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PROJECTING INTO DARK MATTER*

This will be a dialectic piece about the way in which technology impacts capabilities of narration and how this can open up portals for a new set of realities to take shape. As in any dialectic piece there will be a thesis, an antithesis and a synthesis, all in neat linear succession, like pearls on a string.

To begin with, I would like to shoot out two absolutely polemic claims. One is good news and the other is bad news. As is custom, the bad news first: Artificial Intelligence is in total control of almost everything – and it has been since a quite precise point in time: Since March of 2016, that is. The good news is: I say the Al is in control of ALMOST everything because there are things hidden in the dark. Let's project into them.

THESIS

You might be aware that the term "photography" literally means "writing with light". However, I think that "writing with light" does not only refer to the mechanical and chemical issues of the photographic process but it also refers to photography being an extension of the historic project of enlightenment.

I would like to insert a brief digression here and log on to one element that enlightenment introduced – or rather popularized – that became very influential in the long run: binaries. A binary system – you might know that – is a a pair of two terms or concepts which stand in an oppositional relationship to each other. For example, René Déscartes, who arguably was a father of all enlightenment thinking, separated the body from the mind, and Gottfried Wilhelm Leibniz made the binary number system useful in Western mathematics and philosophy. This system allowing to express any numeric value and thus perform any calculation by just using the numbers one and zero of course is still used in computing today.

The advent of binaries disrupted a prevalent idea of a flow and of an unseperable entanglement of all things – of an essential one-ness of the world – and it started to dissect the world, to cut it into slices and so the world was simultaneously deciphered and encoded. The world was simplified, categorized and put in order, the chaos was cleaned up and with binary logic, phenomena that before had seemed paradoxical now could be resolved. But then again, the light which enlightenment shed on the world consisted of ones and zeros only. Photography, a technology which was first introduced less than a hundred years after enlightenment's heyday, was a great helper in giving weight to enlightenment's "world formula".

The photographic apparatus itself operated with binaries – light and shadow, that is – and so, whatever the machine-eye could spy delivered the proof of its own existence. The camera was the perfect apparatus of enlightenment as it constructed a measurable and therefore objective reality through a seemingly objective process. The claim to truth came from an inward motion (fig. 1): light falls into the apparatus' physical black box and onto a photographic silver gelatin emulsion triggering a chemical reaction. Thus, the argument went, it was the hand of nature writing reality and not the hand of man interpreting it.



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And the black-boxed machine-eye could see much more and much deeper than the human eye: Just think of (fig. 2) Eadweard Muybridge's photographs of a galopping horse suspended in mid-air – a moment that the human eye alone would have never been able to isolate. That the machine was able to see this moment of socalled "unsupported transit" was a striking success for the advancement of photography. Here emerges another essential product of enlightenment: The breaking down of time through its subsequent slicing into a linear succession of individual moments, one following the next. Single images, time frozen in the frames of a film, the image engraved by nature itself.



And so, all the things that could NOT be sliced up and encoded/decoded by the logic of enlightenment – and of course, they did exist – were dismissed and degraded as mumbo-jumbo. These things were beliefs, superstition, rituals, the occult – literally that, which is hidden from sight, the metaphysical – literally that, which is beyond the physical –, and so on. Any kind of magical thinking was suspended. It was declared impossible and became the dark side of enlightenment, shielded off, hidden from the physical black box of the photographic apparatus and confined to a proverbial black box of denial while the world was slowly but steadily covered in a shiny silver gelatin emulsion of binary logic.



Here's one thing that the photographic process was certainly not: A space of projection. Light falls into the blackbox behind the camera's lense and it is trapped. It will never leave this chamber again.



A different kind of blackbox, that nevertheless operates with binaries and the physical as opposed to the metaphysical, is the computer. I started this text by mentioning artificial intelligence, so I should draw a parallel here: The processes which structure the operations of computers, and thus artificial intelligence, are algorithmic processes. Any algorithm relies on counting in order to function properly. It is in need of a clearly defined beginning and a clearly-defined ending. With every counting tick there is a potential change and a decision to be made and so, the algorithm navigates progressively through a command line or a decision-tree. At the end, the process is resolved and "killed", to use computer terminology. If the counter's instruction cycle is somehow erroneous, though, the algorithmic process cannot reach its defined end (figs. 5), it cannot find closure and as a consequence, the entire process crashes. Wikipedia explains: "Operating system crashes occur when internal sanity-checking logic within the operating system detects that the operating system has lost its internal self-consistency."

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In other words: Because the counter of linear time is dysfunctioal, the algorithm cannot define an end to a process it is working on and thus find closure. As a result, it is caught in contradiction and goes insane: The algorithm loses its internal self-consistency. So, you could say: If an unresolvable contradiction and with this the impossible, the occult and the metaphysical, enter a computer's brain, it loses this internal self-consistency. The machine's vision is far superior to human vision-but when a computer starts to see ghosts, it goes insane.



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And it's even worse: If an algorithmic process that cannot be finished – if it cannot be "killed" – will be suspended in an infinite loop between life and death. It will become a ghost itself, losing all of its agency and having to beg to be killed by a restart (fig. 6). Thus, the goal of every software developer is the perfect program: A program that never crashes, as every crash produces yet another ghost and by doing so opens the door to the occult just a tiny bit more. Every crash opens up the door to the metaphysical, to that which is hidden from sight and which has to be contained in a sealed black box of denial. Every crash opens up the door a little wider to that which is – in enlightenment logic – impossible. "There are no ghosts!", says the enlightened mind. But yet...

ANTITHESIS

There is a substance you might well call the opposite of the photographic process and quite literally the opposite of enlightenment thinking as such: This substance is Vantablack. It was originally developed in 2014 by a British company called Surrey NanoSystems. Vantablack can be compared to a paint. It is not

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an ordinary paint, though: Any surface covered with it absorbs 99.96% of all visible light. "Vanta" is an acronym meaning "Vertically Alligned Nano Tube Arrays" and this describes the way Vantablack works (fig. 7): Light falls onto a Vantablack-covered surface and gets trapped in between the Nanotubes until its energy is absorbed and transformed into heat. The blackness of this technology is in fact so black that it makes any object coated in Vantablack appear entirely flat (or as an infinitely deep hole) to the human eye – or any machine eye, for that matter.



Similar to a camera's blackbox, here again, we are facing a setup of light being trapped. But instead of dealing with an inward motion, in this case we are much more dealing with an outward motion: I found that Vantablack is a phantastic projection screen. And that is precisely because the substance does not provide a surface for a photographic and binary closure of matters. Instead, Vantablack allows us to project all kinds of beliefs, realities and universes onto its light-absorbant blanket while nothing is ever reflected to bounce back to be evaluated under the 2-Dimensional scrutiny of enlightened binaries. What's projected onto the Vantablack stays in the Vantablack.

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And so, a Vantablack-coated surface is not only a projection screen but actually, it can become a portal: A portal for all the beliefs, ideas and speculations that will never hold water under the rule of enlightenment thinking, which of course is determined by a linear idea of reality, space and time. Vantablack can become a portal for alternative realities and dimensions of truth to enter our thinking. The unsupported transit, this moment of the horse's levitation that only the machine eye can see, moves away from the solid framing that the apparatus provides. It liquifies against the backdrop of Vantablack and turns into a moment of levitation of thought, so that things can become apparent which we aren't able to perceive otherwise. Through Vantablack's infinite darkness, the occult, the metaphyiscal and with it magical thinking – which up to this point have been kept locked away in the black box of denial – can resurface. Through the Vantablack portal, the dissection of the world into a succession of linear time-slices is suspended, linearity turns into simultaneity and that what formerly was the outside is invited in.

SYNTHESIS

To begin the synthesis, we must come back to the AI, to its control of almost everything and to March of 2016. What happened in March of 2016 that makes me claim the AI has taken over? Well, three events took place in short succession of each other which all are strangely entangled:

EVENT NUMBER 1:

For the first time, an artificial intelligence beat a human – the South Korean grand master Lee Sedol – in the Asian board game of Go. Go is a game that is considered to be so complex that up to this point it was basically thought to be unsolvable for an Al. However, the Al, an algorithm called "AlphaGo", beat Lee Sedol in a series of 5 games quite impressively with 4-1.

EVENT NUMBER 2:

The Oculus Rift virtual reality headset was released. A VR headset is the perfect embodiment of enlightenment's denial: It's a device that turns our eyes into the camera's lens while at the same time encasing and trapping us in a black box of a make-believe space. It constructs an artificial world that surrounds us 360 degrees and pretends that there is no outside. "There is nothing occult", the virtual reality goggle says: "Look around: Everything that is there, is there for you to see!"

EVENT NUMBER 3:

The artist Anish Kapoor, well known for his bloated installations, such as a notorious selfie-opportunity in Chicago called "Cloudgate", bought the exclusive right to use Vantablack and since then holds a monopoly on the substance.







How do these things interrelate? Here's my take on that: With the Go-competition, the AI was staging some sort of test run to determine whether it had reached a point of singularity, that is, where it was superior to human beings. And it found: "Yes, I have reached that point, indeed." The subsequent release of the Oculus Rift was a way to envelop us in a black box and confine us to it – the virtual reality headset being a more immersive version of film operating under the same principles and creating an illusion of linar and homogenous space, time and reality while at the same time obstructing what is really there. But what does it mean, then, that Anish Kapoor monopolized Vantablack and how does that relate back to the AI?

We saw that Vantablack dissolves linear time – a necessary given to any computer system – in its total blackness. Vantablack's darkness becomes a portal that opens up multiple universes, multiple realities, multiple temporalities and thus its mere existence is a threat to the algorithm-based artificial intelligence that has to keep out anything occult by all means. If that which lies in the dark surfaces through the Vantablack, the AI loses its internal self-consistency and its processes are suspended in mid-air to remain unresolved. So, Vantablack becomes something like Cryptonite to any artificial intelligence.

Having that in mind, I believe Anish Kapoor's monopoly on the substance can mean two things:

> 1. Anish Kapoor is a replicant sent by the Al to control Vantablack and keep it locked away, so that linearity, binaries and the notion of a singular reality can stay true.

OR

2. Anish Kapoor is a human and wants to save us from the Al's total domination and tries to secure the use of and access to Vantablack. And here is the trick: Of these possibilities, I think both are true at the same time. Now is the time to quit thinking in either-or binaries: With the introduction of Vantablack, there was a rupture in the space-time-continuum (fig. 10). Two parallel universes have opened up and thus both of these options are possible and true simultaneously.





In one Universe, Anish Kapoor, the replicant, was sent by the AI to destroy Vantablack and thus close this portal that Vantablack opened. He was sent to reduce the dimensions back to one – to a linear one, that is – and thus allow the AI's algorithm to stay internally consistent, to stay sane, and to live on exerting control over us by immersing us in the black box of the reduced dimensional grid of virtual reality.

In the other universe – unbeknownst to the AI – Anish Kapoor, the human, wants to externalize the black box and turn it against the AI. In this universe, he has devised a plan to paint over the earth's silver gelatin-coating with a layer of Vantablack. He will paint the world in Vantablack and thus liberate us from the binding binaries of enlightenment thinking, he will end the dominion of linear time. He will reduce all visible depth but instead open up a different depth, namely, an infinite number of parallel dimensions and truths. The rupture of linear time will make the AI see ghosts, it will go insane while its algorithmic processes will be suspended in infinite undead loops. The AI's algorithms will be turned into ghosts, one by one, not able to fully die, but being caught in a limbo between life and death. And even worse: Each crashing algorithm that is transformed into a real existing ghost will open the door a little wider for the occult, the denied, the impossible to seep in until we are encased by the total metaphysical and magical darkness of Vantablack. Painting the world black will replace a trapping blackbox with a liberating one and the pitch black will make us see again.



In this universe, Anish Kapoor has already started his blackbox-unboxing liberation project by painting the Chicago Cloudgate – as was reported on the art-newssite Hyperallergic in April 2016 – turning it into an actual gate, turning it into a portal of possibilities, into a shrine of magical thinking, allowing many parallel universes to open up, to interfere with ours and to trap the Al in an insane, internal-logic-failing world of ghosts instead of allowing it to trap us in enlightened binaries.



I'm not sure at this point in which of those universes I find myself in and I am uncertain if we all – being separated by space and time – even share the same one at this very moment.



*The performative lecture PROJECTING INTO DARK MATTER was given by Till Wittwer in November 2017 as part of the UIC School of Design's Public Seminar Series 'Through A Glass Darkly.'





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