



We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).



**WI:** Welcome. The occasion for this panel or roundtable discussion was actually

We need your consent before you can continue on our website. [Development with artificial](#)

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission. [One hand, the](#)

[The communication was very professional or incompetently and on the](#)



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data [who are very well](#) in our [about it.](#) privacy policy. You can revoke or adjust your selection at any time under [I'm looking](#) Settings.

I will briefly introduce the participants:

[Chair of Art, Design, and Visual Culture at the Department of Design at Dortmund University of Applied](#)

[Sciences and Arts, PhD Dean and Art Critic. Last year, if you know the magazine](#)

[Kunstforum](#), she published a volume on the subject „Can AI make art?“. So it's

just our topic.

Over here, Professor Doctor Tilman Baumgärtel. Author, media scientist, curator and journalist. Professor of Media Theory at the University of Applied Sciences in Mainz in the Department of Design, specialising in Media Design. One of the aspects for which he became very well known in the art scene were two books on net art already in 1999 and 2001.

And in the middle, Harm van den Dorpel. An artist with international reputation who has been shown in various exhibitions in museums and galleries, has also been very involved in the context of NFTs and has been dealing with the topic of AI for several years.

The first question would be to Pamela on my left, which is the view, or *your* view on AI. What would you describe as AI? How would you define it?

**PS:** That's a very general, very broad question and you can answer it quickly. It depends on how you ask. If you ask computer scientists or someone who has really developed or programmed AI they would say: „That's an algorithm and it's about problem solving.“ So finding a solution and a creative solution to a problem. In the arts it's of course different and I would say we talk about art tonight, or what AI is doing to art.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

what I tried to show in *Kunstforum International* in the volume that deliberately

also asking:

How does AI influence art? What does it do to art?

Perhaps as a first statement in the round, I would say that AI is a very intelligent new instrument. A new technology in the long history and development in

which we've always used tools to make art. It has become more intelligent, it

has a certain autonomy and with this autonomy it also becomes a co-producer or co-creative partner and co-player.

So I would say in short, AI enables a co-creativity in a wide network where we are human actors, artists. We humans who use the tool, the algorithm, but in a network. We produce something but it still needs the will. It needs the motivation of a human actor who wants to achieve something with it. So co-creativity, co-production, I would say, is the issue with AI. In a network.

**WL:** Yes, I can understand that. Tilman, how do you see it?

**TB:** Let me remind you that we had prepared small formulated statements. I don't know whether this is the opportunity to get rid of them or if we're going to wait, because I think you shortened up.

**PS:** I have shortened it a lot, I would say AI enables.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

[Redacted text block]

[Redacted text block]

[Redacted text block]

**TB:** Well, let's try to summarise it briefly, it's already been put on paper here and I would say there is no artificial intelligence at all.

The term was coined in 1956 by the American mathematician [John McCarthy](#).

when he applied for funding for an academic conference and was looking for a cool buzz word to make this academic conference interesting. That was the famous conference at Dartmouth College in the USA, and that was a workshop that actually got all the money over the whole semester break in the summer, eight weeks long. And there were, for example, Marvin Minsky or Nathaniel Rochester or Claude Shannon. And it was through these people that the term came into circulation because Minsky, for example, played an important role in the AI for the following few decades. In quotation marks „AI research“, and used this term again and again where one could just as well have said Automata theory. That was a different title than the one McCarthy had in mind, or by the way, wanted to describe: Stochastic Process steering.

By the way, the term *machine learning* is equally a buzz word coined by IBM in 1959 for marketing purposes and yes, actually not really applicable. Back in the 1950s computers were not very intelligent in the sense of being independent or creative and are still not intelligent today. But what they can be or what they can produce, are new and ever more sophisticated methods. The computer, what we can do with it, is to use it as an instrument in creative work and entrust it with

some tasks.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

about the autonomous program. That was also a certain learning curve that had been introduced. I think about the program as a collaborator.” Something like

what Pamela just said. That also applies to artists today and I am therefore curious to know what we will hear about the subject from the artists or maybe

from the artists who are present here.

## Harold Cohen, für Arnolfini Gallery Bristol, 1983

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

worked overnight, so he looked at the results, said: „We'll take that, we won't take that," and those were the results from the previous night, and then he left again.

had no input whatsoever. So he didn't use any material from the internet, he didn't have any data sets or images from the internet, which is something

completely normal these days. This is also used in large quantities by artists, and it is a question of conceptually understanding where a structure or an interesting painting or drawing is created and how this is possible.

This system, which taught itself, developed itself, was absolutely revolutionary at the time. To my knowledge, the first who worked in this way as an early precursor was Cohen. Because the earlier pioneers worked with two-dimensional geometric shapes, that is, much simpler systems.

And now to you, Harm. How do you work with AI? How would you define AI? How important is it to you in your work?

**HvdD:** Yes, I like how you said that. There's no AI at all, I happen to agree. It's more of a complex, non-linear reproductive system. But it's cool too. It is great too and you can get involved in a lot and I've been making generative art for a long time and arbitrariness is often used because random values are used randomly again and again.

I thought to myself how could I, because with humans in biology it isn't like that, when you talk about evolution it's not random. There is a direction that develops

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

algorithms for a very long time.

No, there is nothing. It's totally stupid, but it's ok. It's technology from the world

when it would become intelligent, but it never came. It's ok. It was very practical

there.

I recently did a generative project with about fifty parameters and I wanted to generate a thousand of them and I couldn't do all by hand so that all thousand would be interesting, but also different. So I created twenty or thirty good works, saved them, and also saved around thirty bad works and told the neural network: „I think these are good, I don't find these good and I find these average.“. After that, the neural network generated a thousand actually very acceptable works. Was that intelligent? Maybe I was a bit intelligent. I'm proud that it worked. But there's no conscience in the neural network, there's nothing there.

**WL:** Exactly, but you said you chose which ones you liked and which ones you didn't like. That's a very interesting aspect. As far as I know, an AI system cannot do that. There is, we can talk about it in a moment, there is this concept of GAN, where systems are in communication but... Which were the criteria for you?

**HvdD:** For example, I once did a project where I didn't want to decide for myself what was good. So I thought about it, also in painting, what is a good picture?

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

train it. That's really a lot of fun, to realise how fast they notice what you want.

**TB:** Yes, I was just about to ask, what's totally interesting about Harold Cohen...

style, his own handwriting. He was also relatively successful and he started to work with computers and somehow he managed to teach the computer his style. So these pictures that this software Aaron painted at some point looked

like what he had painted before. And that was at a time when computers were still electronic brains, some of which took up entire rooms.

You have also made physical objects, I don't think painted, but which kind of had a visual style. What are the common points? Have you managed to transfer your visual style?

**HvdD:** Yes, I find that very important, because as you say, this artist developed an AI himself. He programmed and worked on it for years and refined it and also trained there and again and gave it more input, also expanding the software in itself. For me as an artist it is an artistic process to develop software oneself. That's where I make a lot of micro-decisions which I'm not always aware of and with that I somehow build a certain aesthetic.

What I actually find so uninteresting about things like DALL-E and Midjourney is that you give them a prompt, and it's totally funny. We've got millions of pictures of pandas, we've got millions of pictures of skateboards, now we've got a panda on a skateboard, yay! It's fine that people work with it, but they will only get a reproduction of something that already exists. There are no artistic interventions in the programming of these systems themselves. If someone took my concept

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

in mashup, in sampling or hip-hop itself as a culture. And to that extent it is also an emancipation. Today anyone can sample, even make a mashup, thanks to these intelligent tools. Of course we don't know what's behind, running in the sense of a rip-off.

Today as a layman, anyone can use Midjourney if they have an account. That's

another question, the license, to have access to experiment, play, prompt... Sometimes there is a community that also cobbles together the prompts so you can also buy them. Because it's quite an art to find the right one for this algorithm to get really interesting pictures. Exactly as you say, it doesn't go any deeper into the matter or into the technology. But they're an application and for me they are actually mashup mixers which are incredibly fun and enjoyable. Another interesting question is, of course, whether the artist also needs coding knowledge. Because AI will of course be a more intelligent instrument and perhaps also a muse for the artist. But you have to have a certain level of expertise on the code level in order to be able to tune the instrument so finely for what you actually want to achieve later as an output.

Computer scientists always say: „Shitty input, shitty output.“. Whereas now with prompting we simply have our short texts and then we look forward to pictures which we then share on social media. By the way, that is new. The picture production is also published at the moment, instantly. And that actually serves to launch the images as a meme immediately on the internet.

That's a completely different story than when it's an artist's job. I'm completely

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

PS: „Dear painter, paint something similar to me.“

WL: Something like that.

TB: Now I would like to say something briefly in this comparison with mashups

constructivism. And back then, you just worked with found material and there

was a lot of material that actually had nothing to do with each other and was brought in contact and in dialogue.

That's exactly what we're seeing with these prompts now. People try the most blatant combinations somehow, because they see what the programme does. They enter „panda“ or something and for me that is warmed-up surrealism. That was the definition of André Breton: „Surrealism is the meeting of the umbrella and the sewing machine“, I think, „on the dissecting table.“.

And that is now, so to speak, somehow achievable for everyone without much effort. But I personally find that very uninteresting and there are a few artists who somehow draw attention to themselves with it for a short time. So I don't think that has an enduring power.

And before we go to these coding issues, we should perhaps point out again that this is all based on a big act of copyright infringement. People went on the internet with big hoovers and appropriated everything that could be stolen from images. And yes, if you work with something like that, you only get very hackneyed images as a result.

I don't know if you know what pulp is. When you make new paper out of waste

paper. You first have to shred the paper and mix it with water, and then it comes

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

Then the next thing you have to think about is that the images are shared, which also means of course, that the big hoover sorts these images in again in the next

round. Something like that is a kind of artistic inbreeding, or visual inbreeding.

Where certain motifs are thus reinforced more and more by the fact that these

hackneyed images are locked up in an endless feedback of more and more

born, hackneyed and devaluated images.

**WL:** Mhm well, I actually wanted to make these different positions quite clear again. Also what we've described here, Harm. If I have understood you correctly, you've gone a completely different way and there are artists who do not use any input material in the way we consider it in this day and age i.e. data from the internet, but produce this data themselves. Taking photos themselves or gathering information, which then flows into the systems and so on. That is another level compared to what you have just described.

And the other aspect we haven't discussed yet is that Harold Cohen developed all his programmes himself. When you work with the so-called AI, in the majority of cases, it is no longer programmed by the artists themselves. They use open source systems, which in the best case, and I can see what you have described, they can simply be adapted through their knowledge and their ability to such an extent that an individual message is really created. Because what you're describing is, of course, what I see every day and what artists send me every day and describe what great things they've done. And I look at it and think, ok, that's it. It's really all very similar and it doesn't replace the vision that an artist must have.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

autonomously, I think that's when the mystification and mythologization comes

in. We observe something that autonomously produces something that looks like an artefact and perhaps looks like abstract art. That's what I actually found

some say that's an autonomous painting machine, and others say, we might

argue here, AI is actually just an agent in a larger network. [Peter Weibel](#) also

said that AI does not exist, but that it's an emerging phenomenon. An algorithm

that needs the energy of the earth, I need hardware, software, I need an artist who wants to do something with it. And then something emerges in this network with this algorithm as an intelligent programme or tool which we define as projection, as artificial intelligence. Something emergent does take place there and, for example, we want to project something into it.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

I always had the impression with Harold Cohen when we look at his work, and something emerges on the floor or where you see his robots. You see him standing next to it and he observes his own handwriting. His personal style is continued beyond his own

death. That's also fascinating, we can perhaps perpetuate ourselves with AI if the program runs forever.

One point about mystification which I found exciting about Harm is... I took another look at his work, which is online on the [ZKM website](#). The parallelism you mentioned with code and cellular automata, in other words, with biology. When artists work and perhaps want to create life-like or variable works of art which develop perhaps quasi-autonomously further. Also with the self-learning principle.

We have something that we can observe, like an evolutionary principle. And there have been parallels in digital art with biology since the 90s, i.e. with the discovery of the genetic code, with decoding, and we can say that we are also biological automata. Artists too are then natural intelligence, biological intelligences that produce something. But if you try to work with this code, perhaps you can add an evolutionary development to this parallelism of the genetic code, which I see in your pictures, Harm, when one calls them up.

On the website, you have a garden and the abstract pictures develop in such an evolutionary way. Sometimes you're quite surprised with the results. But then

again it's also my own socialisation, which is sensitive to beautiful pictures. I am

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

HvdD: [Mutant Garden](#)

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

PS: HvdD: Oh, yes! Exactly. Would you perhaps like to add to this parallelism?

As an artist, you have written the programme yourself, the evolutionary development of the digital code, and the evolution of the digital code is relatively

exciting. Because it also has a reflection theme in it, where you think about life, the meaning of existence, of evolution. How do forms develop through the

parallelism of the genetic code with this digital code.

**HvdD:** Yes, you've already said a lot, that's very good.

**PS:** I am known for suggestive questions, but nevertheless perhaps the audience is also very curious afterwards and is interested. Because everyone who opens the website gets their own series of pictures. Like you, I can then choose which ones I send to the garden and then let them reproduce on their own. So I find that super exciting. We talk about AI art, this parallelism, which the artist opens up, and then we have a new view of our biology, of human creativity, of life itself, such a reflection. And that is of course much, much more impressive than the broad masses, whom of course also prompt.

But I don't want to underestimate that all. I know a lot of people who spend a long time on these texts, so a digital ekphrasis is developing there. In the past we had it the other way round, when we sat in front of pictures. We art critics, art scientists, we stood there and tried to put these pictures back into words and now we experience just the opposite. People have to find words for their pictures in their imaginations and the algorithm or the AI model then helps them make them visible. A reversal today is digital ekphrasis.

**WL:** But these people, I assume, do not generally have a specific image in mind of what they want to create.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

This brings us to the question, do I actually have to be able to code as a digital

artist today? My students always ask me: do I actually have to programme

today? Is that a skill? Am I illiterate if I can't programme today? That is the

question, that it's an educational mandate, then we're evolving, aren't we?

Photographer Eldagsen and his work »Pseudomnesia: The Electrician« Photo:  
Alex Schwander; Boris Eldagsen / dpa

WL: Tilman, what do you think about that? Do we need them? The abilities?

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

exactly what's behind.

This is a question that goes beyond artificial artistic themes, but that was actually what I found interesting and important about net art. Also as an

company, it's much easier of course, track the black box and make it transparent. And either manipulate it oneself or somehow show the audience, the viewer, how certain programmes

work or at least from what mindset they were created.

But that's an incredibly complex task, Harm said it's easy to create such programmes yourself, but I personally haven't yet got into this, it hasn't really opened up to me. So I'm a bit interested to hear that from you, as you said you studied it, didn't you? Also with the ulterior motive of making art with it.

**HvdD:** Yes, I studied AI at the Vrije Universiteit of Amsterdam, but they weren't very interested in my paintings. Then I went to the art academy, and they weren't interested in my algorithms at all. This has changed a bit.

**PS:** Because new platforms have probably emerged, so maybe we need to think about where this AI art actually takes place. On the one hand, if we now, for example, have artists who work with and about AI, then they are all in residencies, research institutes, ZKM, maybe also DAM. So this is all located in this non-wide art market. The art market is interested in NFTs, which we don't want to talk about. But there is also a lot of AI art on the blockchain sold at very interesting prices. We have just experienced at Art Basel that there is great

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

screen.

**WL:** Everything is mostly presented on screen.

**PS:** Most of us don't have under our radars that there's a web community, maybe similar to the art world, but online, with artists who are further

development. The market is a different story.

**WL:** Yes, that's a different story.

**TB:** We're in an art gallery, why shouldn't we talk about this?

(laughter)

**WL:** Before we give the audience the opportunity to ask questions on the subject, I would like to put up for discussion a project which I just discussed with an artist a few days ago. I came back from two conferences about this topic. The artist is Mario Klingemann, relatively known in the field. He's been working in the field for a very long time, already very early on with concepts such as what is considered AI, machine learning.

**PS:** He is also a computer scientist.

**WL:** Yes, exactly. He knows a lot about programming. He developed his own machine learning programme back in 2006 and now of course also works with advanced systems and has created an interesting project. A project called Botto.

Do you know Botto?

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

**WL:** When a community decides what the best is?

**PS:** It is participatory art. But I think it's the concept and only one person can do it. It gets boring.

He was the first to do it and he also did it consciously as an installation which you can observe. Long-term observation, participation with the audience. So you have to look at the concessions to art made by a new generation of young

people socialised with social media as art observers. And I would say I find the project very exciting, but who's pioneer? Who was the first to do it?

For me, it's a conceptual approach and a slightly ironic one. Because when you talk to Mario Klingemann sometimes, you really notice that he's a computer scientist and he's testing out a little bit how things can go. And just to test them and see whether we accept them as art. It's also a very interesting question, when something shifts in our definition of art. So I see it more as a very exciting long-term project of his. And of course, if you earn well, why not?

**WL:** He earns next to nothing from it.

**PS:** He's not here, we can't answer that now.

**WL:** Yes, I did talk to him about it for a long time yesterday.

**PS:** By the way, on the invitation you sent out, it's the image in black and white.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

Mario Klingemann, Teratoma Series, C-Print, 56 x 46 cm, 2019

WL: The first invitation, I didn't have a picture from Harm yet so we used an AI work from Mario Klingemann.

Anyway, the community pays in order to be part of that community and to be

able to acquire the work. And he's not part of this community. He is a creator, so he has some shares, but he says what he earns from it is minimal. I suppose such a concept is exactly opposite to how you work, isn't it, Harm?

**HvdD:** Yes, but I don't ask myself this question so often, whether something is art. For me, the question is often whether I find something interesting or beautiful. And about Mario, I think the project is cool but I think the pictures that come out of it are shit.

(laughter)

**WL:** I don't think all the pictures are cool, but that's a different topic. We can all argue about art...

**PS:** These are the *bad paintings*...

**HvdD:** Relational aesthetics, maybe we can call it that. And he is somehow a bit of a troll, by having done all this. Because of course he has a very strong

aesthetic sensitivity in his head and he also sees that the images which are created are actually very critical so I

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

**WL:** We won't get into this in detail tonight

**PS:** It's said they're bad pictures, but that's just the playing out of this pseudo surrealism that's coming, which can also be a statement on the conceptual side.

he was the first one, I don't need the other ones.

*TB*: I have to intervene now in this „first of the first“ theme. Participatory art and so on, co-creation, that worries me a bit. All these corresponding projects are now obviously no longer so present. But in the 90s, starting with *The World's Longest Collaborative Sentence* by Douglas Davis in which all together, people created a text or a sentence and you couldn't add a full stop. What people found out very quickly, is that they could add a full stop and thus cracked this system. They didn't only write along. In this case it seems to be about classifying images, I don't know the project, which is why I wanted to be careful about judging it. But for me it has a consumer feel to it.

With classics in the net art format or Alexei Shulgjin, for example, people made their own works according to certain specifications and parameters, which were then shown together in the gallery on a totally equal footing with his own things. As I said, I don't want to look down on a project I don't know, but it's definitely not something new.

Actually, it has to be said that there were much more complex and more challenging art projects online in the 90s.

**WI**: So you can see the question „Can AI make art?“ is not so easy to answer,

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

**HvdD**: Most of my work ends up finding a target on the Internet and that's why I end up writing JavaScript. But I use TypeScript and I also write WebGL Shaders, so GLSL. And this is quite technical but a bit of Bison, but that's not that exotic.

**Audience 2**: Off the top of my head I just remembered that when Photoshop came along, it was also used predominantly in the field of artistic photography and very quickly lost its magic. Because of course the programme was popularised,

anyone can use it today. We can all take magical pictures, but no one is interested in them, and rightly so. Sometimes I ask myself, we can't all programme yet, but the whole next generation will be able to programme. How will they find this art? On the surface, there is only output. How will they find this output? Because as recipients who only see what comes out, what has taken place on the background is not really relevant. Assuming, of course, that it is a technical level which is about to open up for all.

**HvdD:** It's not actually my experience that the newest generation is interested in learning how to programme.

**Audience 2:** It will happen!

**HvdD:** I think the new generations have grown up with mobile phones everywhere and everything being very user-friendly. When I started, everything was always broken and didn't work at all. Technology has become rather transparent and ubiquitous for the new generation.

**Audience 2:** I'd like to add something from my own experience. When I was studying, we made videos and when it was cold, the tapes would stick to each other.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission. you only need a very small mobile phone to make a video.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

**HvdD:** The democratisation of resources.

**TB:** If I summarise it correctly, or part of what you said, you also said that it

doesn't matter what happens behind the surface. But that's where the power is, that's where the politics are, that's where the aesthetic is, that's where the

guidelines are. If they don't show it, they are really just a user of the programme.

They are also subject to the programme to a certain extent.

At least in the early days, I think artists are always interested in such technologies and they also somehow play a special role in that they start to take out the instruments and see what's underneath the surface. At some point it will be over, but at least at the beginning, when a new technology comes along, artists will roll up their sleeves and see exactly what's going on in the box. I'm not an art historian, I'm a media scientist and that's why I'm interested in net art or early video art. And there's no need for incredibly technical and vivid art. Take Nam June Paik, no one will say he was just a tinkerer. He also established a whole new visual style.

PS: But those are also the exciting AI works of artists, the ones trying to hack or hijack the systems to do something else and point out that monopolies will arise. That the companies are having a huge impact on society and that we are becoming more and more dumbed down by the system. Because there's so much that remains a black box to us. So if you look at schools, Chat GPT allows you to write texts, pictures are generated without you understanding and there is also a monopolisation. Those who develop programming and tech companies

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

TR: If I'm allowed to say this, it's interesting that these Gary Athlons and so on, who are building up the companies, somehow also warn against themselves, against AI, so to speak. But we are never against something like what we were just talking about. They warn about the fact that somehow singularity is something on the internet and talking about singularity is completely utopian scenarios lying far in the future.

But it's precisely this lack of competence in operating the machines and this disenfranchisement, which is also partly due to these technologies that is not an issue for them.

**PS:** And we haven't even spoken about biases, i.e. the distortions of reality that are also inscribed in the codes or the data which is used for training. But I don't want to fall into cultural pessimism, because as I said, I still remain convinced that AI does not exist, as we said, but as a component of a network it is an emergent phenomenon. I.e. intelligent programmes in the tradition of Photoshop. There's a further increase in the technology of the tool. The instrument becomes more intelligent, has a certain autonomy, apparently, but I should be able to master it, I should understand it, except perhaps at the code level.

You can see that the most exciting works of art are those in which the artist knows about coding and also penetrates deeper so that really meaningful works, which also want to say something, are created. And in the confrontation or occupation with this art, we learn something about our reality, about our present. Therefore, I always understand AI art as art about this phenomenon, or

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

only understand the art in which the artist explains the process to me and my

appeal to the artists is always: "Please, really document for me. In two years you won't remember how you did it, what you trained, which programmes you

there will be a certain lag, a latency.

**PS:** I find glitch art exciting, but there is also so much mystification. People think an error happens, some bug is in it and a certain aesthetic appears, which also serves as a reflection surface. We believe that something autonomous arises that people no longer understand. There is a whole community about it. I know a lot of computer scientists who instantly grab a screenshot when they see a glitch and are so enthusiastic about it. They project a sort of ghost into the machine. Because at that moment they don't understand why this glitch is happening, this error in the system. But we have already learned that from Paul Klee, an error in the system, that's the genius.

**Audience 4:** So it's not a question, but a push from the previous thought. Namely whether the next generation will be able to code. I am part of a project called *Key Tech*, funded by the German government. We teach AI at art colleges and the College of Mainz, for example, is also involved. I teach for the HfG Offenbach, and I notice that people don't want to code. So it's more along the lines of what Harm said. People have grown up with GUIs, ready-made apps and black boxes. Let's say people who are now starting to study art and are interested in electronic media, also in AI, are unfortunately

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

these machine models themselves or code them themselves. So that's kind of

**Audience 5:** What is your assessment? Does copyright law have to be adopted?

Clearly this doesn't apply at all in the case of generative art, but I mean,

copyright law protects works of personal human creation. What is your assessment? How will this be dealt with in the future?

**TB:** Definitely. That's already being discussed. I think there's no way around it. What they did was completely criminal. It's just like the first internet companies in the 90s or Facebook, these companies got totally out of hand. They did what they wanted and then you actually have to take care of it peu à peu and the AI files of the European Union have at least managed to show the problem as particularly dangerous. It seems to have brought legal requirements into discussion and pass them. But you have to keep thinking about the fact that we are still living with many of the internet's teething troubles. Any six-year-old can watch pornography on the internet without limits if he or she knows where to look for. All these problems with social media, such as the use or misuse of personal data have still not been properly clarified. And now we have the next construction site where companies appropriate knowledge of the world view and think that this is the basis for their business model.

**PS:** Tilman, I would like to disagree with you very slightly. I always get a

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

perhaps made van Goghs or drawn nudes. So we have also participated in this

culture by first of all learning by repeating, training ourselves to then develop our own language or form our own attitude statement which we then want to

So in this respect, I am also socialised with hip-hop culture. And hip-hop was

unexpected interesting ways and create something new. And that is also an act of emancipation. To say: „Do we actually want to? Are we allowed?“ leads us to not being allowed to do anything. Where would you even learn art? If you're not allowed to look at anything or repeat anything at all.

And then the second level would be the algorithms. That would be a question about the tech companies. Of course they have their hand on it, they don't hide it either. There are a lot of codes that are not made public, so that stays that way.

You can also say that the trade secret is perhaps also copyright protected. If I'm a computer scientist and I've written something and it's an AI model, then I have the copyright. I give it to you as an instrument, like a Photoshop programme.

And the third level, when we talk about regulation, what comes out would actually be initiated by me. When I prompt these are my sentences, it's my ideas that I want to get out of the machine.

I think that the copyright law or authorship law is becoming more and more problematic and I think it's a pity and it only ever comes into play when it's a question of monetary exploitation. So it's actually a question of exploitation and of course we have a monopolisation, I agree with you. You can see that some

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

there is already the possibility of an outbreak. There are programmes where I can say as an artist, „I allow the AI to use my photograph, my artwork is training for

Midjourney, Stable Diffusion.“ Or like on Google Earth, „I don't want my house to be shown.“ But then I would have to ask you this question: Where did you

actually study? Haven't you also built up your artistic skills everywhere?

**TB:** Including a person who is inspired by Peter Kassel or a huge commercial enterprise which somehow wants to raise 100 billion dollars in the next round? Namely OpenAI. These are sums that also existed with all these classic internet companies like Facebook and Google in their most speculative and dark times.

**PS:** But that is again embedded in economics.

**TB:** You wanted to actually hear from the artist's point of view, maybe the artist can talk. But I would like to say something before. I'm not an artist, I'm an author and I don't know if my texts have been inhaled or not. Probably yes, and it's not as if I could have clicked somewhere: „I don't want to be sitting at the other end of the straw when OpenAI comes along and appropriates what's there.“ What's that famous quote from *There will be blood?* „If you have a milkshake, and I have a milkshake...“ I can't remember, but anyway... If a question is directed to the artist, the artist should have a say in it.

**HvdD:** Is „Urheberrecht“ the same thing as copyright?

**TB:** Not quite, but for the purpose of the discussion...

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

complex, nested, regressive structures. And these are precisely the things that these systems cannot do. They don't have loops, and that's probably still to

come. When they do, I will definitely use these systems myself. But I'm not afraid of that, that something will be stolen from me. Because the systems never

come up with anything new. It's always repetition, something stupid and simple, and... they're welcome to keep doing that.

I also speak easily about this because I have already profited from NFTs in recent

years. I don't have to fight to survive any more. So if someone does something with it, well they should have a lot of fun.

**Audience 6:** My name is Thomas Schäfer, hello. A lot has accumulated, now I don't even know where to start. I thought what Pamela said was very good, about the art academy. I also see it that way. The biological intelligence that absorbs influences, somehow generates role models, imitates in the meantime... I have experienced this often enough, that detachment didn't really work out. Thinking in modules for example, I had a teaching assignment where the whole History was taught in modules. I didn't experience the young generation, the digital natives, because I only programmed BASIC, I didn't get any further. Now I have digital natives in front of me, it's all going to be wonderful, the exchange... And then I also saw that the black boxes were not opened. In video art, where I originally come from, there was no recorder torn open, no delete button removed. I started with it, it didn't interest me at all.

My hope is also my question, about the prompts. A friend of mine who has been working since for ever for Google & co. and the AI he trained there. Things were described for it, so it's the other way round. The prompt, as far as I understood,

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

Because I have the feeling that they hardly listen to me when it comes to

concept. Sometimes not even believed in because it's falling out of

the grid. And I have the hope that the AI, the pseudo AI maybe, builds up such a

pattern in a direction that backfires.

TB: Was it a question or a comment?

**WL:** Both!

**TB:** I'm afraid you can't underestimate the consumers. If you look at how culture has developed, another superhero film, who knows how many Spidermans, Harrison Ford being resurrected and playing treasure hunter again... Somehow we're living in a phase of cultural history where everything seems to go round in circles. And I don't see any great counter-development at the moment.

Now you can say that AI is overloading the system in such a way that will eventually tire out even the most patient people, but this point hasn't been reached yet.

**PS:** But everyone in art and aesthetics is waiting for the AlphaGo to make a certain move, the moment when people will say „Humans haven't been able to think about this yet.“. That you make this move and then win the game. We just have to admit that the computer performance naturally exceeds biology. Every calculator is better than us.

Of course we will also find patterns in computing power. I'm also of the opinion that AI art is also meta art, because it somehow shows us something from our

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

that exceeds our brains in the meantime. Patterns which we would need a long

time to find. And on that level, I think some artworks which work on this meta

level and not just to hack the system are very exciting.

used quantum computers to visualise the MoMA, all the abstract art works into

a flow. I would say it's data visualisation, whether you like it or not, and you have

to believe what he says. There's the black box again. So is everything actually true? The quantum computer is right, the code is right, and then we realise we're becoming illiterate. There is a dangerous gap in society where there are people who are tech nerds and geeks and have mastered these codes and are also earning a lot of money because they have start-ups and are economically supported by certain countries where there is no regulation. And then there's us, who only have accounts which we also have to pay for. OpenAI, Tilman already said this, earns a lot of money and we only use these tools like monkeys and are happy to get a few nice pictures.

That's why the art scene is so important. Art has to deal with this contemporary phenomenon and this technology. And with some AI artists, here is one sitting in our midst, we learn a lot about life, about evolution, about forms, education... And for such things it's a good instrument. It is the same question as with a knife: can I kill someone with it? Or can I peel my apple? So the question is what I want to do with it and how do I master it. Do I have skills and abilities to deal with it?

And of course that becomes more complex because the AI models are very

demanding. Either you are involved in co-evolution and try to understand this system and help shape it, or you are behind and then it is of course a bit of a danger. But I think more than I don't need to learn how to

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

to say, ok, I have this new technology in which the question is how technologically supportive we still are. Do we really want it? And if some people go ahead with it, there's the danger that some will be left behind. That's just the way it is, sorry.

We need your consent before you can continue on our website.

If you are under 16 and wish to give consent to optional services, you must ask your legal guardians for permission.



We use cookies and other technologies on our website. Some of them are essential, while others help us to improve this website and your experience. Personal data may be processed (e.g. IP addresses), for example for personalized ads and content or ad and content measurement. You can find more information about the use of your data in our [privacy policy](#). You can revoke or adjust your selection at any time under [Settings](#).

2025-04-11