

## **Making-of “Brodmann-Area 19”**

### **for the Biennale Chengdu 2026 by Martin Maria Blum**

In the spring of 2025, Professor Rendel asked me if I would like to participate in the Chengdu Art Biennale 2026 with a video installation. He had been commissioned to curate the new design section, which was to occupy three large halls in the Chengdu Tianfu Art Museum. Professor Rendel had assigned a colour and a theme to each of his halls. Visitors would enter through the section entrance into the (almost completely) black hall of contemplation, where my video installation would play a major role. This would be followed by the white hall of creation, and the green hall of inspiration would form the conclusion.

Professor Rendel had recruited Arik Levy from Israel as lead designer, who would create a purist set for the black hall consisting of an artificial black meteorite, my video installation and a few loungers.

Another approach taken by Professor Rendel was to appeal not only to the senses of sight and hearing, but also to the sense of smell. To this end, he wanted to commission French fragrance designer Georges Maubert to extract a perfume from the overall effect of the black hall.

For the opening of the design section, Professor Rendel had his own music in mind and wanted to ask the American composer James Reynolds to create a work especially for the Biennale and perform it there.

My briefing for the video installation was simply:

‘Koyaanisqatsi 2.0’ – and Professor Rendel had already agreed this with his Chinese clients.

‘Koyaanisqatsi’ is the title of a film that was released in cinemas in 1983 and used impressive time-lapse photography to explore nature, the environment and what humans have done to it – both positive and negative.

The title ‘Koyaanisqatsi’ is a word from the language of the Hopi Indians, is only passed on orally and means something like: life out of balance.

What makes the film so powerful, apart from the sensational footage, is the music composed by Philip Glass.

As I found the task very appealing, was keen to work with Professor Rendel and had been intensively involved with time-lapse photography over the last decade, I accepted and considered how I could interpret ‘2.0’ visually. To this end, I asked myself what the biggest difference between 1983 and 2026 would be. And it occurred to me that 1983 was the last ‘analogue’ year before the start of the digital revolution.

## **1983 KOYAANISQATSI IS RELEASED IN CINEMAS**

- 1984 First email sent in Germany
- 1989 Tim Berners-Lee develops the World Wide Web
- 1991 First website goes online
- 1996 BackRub (renamed Google Search in 1997)
- 1997 Deep Blue defeats Kasparov
- 2000 Amazon Marketplace
- 2004 Facebook
- 2005 YouTube
- 2007 Steve Jobs presents the first iPhone
- 2011 IBM Watson wins "Jeopardy"
- 2015 Alexa is launched in the USA
- 2016 AlphaGo defeats Go master Lee Sedol
- 2018 Chat GPT-1
- 2019 TikTok reaches 1 billion downloads
- 2020 First residential building printed in Germany
- 2025 Deep Seek (Chat-GPT competitor from China)

If Koyaanisqatsi marked the beginning of this development in 1983, algorithms would best characterise the world and emotional landscape of 2025. So Koyaanisqatsi 2.0 could mean: Time-lapse photography seen through the “eyes” of algorithms.

It is important to know that algorithms can ‘recognise’ three things in live images or archive footage, namely movements, shapes and colours. And it was more by chance that I was looking into the processes in the brain that enable us humans to dream at the same time. Brodmann area 19 is of particular interest here. It is named after Korbinian Brodmann, a German neuroanatomist and psychiatrist who lived from 1868 to 1918 and published his findings on the cellular architecture of the cerebral cortex in 1909. He divided it into 52 fields according to histological criteria, which are now named after him as Brodmann areas.

Although Brodmann already recognised the functional significance of the divisions to some extent, it was only later that the importance of most areas for brain function became clear.

Brodmann area 19 plays a key role in the processing and construction of visual images, including the shapes, colours and movements we experience in dreams.

Even when there is no external visual input during sleep, this visual association area can generate rich internal images and reconstruct visual elements from memory. This even contributes to the realistic feeling of dreams – even if they are entirely imagined or impossible scenarios.

‘Processing and constructing visual images, including shapes, colours and movements’ – a wonderful parallel to the algorithms and a nice-sounding title for (my) installation:

## **“BRODMANN-AREA 19”**

I presented this stage of my thinking to Professor Rendel, and he was immediately very taken with it. But that was still not enough for me, and once again chance came to my aid in the form of a popular science discussion about the popular theory that algorithms could one day surpass their creators in knowledge and intelligence and dominate, or even exterminate, humans. And then it occurred to me that our brains enable us to do something that goes beyond stored, learned and trained knowledge, beyond logic and intelligence. Namely, the ability to dream. Perhaps this is an ability that algorithms will envy us for at some point. And perhaps it is the ability that will ensure our survival?

I found it all a bit bizarre, but also poetic. And I liked the fact that with Brodmann Area 19, I was on a scientific level. Because alongside music and mathematics, science is the third language spoken around the globe and thus also between Chinese and Germans.

However, this presupposed that my greatly abbreviated summary of Brodmann Area 19 and dreams was still accurate enough to stand up to scrutiny by scientists.

So I asked Professor Rendel for the support of a renowned neuroscientist. He arranged a video conference with Brandon Stell, the founder of PubPeer, a platform for post-publication peer review that promotes transparency and accountability in scientific research. Brandon is also co-team leader at the Brain Physiology Lab in Paris, where he focuses on brain function and neural mechanisms, particularly in sensory processing and perception.

The meeting with Brandon was extremely interesting. He is an extremely competent and at the same time very nice person who was very taken with my concept. I was very grateful to him for raising it to the required level with a few rewordings and additions.

In the next step, I focused on the visuality of Brodmann area 19. Colours and shapes were not difficult to visualise, but visualising the movement aspect was a challenge. I had something like tracked filigree lines in mind and made some Photoshop sketches, which I presented to Spanish multimedia artist Paco Croket. His assessment was that he could achieve the desired aesthetic with the Touchdesigner tool. But it was clear to both of us that it would take a lot of development work to achieve the right balance between visuality and plausibility. Because there was no template for what I wanted: tracking time-lapse photography, i.e. recordings in which movements and temporal sequences are very fast or erratic because, for technical reasons, a large number of intermediate images are simply missing. At first, the algorithms in Touchdesigner couldn't cope with this at all, and it took a great deal of commitment and many corrections by Paco before he was able to adapt my visual specifications precisely to the time-lapse sequences.

At the end of November 2025, Professor Rendel asked me to send him the current status so that he could show it to his clients. But images only account for half the impact of a video. For the announced shoulder glance, I therefore added a music track by Canadian cellist Raphael Weinroth-Browne to the visual layer, whose instrument blended perfectly with the animated lines and time-lapse impressions – as if Weinroth-Browne had my video in mind when composing. That's why I had high hopes that Weinroth-Browne would approve its use for the Biennale. And Professor Rendel succeeded in this as well.

I am very happy with my video installation and at the same time a little melancholic. Because I know that in the future, hardly anyone will take time-lapse photographs the way I did in the past: namely, in real time. A 15-second shot could take between 30 and 60 minutes on location, turning the production into something of a meditation, as it was essential to avoid touching, interrupting or restarting the recording equipment during filming. Time-lapse photography was the only job where no one could tell you to work faster or take more shots per day. After all, you couldn't tell a sunset to hurry up. And I actually always enjoyed these moments of waiting in the face of the changing motif.

Something that will be lost with the new AI programmes. Because in future, all you will need is a photo of your subject and the right prompt. This opens up great creative opportunities. Unless, of course, you are consciously seeking to slow down, to meditate in the face of nature, the environment and time.

THANKS TO

**Curator** Professor Martin Rendel  
**Scientific Advisor** Brandon Stell  
**Touchdesigner** Paco Muro  
**Musician** Raphael Weinroth-Browne  
**Lead Designer Black** Arik Levy

Link to the video: <https://mind.work/2026/02/08/brodmann-area-19/>



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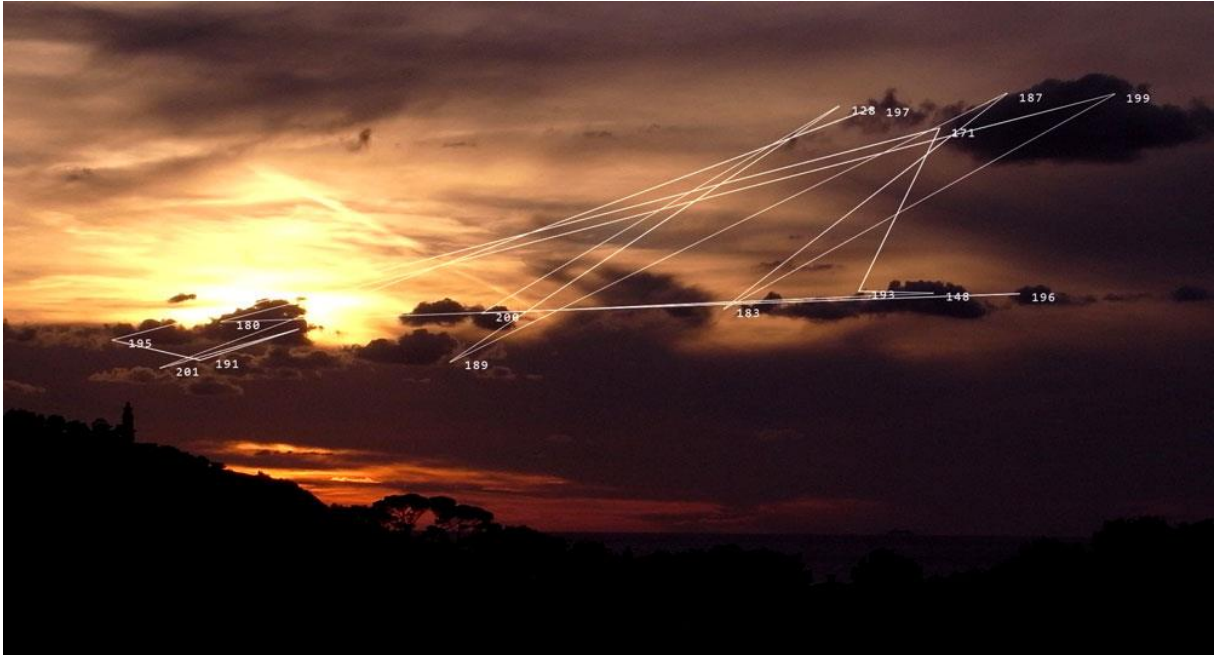
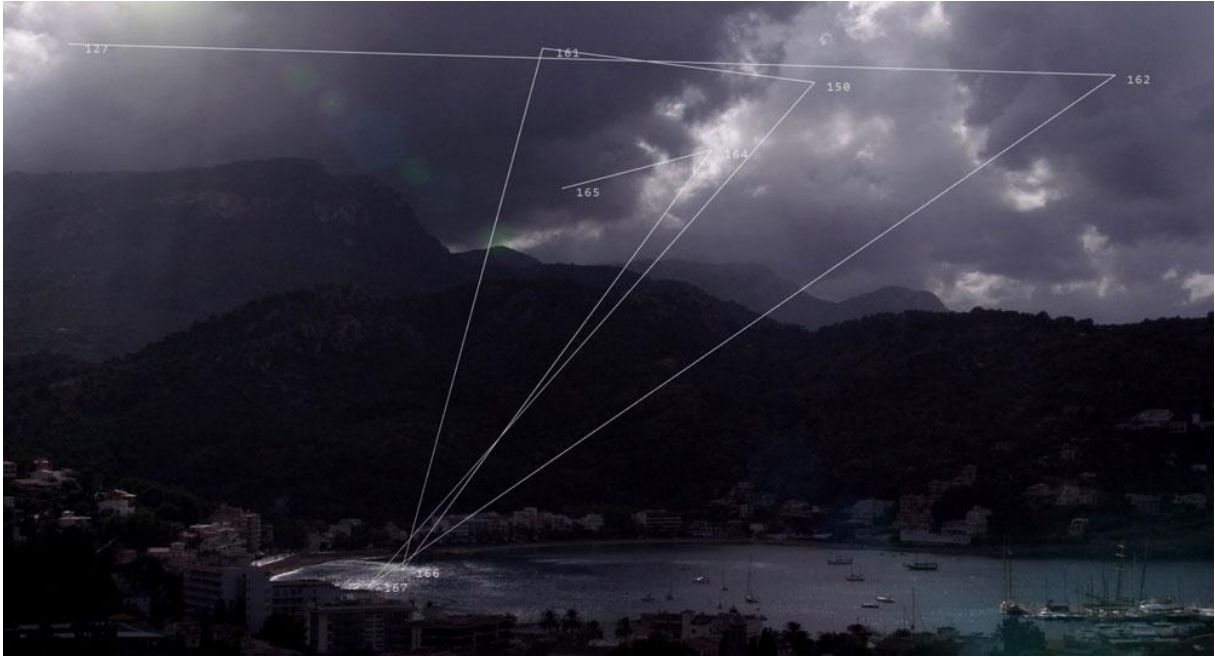
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19.3.1936 - 5.8.2025