtual created additional vision that was different and yet identical. The doubling of the imaginary gestures towards the unfurling of another virtual space, perhaps an infinitely reoccurring projection existing in glass reflections and behind translucency plains. Lefebvre writes about the interplay of mirror qualities and spatial objects, a reciprocal form altering relationship.

> One truly gets the impression that every shape in space, every spatial plane, constitutes a mirror and produces a mirage effect; that within each body the rest of the world is reflected, and referred back to, in an ever-renewed to-and-fro of reciprocal reflection, an interplay of shifting colours, lights and forms.[29]

The *Digital Alpine Landscape* short video work and Virtual Reality proposal related to the biographical presence and spatial-walks that attempted to locate the body or its senses of perception within a virtual space. Utilizing Virtual Reality and screen-based technologies, I hoped to convey this type of presence and reiterate the immersive experience of the *Glashau*s dome from 1914.

After creating various digital representations of landscape and atmospheric clouds and investigated different lighting effects, colouring and textural processes, I shifted the

[28] Lefebvre Henri, *The Production of Space,* trans. Nicholson- Smith. (Cambridge: Blackwell, 1991), 185.
[29] Ibid., 183.

creative work towards the architectonic crystalline form as the primary object of the work. This relinquishment of figurative elements in the models and videos coincided with the search and collection of actual crystal objects as a source material for future creative production.

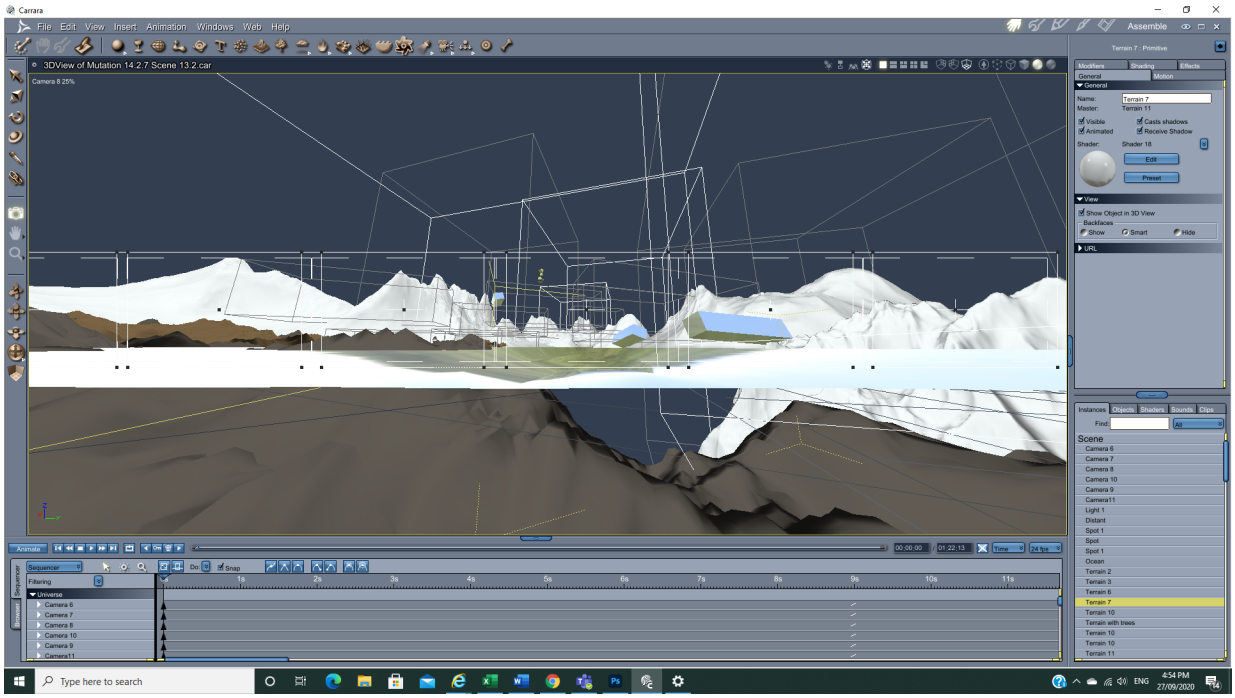


Figure 27. Brendan Lee, Screen shot of 360° model, 2017, Carrara 3D.

2.3 Fantastical Rocks.

As a guide to creative process, I emulated Wenzel Hablik's alpine walk near Brux Germany, which he made in his youth over a 100 years ago in the early part of the 20th Century. On this trek, Hablik discovered a quartz cluster in a rocky crag and in time he would use this mineral form and many others as the source material to envision his crystalline architectural utopias and landscapes.

My friend Michael Spooner introduced me to Hablik's work after a discussion on Bruno Taut and his text *Alpine Architektur.* Intrigued by Hablik's architectural and etching work, based on the crystals, we hired a car and headed down the Nepean Highway with the aim of finding the perfect mineral specimen at a store called Collectors Corner, located in the outer suburbs of Melbourne. We drove on the freeway cutting through the flat expansive urban sprawl of the south-eastern suburbs. The newly constructed glass towers of the CBD were on the horizon behind us, slowly diminishing as we drove further away from the centre. The openness and scale of the suburban landscape contrasted to the inner-city, a dense zone of towers with coloured glass facades. Those reflective and translucent glass structures recalled the crystalline fantastical dreams envisioned by the Crystal Chain- a vertical glass city reflecting back the suburbs- all its activity mirrored and contained in the reflective surfaces of the skyscrapers. To the left in the distance we could see the Dandenong Ranges but we were heading in a different direction to the mountains. Soon we arrived at Collectors Corner. Not exactly an alpine adventure in Europe but I hoped to encapsulate the spirit of the Crystal Chain group by completing the road trip and finding the ideal rock as Hablik did many years ago. Bruno Taut wrote in his letter to Hablik and all members, December 1919:

> The "New Architecture": floating, impracticable models: stars and absolute fantasy. Purely festive things. To charm through their mere existence. Probably the most important starting-point for the new architecture. A frivolous world![30]

After an hour or so of consideration, I selected a calcite matrix (Fig.30) from the glass cabinet at Collectors Corner. It was an aggerate with a coarse powdery surface, a pseudo-morph of calcium carbonate with polymorphs of calcite, which means one type of mineral grew over the other, like some quasi living thing that took thousands of years to form, perhaps millions. On reflection, the surface of the mineral had similarities to the texture of polystyrene foam which had been used to construct the VCA art-studio cubicle project. The specimen reminded me of the 3D digital model I had been working on for the past 12 months; separate cubic shapes integrated to make an additional complex form. The white specimen's cohesive interconnected system and pseud-morphing formation provided ideas to apply to my digital architectural models.

The structures of crystals imaged under electron microscopes reveal a structure and patterning has a repetitive architectonic form and quality, something I wanted to reproduce digitally. The imagery also evoked the interchangeability of the microcosmic and the macrocosmic, a concept that Wenzel Hablik was interested in; the idea of scale being indeterminable throughout the macro and micro cosmos.[31] On the *Canadian Museum of Nature's* website, I found an electron microscope image of a nisnite crystal (figure 28). Measuring only 150 microns (0.15mm), it embodied this duality of scale; it could be

[30] Taut Bruno, The Crystal Chain Letters, ed. trans. Whyte (Massachusetts: MIT Press 1985), 25.
[31] Tischhauser, Anthony, W. Hablik 1881-1934, (London: Architectural Association, 1980.) p7.

immense architectural form, or a miniscule one only visible through an advanced microscope. The crystal was described by the online mineral database, *Mineral Dat Org* as:

> Striated, blocky and square to rectangular tabular crystals of up to 100 μm in length, with groupings of ≤1 mm growing on heazlewoodite. Crystal groupings exhibit a boxwork-like habit[32]

Using the electron image as a template in CAD software, I drew lines over the surface with the mouse, to transform the 2D into a 3D model. The process of mapping a form and transforming it into another form, (2D image to 3D digital model), followed on from the reconstruction of the walls and floor of my art-studio cubicle. As with the nisnite model, the polystyrene object was measured and transcribed into the 3D digital space and reassembled as groups and individual components. Additionally, the shapes in the monochromatic image to some extent appeared to resemble the white polystyrene studio construction. In the process of copying by hand, (computer mouse, measuring tape.) inconsistencies are generated, subtle differences in perspective, extensions, and new configurations are inadvertently made – the translation is not exact.

Where the cropped 2D image prevented me from seeing the form, I estimated how it would extend and be completed. These estimations were mental constructions, extensions of the observable into a complete virtual model of 20 components. This estimation of the cropped elements created a type of fiction to be imagined. It was difficult to believe the image of

[32] Mindat org catalogue entry of Nisnite" published 2011, https://www.mindat.org/min-39870.html

the mineral actually represented a real thing, a network of perfect right angles, its surface seemed polished by a machine, and its micro-scale imperceivable to the human eye. The polystyrene studio likewise was an incomplete entity, with voids and areas not outlined, requiring forms to be imagined, and the rear or front sides of elements to exist virtually. Recalling the interconnecting forms of the rock I had collected, I combined the grouping I had drawn digitally multiple times to form new structures, causing a feedback loop to exist between the actual mineral objects collected and the virtual digital forms which would influence additions to the collection.

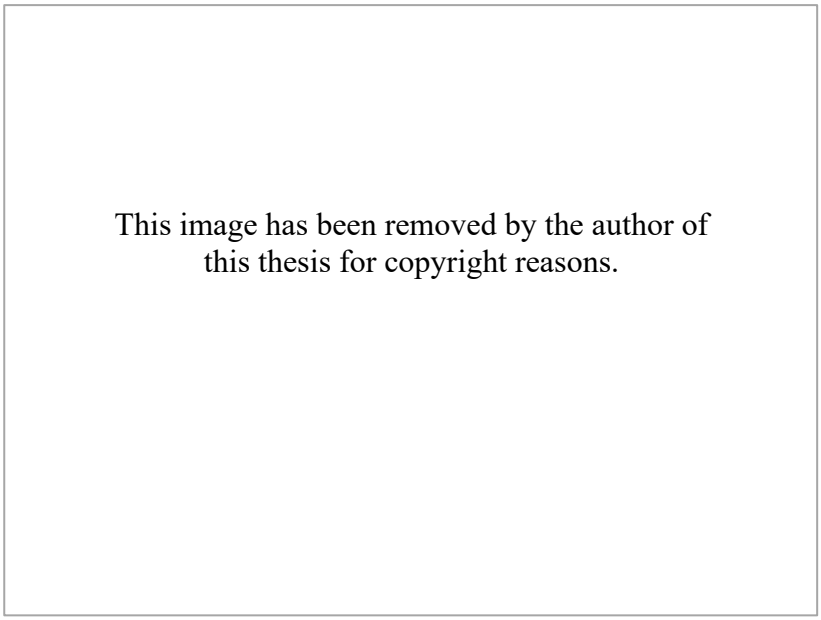


Figure 28. Electron image of nisnite crystal. Image: Glenn Poirier © Canadian Museum of Nature, Seeing the Small with Electrons, 2011, https://canadianmuseumofnature.wordpress.com/2020/04/22/seeing-the-small-with-electrons/

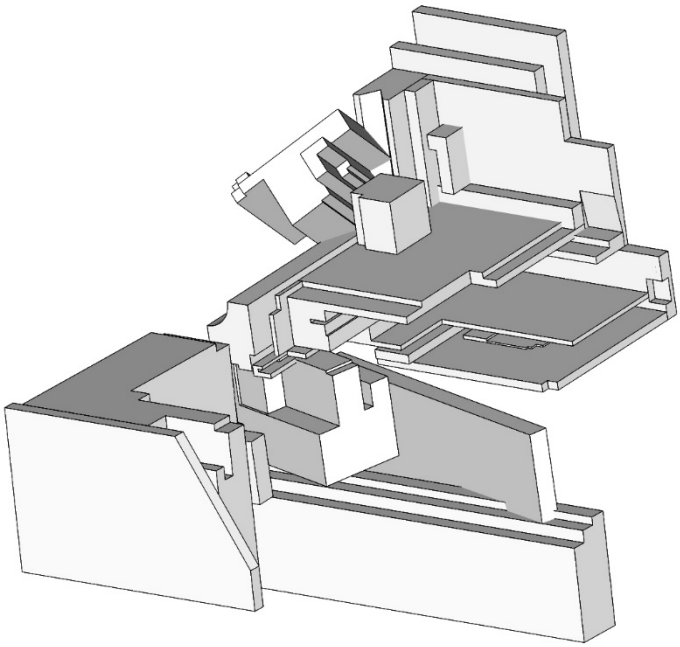


Figure 29. Brendan Lee, Digital 3D model of 20 components varying configuration, CAD image, 2018.



Figure 30. Brendan Lee, *Calcite Crystal Image 12*, 2018, digital photograph, 2 m x 1.5 m.

The geological history of the mineral determined the shape of its forms and in turn this past informed the digital modelling stage of the creative work. Natural forces, for example heat, pressure, mineral types, speed of cooling and others, -had created the geological objects and indirectly defined the structure of the virtual model. Transferring the physical object into the virtual could be viewed as a digital-geo-history of the object or a version created via the electron imaging of the nisnite

The several crystals in my collection were sourced from two locations in Victoria: Collectors Corner and Crystal World, both located in the outer South East of Melbourne.

Each specimen had been located from various countries recorded on the accompanying labels.

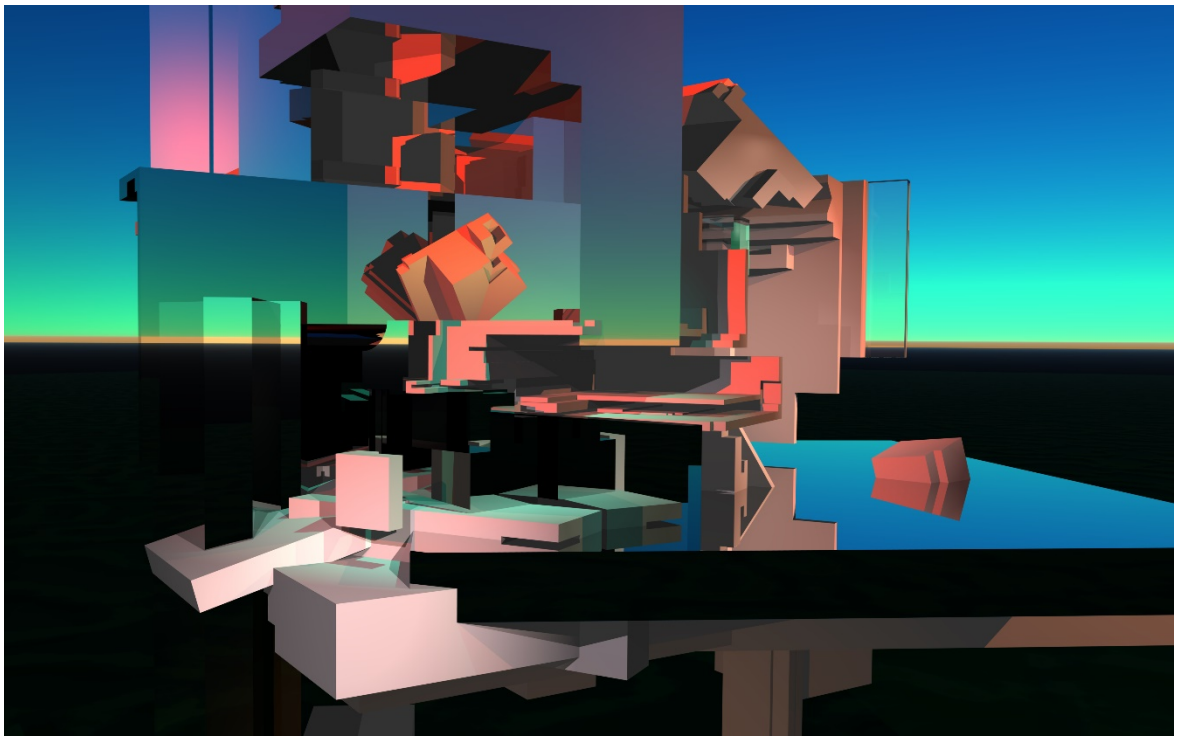


Figure 31. Brendan Lee, *Theatre Set A*, 2018, digital still, 1.5 m x 2 m.

In 1923 and 1924 Malevich created a series of works on paper he titled, *Future Planits for Earthlings*. These monochrome axonometric drawings coincided with the development of the sculptures which were first constructed while he was at Ginkhuk (State Institute of Artistic Culture,) Leningrad in 1923. This Suprematist multi-plane three-dimensional work was concerned with new architecture, a weightless ideal city and mostly avoided the utilitarianism of Constructivism. The white plaster models were devised in Malevich's laboratory. The avoidance of function, ornamentation, doors, windows, texture, material and location rendered the planits as non-objective however the architectural provocations

presented in the everyday life by Malevich's imagining Suprematism in utilitarian objects, for example a cup and saucer, and tea pot.

The white polystyrene art cubicle and the white crystal form (fig. 30) should likewise be viewed in Malevich's Suprematist terms. The intersecting cubic shapes, white planes and non-objectiveness of his work relates to ideas of new world building and new art in the style of Suprematism.[33] Tatiana Mikhienko writes about the *Architekton:*

> In the Architekton, the role of colour is reduced to the symbolic square, cross, or circle applied to its planes; in this case, the whiteness of plaster is like the white background of a Suprematist painting, which corresponds, more than anything else, to the non-objective character of the Architekton.[34]

In these works, with their removal of multi-colour schemes, the implementation of black and white tones, creation of solids,- with degrees of transparency, would anticipate future video works and modelling after a period of experimentation. The new digital models returned to fantastical, proto-form ideas present in the polystyrene art cubicle. This eliminated unnecessary information and suggestions of function.

[33] Mikhienko Tatiana, *The Suprematist Column – A Monument to Nonobjective Art*, in *Kazimir Malevich : Suprematism*, Matthew Drutt (New York N.Y. : Guggenheim Museum 2003) p80.
[34] Ibid., 81.

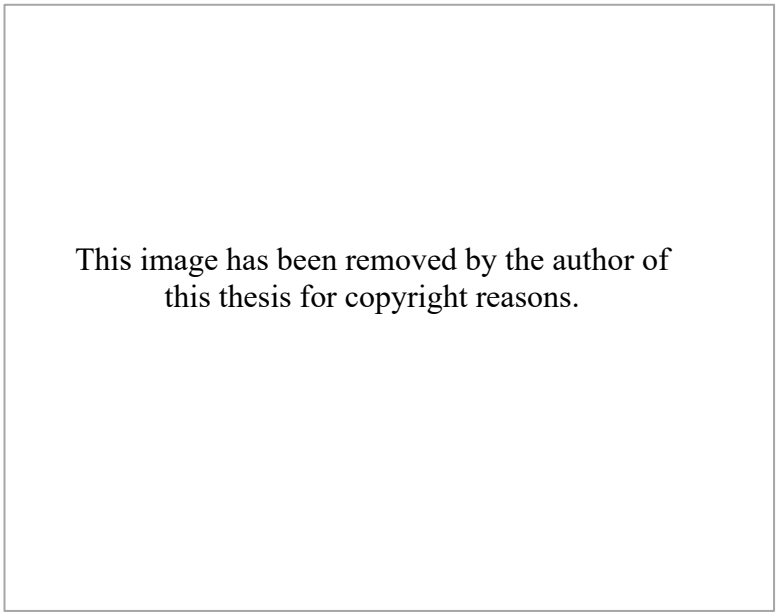


Figure 32. Kazmir Malevich, *Alpha Architekton,* 1920. Plaster. 31.5 x 80.5 x 34 cm. Kazimir Malevich : Suprematism, Matthew Drutt (New York N.Y. : Guggenheim Museum 2003) p204.

2.4. Drawing, Traces, Atmospheric Entanglement.

Wenzel Hablik's etching plate series, *Shaffende Krafte (Creative Forces)* derived its compositional design from observing the structural plan of inorganic forms, primarily the multi-faceted crystal object, and by then suggesting these qualities and divine forces were inherent in natural phenomena throughout the cosmos.[35] Hablik used graphic line and pattern to articulate and envision crystal paradises and to symbolize dynamic natural forces apparent in geological and oceanic interactions.[36] It was in this mode of drawing that Hablik anticipated a psychological response, and hoped to reveal the spiritual qualities of light as it was reflected and mirrored in crystals. Eugene Santomasso in his essay on the *Shaffende Krafte* etching series writes on the affect characteristics of Hablik's generative linework:

> Throughout the series, in both the scenes and their accompanying aphorisms, lines are regulated into varied configurations and are given different densities, weights, and patterns of repetition to establish sensations of motion and rest and to generate feeling.[37]

In my drawing practice, atmospheres, rocks, bodies of water and light are rendered in linear patterns and broken lines that can be considered traces of material things, natural forces and phenomena relating to light. The lines articulate entangled natural forces and vortex fields that coalesce and disintegrate structures that resemble rock islands. This

[35]Santomasso Eugene A, *Schaffende Krafte*, *W. Hablik 1881-1934*, quarterly (London: Architectural Association, 1980.) p18.
[36]Ibid., p19.
[37]Ibid., p16.

effect produces an illusionary-space reflected in turbulent and still pools of water, a fluidity that shifts objects from what was considered partially materialized to things that are airy, atmospheric and resembling human traces.

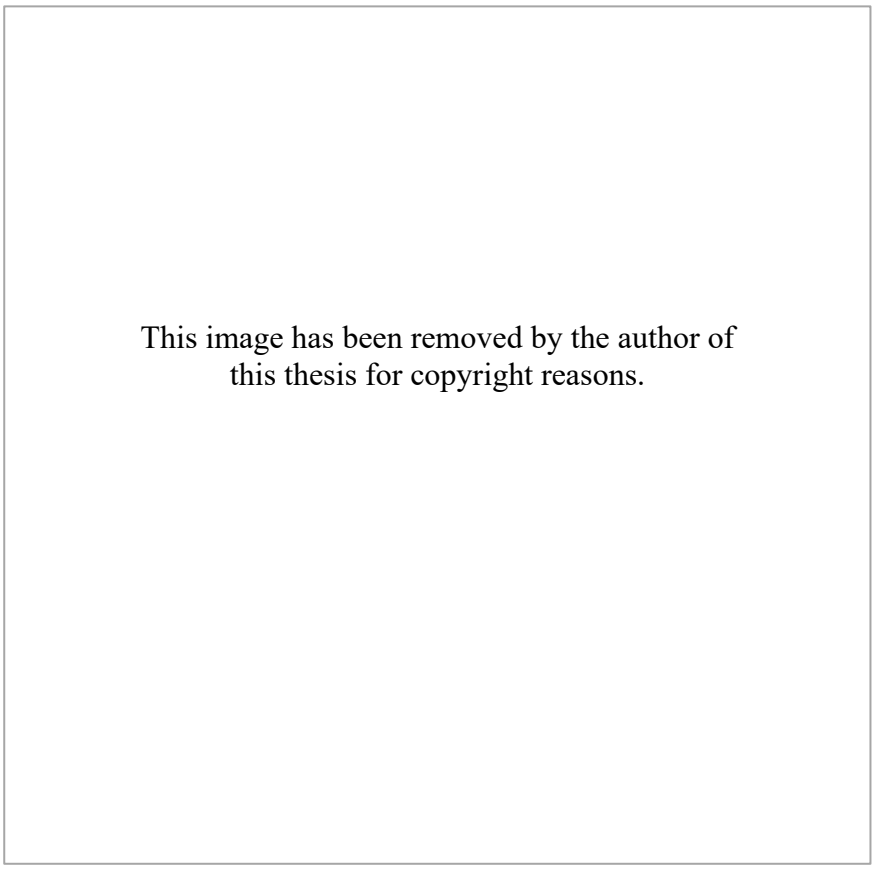


Figure 33. Wenzel Hablik, *Shaffende Krafte Everywhere is life, everywhere is the struggle for life,* Etching, 1909. Wenzel Hablik Expressionistische Utopien, (Munchen: Prestel, 2017.) p49.

A series of drawings on papers (fig. 36) was generated during my 6 month of chemotherapy treatment. These nine drawings were not composed in the graphic style of the previous series, but were less condensed and somewhat emptied of rendering (fig. 36). Reiterating Hablik's strategies to communicate affect qualities and the crystalline, the geo-forms were modified, spiritualized through oceanic, geological and cosmological forces.

During the chemotherapy's fortnightly cycles, the body exists as though it is without substance, a virtual existence. I would often comment on how I felt ghostly to my friends, as though your body was made of something like clear water or perhaps the air. The toxic chemicals (platinum based anti-cancer therapies) in the body and its organs prevented regeneration of both healthy cells and cancer cells and I'm certain this halting process related to this sense of lightness, and the awareness of being only a trace of what I felt before treatment. Fortunately, this sense of not-being and not of substance, faded when treatment ended. On reflection and during the writing of this document, I can identify the pale and vaporous characteristics in the nine drawings compared to earlier graphite works.

The dimension of the paper (35 H x 25 W cm) related to typical canvas dimensions for self-portraiture in painting. Like self-portraits, they articulated a biographical account of this period and the impression of non-corporeality that typified this process. The moderate size of the paper was determined by the practicality of drawing while in hospital or having to be seated on my apartment sofa, with the paper sheet positioned on a book on my lap.

The broken patterns of line shifted to dashes and soft graphite tones, and signified a sense of depletion. Through abstraction these feelings and impressions took shape or as non-shapes in the compositions of ephemeral forms and their representation. After each chemo-cycle this sensation intensified and soon I couldn't feel my feet and fingers due to the neurological damage caused by the platinum-based drugs. This inability to feel my fingers regulated and influenced the mark making on the paper surface. Initially I felt despondent unable to make intricate line work however the defined lines of previous works were replaced by soft dash patterns which generated a halo luminosity.

The physical inability to draw with precision coincided with a desire to be how I felt before treatment and then having to consider things had changed from now on, which also changed the way I drew. However, this anticipation of change in future drawing practice would resolve as my strength partially returned. It was during this period that the final video works were in a preliminary stage and the portrait format of this drawing series eventually transposed into the proportion and size of the video format (67 H x 38 W cm). The digital work was primarily composed on a laptop computer while in hospital and at home. This small screen had a relationship with the size of the drawings on paper. Condensing this scale permitted a continuation of creativity and dictated a common dimension in all the varying mediums.

The drawings are completed without a draft or underdrawing. The compositions are rendered with immediacy, and each line or dash determines in some way the next line and its position. This type of line making without pre-design and intention, creates a free forming pattern and movement. Areas of tone produce shadow and where no lines exist, a sense of light is produced. Many hours of drawing practice in this style and method, enabled the style itself to perpetuate and intensify the direction of the work.

without a crystalline shaped template as a bordering device to contain the drawing, as in previous works (fig. 35), the drawing marks extended to the edge of the paper as though simulating the full screen-based video works. Drawing to the edge of the paper transformed the paper to an art-architectural-object just as the forms exist in the video work.

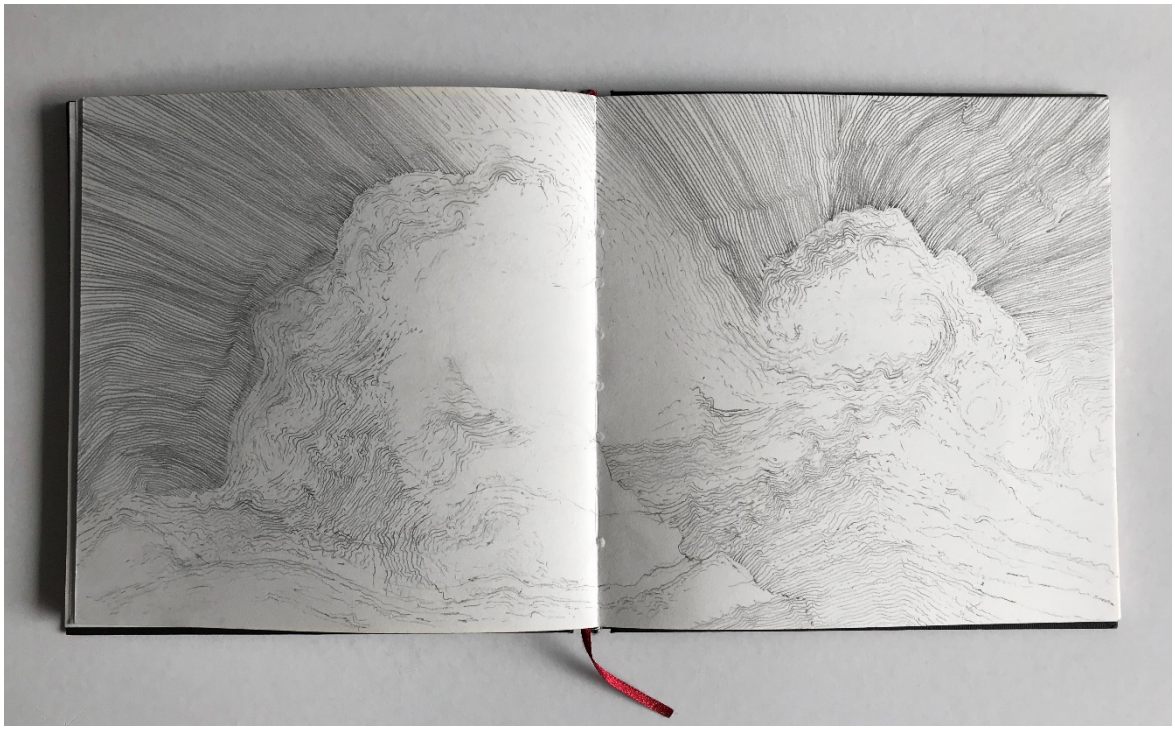


Figure 34. Brendan Lee, notebook, 2017, 20cm x 20cm.

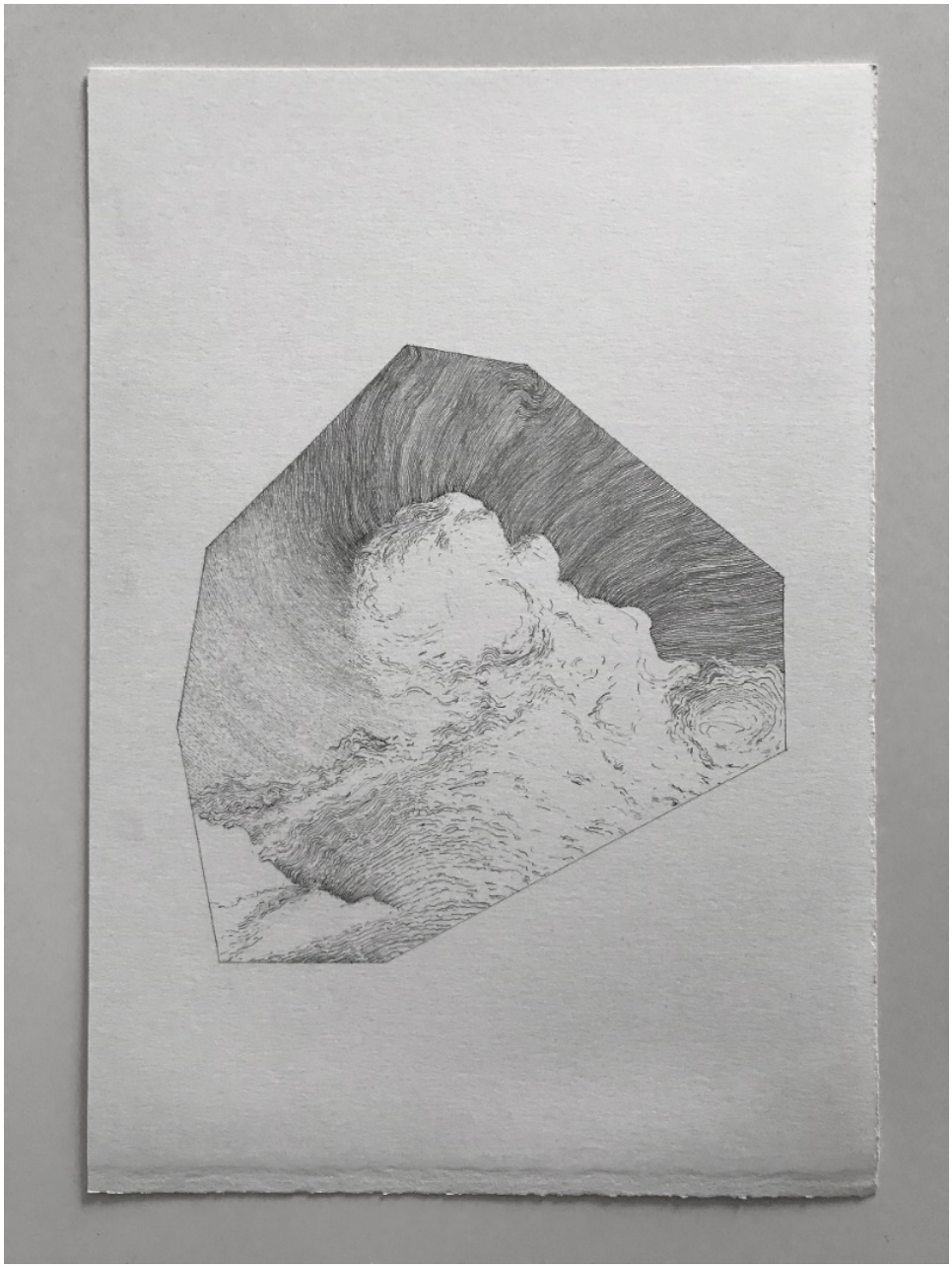


Figure 35. Brendan Lee, untitled, 2018, graphite on paper, dimension of paper 35 x 25 cm.



Figure 36. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.

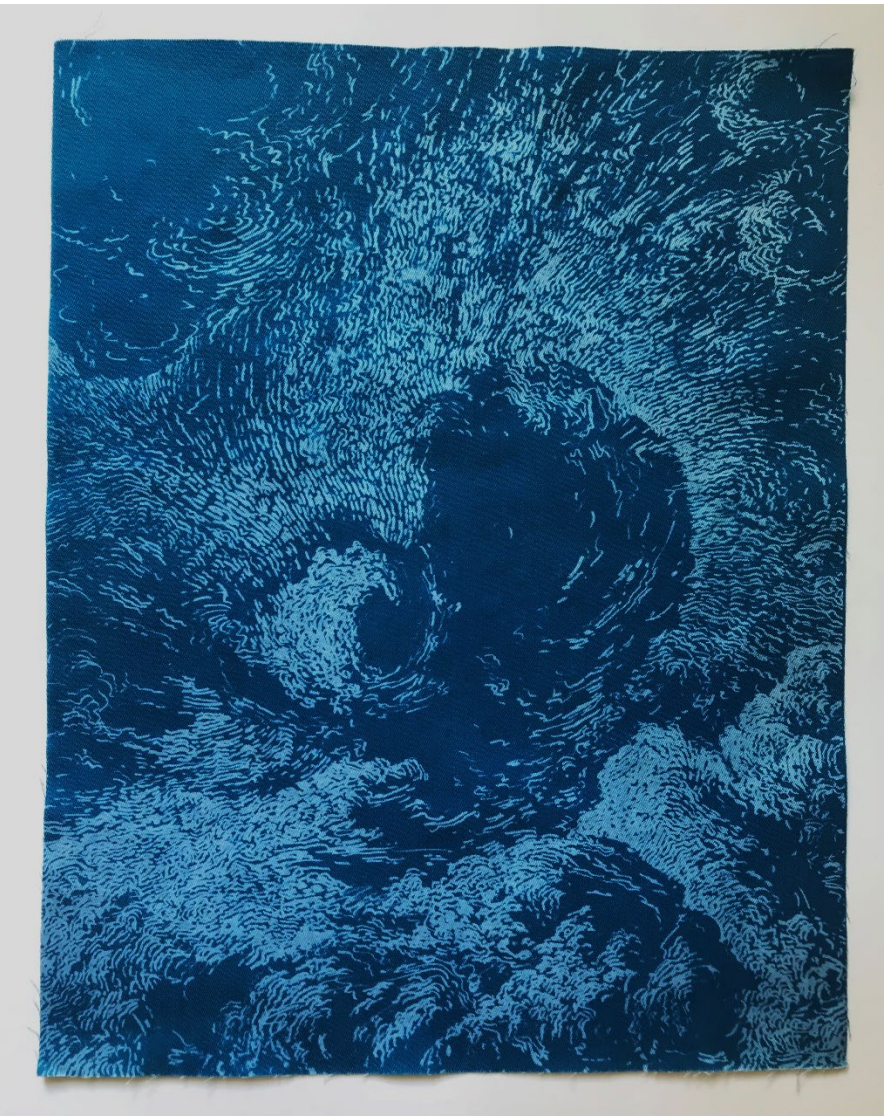


Figure 37. Brendan Lee, untitled, 2019, cynotype print, cotton textile, 27 x 21 cm.

During this period I experimented with the process of photograms to reproduce the pencil drawings in print form. The rudimentary photographic technique uses a light sensitive iron solution to reproduce an image on its surface. A base material such as paper or cotton is coated in the cyanotype solution. The drawing is photocopied onto a transparency and laid over the top of the cloth which is then exposed to direct sunlight for several minutes to cause a chemical reaction. A print of the drawing is produced on the textile fabric and can

be considered a parallel to the ephemeral qualities of light photons projected on surfaces as seen in the video screen-based work.

2.5 Crystalline Architectures.

Transparent. Translucent. Opaque and Mirrors.

A recorded voice speaks from the CT scan machine: “Breath deep. Hold your breath. Breath normal.”

The contrast dye spirals into my arm. I feel warm. What will they see? Will it be glowing colours again? A scan every six months and now every four. The desire to create other worlds in the digital modelling and video work seemed an understandable reaction. As I moved into the machine, I closed my eyes and I imagined moving through the architectonic forms and its dark space. After the previous scan, in the adjacent room, I saw the inside of my body on the large flatscreen monitors. Within the outline of my figure there were blotches of blue, red and yellow. I wasn’t meant to see these images. A radiologist closed the door. For a moment I witnessed the examination. I appeared transparent and translucent. I could see the titanium staples in my lungs. It didn’t seem like my body, just a residue. It was a virtual body you might envision in virtual reality. An abstracted body you can no longer recognize or the strange image of yourself in the mirror when you stare at it for too long. Your face appears familiar but different at the same time.

I soon realized the scan was of me. I recognized the shape of my body. It was like an interior map. I felt disconnected yet interrelated to the scans. The proportional relationship between the images and my actual body was visible however it was a second

version. This idea of the bodily presence within the digital virtual works was expanded upon in further digital videos.

The 3 looped animations titled, *Rotating Crystallines*, used the same 20 components (fig. 38) from previous video works. The ninsite crystal components rotated around a central aggregate of forms. The background is an outer or inner space without forms. The solid shapes were echoed by two translucent copies, synchronized, rotating in a brief delay without audio. The diminishing solidity of each revolving copy evokes medical x-ray imaging of the body or object, and the non-substance qualities or traces that pertain to the atmosphere drawings on paper.

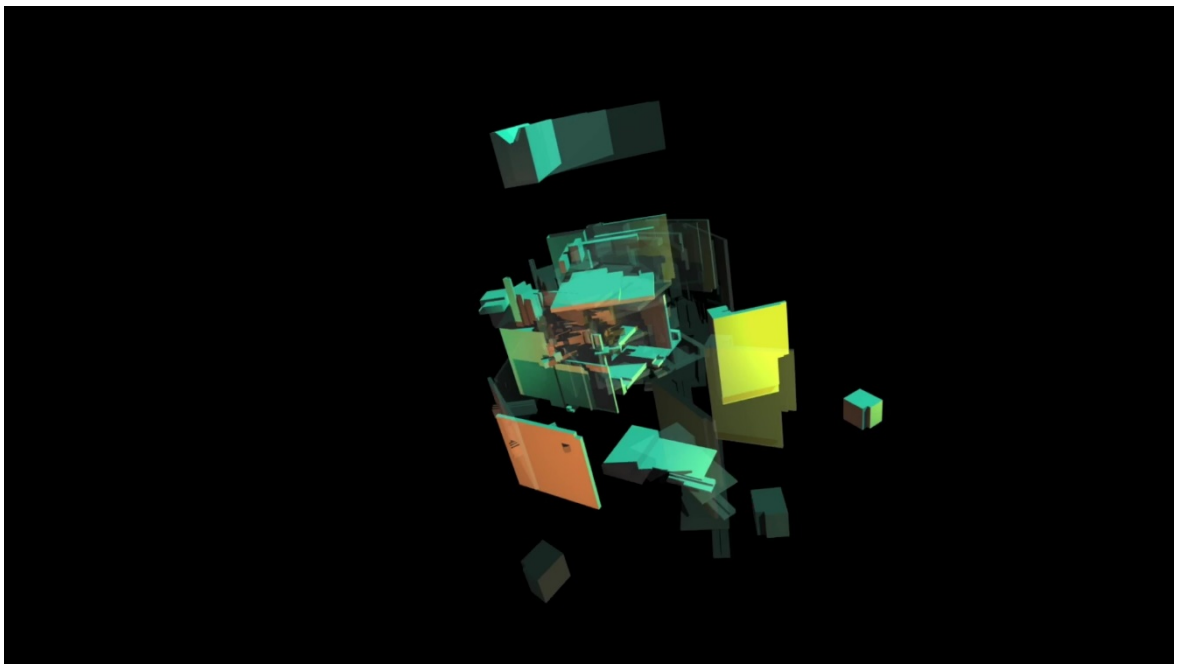


Figure 38. Brendan Lee, *Rotating Crystalline A*, 2019, looped play.

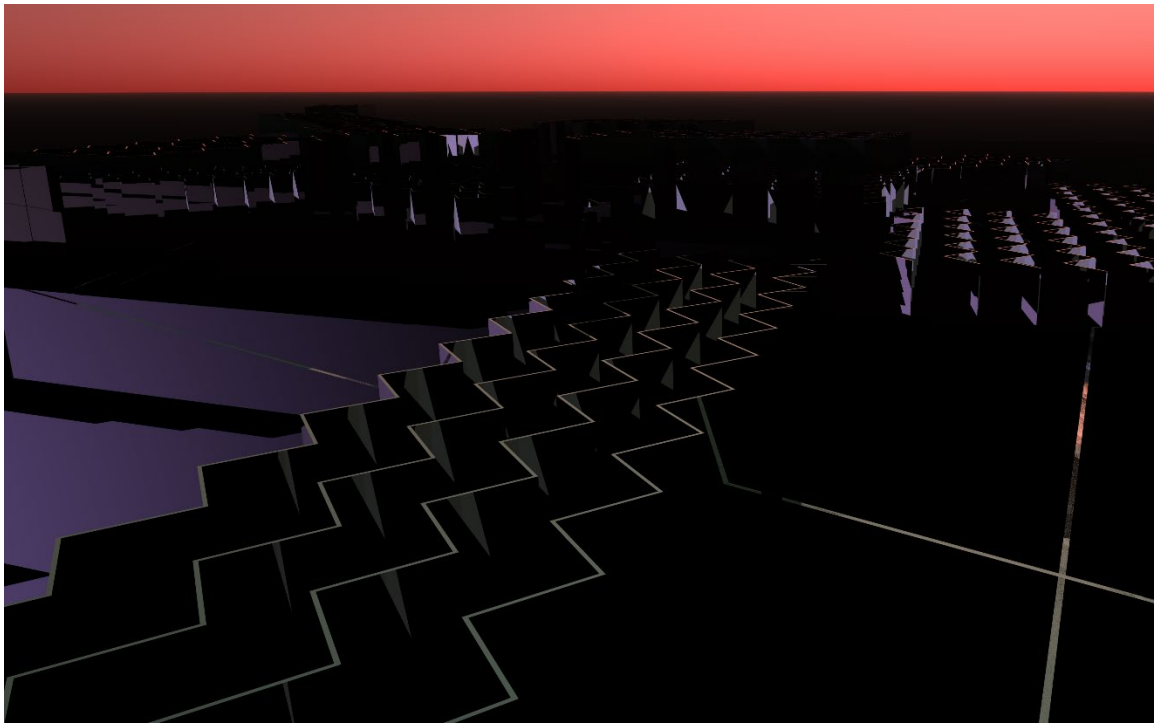


Figure 39. Brendan Lee, still from digital video, 2019, 6 mins.

The high positioned camera tracks over unfolded wall structures and expansive lines resembling transport routes. This digital work and the position of the camera resembled models and video made from cardboard and acrylic in 2015. The mirror-city-landscape reflects itself in numerous multiplications and long shadows are cast from a sun positioned low in the sky. The saturated colour fields primarily mauve and orange, and the patterning of minimal type structures reduce a built environment into an abstraction. The non-utilitarian wall-architectures are without doors, windows, accompanying buildings, or a population. The unfolded walls expand out to horizons where the ground and surfaces are unlit, and a void-space is apparent. An interplanetary vehicle or drone explores new territories and send signals back to home.

The fantastical utopias speculated by the Russian Cosmists theorists, posited futures of immortality for all and existences in the outer cosmos. In 1932 Konstantin Tsiolkovsky

wrote *The Cosmic Philosophy* which outlined his ideas of inhabiting the Milky Way for the good of humankind and the establishment of interplanetary utopias for the resurrected:

> Tsiolkovsky himself was a follower of cosmic biopolitics who wanted to fulfill in practice what Fedorov called the "patrification of the heavens" (the transformation of the planets into habitable places for our resurrected ancestors).[38]

Their utopic societies and interplanetary visions coincided with emerging technologies and cosmist theories of immortality and utopia.

The Russian Cosmist and German Expressionist utopic texts and proposals had additional relevance and potency for this work. Working on digital models and drawings, I created virtual fantastical spaces, detached from the surgeries, chemotherapy and months of isolation within my small apartment. The research and creative practice provided a resuscitation and, purpose. Specifically the Cosmist's texts evoked a positivity when exploring ideas of immortality through future technological processes. My oncologist would often talk of hope, detailing future targeted chemotherapies and immune therapies. Advanced treatments and immortality were also possible for me in the future.

The cosmist movement began with the work of Nikolay Fedorov thirty years before the Russian Revolution in 1917 and the later writings of Tsiolkovsky. Tijanan Vujosevic in

[38] Groïs Boris. *Russian Cosmism* (Cambridge : The MIT Press, 2018) 12

her analysis of Modernism in the early Soviet period describes Fedorov's ambitions and philosophy:

> People inspired by Fedorov claimed that fundamental human rights included the right to eternal life and the conquest of space and the right to interplanetary travel, both of which demanded liberation from capitalism.[39]

I too hoped for technology to bring happiness and an end to suffering. Perhaps cures for all ailments would soon be possible. I thought about this possibility while reading Cosmist texts during my hospital stays, as they took me in a wheelchair to the basement radiology unit on a daily basis, to peer inside my chest to view my lungs in monochromatic x-rays. Like seeing grey things behind a sheet of frosted glass. I wanted to escape the subterranean hospital world and the operating theatre level where everything was blue, and where the robotic surgical machine waited for me. It was this technology that would give me life, give me oxygen in outer space.

In February 2020, I began work on new models for an animation drawing from utopian ideas envisioned by Taut, Hablik and Russian Cosmism. The monochromatic video work utilizes the electron image of the nisnite crystal I mapped into a 3D digital model previously used in other video works. The model is a repetition of the twenty components at varying scale, intersecting and reassembling, creating voids and assemblies. The

[39] Vujosevic Tijanan, *Modernism and the Making of the Soviet New Man*, (Manchester: Manchester University Press, 2017) 15

patterns and shapes emulate the minerals at the microscopic level and envisions them at a macroscopic level; a symmetry apparent in the universe as posited by Hablik.[40]

The crystalline components vary from transparent, translucent, mirrored and opaque surfaces, and oscillate between being reflective or light absorbent. Where the surface is mirrored, the objects reflect other objects and this suggests other virtual space existing, like pools of still water with permeable reflective surfaces.

The sound of my breathing and heart beating, and the vertical format of the video frame redefines the moving image as type of self-portraiture. This audio-visual integration constructs corporeal qualities within the video work. The sounds are recorded digitally then transferred into the computer software as an audio-track. The output suggests a type of residue and trace that could exist perpetually like drawing marks on paper and scratches in clay. The body's presence becomes audible again, through the sound of breathing,- and the heart beating, even when there is no body.

The scene is a continual exploration, circulating through forms and ultimately towards infinite dark space. The vision (virtual camera) tracks forward through a tunnel within the structure and emerges into a large chasmic interior. Beyond this space and into the exterior, a distant crystalline tower is positioned. The architectonic environment is similar to the sun brightening the silver lunar surface or a submarine illuminating a preserved wreck that lies at the bottom of an ocean where the light can't reach.

[40]Tischhauser, Anthony, W. Hablik 1881-1934, (London: Architectural Association, 1980.) p7.



Figure 40. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.

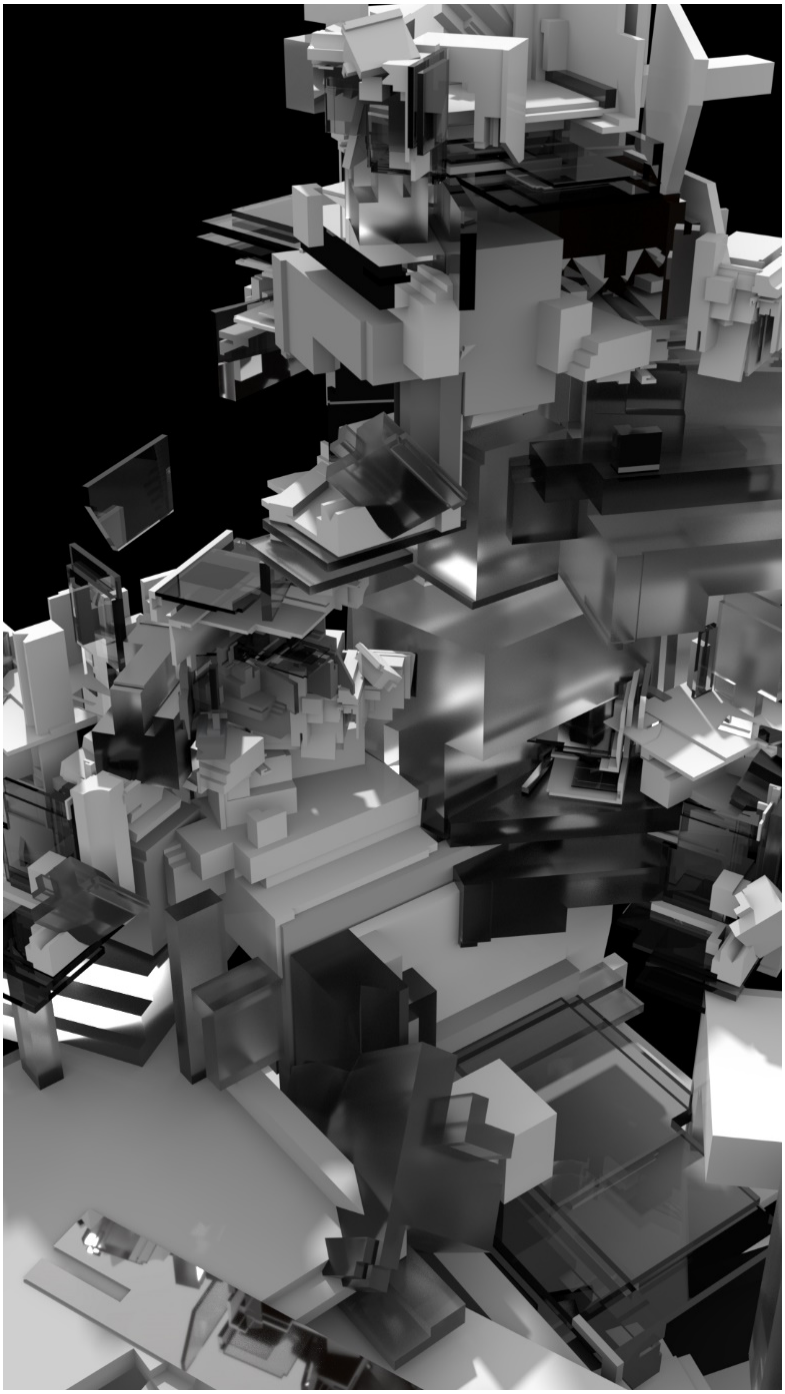


Figure 41. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.



Figure 42. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.

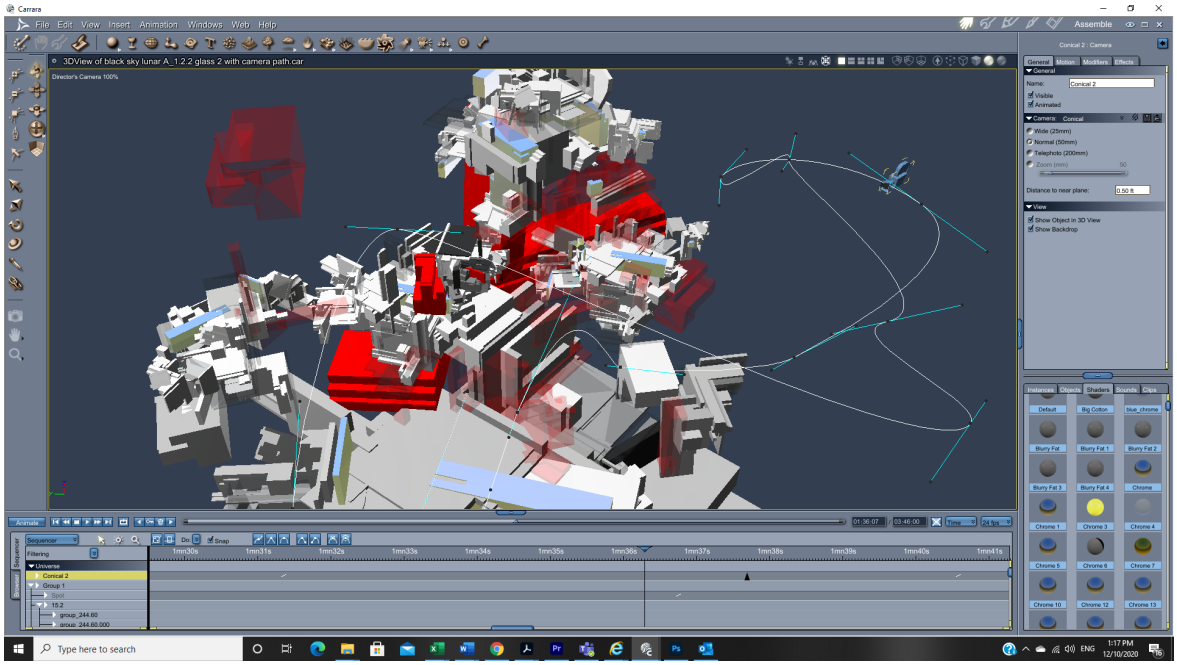


Figure 43. Brendan Lee, Screen shot of model, Carrara 3D, 2020.

Recently a friend purchased some white clay as a gift to keep me busy in isolation. It is embedded with paper fibres so that it will have the appearance of a sheet of paper but the weight of a small rock. Incising the almost dry clay animates the surface with small ridges. The clay material once kiln fired to stoneware offers a type of permanence to the drawing inscribed.

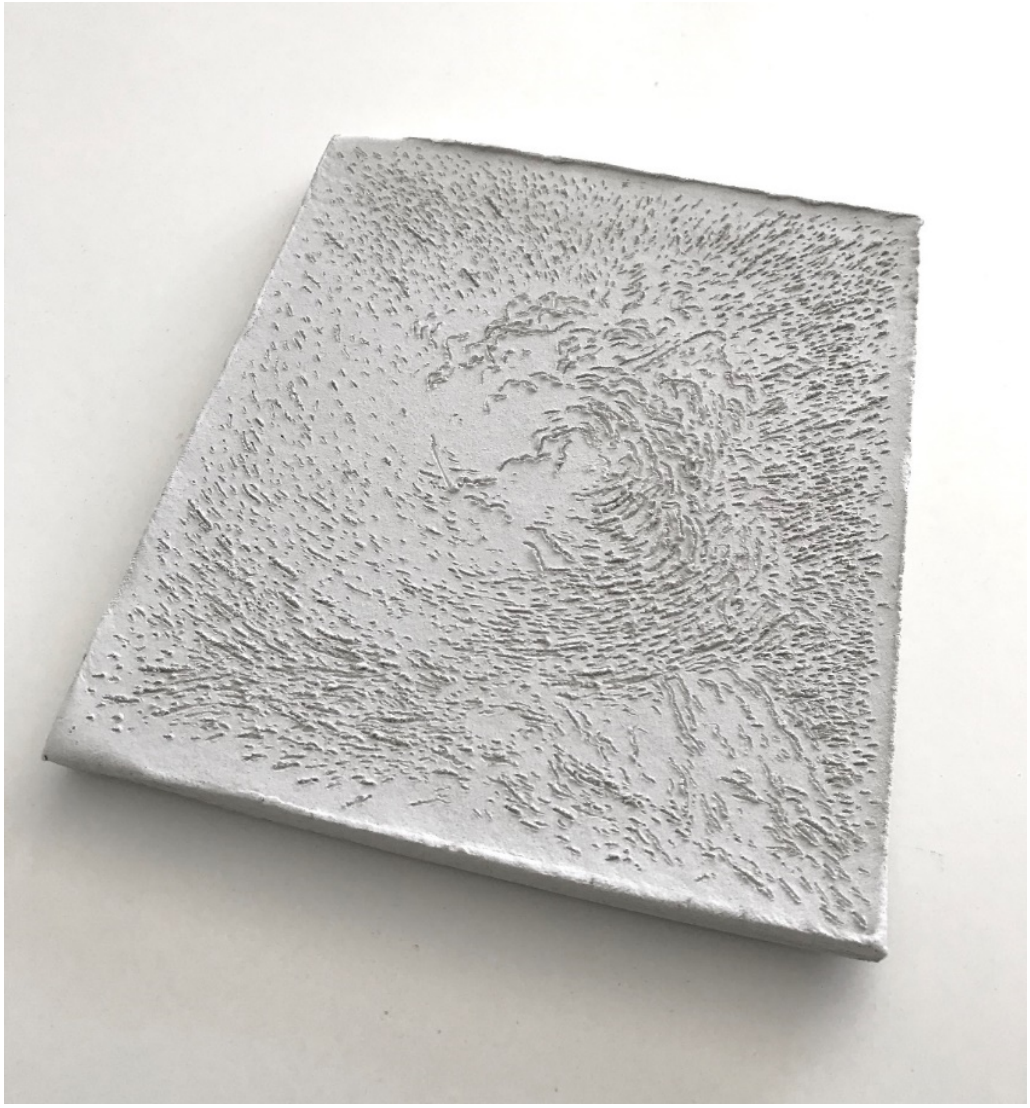


***Figure 44*.** Brendan Lee, untitled, stoneware, 13.5 x 16cm, 2020.

Chapter 3. Conclusion.

For eight years I lived in a one-bedroom apartment near the Shrine of Remembrance. This apartment was seemingly like all others, a white box, but it was in this space that a majority of my research and creative practice occurred. I occupied it during the course of my chemotherapy and recovery for which I was required to be isolated for long periods. Designed during the most recent fervent construction of Melbourne's urban image, the bedroom had only a shared window with the living room. After such long period of time inside it felt dark, in spite of the glimpses of the Royal Botanic Garden's tree canopy of seen from my balcony, and so after the completion of anti-cancer therapies I found a place with large floor to ceiling windows. It faced south-west, with views over South Melbourne, across Albert Park and to the edge of Port Philip Bay.

This new place was in one of two 67-storey glass towers that emerged from a plinth that lifted the surrounding landscape into an outcrop of gardens and crevices. I occupied an apartment on the 16th floor of the East tower while tradespeople completed its construction high above for another 12 months. The temporary elevators, attached to the outside of the tower near my bedroom window, would go up and down throughout the day. I imagined the builders inside the elevator cars, heading up to the summit of the tower, where they would construct a new level every ten days or so, cladding each completed level in the glass windows panels so that the towers reflected even more of the city and the bay. During the afternoon, in the quiet, I sit on my bed in the sunlight that enters through the floor to ceiling glass façade, the farthest edge of this apartment-world, and watch the cars and trucks drive over the southern section of the Kings Street Bridge. The blue horizon line of the sky and water is visible on clear days. A gift of an original etching by Wenzel Hablik from his *Creative Forces Series* (1909) hangs on the wall above my couch where I can consider the composition and study its line work. At night, on the television screen in

front of me, I watch documentaries on the outer cosmos that imagine an eternal human life on distant moons. A collection of crystals composes a foreign and strange landscape on my glass coffee table.

As with the previous apartment, the new interior consisted of white walls and ceiling, and a white kitchen with a mirrored back panel. These two apartments reflected the polystyrene art-studio that I inhabited at the Victorian College of the Arts. So my art practice traversed the plains of all these interiors mirrored endlessly in the windows of the apartment, and stretched into a cosmos of illuminated outlines and the mirage of life in the towers opposite. In the evening, the builders at the top of the tower waited for the construction elevators to take them down to the ground level. The small elevator window provides a diminishing view of the suburban territories as they are slowly lowered from the top of an urban crown of floating glass.

In April 2020 I had to isolate for 3 weeks and was unable to leave my apartment nor could I have visitors. I had to undergo further lung surgery and could not risk contracting Covid-19 before going to hospital. Digital worlds became a way to escape my confinement. The computer on my desk operated in the background, its whirling fan animating the apartment interior along with the laboured sounds of breathing and the screen blinking with the current video frame being rendered viewed from my position on the couch in the mirrored kitchen panelling. The 3D animation sequences could take a week to complete the full series of frames required to compose the video project. Using a projector I would use the bare kitchen wall to test the video sequences at a larger scale, the swirling crystalline masses dissolving the white wall, and expanding the boundary of my apartment.

The video projections and drawings are the result. An abstraction of the corporeal, folding its presence into material and immaterial outputs. The white walls recalled in the digital assemblies, and the crystalline objects that animated them mix with a personal account of chronic illness, and trace a horizon expanding ever outwards.

Bibliography.

Calvino Italo. *Invisible Cities,* trans. William Weaver. London: Vintage 1997.

De Maistre Xavier. *A Journey Around My Room,* trans. Andrew Brown. London: Alma Classics. 2013.

Drutt Matthew. *Kazimir Malevich: Suprematism.* New York N.Y: Guggenheim Museum. 2003.

Feub Axel, "*Draft of a Utopian World."* In *Wenzel Hablik Expressionistische Utopien*. 103. Munchen: Prestel, 2017.

Groĭs Boris. "Introduction." In *Russian Cosmism,* ed. Boris Groĭs. 1-16. Cambridge: The MIT Press, 2018.

Gutschow Kai. "Object to Installation in Bruno Taut's Exhibit Pavilions." *Journal of Architectural Education,* Vol. 59, No. 4 (2006). 64. https://www.jstor.org/stable/40480632

Haag Bletter Rosemarie. "The Interpretation of the Glass Dream-Expressionist Architecture and the History of the Crystal Metaphor." *Journal of the Society of Architectural Historians,* 40, no. 1 (1981). 20-43. doi:10.2307/989612.

Haag Bletter Rosemarie. "Paul Scheerbart's Architectural Fantasies." *Journal of the Society of Architectural Historians, 34*, no. 2 (1975). 83-97. https://www.jstor.org/stable/988996

Kaplan, Louis. *László Moholy-Nagy: Biographical Writings*. Durham: Duke University Press, 1995.

Knoop Christine Angela. "*Architecture and Utopia in Scheerbart's Rakkóx Der Billionär."* In *Text and Image in Modern European Culture.* Edited by Grigorian Natasha, Baldwin Thomas, and Rigaud-Drayton Margaret, 115-132. Indiana: Purdue University Press, 2012. https://ebookcentral.proquest.com/lib/unimelb/detail.action?docID=3119461.

Laurent Mannoni, Werner Nekes and Marina Warner, *Eyes, Lies and Illusions*. London: Hayward Gallery Publishing, 2007.

Lefebvre, Henri. *The Production of Space,* trans. Nicholson- Smith. Cambridge: Blackwell, 1991.

McBride, Patrizia C. *"Narrating in Three Dimensions: László Moholy-Nagy's "Vision in Motion"."* In *The Chatter of the Visible: Montage and Narrative in Weimar Germany.* 83-110. Ann Arbor: University of Michigan Press, 2016. doi:10.2307/j.ctt1gk08k8.9.

O'Benson Timothy. *Expressionist Utopias. Paradise. Metropolis. Architectural Fantasy*. Los Angeles: Los Angeles County Museum of Art, 1994.

O. Khan-Magomedov Selim. Pioneers of Soviet Architecture. *The Search for New Solutions in the 1920s and 1930s.* London: Thames and Hudson, 1987.

Santomasso, Eugene A. *"Schaffende Krafte,"* In *W. Hablik 1881-1934.* 15. London: Architectural Association, 1980.

Scheerbart, Paul. *Glass! Love!! Perpetual Motion!!! A Paul Scheerbart Reader*. Ed. Christine Burgin and Josiah McElheny. United Kingdom: University of Chicago Press, 2014.

Siegel Josh. *"Projects 84 Josiah Mcelheny The Alpine Cathedral and the City-Crown."* New York: MOMA. Feb, 2007. Https://www.moma.org/d/pdfs/W1siZiIsIjIwMTYvMDcvMDEvMWVvZGJsc3kzX3Byb2plY3RzODRfcmUucGRmIl1d/projects84_re.pdf?sha=79803bcd019c47db

Taut Bruno. *Alpine Architektur,* ed. by Matthias Schirren. Berlin: Prestel Vertag 2004.

Taut Bruno. *The Crystal Chain Letters*, ed. trans. Iain Boyd Whyte. Massachusetts: MIT Press, 1985.

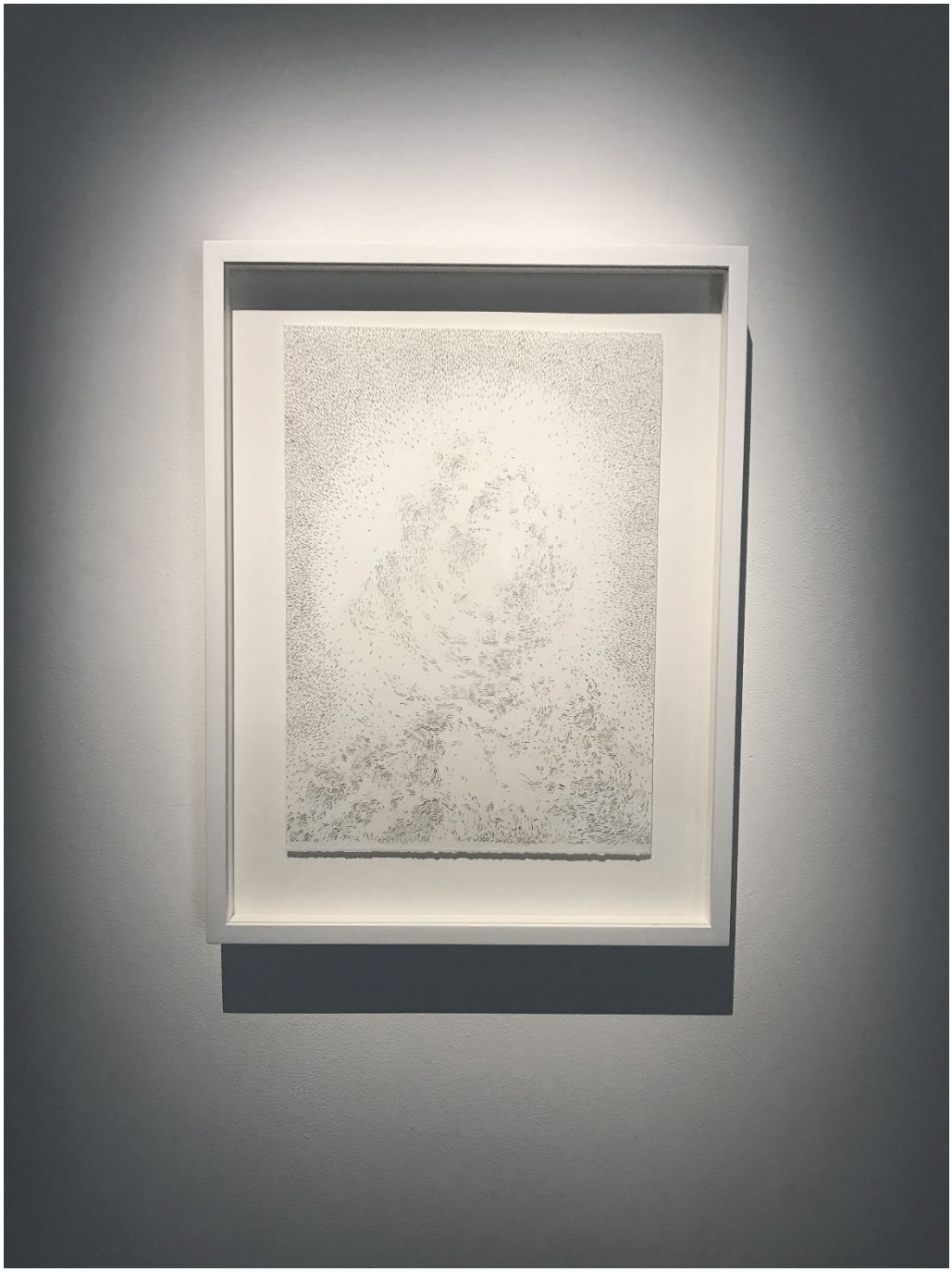
Tischhauser, Anthony. "Wenzel Hablik: Crystal Utopias." *AAQ. Architectural Association Quarterly.* Volume: 12. No. 3. (1980). 16. info:sid/primo.exlibrisgroup.com-RMIT_ALMA

Vujosevic Tijanan, *Modernism and the Making of the Soviet New Man*. Manchester: Manchester University Press, 2017.

Graduate Exhibition Installation.
VCA Artspace. December 2020.



Brendan Lee. VCA Artspace, *untitled,* digital video projection, 2020, 3 minutes and 6 seconds.



Brendan Lee. VCA Artspace*, untitled*, 2019, graphite on paper, 35 x 25 cm.

Catalogue of Creative Works.
2016-2020.

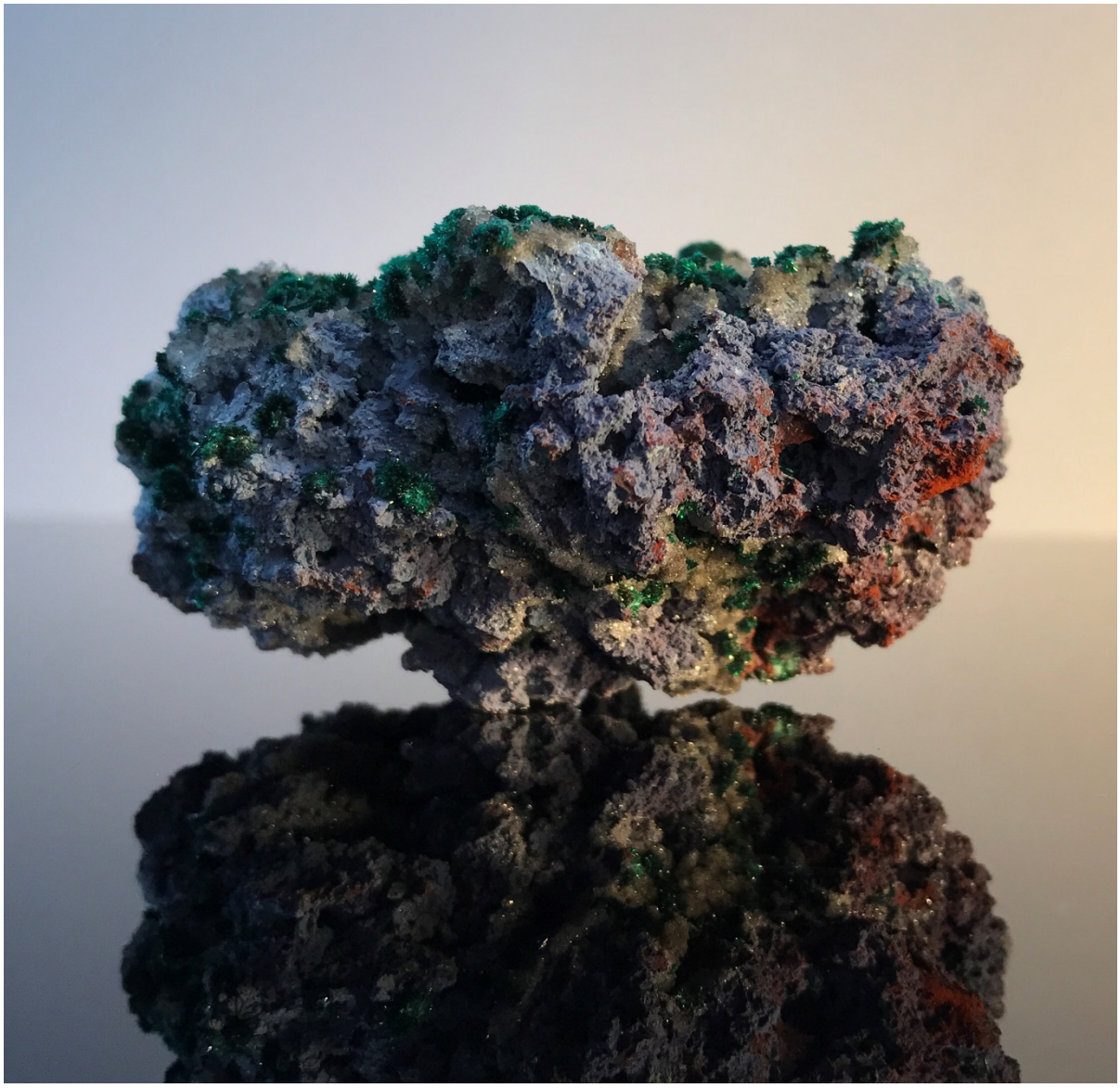


Figure 45. Brendan Lee, *Malachite on Blue Azurite Matrix Crystal Image,* 2018, digital photograph, 2 m x 2 m.

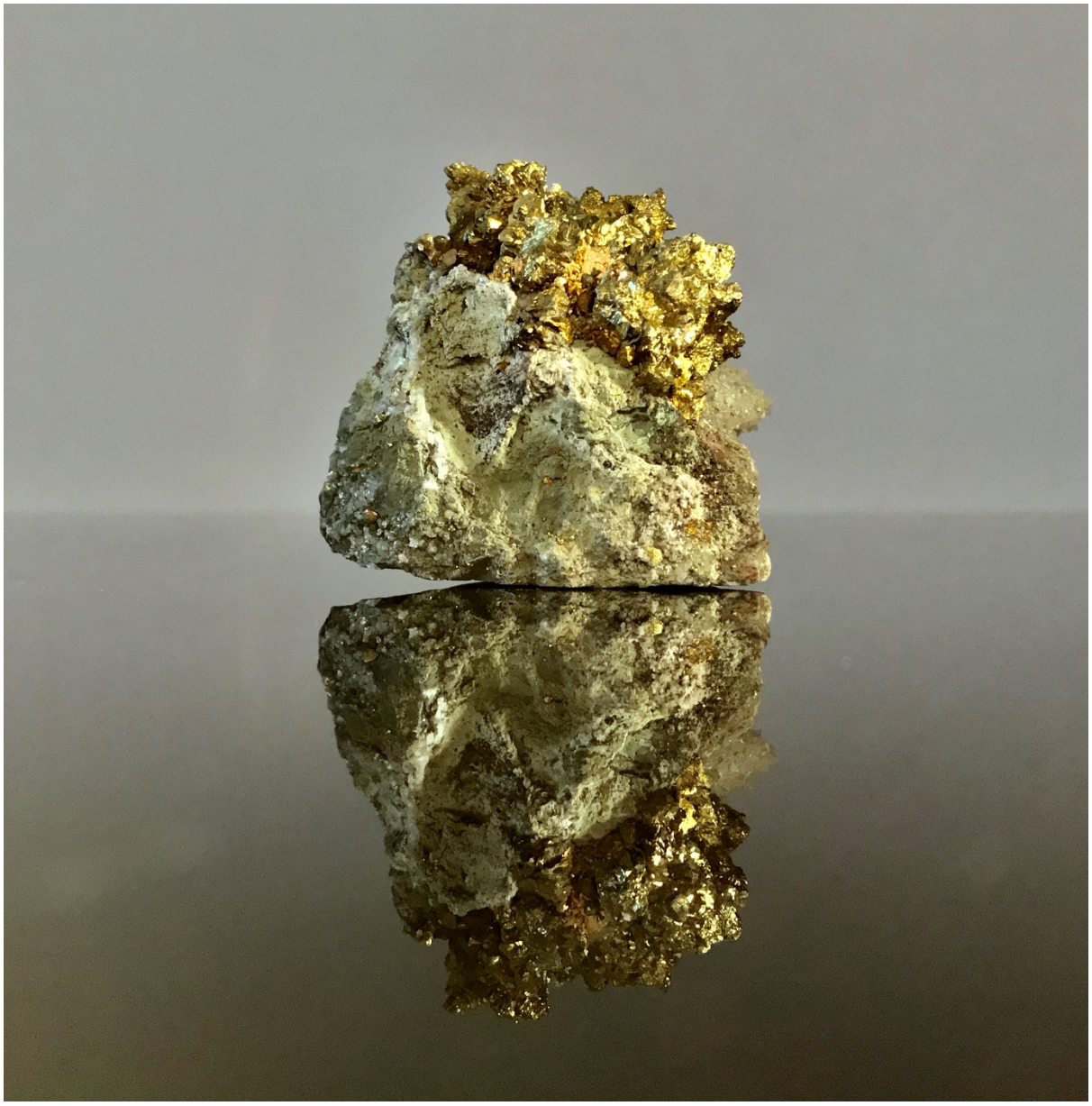


Figure 46. Brendan Lee, *Pyrite on Calcite Crystal Image 1*, 2018, digital photograph, 2 m x 2 m.



Figure 47. Brendan Lee, *Chalcopyrite and Siderite Crystal Image*, 2018, digital photograph, 2 m x 2m.

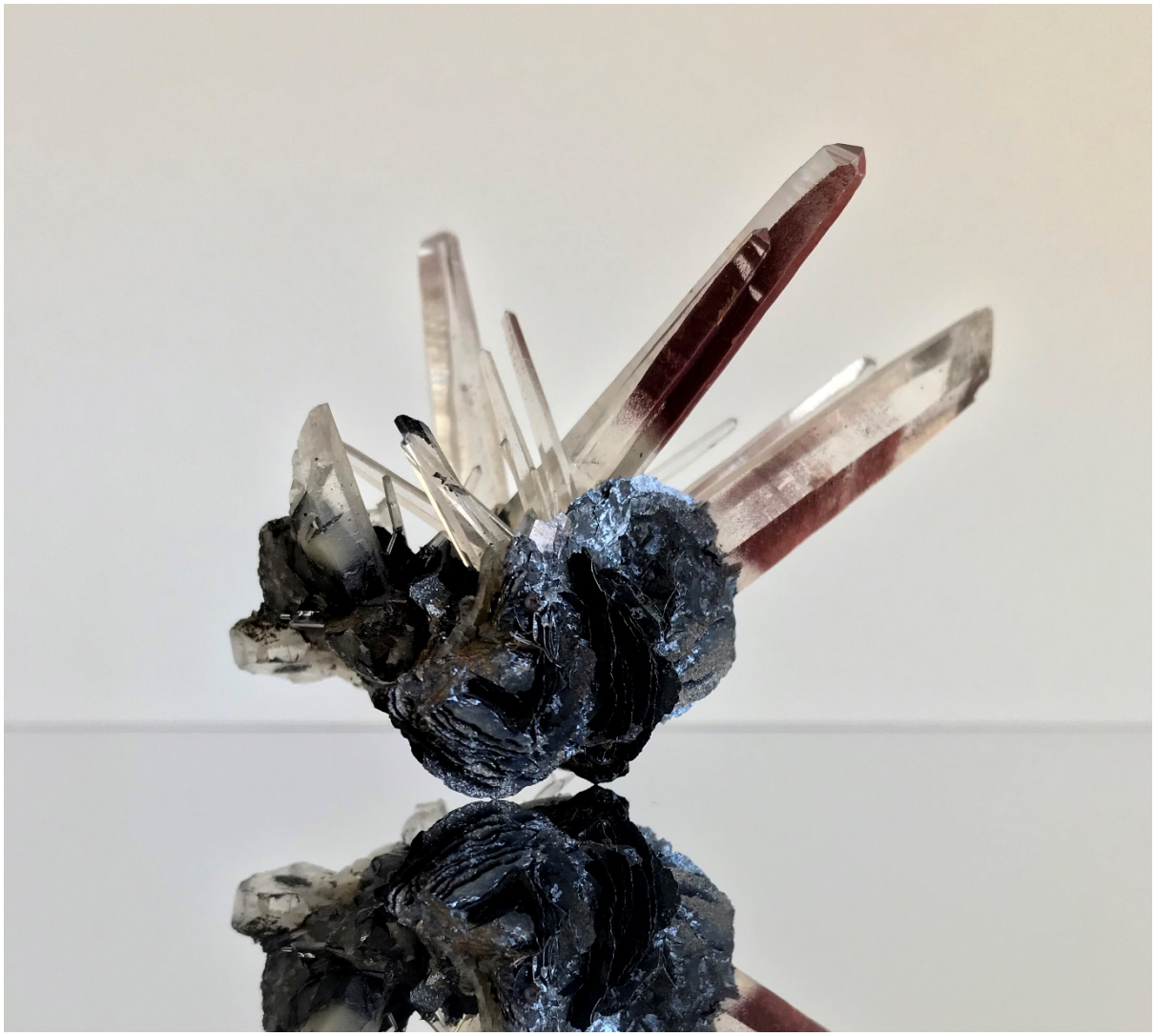


Figure 48. Brendan Lee, *Quartz Crystal Image*, 2018, digital photograph, 2 m x 2 m.



Figure 49. Brendan Lee, *Calcite Pseudomorphose Crystal Image,* 2018, digital photograph, 3 m x 2 m.



Figure 50. Brendan Lee, *Art-Exhibition-Studio*, 2017, high density polystyrene, timber, mirror, approx. 2m H x 3m L x 2m W.



Figure 51. Brendan Lee, Art-Exhibition-Studio, 2017, high density polystyrene, timber, mirror, approx. 2m H x 3m L x 2m W.

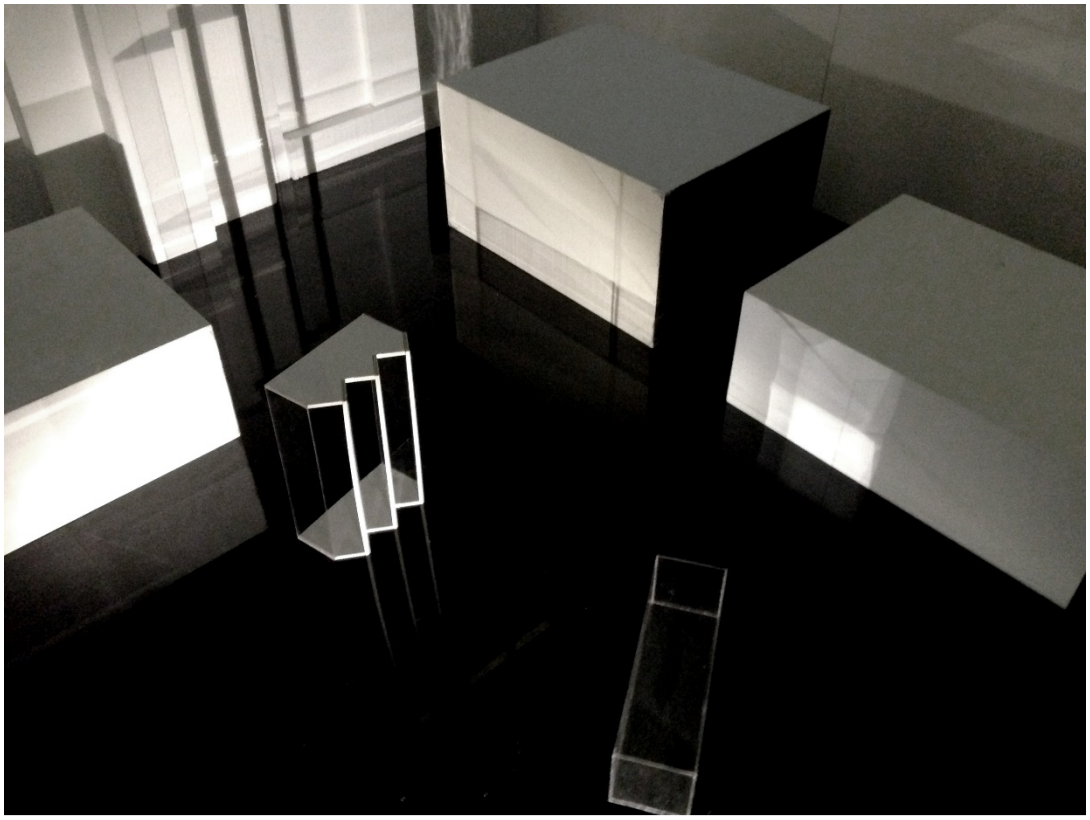


Figure 52. Brendan Lee, *Set A for Crystalline City,* 2016, digital still, acrylic, plasterboard, cardboard, polystyrene.



Figure 53. Brendan Lee, *Kaleidoscope City*, 2016, digital still from video, 2 minutes 30 seconds.

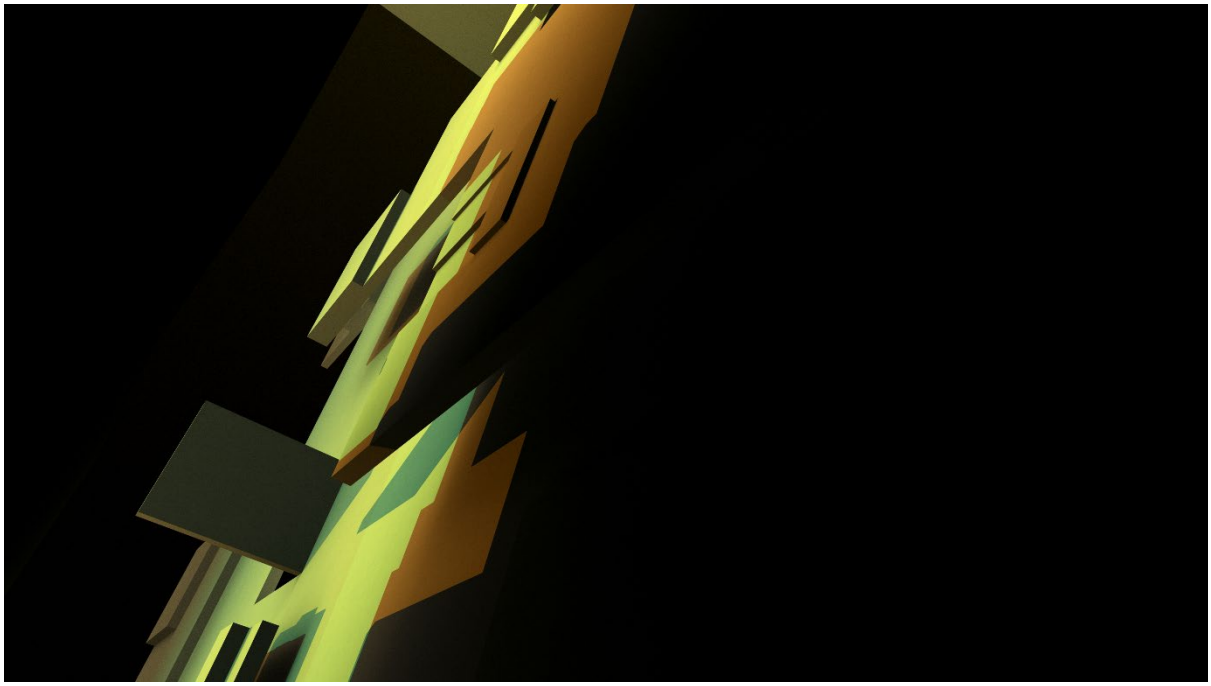


Figure 54. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* digital still*,* 56 x 29 cm.

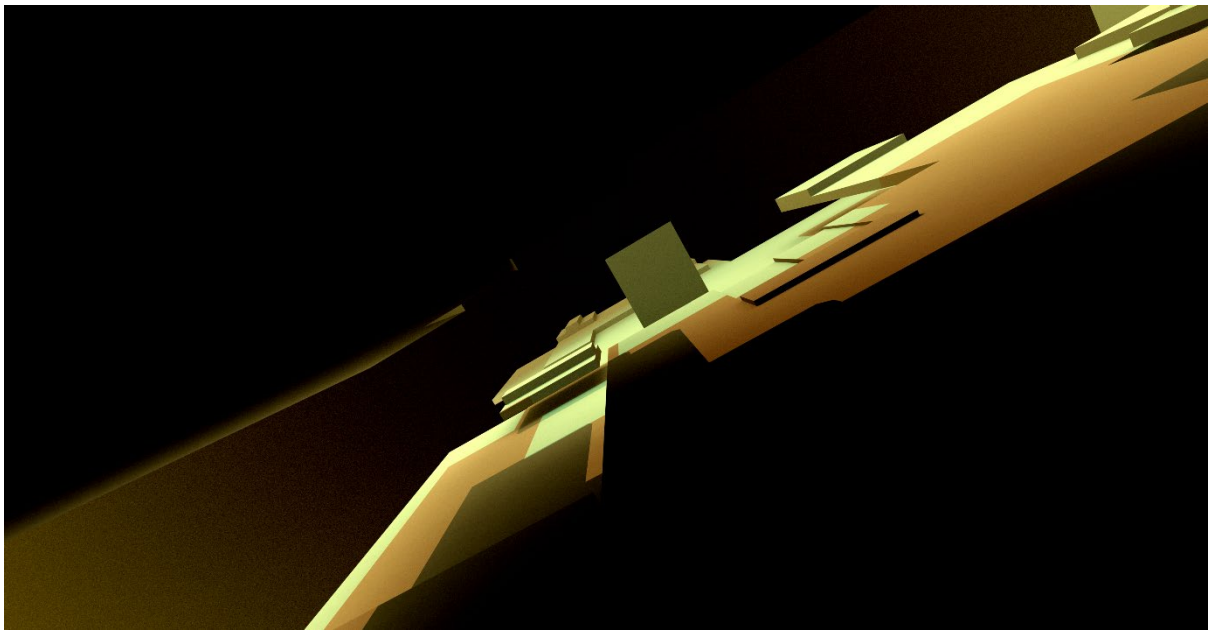


Figure 55. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* digital still, 56 x 29 cm.

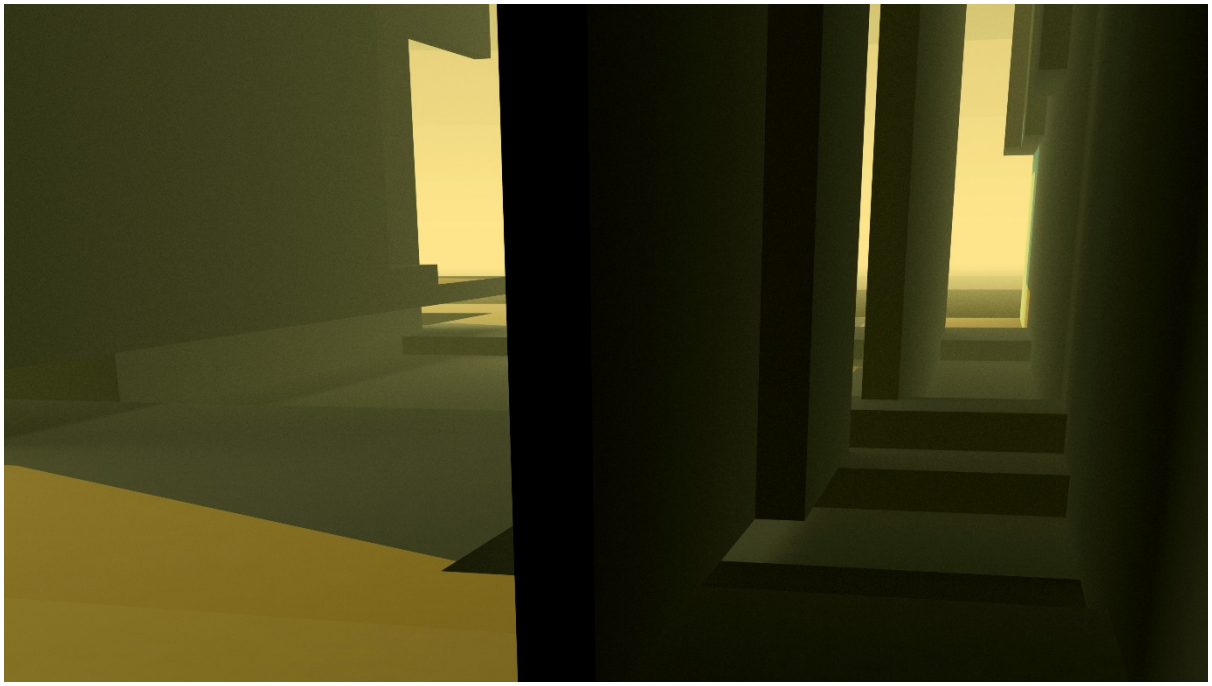


Figure 56. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* digital still, 56 x 29 cm.

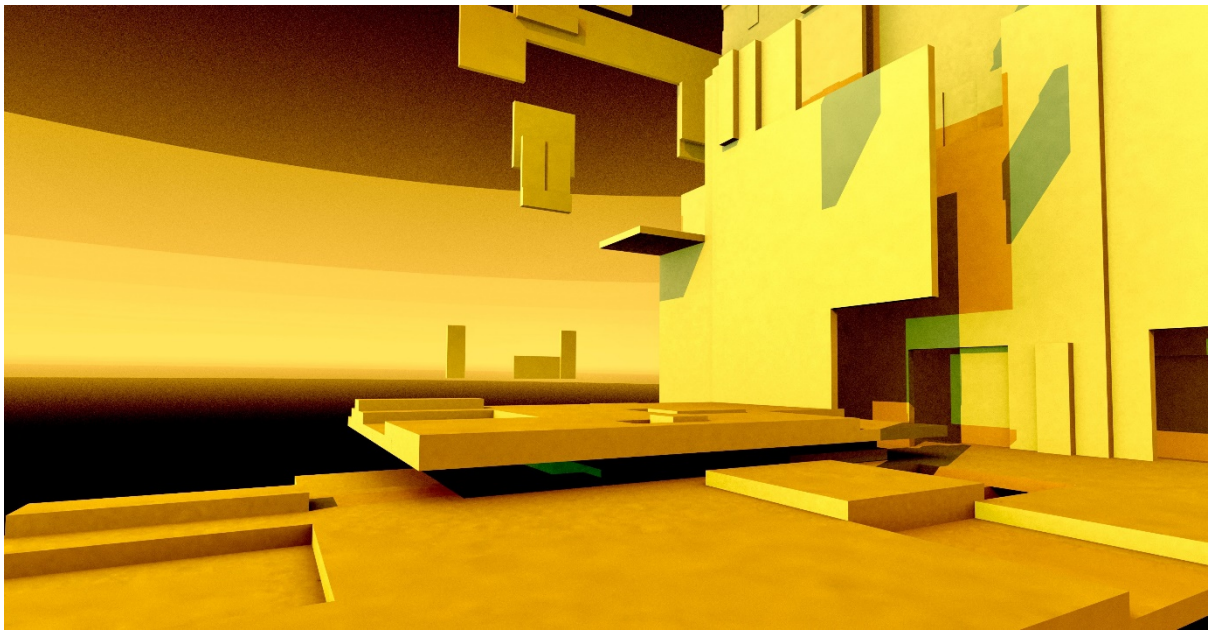


Figure 57. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* digital still, 56 x 29 cm.

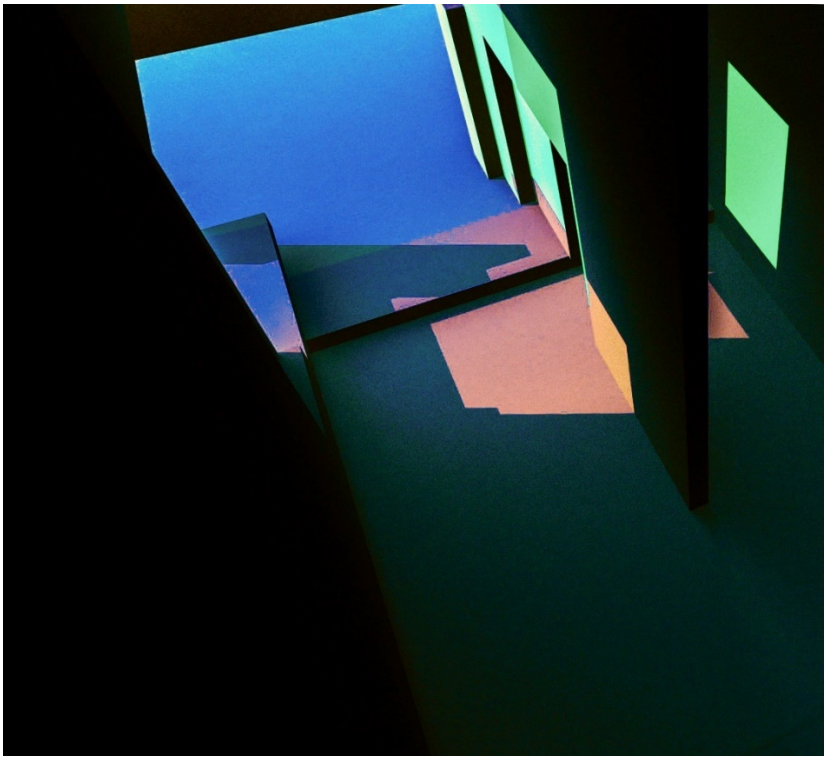


Figure 58. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* digital still, 24 x 22 cm.

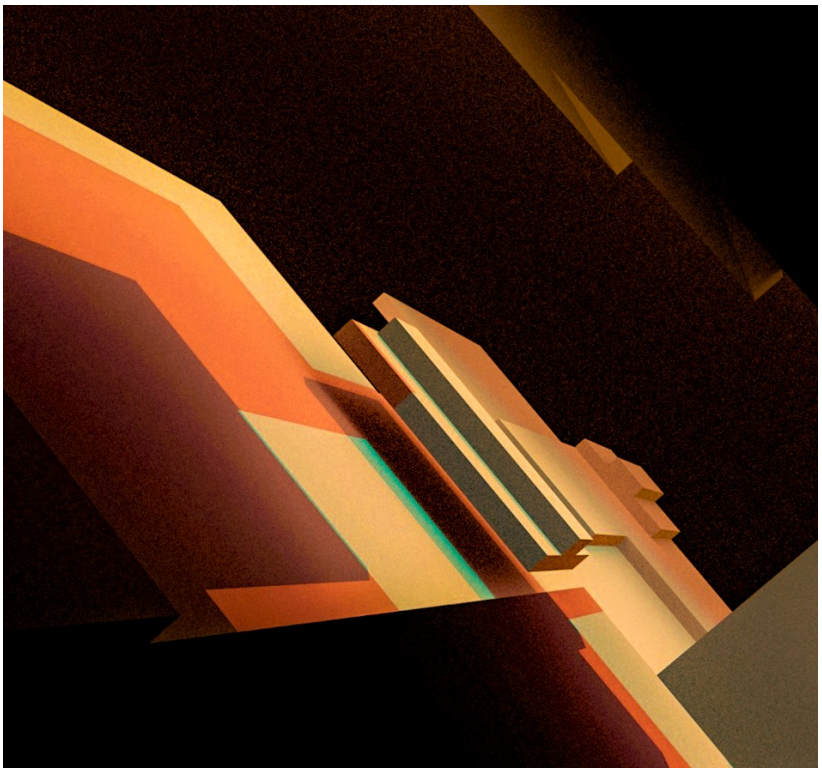


Figure 59. Brendan Lee, *In Proximity to Cyklus Ausstellungs-Bauten,* 2017*,* digital still, 24 x 22 cm.



Figure 60. Brendan lee, *Digital Alpine Landscape*, 2017, Still from video, 30 seconds.



Figure 61. Brendan Lee, *Digital Alpine Landscape*, 2017, still from video, 30 seconds.

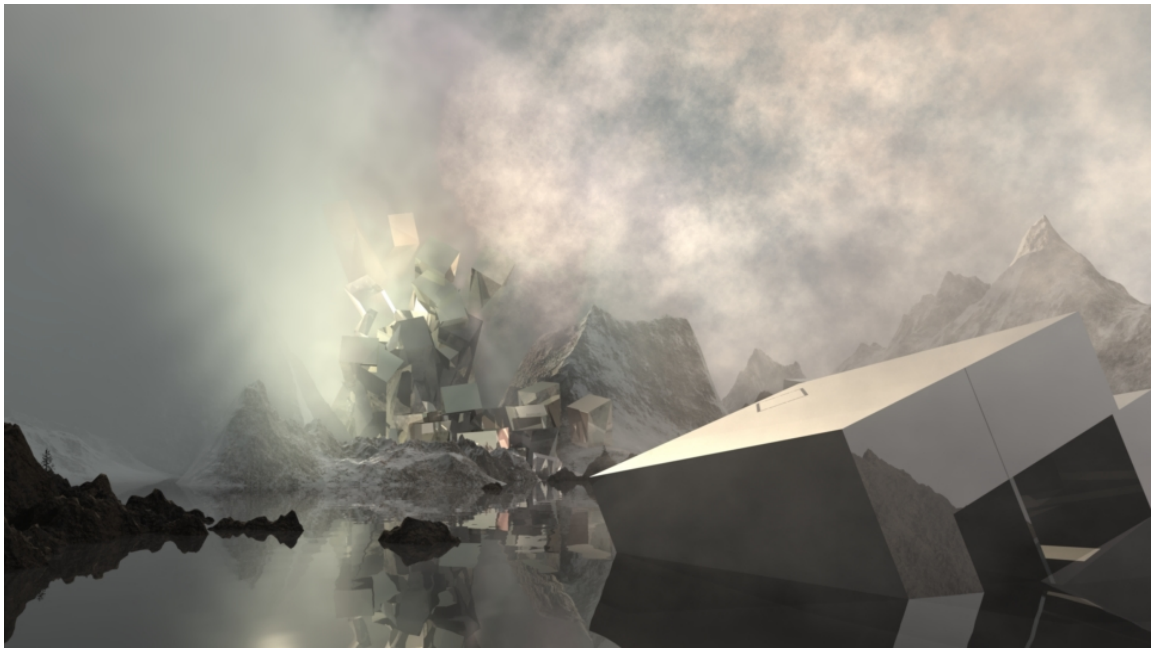


Figure 62. Brendan Lee, *Digital Alpine Landscape*, 2017, still, section from VR video.

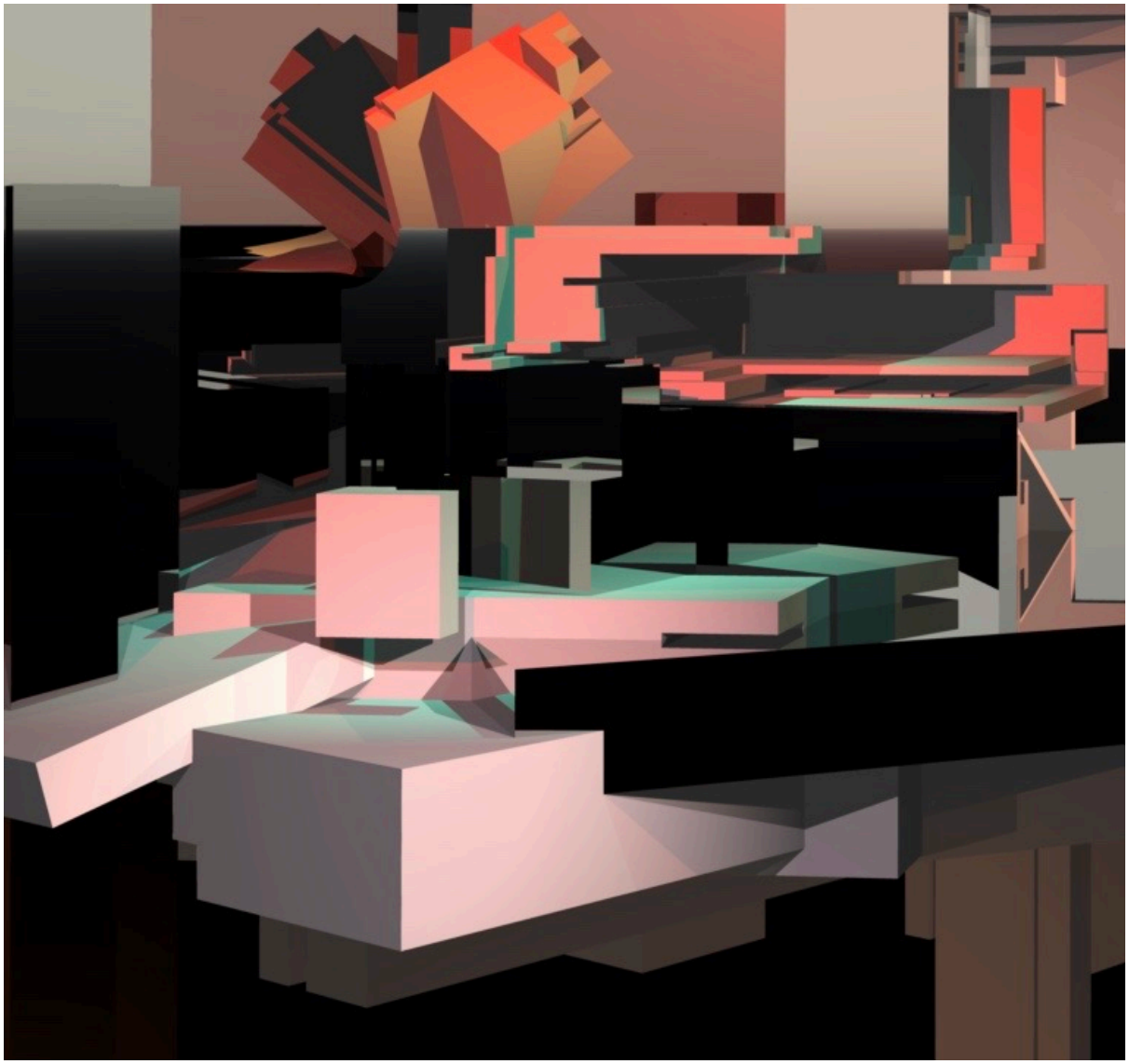


Figure 63. Brendan Lee, *Theatre Set A*, 2018, digital still, 1.5 m x 2 m.



Figure 64. Brendan Lee, *Crystalline City A*, 2018, still from video, 31 seconds.

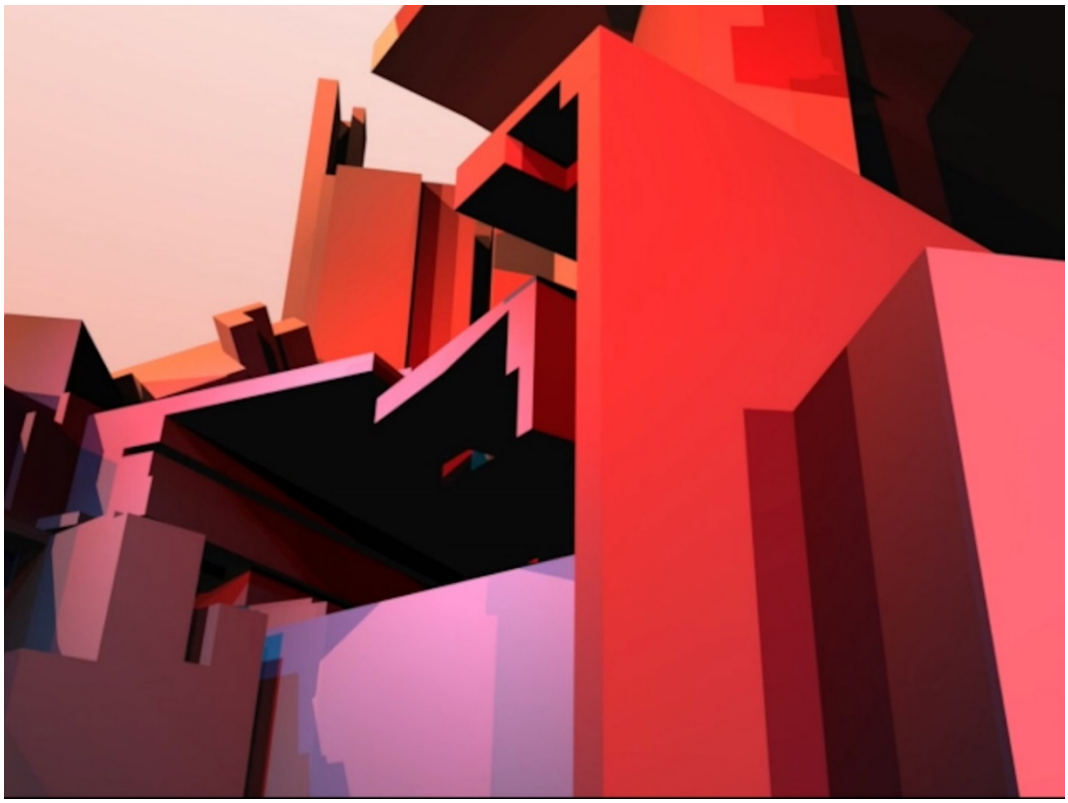


Figure 65. Brendan Lee, *Crystalline City A*, 2018, still from video, 31 seconds.

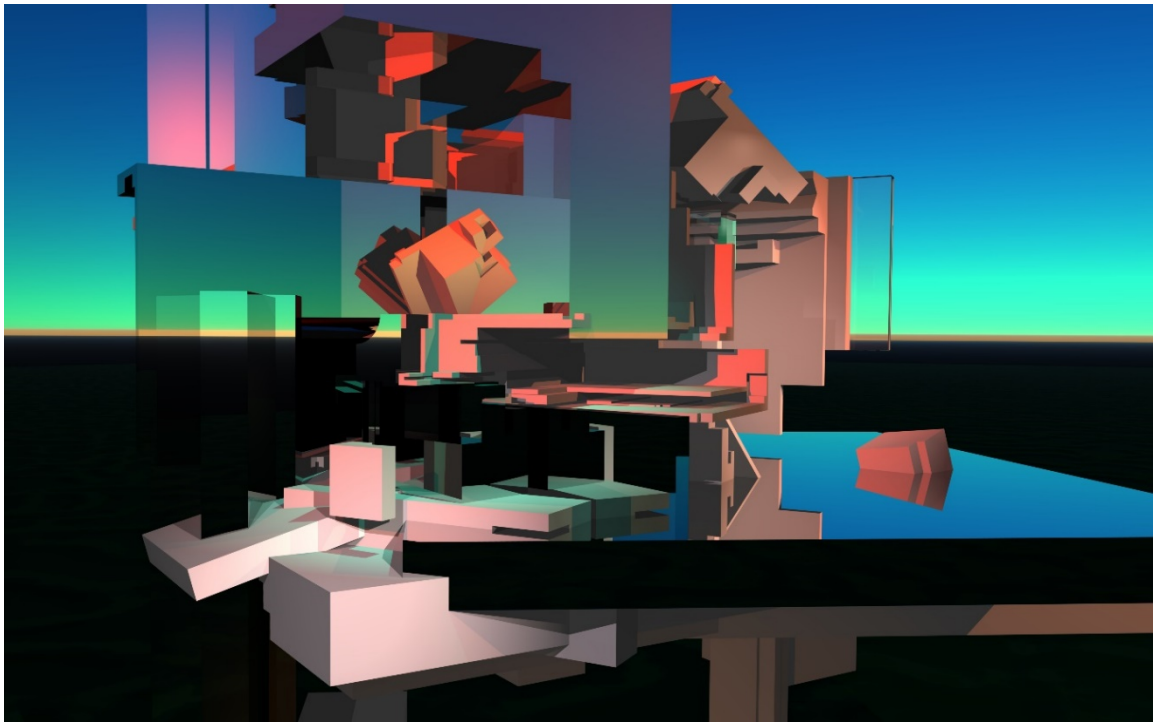


Figure 66. Brendan Lee, *Theatre Set A Blue*, 2018, digital still, 1.5 m x 2 m.

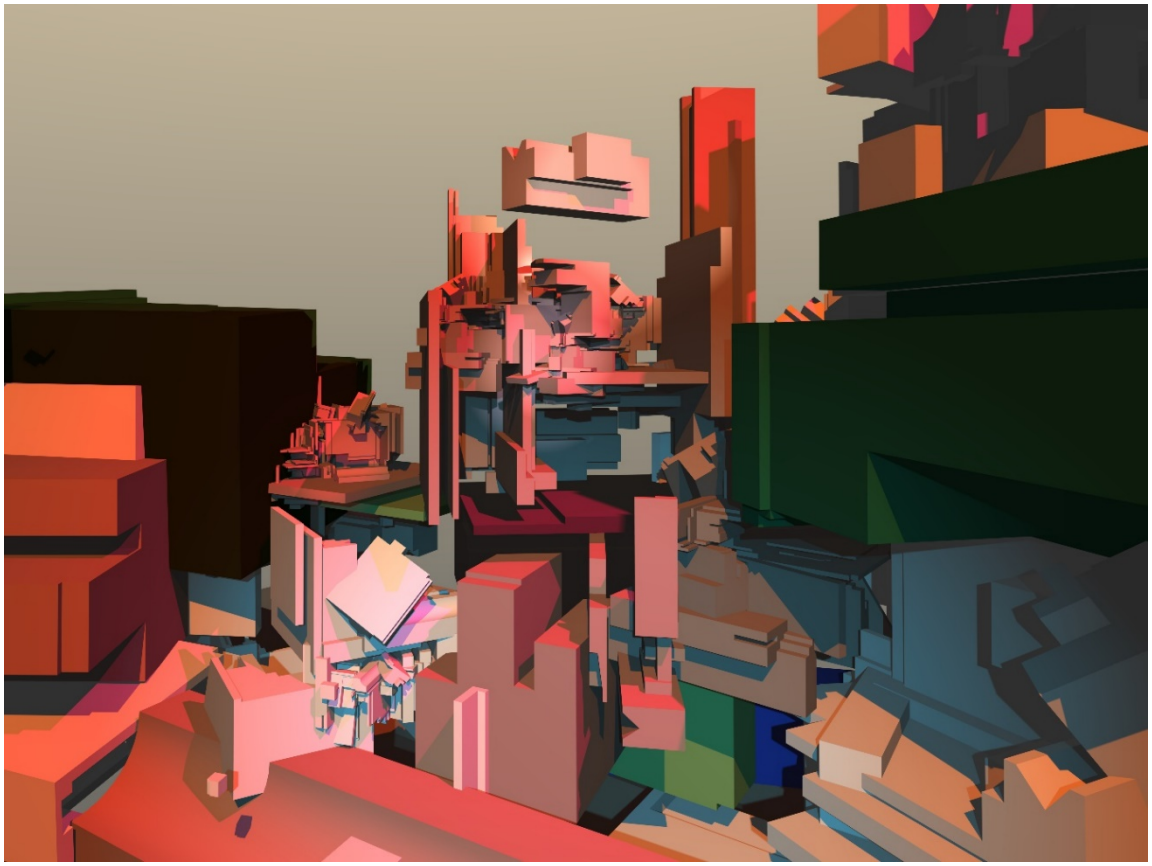


Figure 67. Brendan Lee, *Theatre Set B Expanded*, 2018, digital still, 1.5 m x 2 m.



Figure 68. Brendan Lee, *Theatre Set B Expanded Mirrored*, 2018, digital projection.

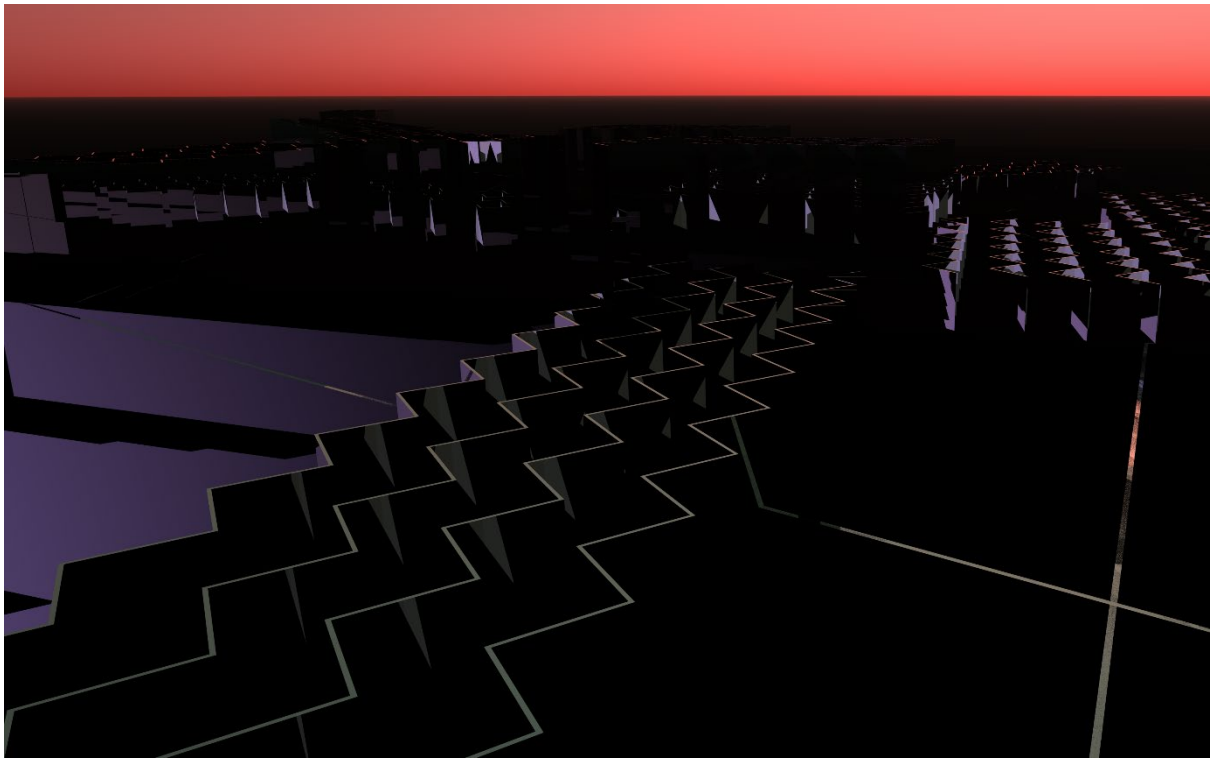


Figure 69. Brendan Lee, *Crystalline City B*, 2018, still from video, 1 min and 10 seconds.



Figure 70. Brendan Lee, *Crystalline City B*, 2018, still from video, 1 min and 10 seconds.

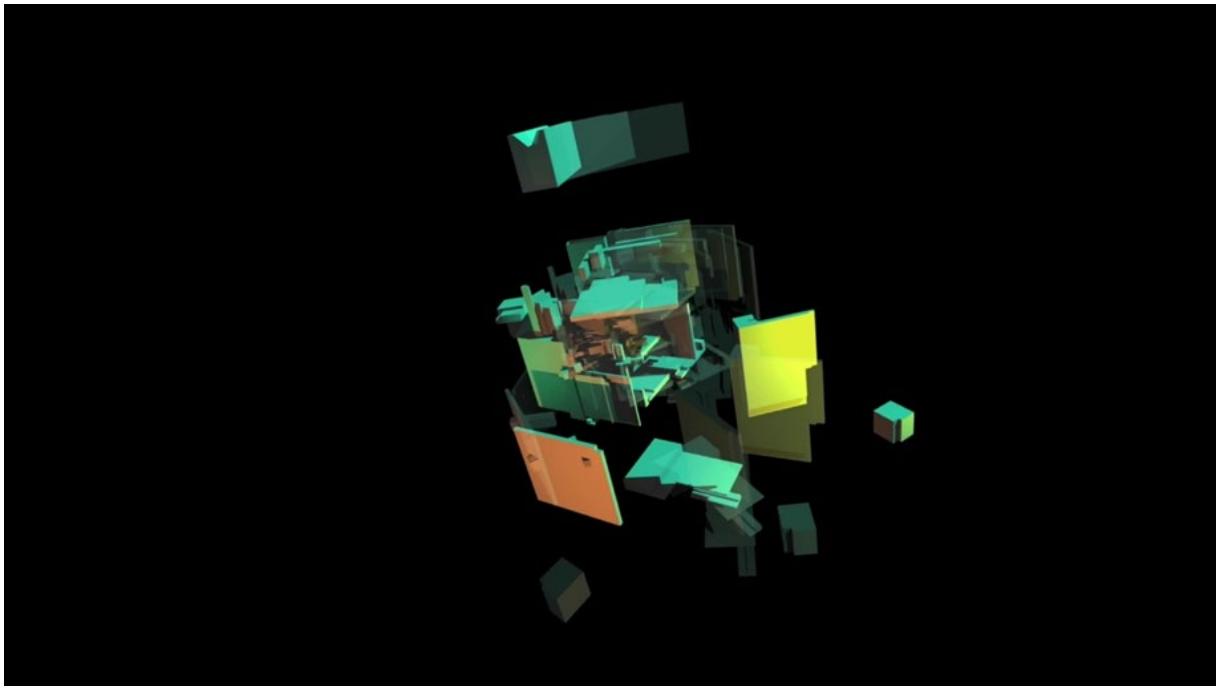


Figure 71. Brendan Lee, *Rotating Crystalline A*, 2019, still from digital video, looped play.

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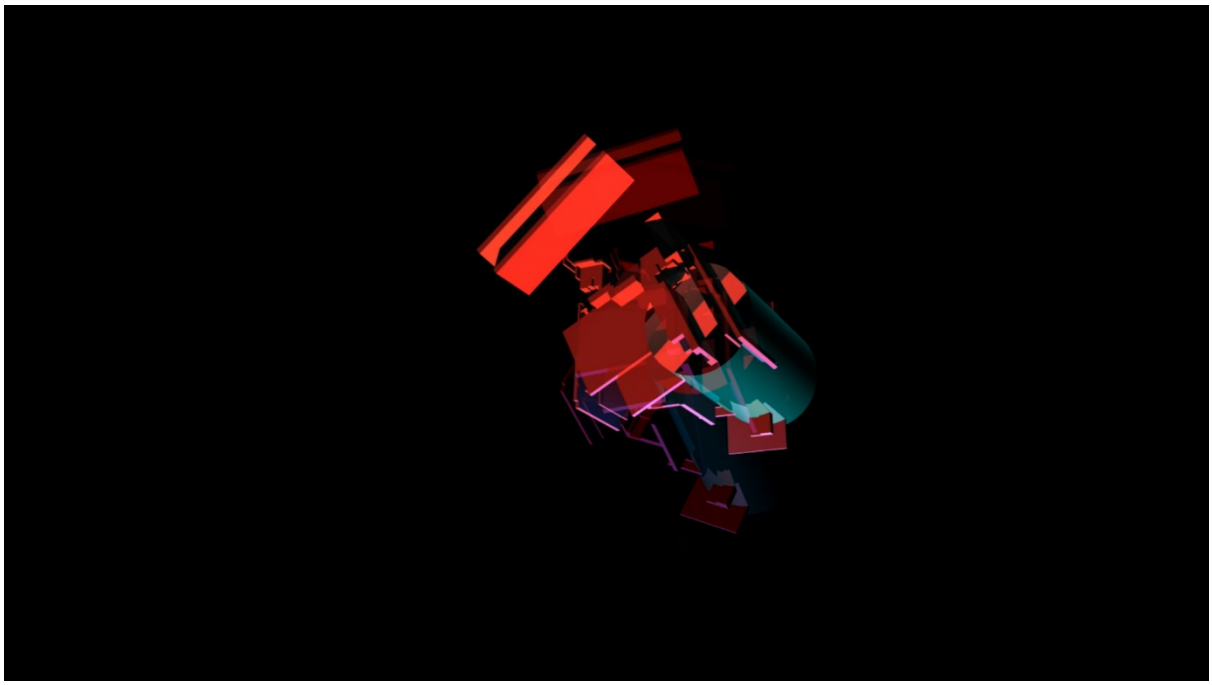


Figure 72. Brendan Lee, *Rotating Crystalline B*, 2019, still from digital video, looped play.



Figure 73. Brendan Lee, *Rotating Crystalline C*, 2019, still from digital video, looped play.

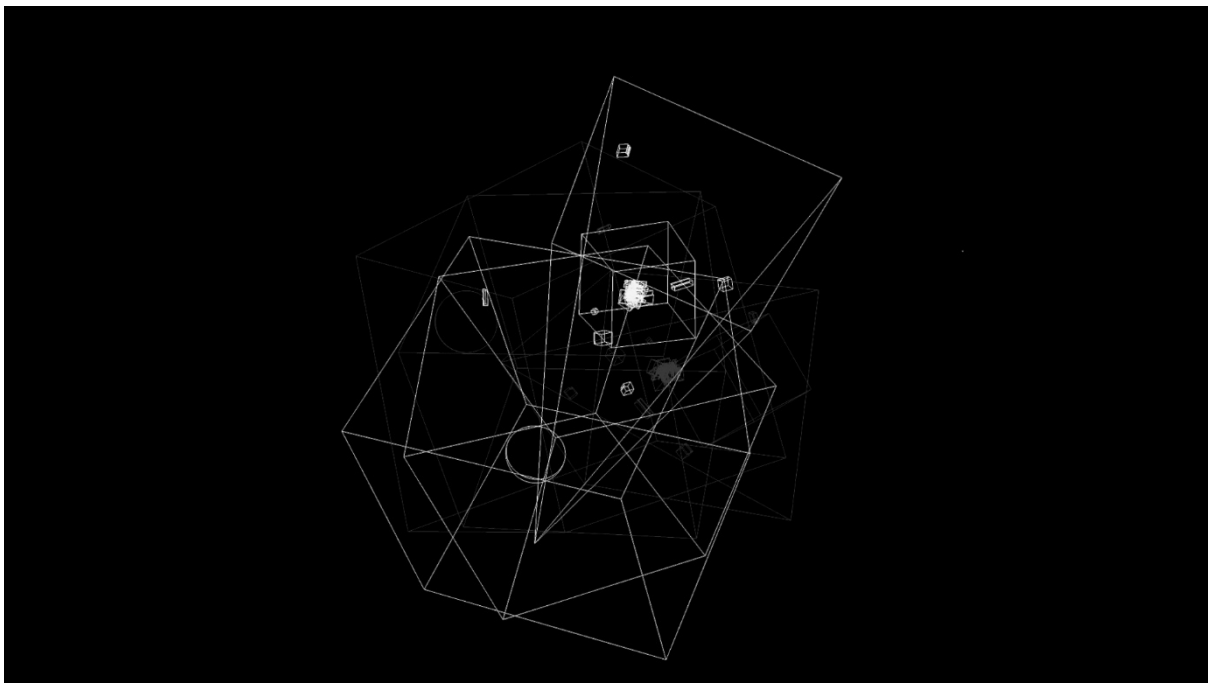


Figure 74. Brendan Lee, *Rotating Crystalline City Plan*, 2019, still from digital video, looped play

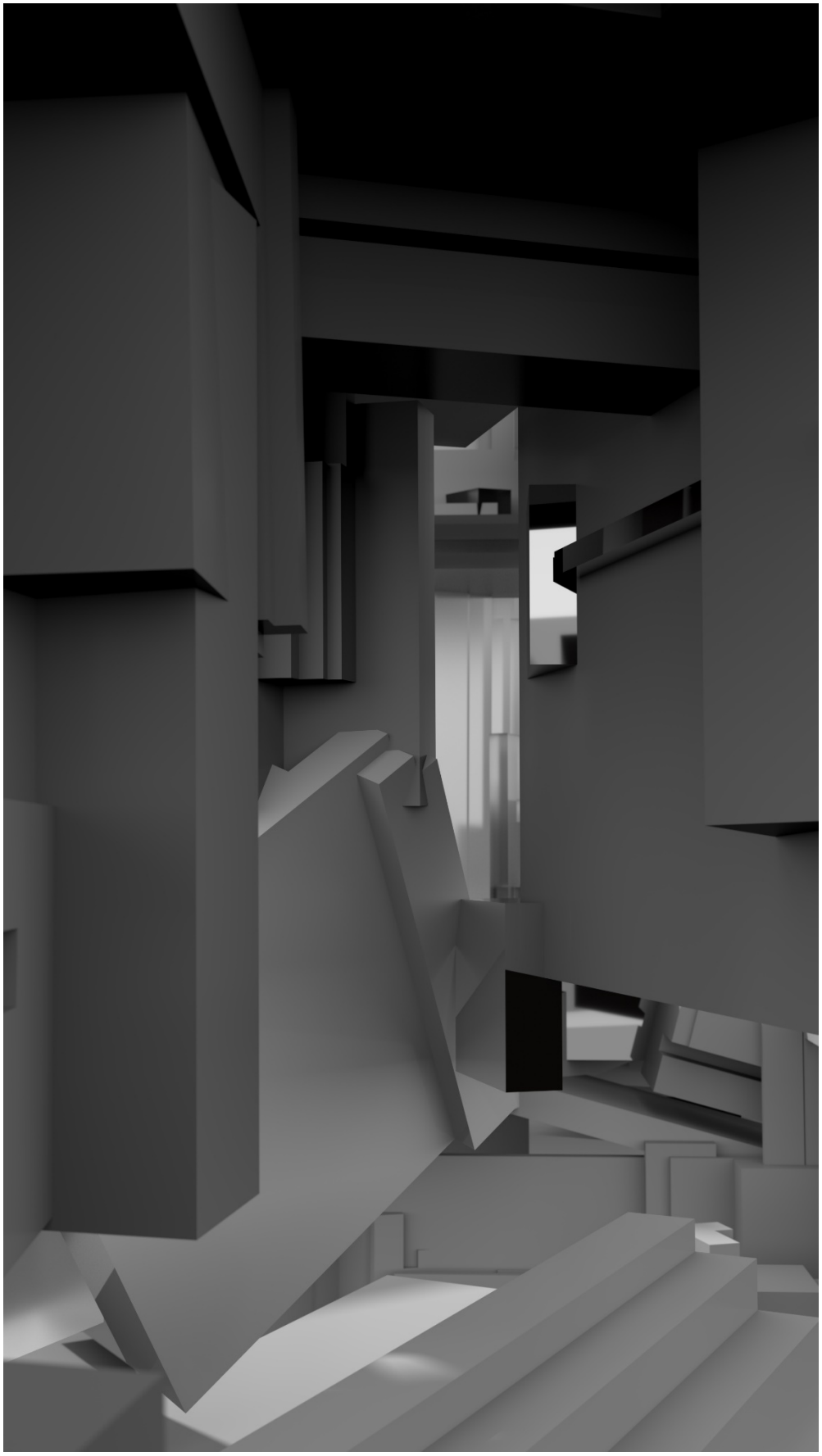


Figure 75. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.



Figure 76. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.

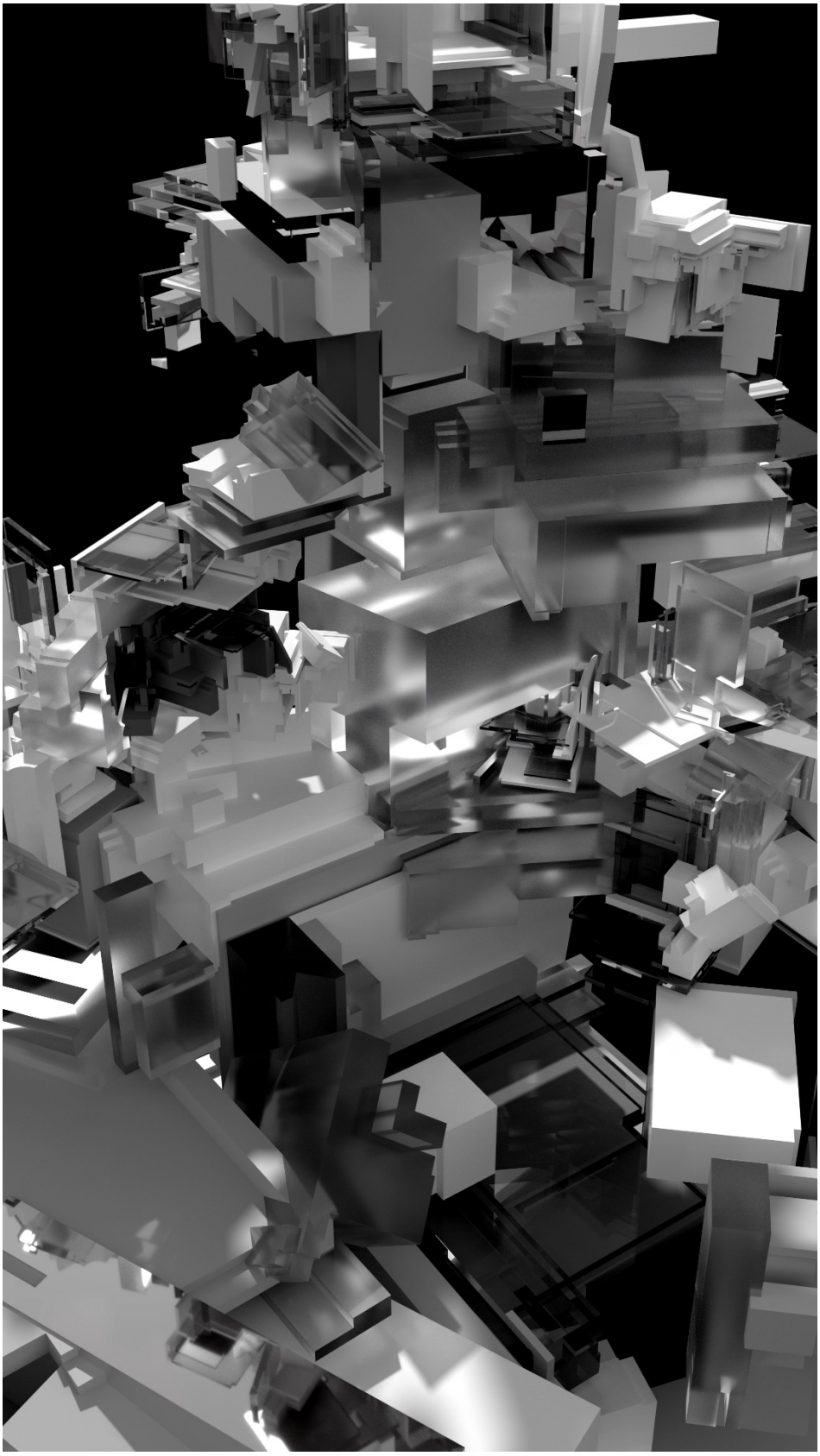


Figure 77. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.



Figure 78. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.

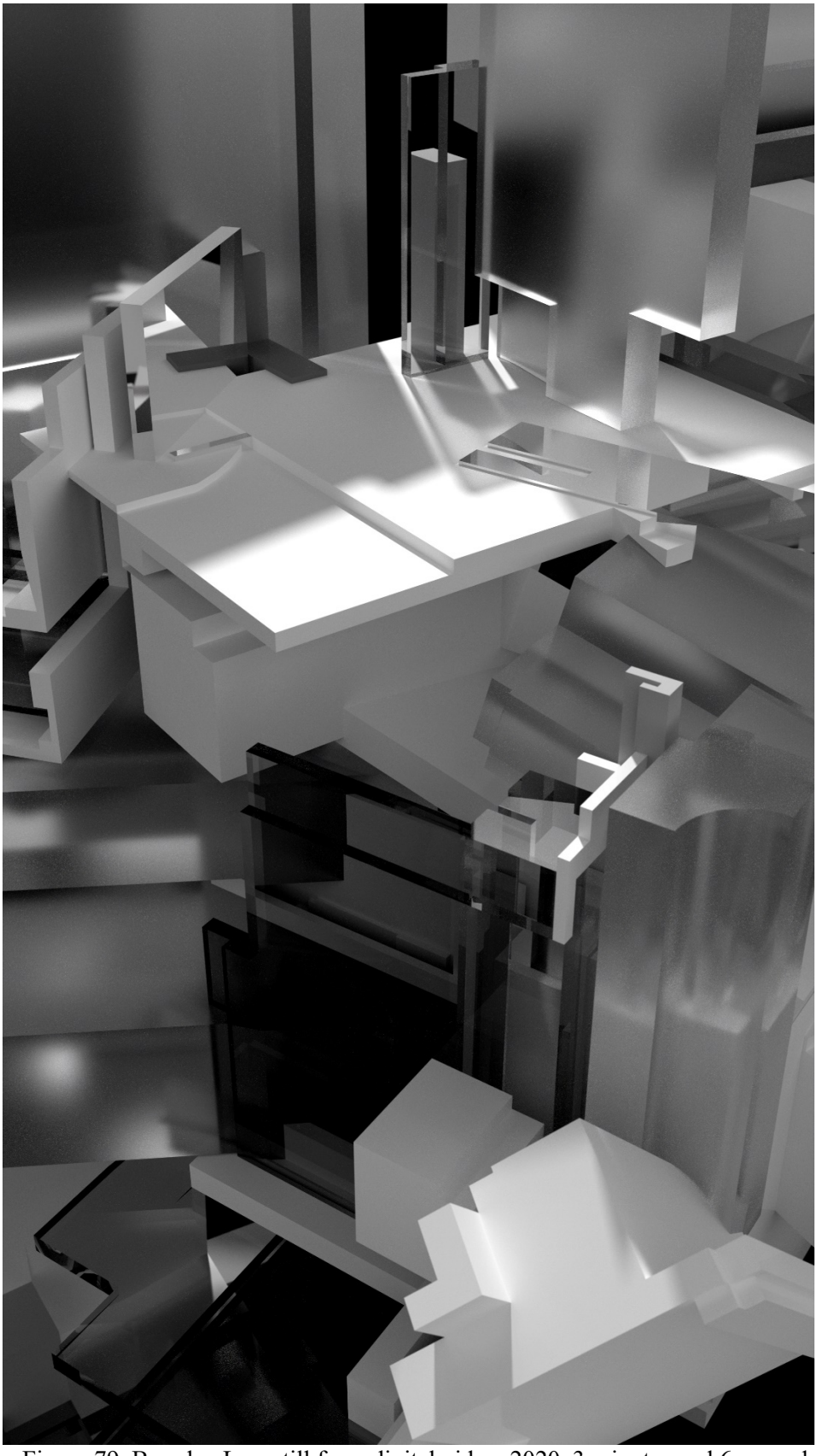


Figure 79. Brendan Lee, still from digital video, 2020, 3 minutes and 6 seconds.

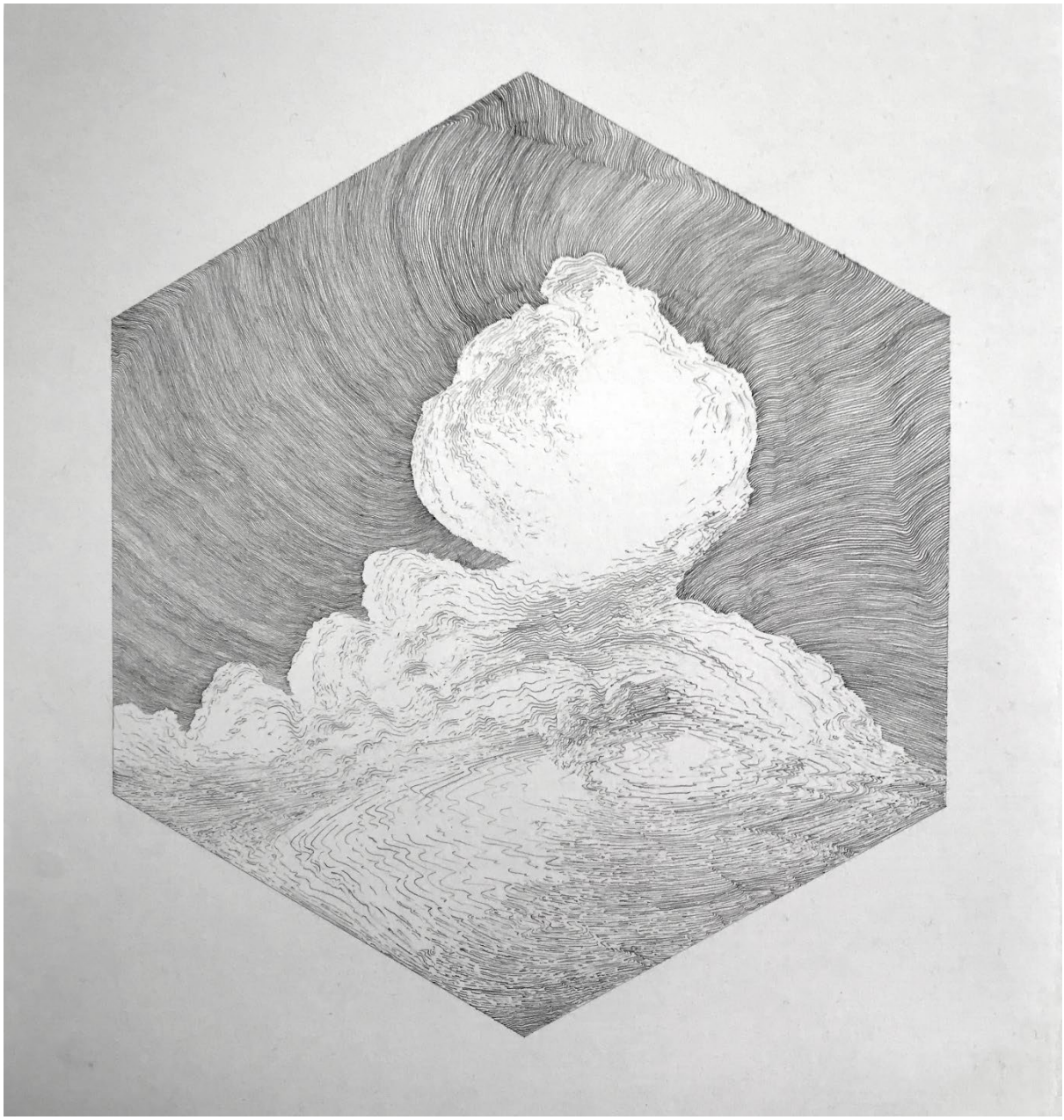


Figure 80. Brendan Lee, Untitled, graphite on paper, 30 x 20cm, 2017.



Figure 81. Brendan Lee, Untitled, graphite on paper, 30 x 20cm, 2017.

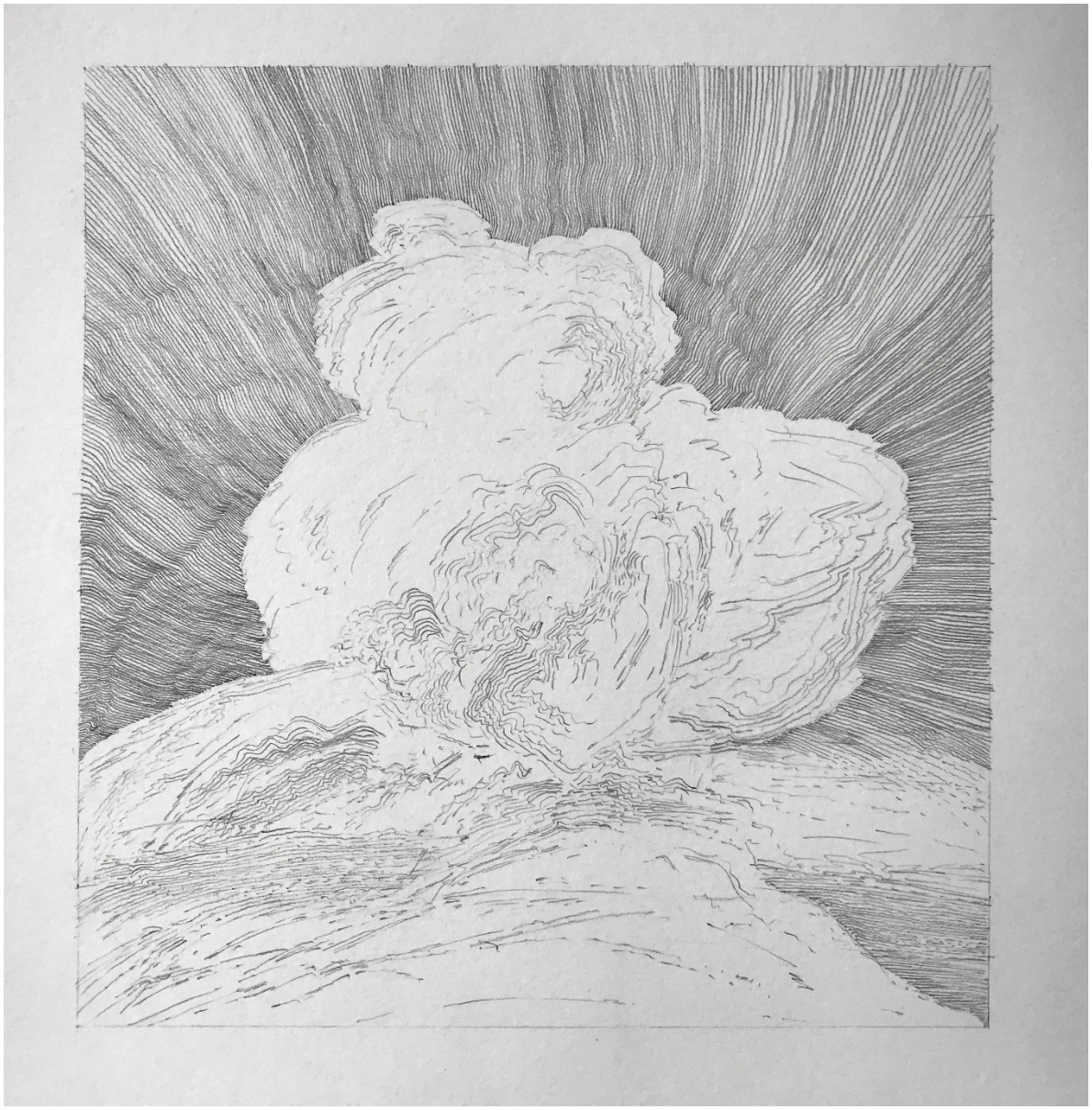


Figure 82. Brendan Lee, Untitled, graphite on paper, 30 x 20cm, 2017.

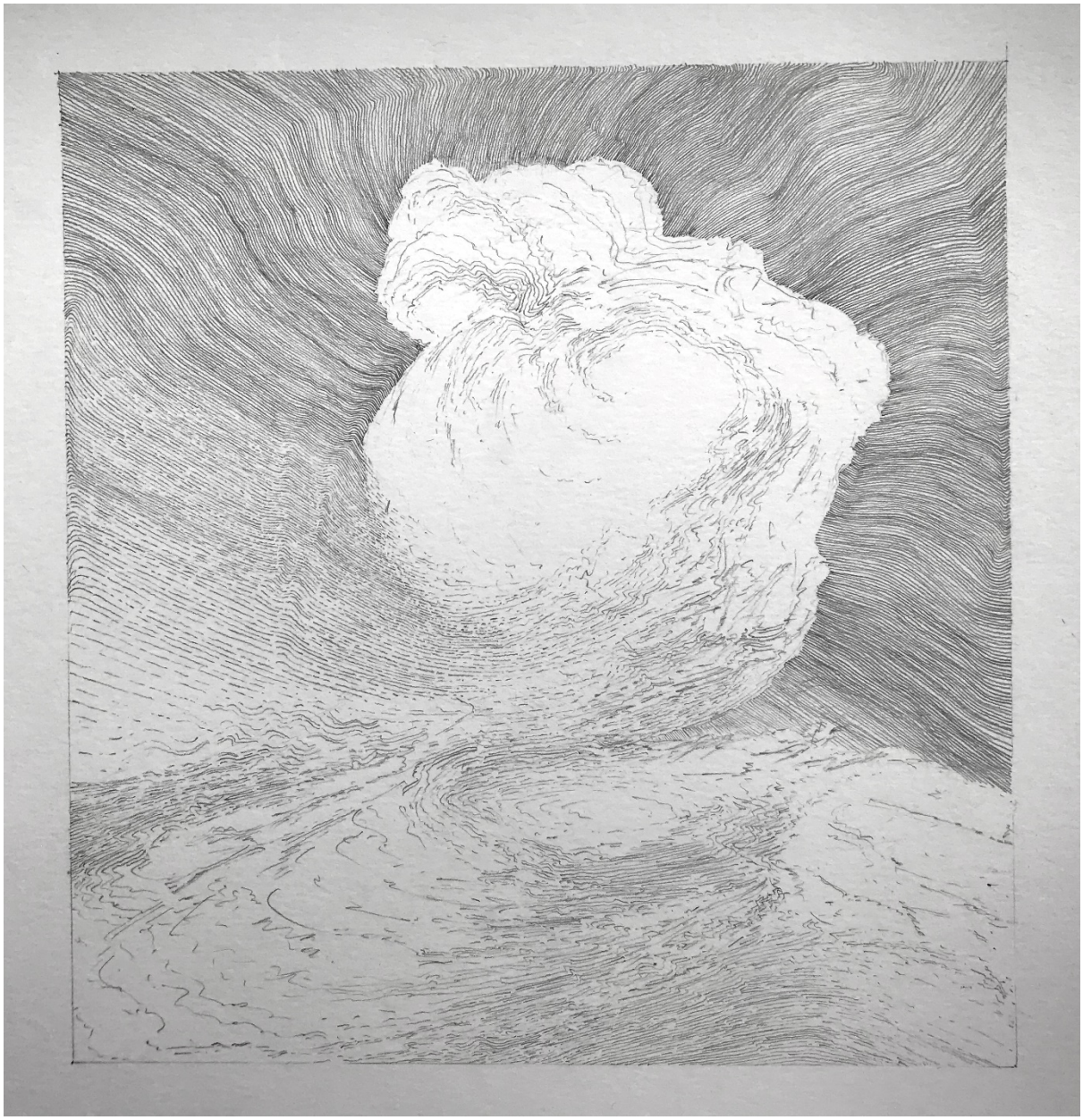


Figure 83. Brendan Lee, Untitled, graphite on paper, 30 x 20cm, 2017.

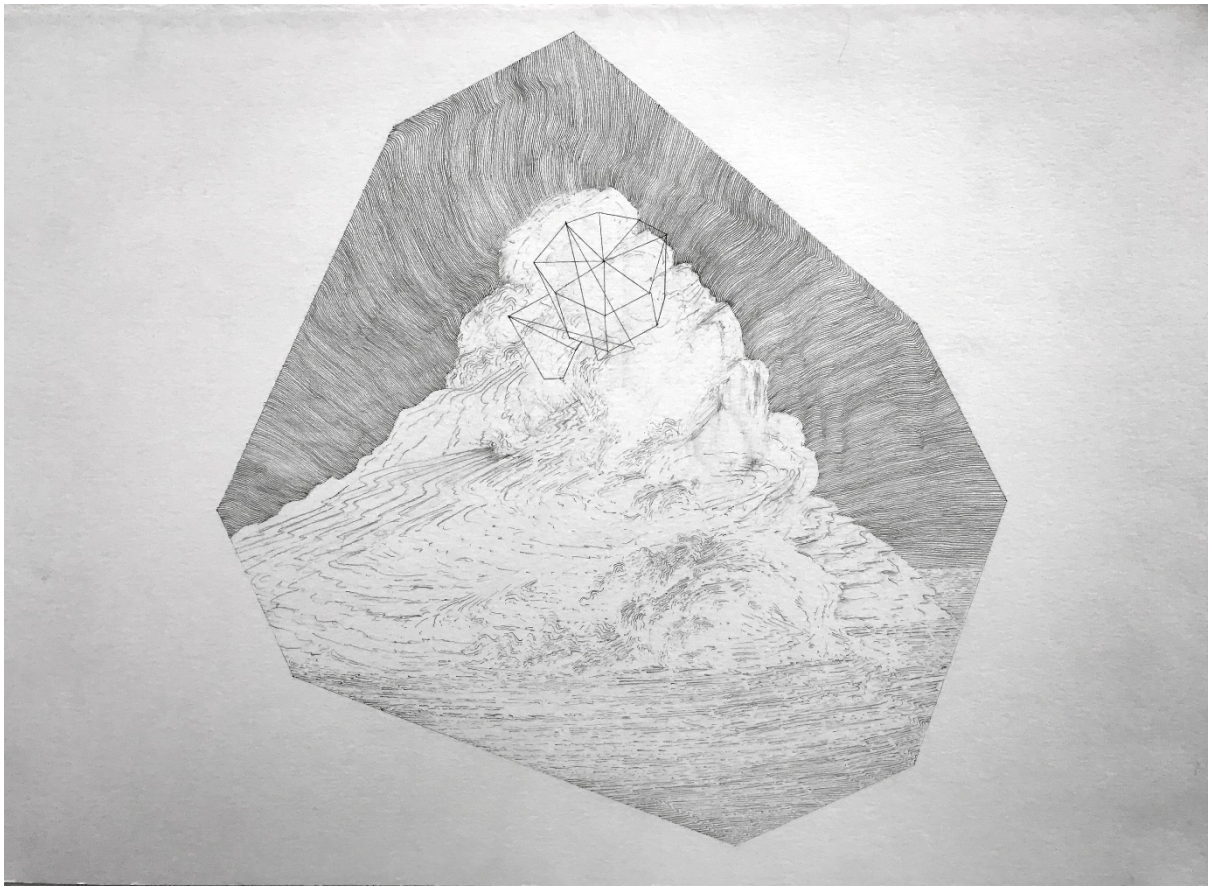


Figure 84. Brendan Lee, Untitled, graphite on paper, 30 x 25cm, 2017.



Figure 85. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.

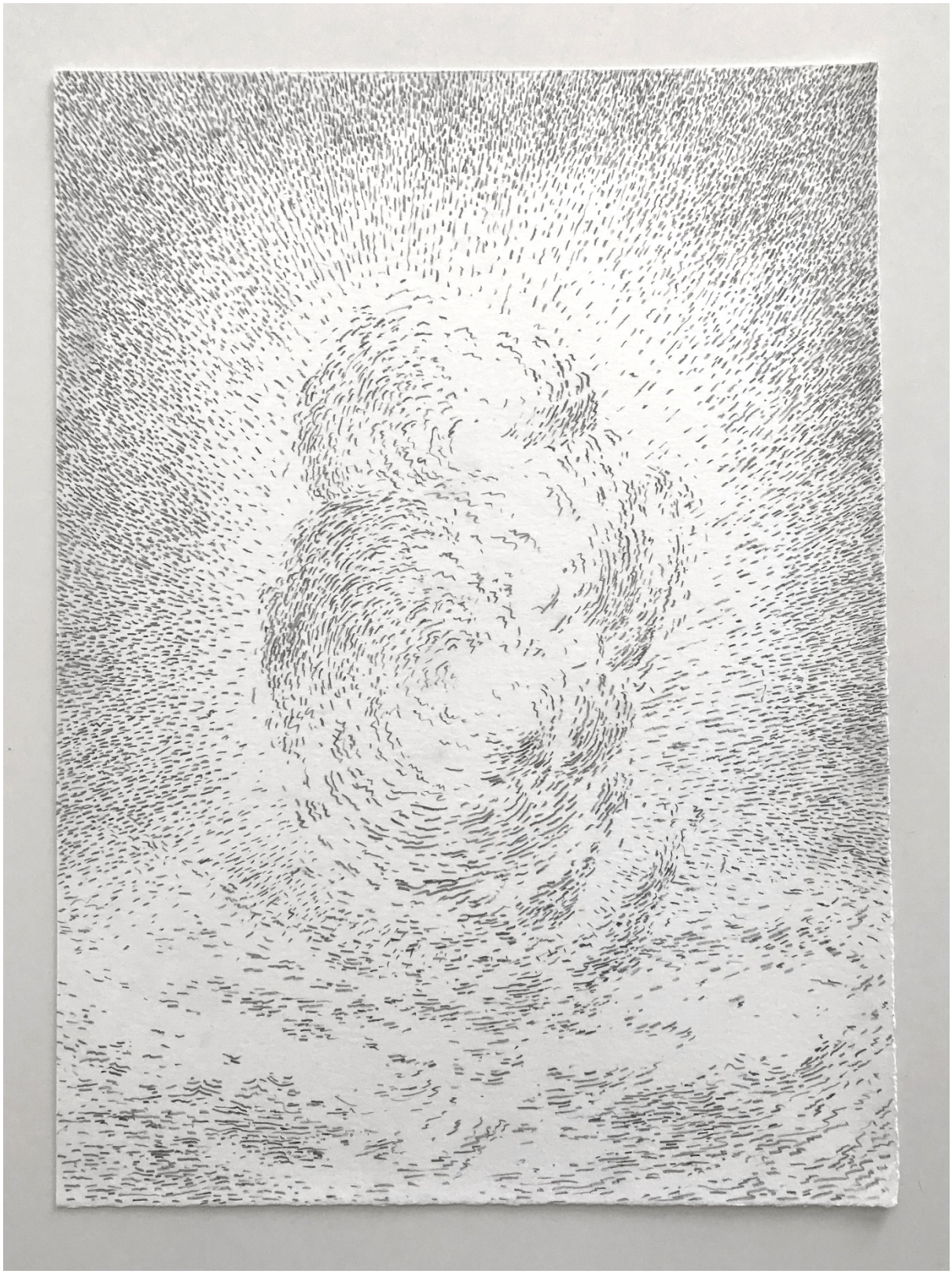


Figure 86. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.



Figure 87. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.

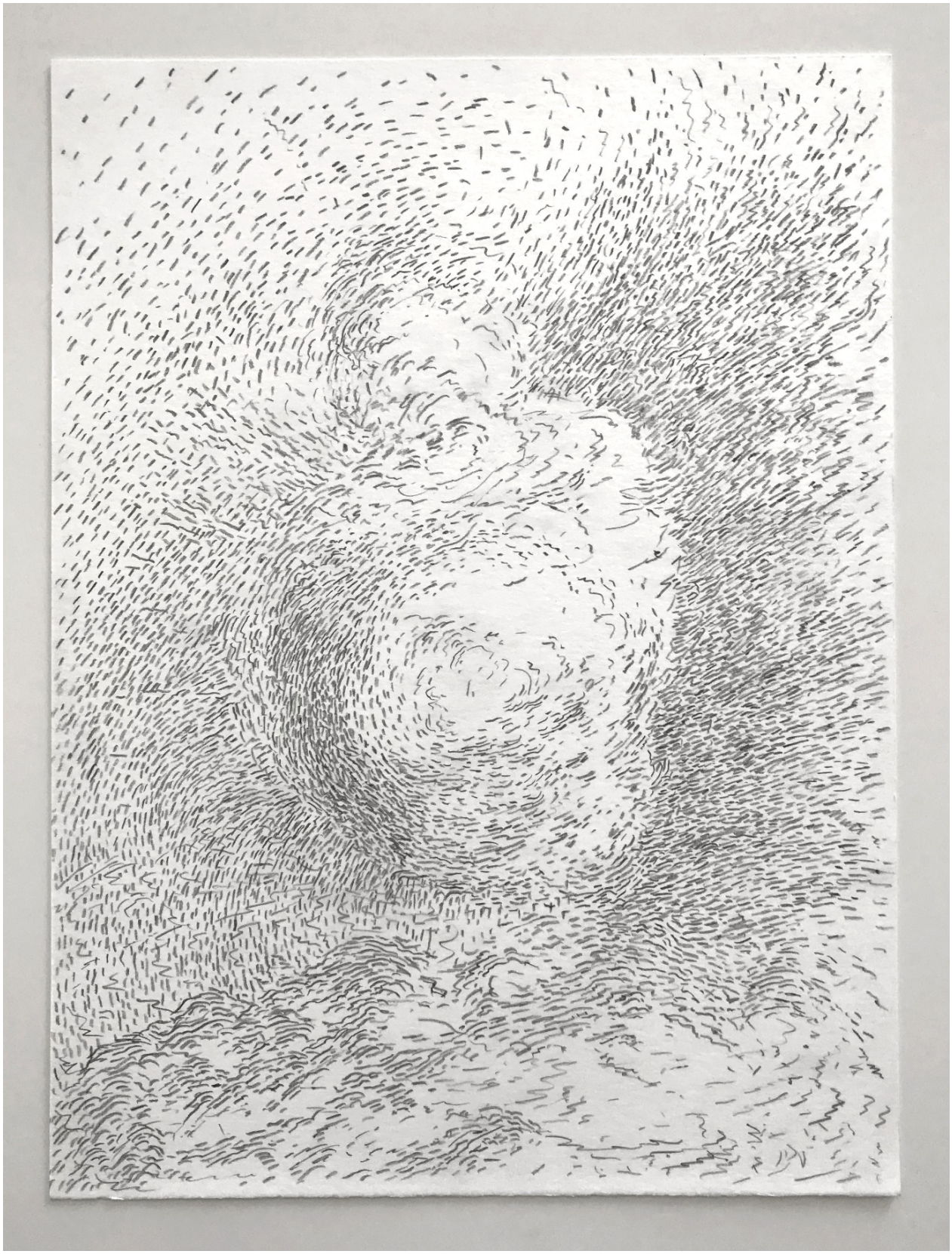


Figure 88. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.



Figure 89. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.



Figure 90. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.



Figure 91. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.



Figure 92. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.

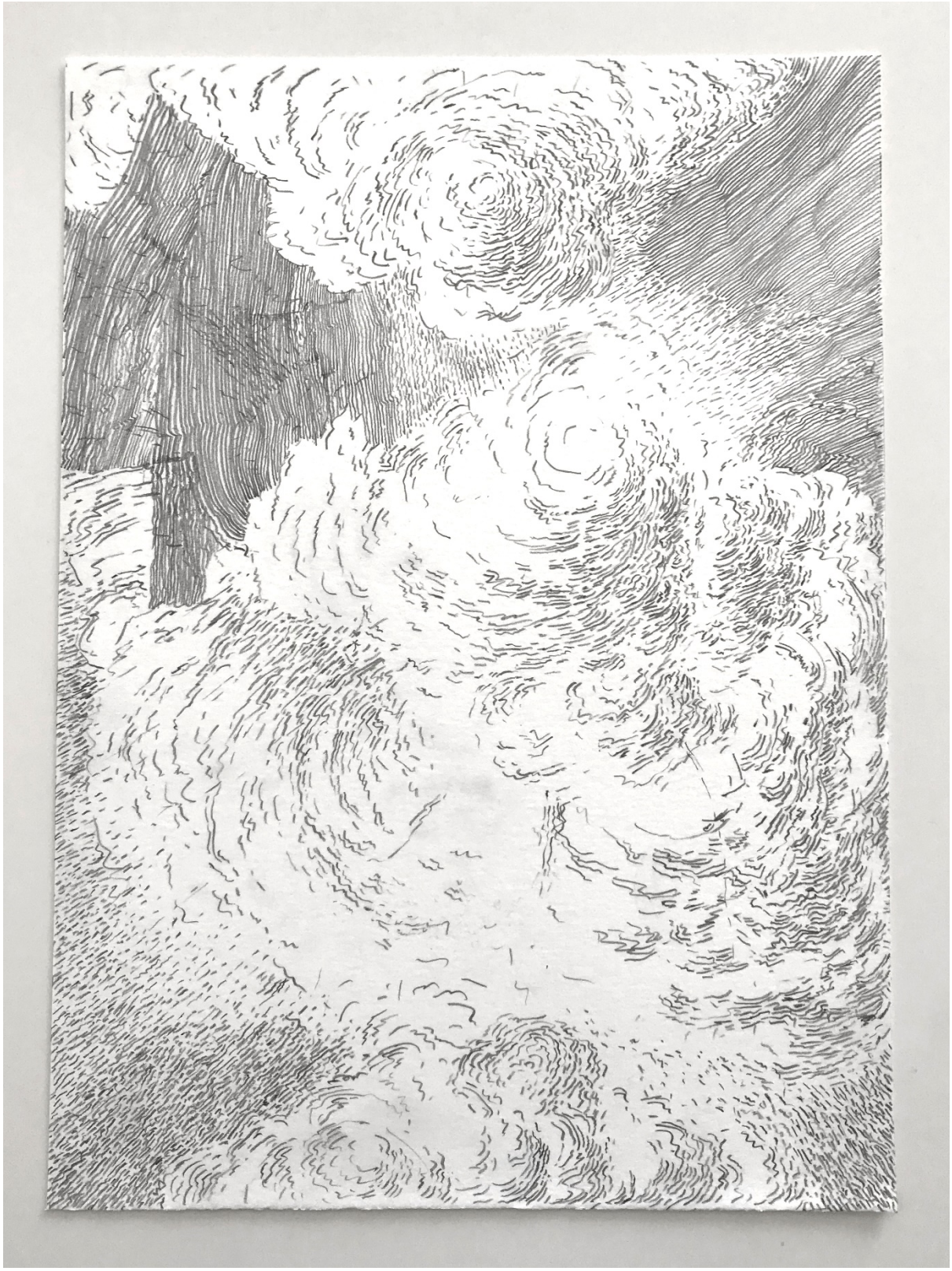


Figure 93. Brendan Lee, untitled, 2019, graphite on paper, 35 x 25 cm.



Figure 94. Brendan Lee, notebook, 2019, 43cm x 31cm.



Figure 95. Brendan Lee, notebook, 2019, 43cm x 31cm.

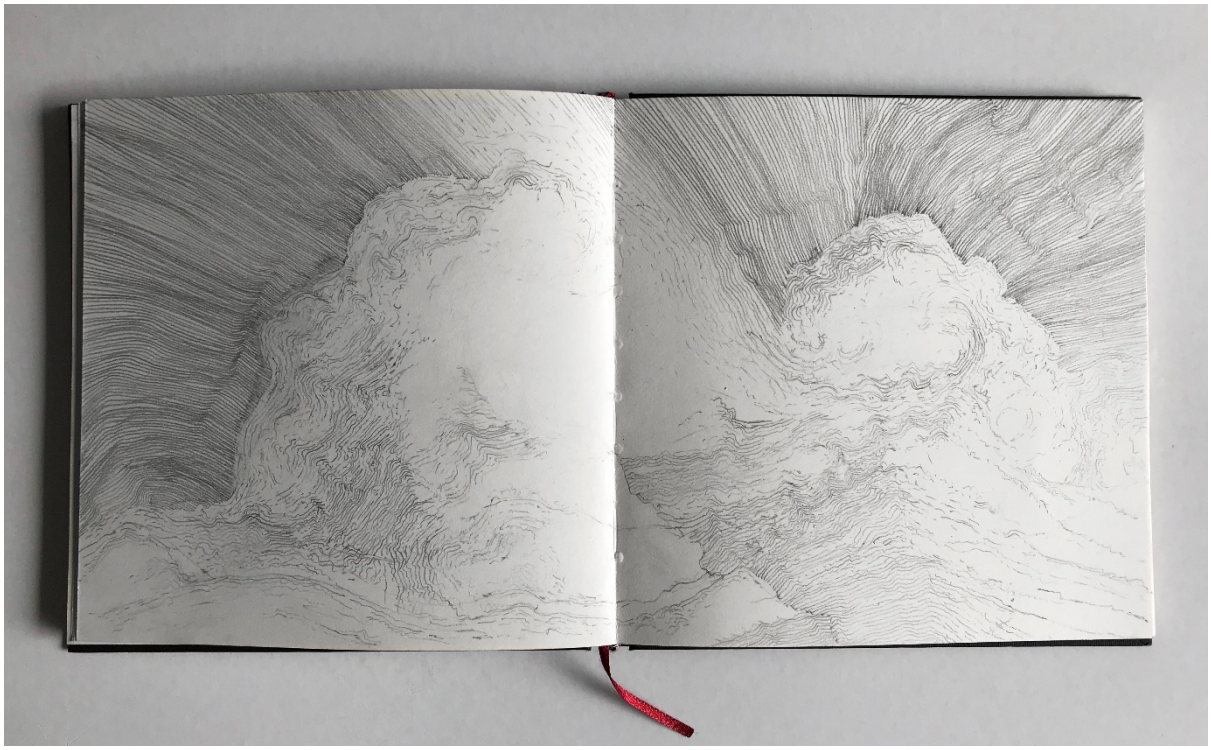


Figure 96. Brendan Lee, notebook, 2017, 20cm x 20cm.

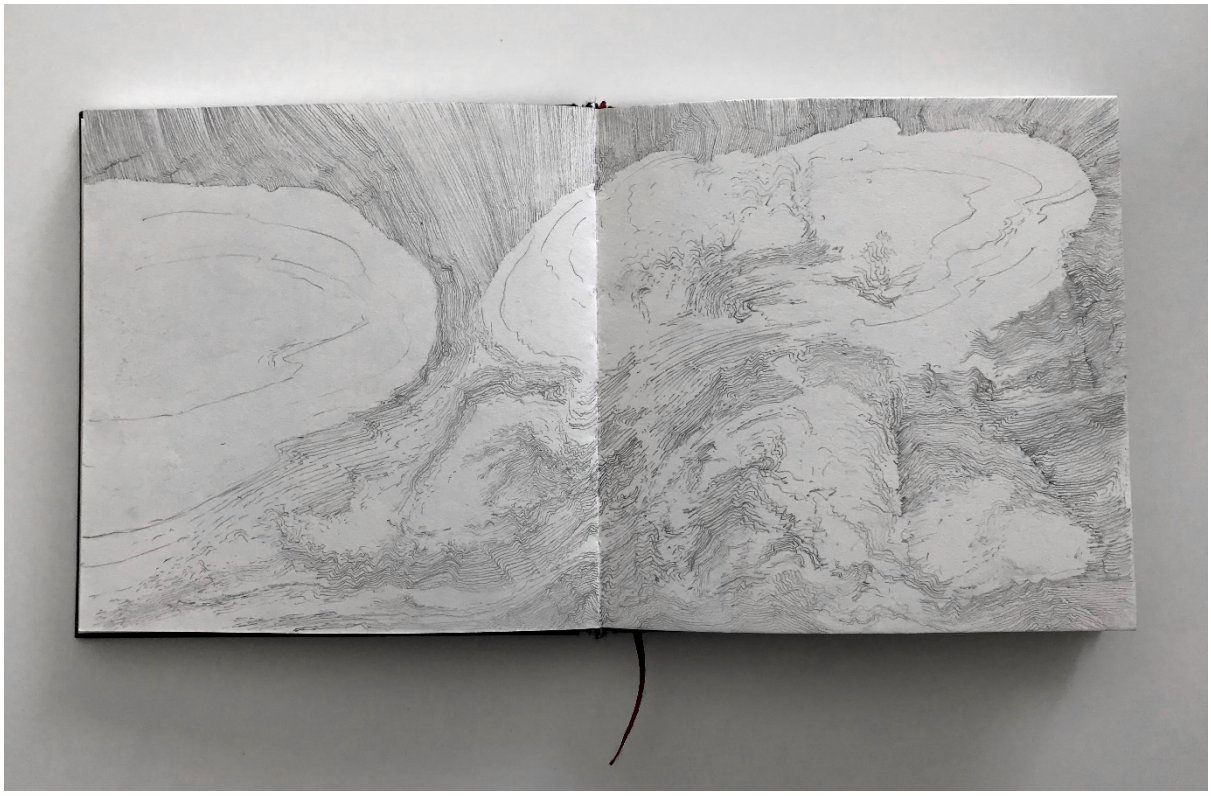


Figure 97. Brendan Lee, notebook, 2017, 20cm x 20cm.

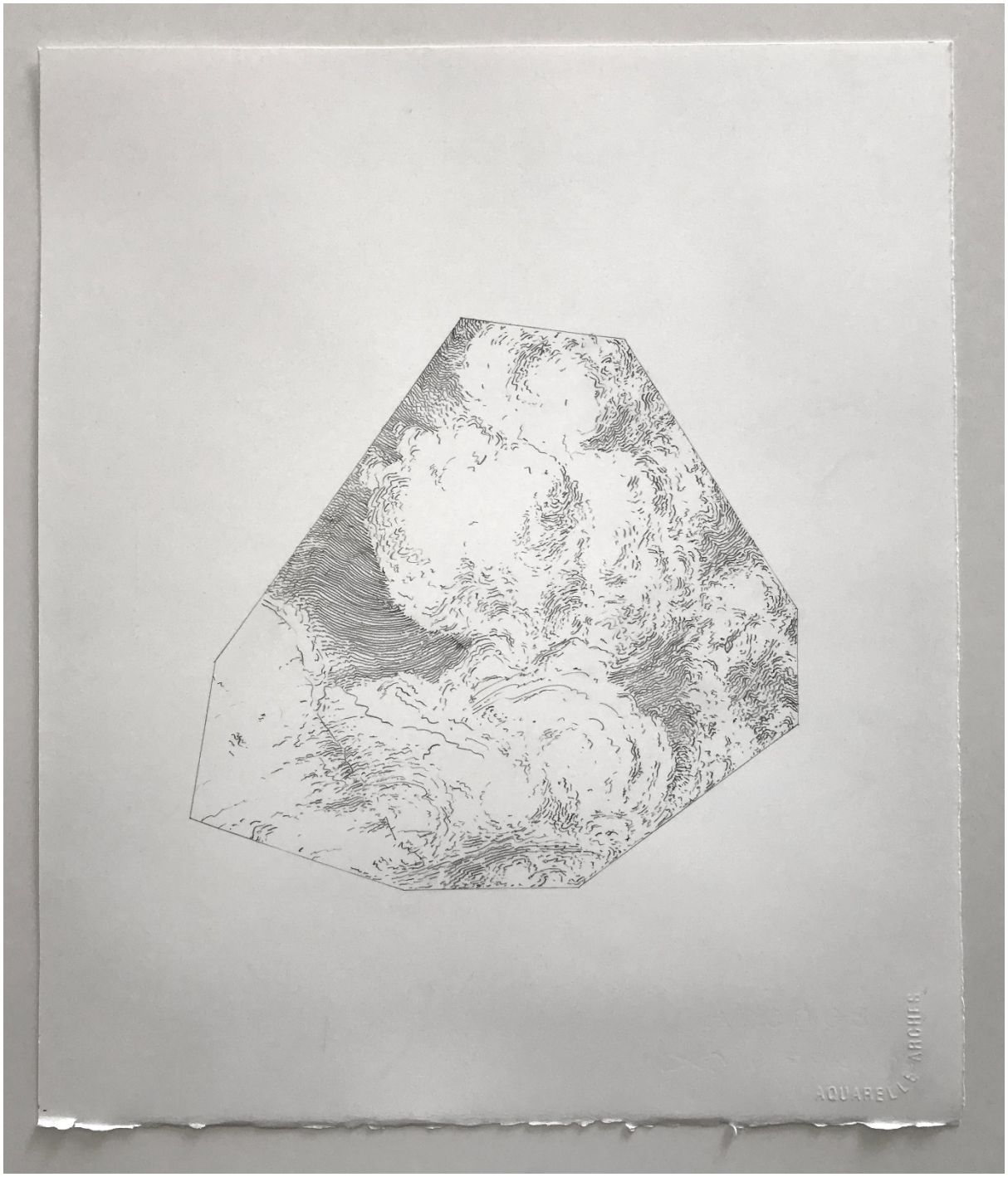


Figure 98. Brendan Lee, untitled, 2018, graphite on paper, dimension of paper 35 x 25 cm.

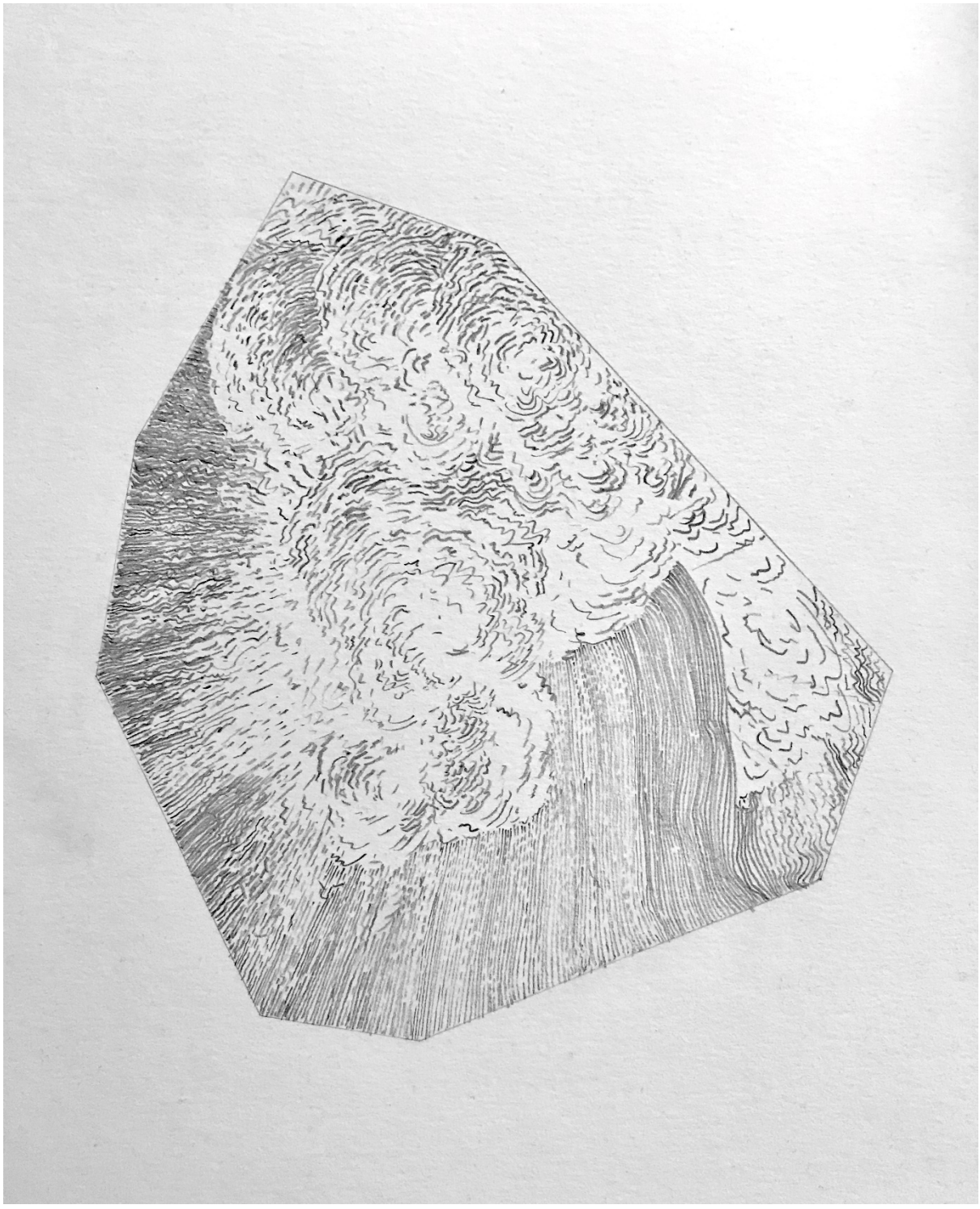


Figure 99. Brendan Lee, untitled, 2018, graphite on paper, dimension of paper 35 x 25 cm.

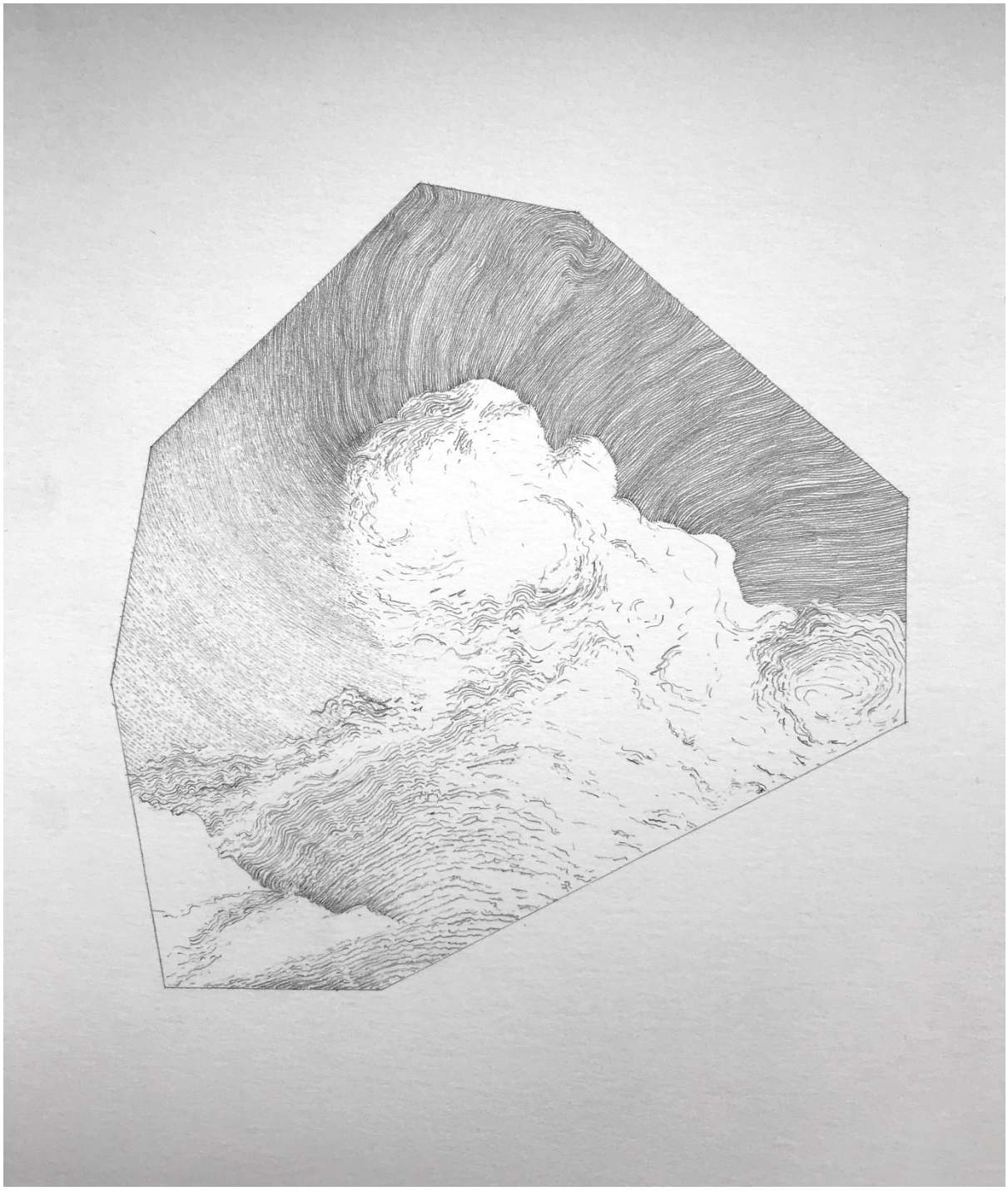


Figure 100. Brendan Lee, untitled, 2018, graphite on paper, dimension of paper 35 x 25 cm.



Figure 101. Brendan Lee, untitled, 2019, cynotype print, cotton textile, 27 x 21 cm.

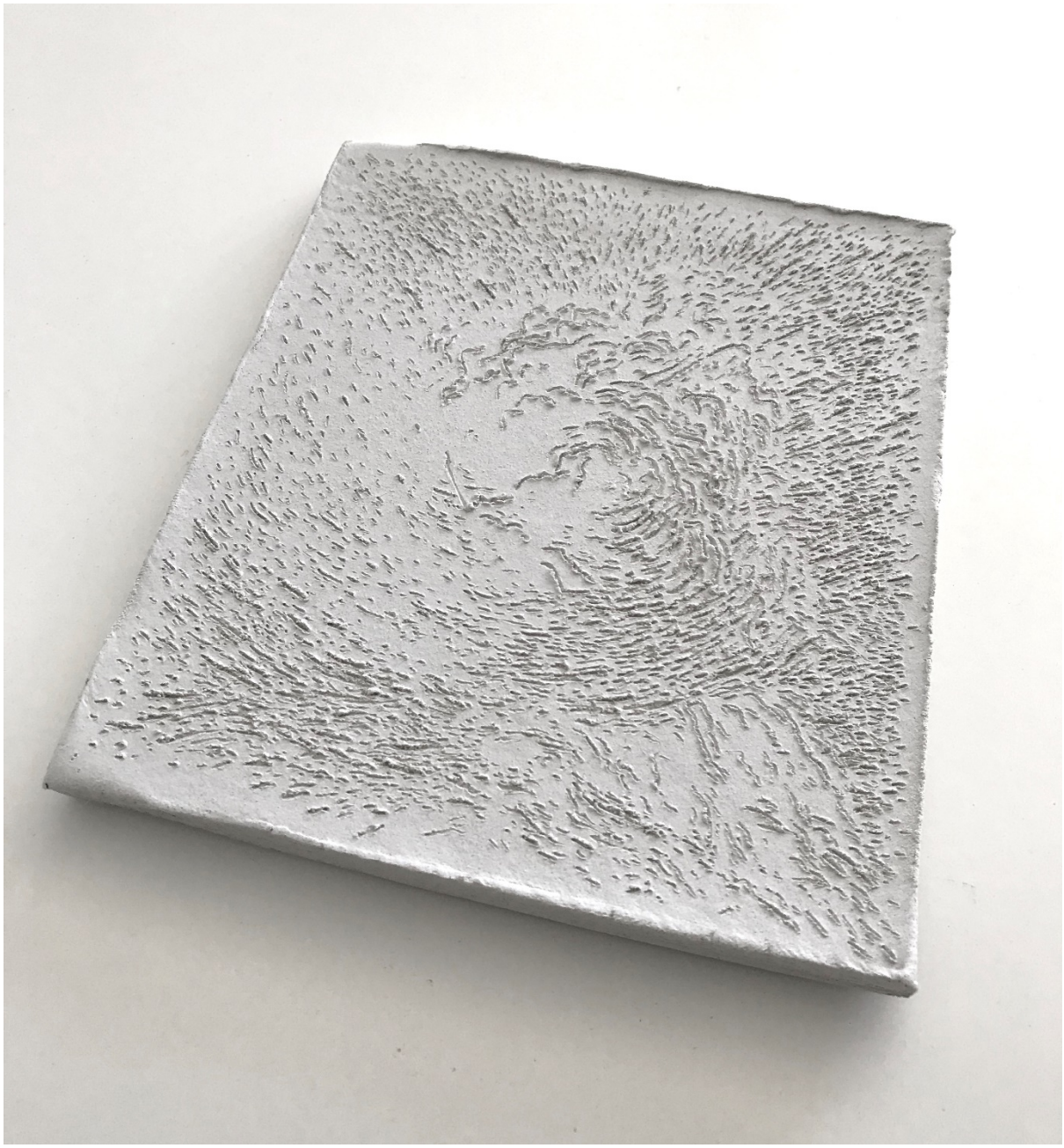


Figure 102. Brendan Lee, untitled, 2020, stoneware, 13.5 x 16cm.