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Toolbox full of dreams

'The artist that would practise his craft well must first sharpen his tools.'
(Confucius, Analects, 15:10)

You can see how people organise their lives by the the tools they use. The dreams of an artist can be seen in his or her toolbox. For an inconceivably long period of time there was nothing in the human toolbox but the axe, which launched the archaeological archive some two and a half million years ago.[1] However new tools are being developed at an increasingly faster tempo, and it now feels like they just land in our laps. The axe is another thing that my father has taught me to handle, but something like virtual reality glasses are as new for me as they are for him. With each new tool we are able to experience something that could previously only be imagined. The world outside our immediate surroundings largely comes to us via television and internet. How we organise our lives is perhaps most determined by apps and games: how we spend our time on the train, how we find our music, when we meet up with whom, how we find our way in the world. We follow the patterns determined by multimedia giants and data barons. An unelected class of billionaires that own newspapers, television networks and social media channels direct the broad lines of our lives. We are encouraged to use our computers and phones to view content, to listen

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1 **According to some scientists, the first words arose simultaneously with the first axes. Philosopher Ludwig Wittgenstein said that words are primarily things used to get something done: thanking, cursing, greeting, praying. In his 1953** *Philosophical Investigations* **he wrote: 'Think of the tools in a toolbox. The functions of words are as diverse as the functions of these objects.' Later in the text, Wittgenstein compared words to the levers in a steam locomotive. Today however I would prefer to compare them to the apps on your phone: they all do something different.**

The pencil case is also expanding. I am typing the final version of this essay on a laptop, but I have already used the following, in chronological order: a pencil, a notebook, a smartphone, the Clear app, a Neo2 AlphaSmart, a printer, A4 paper, scissors, a fineliner pen, the full screen distraction-free Ulysses word processor and a series of blogs. Inspired by the works I describe later in this essay, I added a 'twitterbot' as my newest tool. Perfecting an adult twitterbot requires more work than I could carry out in the course of writing this essay, but some sentences are the first results of working with a bot.

and to read. Most digital screens deal with us in a way that exposes us, whereby our information is seen as material to be used and sold by others. Whoever creates something makes use of one of the numerous freely-available tools. But are there also artists who function within this media maelstrom and have simultaneously found ways to escape it? I'm looking for makers who with their games and apps show the luminous and pixelated reality for what it is: a dream.[2] And it is true that they need to make their own tools to do this?

Tussenkop

I am fascinated by artists who put energy into choosing and developing the right tool. For example, the cave artists thousands of years ago who were able to make their images of wild animals so lifelike only by viewing the three-dimensional surface of their cave as an instrument for their drawings.[3] In their footsteps, painters from all centuries have spent time preparing, developing and inventing ways to make colours look more beautiful on their canvases than in reality. You no longer need to make your own pigment nowadays; we take it for granted that it can be bought ready made. But in the twentieth century, one artist dreamt of paintings so intense that the canvases could only be enjoyed in person. He invented a way to bring the gemstone lapis lazuli directly onto the canvas with a special adhesive compound.[4]

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2 **This question came to me after reading the bright essay *Echt zien (To really see)*, published in 2011 as a booklet by author Bas Heijne. In his perspective, the novel enables to see the reality that is continuously presented to us on small and large screens in our cities, automobiles, offices and living rooms for what it is: an illusion.**

3 **The Lascaux Caves are masterfully filmed by Werner Herzog in his *Cave of Forgotten Dreams* (2010). He was one of the few able to make such sublime use of the newly-invented 3D film camera, and watching his film must be nearly as enchanting as actually entering the caves. Edwin Abbott Abbott also brought the third dimension to life in the novella *Flatland: A Romance of Many Dimensions* (1884). Under the pseudonym A. Square, he wrote a story set in one-dimensional space. The narrator tries to explain the third dimension to the residents of the second dimension. Contemporary readers of the book can experience something of the scientific theory that there are eleven dimensions.**

4**The colour Yves Klein Blue consists of the lapis lazuli gemstone and a chemical adhesive bonding. Even the most skeptical anti-modernist must admit that canvases with this colour emanate an extraordinary power: a force which can only be experienced in real life and not through images of the paintings in catalogues or magazines. The paintings of Yves Klein remind me of the story *The colour from space* (1927) by science fiction writer and cult figure H. P. Lovecraft (what a name! really his name!). An alien object lands in a field, leaking a previously-unknown colour into the surrounding terrain. It is clever of Lovecraft to choose an unheard-of colour. He describes it too: pearly, yet different. You can see the colour before you and at the**

A photographer who wanted to see the moments between the moments built a camera that could record more frames per second than the human eye.[5] For the first time, photographs were able to move. He was able to visualise the phenomenon that at some point a galloping horse has all four legs off the ground.

There is often a special tool playing an important role behind the scenes in the most famous films. One especially beautiful historical costume drama[6] could only be filmed with a lens developed for NASA to look at the moon. This borrowed lens enabled the filmmaker to travel 300 years back in time and catch the light as it shone on the baroque interiors and costumes, for the first time without artificial light.

An artist who wanted to make images that surprised himself programmed a visual social network for other artists for that purpose.[7]

A game designer who wanted to take a closer look at the everyday experience of sitting at the computer built a 'mod', a modification of an existing game engine. Instead of a twist on the classic first-person 'shoot 'em up' game in which you as a player mainly shoot monsters, he built something essentially different. A game that plays with the buttons on your keyboard and with your expectations. A computer programme that makes you wonder if you're the boss of the buttons you press, or vice versa.[8]

A writer builds a chat programme and works what her users say to each other into her poems.[9]

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same time you can't, because you know that the colour is incomprehensible. That is possible only with words.

[5] Stretching time, as photographer Eadweard Muybridge did, is a widely-used literary technique. A great example is the book *The Mezzanine* (1988) by the American writer Nicholson Baker. This full-fledged novel describes only the period of a single lunch break. But there is no shortage of examples of the time stretching technique: thick books that describe only one day or a single phone call for example. I have yet to come across a book that describes everything that happens in a single second, but that doesn't mean that this book doesn't exist.

[6] *Barry Lyndon* (1975) by Stanley Kubrick. The formidable images in this film are reminiscent of the paintings by old masters. In language it is very easy to retrieve the past: which text does not begin with some quote from a long-deceased author?

[7] The visual, social network is called http://delinear.info and was designed by visual artist Harm van den Dorpel in 2014.

[8] Playing *The Stanley Parable* game (2011) by Davey Wreden is a bit like reading Italo Calvino's novel *If on a Winter's Night a Traveler* (1982), which introduces a character named The Reader. Calvino pulls the rug out from under your feet while you read. "I wanted to mess with the player's head," Davey Wreden calls it. In *The Stanley Parable* you become hyper aware of yourself: how you're reading or pressing buttons. You wonder for a moment what it is real and what is not, and that feels impressive.

[9] This example does not yet exist in reality. It is an preliminary result made with the twitterbot

A kid with a smartphone can now easily make a horse float. Such a child may later build an app that shows a different worldview than that promoted by current app stores, with their technological fixes and updates with little innovative content. [10]

Tussenkop

Artists develop their own tools and realise their dreams.[11]
The latest addition to this list is the work of Daniël Ernst. He makes widely acclaimed dioramas, virtual reality boxes that you can step inside. In an early work of his, Diorama #3, you find yourself in an abandoned toll guard house. You can walk up and down a bit, and exert minimal impact on the curtains with the VR controller, but that's about it. It is no more than this, but you feel with your entire body that it works, that you are experiencing something you've never experienced before. As soon as you put Ernst's headset on, you enter an intermediate world and you can do things you could not before, such as move through walls.[12]
Where others immediately make use of all of the possibilities, Ernst gives himself strict, specific restrictions: no endless virtual landscapes, but a single, carefully considered area. No repetitive creatures and inexhaustible weapons, but a precisely chosen number of objects and details. Ernst does not evoke a surreal world beyond ours, but shows you an alternative reality *in* our world.

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mentioned in footnote 1: a programme in the design phase that searches live tweets and combines the results with a database of words in order to generate a series of new artists and their dream tools.

10 Philosopher Matthew Crawford would definitely appreciate such an app. Crawford wrote the book *The World Beyond your Head* (2015), in which he demonstrates – with amazing precision in just a few concrete examples and better than I can repeat here – how the interfaces of most apps control the user's position, gaze and expectations. This happens completely unnoticed, and extends beyond the smartphone.

11 One of my favorite not-yet-in-existence apps is the electronic device that Crawford Tillinghast in the story *From Beyond* (1920), again from H. P. Lovecraft, has developed: the Resonator. This device sends a resonant wave to your pineal gland so that you as a user are able to perceive layers of existence that exist but are not part of 'reality'. The story ends in pure horror and shows that we should be happy that we can't absorb everything with our senses just like that. At the same time it would not surprise me if someone presented an app in a dozen years that visualises all of the dark matter floating through space.

12 In fact, Diorama #3 is a contemporary and hi-tech version of the story *Le Passe-Muraille* (1943) by the twentieth-century writer Marcel Aymé, in which the main character can walk through walls (which incidentally gives him more stress than benefit). Aymé's stories have the same physical effect on me as the work of Daniël Ernst, where you sometimes feel more spirit than human.

"When you're done, you can shake your head to get out," he tells his visitors. Indeed, as if you're waking up from a dream. Ernst writes his own code in order to be able to work with the VR controller inside the virtual world of his creations. He enters his own work in order to sculpt and draw inside. I believe that's crucial. Every square millimeter has passed through his fingers. It's not technological sensationalism; Ernst uses technique to make an even greater mystery tangible.

Tussenkop

As I write this, Ernst puts his hand on his Diorama #4, a miniature virtual reality opera that people will be able to wonder at synchronously all over the world. I've seen an early test, and the finished project will be part of the MediaLab. Putting on the headset is like taking a seat in a virtual theater. You're in a kind of retro-renaissance. It must be like this when you see a shining star light years away at close range. Daniël Ernst told me that he dreams of making eye contact with a supernova.[13] Such a thing can only be accomplished by someone who takes his tools seriously. That is the power of Ernst.

Making your way through virtual spaces with Ernst's interfaces means experiencing something you've never experienced before. It's liberating. At the same time you experience how those same interfaces you use almost mindlessly all day long – including Internet browsers, phone games and menu items – structure your normal life. After having a mobile phone for a few years, you can no longer schedule an appointment without extensive back and forth messaging. You learn the alphabet, and can then never look at letters again without reading them. The tool with which you work also works on you.

Paradoxically, makers who offer you other realities provide a view of the world as it is in all its mystery. The broader context within which a work is created determines what it will look like. The perfecting of the tool is already to a large extent the work. Those who want to show that what is usually presented as reality is in fact an illusion can invent new tools. You can let your dreams loose in your toolbox.

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13 **In - again - Italo Calvino's short story collection *Cosmi Comics* (1965), the author casts supernovas, planets, interplanetary dust clouds and black holes with equally unpronounceable names in leading roles as all-too-human characters.**