





## **The Morning Line**



# **The Morning Line**

**MATTHEW RITCHIE. ARANDA \ LASCH. ARUP AGU  
THYSSEN-BORNEMISZA ART CONTEMPORARY**

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 **VERLAG für MODERNE KUNST**



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# Drawing the Universe

FRANCESCA VON HABSBURG

*The Morning Line* owes its inimitable verve to the inherent qualities emanating from Matthew Ritchie's complex vision. It encompasses disciplines that are poles apart, uniquely asking questions that keep me enthusiastically working on its next manifestation. As it travels to new cities and venues, it captures other imaginations, engages diverse creative energies, and stimulates the minds of many different people from very different cultures, all of whom seemed fascinated and intrigued by it. We all see the magic. *The Morning Line* lives in a space of eternal discovery and dissemination, exploring a sense of aesthetics that brings forth a number of issues about time and space, about the nature of our existence, and ultimately our inevitable failure to make a lasting mark on the fabric

of the universe. *The Morning Line's* lacework casts shadows of chaos that converge into a fluid monument celebrating creation and creativity. Playfully, transience is revealed as a defining state of being.

I first met Matthew Ritchie in 2003 in New York through his gallerist Andrea Rosen. She spotted my passing interest when I dropped by her gallery when Matthew had a show on, and it took little time for her to gently maneuver me into an enthusiast! I acquired a major work called *The Family Farm*. The dialogue with Matthew really started in 2004, the year he had shows in Kanazawa, Japan; at the Bienal de São Paulo; and at several museums in the United States—that is to say, he may have been unknown in Europe, but he was very much in demand in the rest of the world. The exhibitions included large installations, some sculptural, some painterly, usually a combination of both, and reflected his natural flair for integrating different disciplines. His love affair with physics runs deep, and Matthew was so engaging in our conversations that even I started to dabble in popular science. Most of them introduced scientific concepts not always comprehensible to a layperson like me, but Matthew weaves them into a seductive array of mysterious formulas, drawn from a deep personal fascination and knowledge of the subject. He had started his life in New York City in the 1990s as a

pest control agent, picking up physics from textbooks that college students dumped in Union Square at the end of the semester. I caught him in full form just days after he had given a lecture at the Einstein Academy of Sciences in Berlin.

The smile on Matthew's face was brimming with pride. The Einstein Academy lecture was indeed impressive, and so was the museum track record he had in the United States but strangely not in Europe. He was very excited about developing his most ambitious project to date with T-B A21, which would integrate his vast knowledge of science and his sculptural talent. He wanted to build a 3-D drawing of the universe, and I wanted to make that dream come true.

I began to detect that there might be more to Matthew than meets the eye when, a few years ago, he practically knocked himself senseless by diving into a river in Jamaica that was quite obviously only ankle deep. I later asked him why he did that, and he answered that it was because the local Rasta told him to "dive in!" It reminded me of just how willingly he dove into *The Morning Line* project. He had taken a huge leap of faith, as did all the other collaborators who were to join this project over the next three years. I do hope, however, that the rest of us don't end up with huge bumps on our foreheads as well.

Matthew's creative, articulate, and massively generous spirit knows no bounds. There are no limits to his desire to experiment. Matthew and I began to explore possible partnerships with architects and engineers, musicians and scientists, programmers and graphic designers. The result is *The Morning Line* — a masterpiece of interdisciplinary collaboration that defies all logic and acceptable good practice.

The beginning of this maze of collaborations started when David Adjaye advised Matthew and me during the initial stages of the development of *The Morning Line*. He introduced us to Daniel Bosia from Arup Advanced Geometry Unit, experienced in rendering two-dimensional drawings into three-dimensional structures. What Daniel did not realize at that stage was that Matthew was already thinking in multiple dimensions: three was already far too limiting for him! Daniel then introduced us to Benjamin Aranda and Chris Lasch, two young theoretical architects from New York, graduates of the Columbia University School of Architecture. They had been students of Mark Wigley, and this spoke very highly for them because I revere and respect Mark's program. Not only was their studio just around the corner from Matthew's, but they also shared our passion for and dedication to the project and developed structural solutions for making drawings in space in the form of modular fractal truncated tetrahedrons. Without them, *The Morning Line* as we now know it would have never have been realized.

Drawing on my knowledge that the art world can be a fickle place, leaping toward the new with passionate but often passing enthusiasm, I worried that possibly *The Morning Line* would at some point suffer from its grandeur. It needed to be imbued with a sense of purpose; it was screaming for another dimension. I called Matthew to secure his support for a possible sonic intervention. Well, since the very beginning Matthew and I had enjoyed a high level of telepathy. On the other side of the Atlantic, he was secretly meeting with his old friends Bryce Dessner, a talented and visionary musician from the National, as well as Lee Ranaldo and other musicians and composers, to define a musical element to be integrated into *The Morning Line*. The new departure led to new technology. Meyer Sound Laboratories came on board, supplying the project

with the best sound production money can buy. Florian Hecker, a sound artist whom I had met through Cerith Wyn Evans, introduced me to Tony Myatt, professor at the Music Research Centre at York University. He and some of his students came to the table with new programming to interface between the new sonic compositions and the structure, which, by now, was firmly visualized in amazingly detailed renderings and seductive interactive 3-D models.

With this sonic intervention, *The Morning Line* then became an extremely elaborate and sophisticated musical instrument. What was apparent was that we had reached a further dimension by developing well-defined soundscapes /spaces within the sculpture, which created a parallel universe, a second architecture defined not by structure but by sound. The musicians' grapevine began to spread the word, and an increasing number of composers have over the last few years taken an increasingly sophisticated interest in the project's sonic potential. Sound bites started flying through cyberspace, and the sonic archive of *The Morning Line* began to take form and has been growing ever since.

I was overwhelmed by the generosity extended to this new project, the willingness of so many to contribute to something no one had seen, heard, or experienced. I am deeply moved by all this nonlinear thinking, the telepathy, the exploration of science and technology, the sonic atmospheres being created, the lines drawn in space using state-of-the-art engineering principles, the massive weight and monumentality of the structure. I am convinced that the people involved, the time spent on working out the details, as well as conceiving and redefining purpose, locations, and usage, all contributed to the energy that arises when we are committed to a project that surpasses the imagination of just one person. Here is the result of collective creativity buttressed by a spirit that kept all heads up and looking forward at all times.

## **ACKNOWLEDGMENTS**

As always, it is my great pleasure and privilege to write about the many great contributions that so many people have made to our projects, and this is without a doubt the longest list that I have ever attended to! So please bear with me because this is important and tells a story of its own. How people work together in a collaborative spirit very much depends on the attitude and qualities of the organizers. And while I really should not speak about T-B A21 first, I also don't feel that mentioning it last out of courtesy makes sense either! The list extends to more than eighty-five people who have been directly involved in *The Morning Line* in one capacity or another. This project represents the biggest exercise in creative management that I have ever been involved in!

Working with a visionary artist like Matthew Ritchie is indeed a life-enriching experience, and I would like to thank him and the architects Benjamin Aranda and Chris Lasch for lashings of innovation and creativity. The architectural duo was introduced to the project by Daniel Bosia of the Advanced Geometry Unit of Arup, who worked on the structural engineering of the project. I so much enjoyed the creative thinking and development stages that we shared as the core team, and it is all the more exciting to experience the results of *The Morning Line* as it continues to evolve toward its full potential with the integration of musical programming. What is terribly exciting about every manifestation of *The Morning Line* is the opportunity to completely reconfigure it according to each location that it travels to and the particular soundscapes that it frames. This is done in considered collaboration with Tony Myatt and his extraordinarily talented group of programmers and sound technicians from the Music Research Center of the University of York, in our eternal search for the perfect sound. And last but by no means least, I thank Helen Meyer of Meyer Sound for sponsoring in kind the extraordinary sound system of *The Morning Line*, which has transformed the structure into a universe of its own creation!

Once again, I would like to recognize the immense contribution of Mark Herrod from Sheetfabs and his amazing team for always delivering the goods on time and in line. They actually made, built, and rebuilt *The Morning Line*, and I guess it would be safe to say that without them there would be no Morning Line! The person who has dealt personally with this aspect has been project manager Moritz Stipsicz. I am extremely grateful to him because, on top of his professional abilities, he has been a great pleasure to work with. Philipp Krummel, our extremely efficient resident exhibition architect, has been as always the most reliable source of information and simplifies all decision-making processes, which is a real luxury!

Daniela Zyman has helped me in so many different ways to build up T-B A21 to what it is today. *The Morning Line* is one of its icons, and so is she! As we approach our first decade of working together, I look back on a tremendous partnership, for which I am extremely grateful. I want to thank Eva Ebersberger, who worked particularly hard editing this wonderful multifarious box/book! And I must thank Bettina Brunner, Vince Weissbacher, Alexandra Hennig, Simone Sentall, Andrea Hofinger, and Elisabeth Mareschal for their contributions too.

I would like to thank the authors and photographers of the catalogue, Helene Furján, Hertha Hurnaus, Brandon LaBelle, Tony Myatt, Roland Schöny, Mark Wasiuta, and Peter Weibel for making the book so informative, complex, and beautiful through their contributions, as well as Hans Ulrich Obrist for his interviews with the composers. And my thanks to Todd Eberle for capturing the fractal beauty of *The Morning Line* in stunning photographs, and to Julia Juriga-Lamut and Marion Mayr for the great graphic design.

As always, no project would be possible without generous sponsors! To this end I extend my heartfelt gratitude to Karl Fink, Executive Board Vienna Insurance Group, who have been supporting T-B A21 for years and who truly made this ambitious project possible.

# The Morning Line

MATTHEW RITCHIE

BENJAMIN ARANDA

CHRIS LASCH

*The Morning Line* was conceived by Matthew Ritchie as an inherently collaborative structure, an interdisciplinary intersection for information congruence, in which artists, architects, engineers, physicists, and musicians would each contribute their own specialized information to create a new form: a mutable structure with multiple expressions and narratives intertwining in its physical structure projected video, and innovative spatialized sound environments. Requirements of the supporting institutions included that the structure be able to be broken down, shipped to and installed in multiple locations, have a long physical life, be capable of being radically reconfigured for the different venues, and be able to adapt to a changing program of contemporary

music. Ritchie's own decadelong artistic project of constructing a personal cosmology that incorporates the languages of science, myth, and religion into a single systemic or "semasiographic" visual language became a substrate for encoding these multiple narratives in a three-dimensional structural system, in collaboration with Benjamin Aranda and Chris Lasch of Aranda\Lasch and Daniel Bosia of Arup AGU.

The project is inscribed in space as a drawn and spatialized moment, available for interpretation by the collaborating artists. Geometry and structure are unified with expression to form a holo-tectonic system. This in turn becomes the thematic basis for scores and narratives. Sensors then register the movements of anyone inside and convert them into new stories through an innovative sound spatialization system. The building becomes an instrument to be played by the occupant. Interactive in multiple ways; the content grows and adapts as the structure changes both physically and in information depth over time.

This synthetic process is accomplished first through drawing, in which form and content, geometry and expression, can become one. This is partly in answer to the premise of the “holographic principle,” which posits that the visible universe can be understood as a hologram, isomorphic to the information inscribed on its boundaries. In other words, the universe is a kind of picture. The next question is then of course, how do we look at such a picture? *The Morning Line* proposes an analogous conversion of language into place that both tells and embodies the “picture” of the universe and humankind’s attempt to understand it. Built around a new cosmological model that predicts the dynamic growth and re-creation of the universe, the ekpyrotic theory of Paul Steinhardt and Neil Turok, *The Morning Line* is a dynamic cyclical structure, in which conventional architectural distinctions between structure and skin, geometry and expression, form and content are collapsed. Built from an idealized “universal bit,” a truncated polyhedral shape, *The Morning Line* is a fractal cycle, a model of the universe that scales and cycles up and down. The architectural system capitalizes on recent developments in parametric design. There is no single way in or out, no final form. There is no single narrative, no beginning or end, only movements around multiple centers. Infinitely self-scaling, its modular units increase or decrease around a fixed ratio but can expand or contract in any size or direction.

That this recently proposed cosmological model and its implied narrative of endless renewal might be refuted by the next version next year is not our concern. In 150 years, as our cities are submerged under the looming floods, all

cosmological models may be irrelevant. But in order to discover the ruins of the future, something must be built. We will always dream. Looking back and forward in its physicality, *The Morning Line* is both ruin and monument. Conceived as an anti-pavilion it imagines a place that might exist after the second fall of humankind. It inverts the obsolete technocratic optimism usually associated with pavilions and replaces this hubris with a site primarily concerned with generating potential meanings. This is the most important acknowledgment of all, since it is only the human need for meaning that makes the world a place at all. In other words, as a picture of the universe, it is a wager at best. The dynamic cycle is just a song, whistled as we walk past the graveyard.

But these are the terms we all live with. As with any event, *The Morning Line* can be understood only by looking back to it from a future moment. Named after a British morning daily that publishes the daily odds for horses at the race track, *The Morning Line* is about a consuming interest in something impossible to predict; as the future arrives daily, it cannot be understood except through the past. All components are interchangeable, reusable, demountable, portable, and recyclable. *The Morning Line* might as well be the best chance you’ve got at seeing the future before it arrives.





# The Universe Is Infinitely Suggestive

**MATTHEW RITCHIE** artist, New York

**BENJAMIN ARANDA** architect, Aranda\Lasch, New York

**CHRIS LASCH** architect, Aranda\Lasch, New York

## MODERATED BY:

**MARK WASIUTA** architect and theorist, Director of Exhibitions, Columbia University, Graduate School of Architecture, Planning and Preservation, New York

Matthew Ritchie's studio, New York, July 22, 2008

**MARK WASIUTA:** Among its many modes, identities, or points of reference, perhaps the most important for *The Morning Line* are the scientific models of universe formation it cites and the mathematical models for its geometric propagation. Yet, whatever relationship the project claims or establishes to these models, it is arguably a project most interested in questions of mutability, hybridity, and multiplicity. The project's aim to accumulate narratives, forms of reference, and possible conditions of organization might demonstrate what historian of science Lorraine Daston describes as a certain "resistance to classification."

At question is not only how this project and how architecture in general positions itself through, and profits from, models of science but also what happens to the articulation of these models when coupled with a diversity of other references or other articulations. This is not a comment about the limits of translation so much as a question of how the indeterminacy that results from this accumulation of citations enacts a crisis of authority and authorship, and how this may be a requisite and desirable result of the project's investment in, and coordination of, so many different elements.

I'd like to preface our conversation by listing some of these elements. *The Morning Line* is composed of truncated tetrahedrons at three different scales, organized around two primary volumes. These volumes provide space for a program of video projections and for music performances that sometimes incorporate the structure of the pavilion itself, treating it as a sonic tool. The tetrahedral blocks are formed by a computational modeling system that helps determine their structural interrelation. The surfaces of the tetrahedrons are inscribed by a series of drawings that repeat the various scales of the blocks but also transform from one end of the pavilion to another. This transformation is determined by a notational system that refers variously to John Milton's *Paradise Lost* and to other textual references.

The project can be composed in multiple configurations, even multiple information systems, yet the proposed configuration is perhaps most fundamentally determined through its reference to recent theories of cosmology and universe formation.

This list is no doubt incomplete, and, perhaps because of the nature of the project, necessarily incomplete. Yet to begin to fill things in, maybe you could first say just a bit about the relationship of the project to science, to cosmology, and, in particular, to Paul Steinhardt and Neil Turok and their speculative models of universe formation that you've been following. Maybe the clearest approach would be to ask what a model is for you and for the project, and how it might be like or differ from representation?

**BENJAMIN ARANDA:** Is there a possibility for something to be between a model and a representation? [Laughter] Well, in science, models work in the same fundamental way as what they describe so that you can predict events at different scales. “Modeling” is projective in a way that a representation is not. You can't use a representation to test something the way you can with a model. Yet representations have a vital function that is different from models; they render events comprehensible without having to be explicit about their inner workings.

But it is possible to imagine both. For instance, you can have a series of ones and zeros that describes a working tree model. Let's call it a “branching algorithm.” But it's only once you've applied geometry to that code that you see the representation of a tree through the lines that make it. It's interesting to wonder where the intrinsic qualities of “tree-ness” lie—are they on the side of the model or the representation?

We argue that *The Morning Line* posits both sides. The premise of holographic projection—that the universe is multidimensional and projected onto the frame of our visible reality—makes all systems representational, what Matthew would call a language, so this can be seen as the expressive part of *The Morning Line*; the black lines make images and carry structure around an invisible set of rules.

Yet the issue of scalar invariance—that the universe is stable yet expanding—is also present in the project as a working model; we have made about nine different scales of *The Morning Line* structure, each one tying into the next. So, we can say with confidence that the system can work at both the very, very large and very, very small scale. Our models make those inner workings visible, and we can test them and make predictions, so *The Morning Line* operates somewhere between model and representation.

**MATTHEW RITCHIE:** I think it is very important to draw a strong distinction between speculation and experiment. All experiments begin with a hypothesis, which you could call speculation. But science has the ability to take hundreds of speculations that collapse back into a central, empirically observed consensus that can be repeated—that's the nature of experiments. So the idea that you are constructing experiments that have to then be tested—which is where, in our project, things kind of move from art into architecture—is where you say, if you are going to make something, you have to make it real. And you ask whether you can make it real.

We proposed a hypothetical building that was all these different things: speculation, hypothesis, experiment, model, and representation at the same time, a kind of superposed state of multiple buildings. We then asked, “Can we collapse all of these into a single, more or less quantum state?” This is where my interest in *The Morning Line* really began because a lot of the questions that emerge from contemporary cosmology evolve from very simple observations about quantum mechanics that are not currently resolvable.

In quantum mechanics, you can look at two states of reality existing at the same time that, if allowed to proceed, will actually separate into two fixed, different futures. The future is that bifurcation. We asked whether we could build

something that somehow achieved that state physically. That's where it becomes a pretty interesting experiment, and where you investigate whether you can share it, to create a consensus reality. Can multiple people occupy that same space and share the multiple readings, or multiple information states at the same time? That's the purpose of taking the experiment outside the realm of drawing. The goal is to produce a space that is occupiable by multiple people, all experiencing multiple states of information isomorphism.

**MARK WASIUTA:** In other words, the experiment is also being performed on architecture, rather than merely through it. So *The Morning Line* is also testing the extent to which architecture can simultaneously manifest multiple conditions, states, and forms.

**BENJAMIN ARANDA:** Yes, and this happens in a very visceral way. The point of conceiving the piece as a “drawing,” as opposed to say, a sculpture, or a pavilion, for that matter, is to force this issue of multiple outcomes. When a drawing becomes three-dimensional, it fragments; it's impossible to see it as a whole, so this makes its manifest experience different each time for each visitor. Everyone takes away his or her own picture.

**CHRIS LASCH:** I'd add that for some time we've wanted to experiment with narrative in architecture through an examination of the relationship of geometry to expression. Geometry is the vehicle through which the forces that animate a project become visible. These forces are things like gravity, which have very real effects, but there are also other things, let's call them imaginary, whose effects are not so obvious.

**MATTHEW RITCHIE:** You have to accept information as a whole, the universe as a block, and everything in it is part of the block. Therefore everything in it is material—physical material—including information, which means narrative is physical material. So the expression of narrative is the expression of physical material, which means that it needs a geometry to express its motion through space and time, because everything moving through space and time is geometric. So there's really no distinction between something that we call an imaginary thing and a real thing, whether it is an invisible force like gravity or an equally invisible force like magic.

So, how do you bridge between real and imaginary? When cultures want buildings to tell stories, they want buildings to do something; they want buildings to do things to the people who go inside them. The story is merely a way of describing a technology that makes people do things, the way churches make people feel certain ways, although feelings are nothing more than biochemical pathways being imprinted on the brain by the context. So the information context—whether it's modernism or x or y—allows certain things to take place. This is where I think the collaboration came across a kind of congruence that was an unexpectedly great yield, where geometry and what we call expression turn out to be the same thing. It's just a matter of how far apart they are.

**MARK WASIUTA:** I'd like to pursue your suggestion that “drawing is information.” In *The Morning Line*, drawing and structure are mutually dependent yet derived from different scripting or writing processes. On the one hand, the project is candid about how these generate multiple readings, directions, possible organizations, or latent formations. On the other hand, these are sometimes more notational, in the sense that they refer to specific texts or models for which only a sort of ideal, informed, or perhaps even omniscient reader would be able to follow and map the

system of references and associations. In short, the project collects information, or draws information from various sources, while it simultaneously draws that information. Information is not only present in the project as fact or as data that is somehow tabled, identified, or inscribed but also appears in the cybernetic sense of signal, order, feedback, and perhaps interference. Can you expand on your understanding of “drawing as information”?

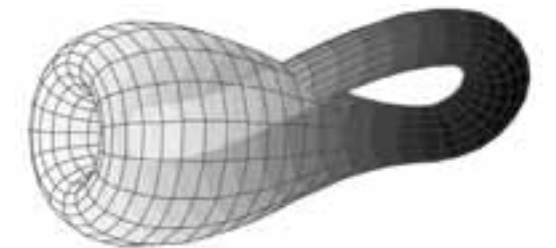
**CHRIS LASCH:** Indeed, a central challenge of the project was to conflate the form and the content of the piece to the greatest possible extent. It’s ultimately a tectonic or building issue. Traditionally, structure is separated from the facade or expressive parts of the building, and one supports the other. In *The Morning Line*, structure and expression are one and the same thing. The regulating crystal lattice, the defining structure of the piece, is abstracted to a simple set of geometrical rules that organize the drawings in such a way that the drawings themselves handle all of the movements of forces through the structure, movements of gravity and weight along with narrative movements.

**MARK WASIUTA:** Congruence then, or maybe condensation, might encapsulate the range of associations, states, and forms of information that enter the project. There is a degree of difficulty involved in *The Morning Line*; it makes you confront the issue of how to read all of its systems, the geometric propagation, the two cores that represent the “branes” of the cyclic model, and so on.

But maybe more appropriate to this sense of congruence is the convergence of geometry and drawing literally on the surface of the tetrahedral blocks. Given the various scripts, writing systems, modes of inscription, and forms of narration in the project, is there an important difference, then, between drawing and writing? Perhaps one of the ways to understand the project would be that it collects and encrypts information through drawing, a kind of idiolect, or code?



/  
Möbius strip



/  
Klein bottle

**MATTHEW RITCHIE:** I will throw out the word *semasiographic*. This is this great word I came across in Geoffrey Sampson’s writing, which is about the idea that there are drawing languages. There are very few of them, but mathematics is one of them, and music is another, and a few writing systems, though they are not necessarily semasiographic. There are even a few ways to write semasiographic letters to people. They are basically pictographic languages, and the beauty of a pictographic language is it has many of the qualities of the real world, as opposed to the linguistic world we were talking about, namely that things go backwards and forwards in time, objects have multiple referents, and ideas and concepts can be attached in multiple directions. Essentially a quantum state can be reached in semasiographic system. In a semasiographic system, everything is connected, so everything has to balance. It has to read both ways, like an equation.

**MARK WASIUTA:** Ben, Chris, is there a meaningful distinction between drawing and writing for you? Not only in terms of narrating the project but also in terms of how you conceive of the relationship between the scripting of the blocks and volumes, and the inscription on the surface of the truncated tetrahedron?

**CHRIS LASCH:** I think there's a strong correlation between the notion of the semasiographic, as I understand it, and the kind of modularity, the architectural modularity, in the project and that we've been trying to develop over the last years. The idea of being able to create a narrative that is not linear and not hierarchical but that can be read backwards and forwards and has multiple entry points, is kind of demountable and reconfigurable, the idea of having a structural system and so a kind of drawing system and a writing system or a kind of narrative system that share the same qualities, is super interesting to us.

**MARK WASIUTA:** To follow this a little further, what strikes me as one of the most compelling aspects of the project is how it almost seems obsessed with systems of writing, information, and description. Any drawing system, because it's iterable, repeatable, can be understood as a form of writing. But one of the constraints applied to that definition is that there be some moment of transmission, so there's a question of the legibility of the system. Could you say a bit more on the writing systems in the project? Do they overlap, combine, interfere? Or, how does *The Morning Line* open and expand or limit and contain legibility?

**MATTHEW RITCHIE:** The question of legibility is part of the experiment. How the project can do all these things and be a real object, and how is it read and interpreted from all these source materials? How can any object be guaranteed a legible meaning without contextual signifiers?

**BENJAMIN ARANDA:** One way to help answer the question of legibility in the project is to describe how *The Morning Line* works geometrically. It's a system of the utmost modularity. It's made from one block, and this block scales; it's a fractal structure. It scales, multiplies, and makes rings, which are structural in nature. So what that means in terms of transmission is that it propagates; it grows and it shrinks to infinitesimal sizes, which means that there are multiple entry points into the project. When you describe it as a narrative, there are as many ways in as there are ways out; there's no requisite entry or exit; there's no beginning and end. So the project sets a context for legibility, but it multiplies the possibilities for interpretation. And, for an understanding of building it, there are infinite ways to develop this aggregation of units.

The design of this piece was understood to be a cycle, a cycle of moments of scaling, because, in a dynamic cycle, you not only have many points in and many points out but, in a view of a larger organization, you also have loops. This way of looping through the project was important, not only in its presence as something that could be walked around, walked through, and experienced but also in the kinds of other universal models that it references, other universal loops, or cyclical universes.

**MARK WASIUTA:** The cyclical discussion refers to the models of universe formation you mentioned earlier. Yet I'm also thinking of cycling in terms of looping in, say, structural film or serial music, in which cycling might be understood as a structure that continually devolves while it advances. At stake would be whether cycling maintains structure or decomposes it. Read in this sense, cycling might suggest how ruin, entropy, and information are in such close relationship within the project. Does the project rely on these other understandings of cycling? I mean, cycling as related to questions of seriality and repetition?

**1****1 /**

E.A.T., Pepsi  
Pavilion  
Osaka, Expo 70

**2 /**

Baghdad Pavilion,  
Topkapi Palace,  
1638

**3 /**

Dan Graham, Two  
Adjacent Pavilions,  
1978–81

**4 /**

Cedric Price,  
Fun Palace  
(unrealized),  
1960–61

**CHRIS LASCH:** Perhaps a more helpful term is *recuperative*. This is where Neil Steinhardt and Paul Turok’s model is the same as what we’re proposing in *The Morning Line*. At the end of the universe, in their cyclic theory, it recuperates all of its parts into its next iteration. That was the premise that we took from their theory. Because it has scalar invariance, all the parts of the project can be recombined. That’s where the key of legibility comes back in, because if something is recuperative, it also becomes legible at multiple levels, and regardless of which point of the cycle it’s in. Because it’s a recuperative cycle, you can say that all the elements are going to be redrawn back together and mutually understood in relationship to one another at any point in the process. So, you can split the “universe” apart into lots of different things, and you can rebuild it. It doesn’t matter what you do, its fundamental relationships remain intact, unlike a conventional building. If you take a conventional building apart, it’s just a pile of stuff; it doesn’t automatically recuperate back into a form, so I think this approach to legibility was an important innovation in our thinking about *The Morning Line*.

**2****3****4**

**MARK WASIUTA:** You describe *The Morning Line* as an “anti-pavilion.” Is this because of its potential transformability? Or is it a recognition of the instability of the type itself, from the Barcelona Pavilion, to the Pepsi Pavilion at Osaka, to Dan Graham’s projects? Cedric Price once asked in relation to the Fun Palace whether it were possible to build an anti-building. In a sense, pavilions are already anti-buildings, if only through their temporality. As an anti-pavilion, then, is *The Morning Line* even more anti-building than a pavilion, exponentially more anti?

**MATTHEW RITCHIE:** At first in the sense that Chris described recuperativity, the pavilion can be disassembled and rebuilt into multiple forms, so it inherently has a radical mutability.

I always think of the pavilion outside the Topkapi Palace in Istanbul as the most perfect little building in the world. From inside, you look out on Istanbul and it's a viewpoint for looking at the universe. It provides for the possibility of being admired from afar, sort of gracefully perched in your ceremonial garb. Historically the pavilion derives from this idea of a ritualized, medieval enclosure.

*The Morning Line* opposes this idea in its structure, which is porous; there's no shelter from the elements whatsoever. So not only are you looking out at the world through it, but you are being looked at through it too.

And, second, as you said earlier, *The Morning Line* demands a kind of an effort, so you're working whenever you're in it. In fact, it doesn't really allow for a resting place, given its sort of fragmentary and incomplete nature, so there's nowhere to really be inside the pavilion; if it were a pavilion, there would be no pavilion to be in, only the disassembled parts of one, which implies that you have to do more work.

At the same time the music is moving you around the space. The music is spatialized, so there's not even a sonic resting place inside it. Then there are the films we included, which display the narrative of the project itself, conceived from the beginning of time to the end of time. So you become very aware of all these forces, and your moment of repose is utterly demolished by the narrative of the narrative.

**BENJAMIN ARANDA:** In some ways the role of the typical pavilion is to create the desire for further architecture, whereas in this case, it's... (interruption)

**CHRIS LASCH:** To end, to end architecture! (Laughter)

**BENJAMIN ARANDA:** Well, okay, we're looking for a further disintegration of the system that we're involved with.

**MARK WASIUTA:** And so there is a disintegration not only of the form and structure but of the current status of the pavilion in art and architectural discourse as well? Another way of approaching this question would be in regard to the proliferation and marketing of pavilions within the art market, and how architecture collaborates in that economy. An anti-pavilion would be both a non-pavilion and somehow against pavilions.

**MATTHEW RITCHIE:** If we were to propose this as the perfect pavilion, the source of all knowledge, it would be a ridiculous object. It would be totally absurd. So *The Morning Line* can only be an "anti-pavilion" in a way. The project takes in all this information, it codifies it into all these systems, and then it falls apart. It has to fall apart. But we allow ourselves the saving grace of saying, "Well, it's just a pile of stuff. If you don't like the experiment, you can have a go."

I see its ultimate form as just a big pile of stuff strewn across, preferably, a red desert—just all the tetras dismantled, and that would be as legitimate an instantiation of the project as its being assembled in its various cyclic or noncyclable forms. So that's where it can really be an anti-pavilion. You can say, "Well, yes, actually one of its forms is completely entropic." But it doesn't kill the piece to do even that, because then you can always pick up all the tetras and put them back together again. Even complete dissolution can't be some kind of romantic, final resting place.

**CHRIS LASCH:** It's also an anti-pavilion in its attitude toward the future. The role of the pavilion in architecture has always been to be very optimistic about technological progress and the kind of future for mankind it can provide. But this one, significantly called *The Morning Line*, makes no bones about coming to the realization that the future is a wager at best.

**MARK WASIUTA:** Does the gamble enter the project in some ways other than as a metaphor for chance or as a wager toward the future?

**MATTHEW RITCHIE:** Well, in my work, I use gambling all the time as a constant source of deep pleasure because gambling embodies—it's a fix! Although in most of its states, it's a completely fixed state of chance—the house always wins!

But that doesn't invalidate the individual bet, ever. The bet is a beautiful moment of chance—are you going to win or lose? You can still win until you're a loser. That's the analogy with life, and that's also why, like Chris said, it's not an optimistic premise. The idea of a pavilion is counterposed with the folly or the ruin. The ruin is always put in the distant past, and the pavilion is always supposed to arrive from the future. *The Morning Line* has deliberately swapped both of those roles: the ruin is arriving from the future, and here it is! It's already passing you this way. So it inverts the traditional model of time, which is much more familiar to the inveterate gambler, where your ruin awaits in the future. It's almost a kind of catharsis. Every gambler is going to lose more than he wins, because you can't win all the time. (Laughter) So in the long run, your ruin arrives. You're playing with the certain knowledge of your ruin, maybe not how or when, but all the same, you know you're awaiting a ruin, which makes all the victories more and more beautiful.

**MARK WASIUTA:** So is the loss in gambling different from loss within the project?

**MATTHEW RITCHIE:** I don't think so. I think it's the same. We're in a culture in which we think we know what we're doing. We're playing the game, and we're losing, and still we keep playing. We keep coming back and doubling up every time. So we will call it quits when everybody has a plasma TV. We'll call it quits when everybody's got six cars or when there are space stations on the moon—that's when we'll start behaving ourselves. All typical versions of the future imply that everybody has all the money they want and everything they want. They don't imply people living out of

paper bags. That's not deemed a win. Although, of course, all versions of the future—except *Star Trek*—depict the world as a total ruin because that's the only obvious outcome if you extrapolate patterns of use and expenditure. There's only the kind of pure fantasy where everyone has lots of money, or pure catastrophe because those are what the gambler's choices come down to. Do I win the pot and walk away? The gambler never walks away. He's always back the next night.

**MARK WASIUTA:** In this gambling mode, *The Morning Line* evokes rampant inequalities and shifts of power. But the loss that you're talking about here is also at a colossal scale. By this I mean the ecological, economic loss that you mention as the telos of current cultural, political gambling patterns, a form of total loss. But this may also refer to loss at the scale of information: the entropic loss of determinable referentiality or determinable interpretation. This might be understood as an inevitable outcome of the gamble of the project. The more tables the project plays on, as it were, the more it plays with disaster, and the greater the chance of losing. At the same time the recuperation you mention would necessarily defy that loss. Recuperation would insist on the anti-entropic, or on an organic organization that would find itself asserted not only at every scale but also within every formation or state. So here the project seems somewhat—and intriguingly—ambivalent about where loss will occur and at what scale, as well as in terms of whether loss has a place.

**BENJAMIN ARANDA:** What we need to say up front is that we believe in architecture as a crystallographic embodiment; that it's modular, assembleable, and that it's predictable in nature. You harness a lot of power by approaching architecture this way, which is different from, say, the more dynamical models, or more fluvial models that might describe other contemporary practices. Ours is about a solid-state approach in which we can harness things like modularity and scaling and structure at the level of the unit. So, in response to this issue of loss, for us it's how we dismantle things, disintegrate them, and allow for more open interpretations of the orders present in the project. So what we introduced into *The Morning Line* project, early on, is that it's an aggregation of units, and as they form this “recuperative loop” that Chris mentioned, they also form other formations or orders, seemingly disordered.



**CHRIS LASCH:** We consider the act of design, when you're working in a crystallographic medium, as a loss of potential, in that the move from something universal to something specific necessitates a kind of loss on some level. But in this project, since it's global and reconfigurable and modular, that kind of universal potential is kept alive throughout the project. Each specific instantiation of *The Morning Line* will carry its universal nature alive inside of it.

**MARK WASIUTA:** Let's end with the range of the project, what could be conceived of as its grandness, or grandiosity then.

I have in mind the Buckminster Fuller exhibition uptown and what might be seen as Fuller's slightly absurd expansiveness. One way in which Fuller appears a bit alien is through the idea that, as a "design scientist," he operates on a global and universal scale. Yours is not exactly a Fuller project, but the vast scope of projects typical of Fuller and of his moment in history is nonetheless evident in *The Morning Line*. Is your aim to dismantle the rhetoric of these claims, or to appropriate them, emphatically, optimistically? Or, to use a term you mention earlier, what of these earlier practices—forms of working and their own collaborations with or uses of science—is recuperated in your project?

**BENJAMIN ARANDA:** I don't think we have Fuller's world-changing ambitions. But if there is a conversation of universality, it's because the project is about the universe, or universes but not in a way that's overly pedagogical or didactic. Rather, maybe like Fuller, the project is explicit about the role of certain things, like order, geometry, drawing, structure, and the role of each of these is important to understanding the project.

I think we found an alignment with Matthew early in the project. Matthew is not afraid to bring multiple kinds of information into a project, so *grandiosity* maybe refers to a kind of umbrella that *The Morning Line* opens up. For us, architecture is always a moment in which the universe is continually building itself in some way. The project attempts to be explicit about how it does that.

**CHRIS LASCH:** Working with Matthew has been really exciting and mind opening, to have a project that brings in all of these different layers of information, sources of inspiration, and disciplinary collaborations. On that scale, the ambitions of the project are great. Yet, what tempers the largest claims of the project is the fundamental and profound provisionality of the work. Whatever its scale or scope, the project is first conceived of as a ruin, as an architectural ruin, a ruin of civilization, as an acknowledgment of the inevitable ruin, or ends, of knowledge.

**MATTHEW RITCHIE:** The word *grandiosity* has become a slightly cynical substitute for *grand*, for grandeur itself. The grand ideas of the Enlightenment came from a bunch of guys in knickerbockers sitting around in a coffeehouse, saying, "Wouldn't it be great if we had a universal bill of rights, and a universal understanding of nature, and so on," and they would go back to their little room and make something. And they'd come back to the coffeehouse next week and say, "Look, I made a universal bill of rights. What did you make?" And someone might say, "Well, I discovered electricity." Or, "I built a microscope."



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Buckminster Fuller,  
Three Frequency  
Geodesic Sphere, n.d.

As Chris said, that spirit of universalism was not a question of claiming that we know what the universe is made of. It's saying we're entitled as individuals, always, to ask questions about how it's made and how we understand it. It is, in fact, the most humble question you can ask, saying, that is, you want to question the nature of the universe, rather than to dictate the answers to an audience.

Paul Steinhardt, whose work has influenced this project on several levels, is taking a colossal gamble with his ekpyrotic theory. If one piece of evidence comes back to deny his theory, then the whole theory is just shot—ten years of work down the drain. But he's totally comfortable with that because that's how science works; you advance a premise, but it's not a universal premise, it's a hypothesis.

I don't think there's anything grandiose about that. There might be a kind of grandeur in it. When you do that, you more or less create a kind of template to say, "Well, now maybe we can just look a little bit to the left, isomorphically speaking, to the information landscape that we're already in. That's the moment you see the construction of knowledge itself. That's where things seem interesting and new because the construction of meaning is, as Kenneth Baker said, what makes the world a place at all.



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Buckminster Fuller,  
US Pavilion,  
Montreal, Expo 67