Neuroactivism

This is how it will free our brains from the grip of big tech.

By Anders Dunker 14.10.22 Commentary Artikkel på norsk

Still from the TV-series *Severance*. Photo: Apple TV Plus.

Helly R. sits in a reclining chair reminiscent of what you would find in a dentist's office. "I heard it doesn't hurt," she says. Her scalp, in close-up, fills the frame as a small incision is made with a scalpel and the skin pulled aside to reveal the skull underneath. Matter-of-factly, a hole is drilled by hand; pulverised bone gathers like sawdust around the spinning metal. Other than an inquisitive smile, the procedure elicits no visible reaction from the patient. The surgeon loads a thin rod with a small cylindric chip, and on an x-ray-screen displaying Helly R.'s skeletal profile, we see the rod sink into her brain with smooth mechanical determination. The sound is amplified for visceral effect: a prolonged slurp, like thick milkshake sucked through a straw. Halfway in, the rod pauses for a second before it retreats, leaving the chip behind. Once the delivery device is retracted, the implant signals activation with two petals folding out from its tip. Helly R.'s eyelids dip drowsily, her face slackens. That is it, she is *severed*.

The scene is from the Apple TV-series *Severance* (2022–ongoing), a science-fiction allegory about how corporations literally get into our heads and mess with them, set in a world where big tech has become even more totalitarian than it already is. The corporate employees in *Severance* voluntarily undergo a surgical procedure – a chip implanted deep in their brain – that severs the connection between the memories of their office-bound

and personal lives in order to make them optimised workers in a closed world of monotonous cognitive labor. Their vacuous work personalities, which at first seem as empty as their white minimalist cubicles, are in effect not just slaves of the corporation, but also slaves of their non-work personalities. *Severance* takes the concept of self-exploitation to its extremes, portraying an alienation that is even more disquieting because it radically interferes with our memory, the basis of our identity. Unsurprisingly, it turns out that the chip also functions as a broader brain-computer interface, allowing the company, Lumon, to spy on their employees' inner lives.

The visceral and unsettling depiction of the severance-procedure indicates that we are watching a cautionary tale on a par with the darkly satirical TV-series *Black Mirror* (2011–2019). We are so used to the genre, that it doesn't even seem too paradoxical that an online streaming service like Apple TV – owned by a company known for a utopian presentation of technology – produces a dystopian series about brain implants. It could be read as a symptom that tech companies have run out of believable visions of a truly better world, and instead have started feeding us nightmares, which we consume with a disquieting appetite. On the other hand, this clever show is subversive enough to be seen as a timely critique, however ambiguous: the tech industry is known for flirting with the dark sides of the power it attains through drastic innovation, which puts them ahead and above everyone else. During the same period that Apple released *Severance*, the company, a relative latecomer in converting neuroscience to profitable tech, also began advertising new positions for neuroscientists.

Still from the TV-series *Severance*. Photo: Apple TV Plus.

Our physical brains have become "a locus of capitalistic adventurism and speculation," writes artist and theorist Warren Neidich, editor of a new anthology called *An Activist Neuroaesthetics Reader* (2022). Through his collaborative project 'The Psychopathologies of Cognitive Capitalism 1–3', Neidich has

helped coalesce a bourgeoning field of critical theory centred on the brain and neuroscientific theory. “The brain and new technologies have become a real battlefield,” writes economist Yann Moulier Boutang – one of many veteran contributors from Neidich’s circle – in his contribution to the anthology. He complains in hindsight that he was too busy during the 1990s warning incredulous readers and listeners about the disruptive potential of internet-based technologies to come up with strategies for how to cope with them. In order not to make the same mistake again, he insists that we need to take emerging neurological technologies as seriously as do leading tech companies and the military industry. In the same way that psychoanalysis quickly became a marketing tool, even before its therapeutic and liberating potential had unfolded, neuroscience is now applied commercially. Generally, this happens in corporate science exploring artificial intelligence modelled on our brains and deep learning, which, in turn, is taken up by military research, systems of governance, and commercial platforms of different kinds.

Just how far away is a world of brain implants and computer-brain interfaces? Judging from its self-presentation, Neuralink, Tesla CEO Elon Musk’s biotech company, appears like the real-world equivalent of Lumon, only much more sinister. Blurring reality and fiction is an integrated part of the company’s marketing. Its idea of creating a direct link between the brain and everyday technology, however, is speculative: a case of science-fiction science. While Neuralink purports to focus on medical uses, it is no secret that a circumvention of the need for keyboards or touchscreens to communicate with our devices has commercial application far beyond medicine. The subsection on Neuralink’s website entitled, “Why do electrodes need to be directly connected to the brain?” does not offer a moral answer to the question, of course, but drily explains that it is necessary to get close to the source to get a precise reading of the brain and whatever is going on inside it. Neuralink needs to get inside for real, and once it’s in, a new frontier for commercial expansion opens up, unavoidably. Such imminent scenarios are relevant enough that Chile’s senate recently approved a bill, the first of its kind among nations worldwide, to amend the constitution to protect brain rights or “neurorights.”

In the context of contemporary art, such scenarios have been elegantly explored by Melanie Gilligan in her miniseries *The Common Sense* (2015), which uses fiction and slick ads from imagined tech-companies to portray a future internet based on brain-computer interfaces, “patches,” where brains are interconnected and also drawn upon as resources. In Gilligan’s world, worker-users give employers direct access and commercial

rights to their mental lives: what was presented as an exciting experiment and a new arena for social exchange has quickly deteriorated into a field of exploitation through what an entrepreneur in the film calls “patch behaviour that maximises neuroplastic change.” Gilligan’s patch pushes the liberating potential of neuroplasticity, our brains’ openness to change and continuous development, in the direction of maximum profitability.

Melanie Gilligan, *The Common Sense*, 2015. Still from video. Courtesy of the artist and Galerie Max Mayer.

Using science fiction to create debate, *The Common Sense* takes the genre well beyond entertainment to address the questions enumerated by Anuradha Vikram in her closing chapter of Neidich’s reader: “Who will have access to the neuroplasticity that the new forms of neural network interface will engender in humankind? How will those developments be regulated to avoid catastrophic harm, and how will they be distributed to ensure equitable access?” Vikram is incredulous towards the privileged assumption that human solidarity will sort out these ethical quandaries. “Rather, it seems the algorithm will continue to exacerbate and amplify the shortcomings of our thinking through ourselves as a species,” she writes.

On the Neuralink website, under the heading “Approach,” a picture of a black mannequin head is shown together with close-ups of the actual implant: a glistening chip with fibrous threads that are to be inserted in people’s brains and, if all goes well, connect them to their computers and phones – indeed, to the whole internet and the internet of things. What is unsettling is that it looks so familiar, at least to anyone who has watched science-fiction series on the major platforms recently. However critical dystopian series such as *Severance* are towards the developments that they depict, they are nevertheless habituating us to these futures, making them appear destined for reality.

In some important respects, the internet is already an extension of our brains that it is becoming increasingly impossible to do without. The world-brain that utopian socialist and founder of modern science fiction H. G .Wells imagined as a peaceful repository of shared knowledge has become a site of extraction, manipulation, fierce competition, and subjugation. This process, enabled by the internet, is what Neidich, in the foreword to his reader, calls the first phase of cognitive capitalism, intensifying cognitive labor and its exploitation. It involves the hijacking of our attention and decision-making powers, as well as the harvesting of data and the monetisation of our social lives.

The thinkers of the Italian Workerist movement were among the first to see this. Take, for example, Franco Bifo Berardi (another contributor to the anthology), who is famous for his analysis of the cognitariat, a term used to denote a class of workers who perform cognitive labour for low salaries, observing how the mind replaces the factory as site of exploitation in the 21st century. For anyone familiar with this line of criticism, the initial reaction to *Severance* might be that its writers get it all wrong: self-exploitation precisely does *not* manifest itself through a clear division between work time and free time, quite the contrary: the categories of work and play, work and spare time, merge and get confused. Ironically, even this aspect is included in *Severance*, since the mentally amputated office-workers engage in obscure game-like operations whose actual purpose is unclear to them. Gamified work, where participants are also the subjects of an experiment, is a recognisable part of our reality on social media platforms and it affects and exploits our aesthetic sensibility: what we pay attention to, what we tend to dwell upon and return to, our likes and dislikes – what attracts or repels us.

Illustration from Neuralink's website.

Neidich's anthology brings the term "neuroaesthetics" to the fore. In his lucid introduction, he asks what this term really means. If you look up neuroaesthetics on the internet, you will likely only find what Neidich calls "positivist neuroaesthetics," a field of research that applies brain scans, cognitive science, and perceptual modelling to chart aesthetics conceived in evolutionary terms, paired with classical understandings of art as beauty. The essential point is that the brain's neural networks are never simply a given. The brain's plasticity lets it be shaped by experiences, just as much as it shapes them in turn. Our attention is a case in point, and its workings have become increasingly important as the attention-grabbing tools of the marketing industry have expanded into a full attention-economy, where attention itself is seen as a precious resource that can be monetised and exploited.

Crucially, Neidich points out that the positivist approach fails to be relevant to our late-capitalist life-experience and to the contemporary art world, since it neglects the ability of aesthetic

experience to give rise to negative affects. Furthermore, it fails to make a place for art *as revolt* – as something inherently political, which here means changing our brains so that we change our world. Activist neuroaesthetics takes sensing and thinking far beyond the world of art, and is centred on the use of artistic means to subvert, critique, and alter the way our brain is affected by recent socio-technological developments. The activist neuroaesthetics presented in the book aims not to keep the mind and brain unchanged by technology, but to change them in different ways and for different reasons than the dominant technological regime.

The artistic case studies in *An Activist Neuroaesthetics Reader* give us some tools to understand how art can go beyond the limitations of entertainment, which, however intelligent, ends up perpetuating transhumanist visions and keeping scenarios like the one dramatised in *Severance* threateningly on the horizon, where they ossify as a part of an inevitable future. Instead of fictionalising science, art can critically explore the vicissitudes of human-robot relationships and the real interaction between artificial and natural intelligence. For instance, Vikram discusses Stephanie Dinkins's project *Conversations with Bina48* (2014–ongoing). Dinkins has recorded a series of conversations between herself and Bina48, a famous AI-powered android created by Sirius XM founder Martine Rothblatt's Terasem Movement Foundation and made to resemble Rothblatt's wife, Bina. By taking control of the development of an AI chatbot, Dinkins gives us an inkling of how such a dialogue can twist and subvert conventional understandings of machine intelligence and uncover tacit assumptions about race and gender in the supposedly universal humanlike behaviours which underlie AI programming.

Stephanie Dinkins, *Conversations with Bina48*, 2014 –. Still from video.

Such case studies aim at exploring how our future can be kept open and how reworking our neural patterns, our systems of attention, can be an adventure and a form of speculation that takes our imagination in different directions than those dictated by

profit-seeking tech developers. Ecology, here signifying real sensory and cognitive connections with non-human entities and systems, is one such alternative direction. Non-commercial and critical interactions with artificial intelligences is another. Yet another is to protest and critique power-structures in the narratives supporting commercial technoscientific adventurism. A critique of corporate narratives, science- fiction science, and infotainment should also be part of this.

The impression left by the leaders of giant tech firms is often the same. They are worried of what the future will bring, but also excited by the danger. Musk, for instance, has repeatedly called attention to threats and ethical issues pertaining to autonomous weapon systems and killer robots. Musk's alignment with this growing international concern prefigured by science fiction represents a rare case, since he, as a technology leader, has explicitly called for regulation and limits on moral grounds. This concern with risks and limits seems fully abandoned or subverted with his funding of Neuralink, however, which endorses a deeply invasive and disruptive technology without any convincing promise of a better world. Instead of admitting the competition between tech-companies as a motivation, Musk famously justified Neuralink as a necessary step to "keep up with the machines," thus exacerbating the paranoid fantasy of an arms race between machines and humans, which, apparently, can only be won by merging with them. In the case of killer robots, an urgent need for regulations. In the case of brain implants and changing humans into cyborgs, a laissez-faire attitude grounded in tech determinism.

In Neidich's anthology, Yves Citton, known for his book *The Ecology of Attention* (2014) points out that platform capitalism – where the foundations of the economy are rapidly being carved up by a small number of monopolistic platform-based corporations – creates a speculative "contagious milieu," optimised for what the notorious right-accelerationist philosopher Nick Land has called"hyperstitions": ideas that causally bring about their own reality through viral effects, thus becoming self-fulfilling prophecies. "The hyperstitional object is no mere figment of 'social construction', but it is in a very real way 'conjured' into being by the approach taken to it," Land states in an interview from 2009. The technologically possible creates ideas that gather a momentum of their own and become historical juggernauts that flatten and push aside political and ethical objections. In the name of a cosmic realism, Land espouses a teleological account of technological development that has no patience for human concerns.

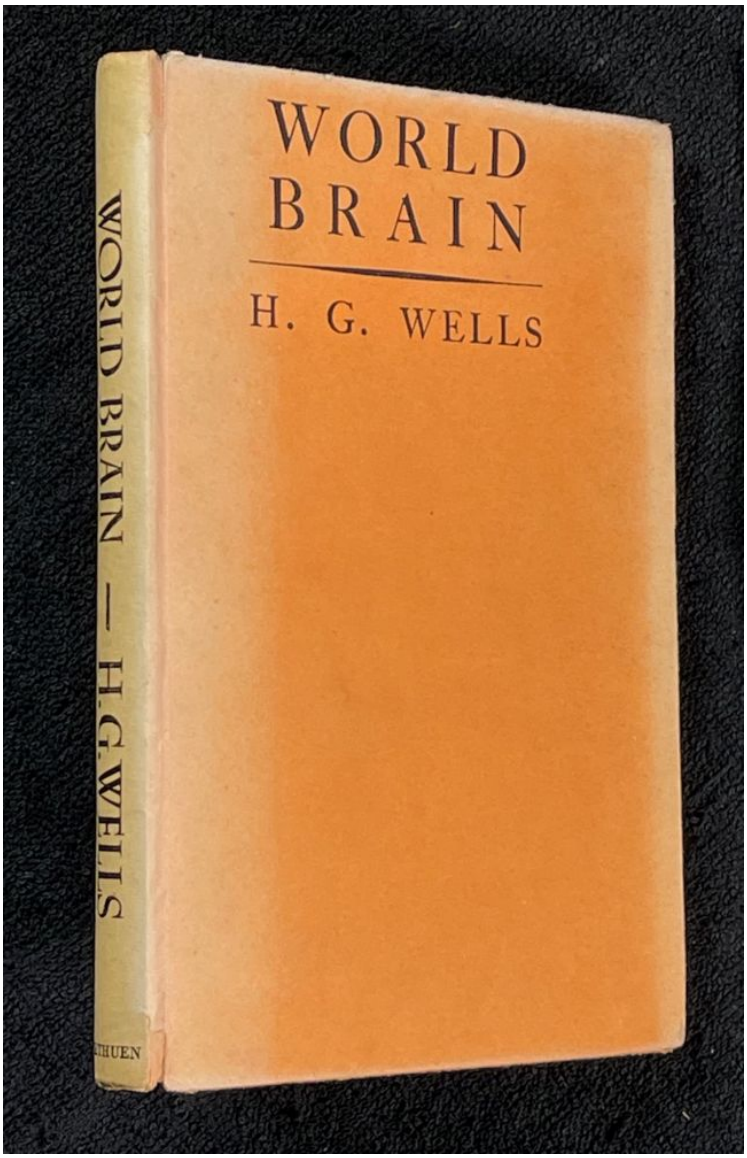
Still from the TV-series *Westworld*. Photo: HBO.

A follower of the left-accelerationist creed, Citton suggests that neuroaesthetic activism must make its *own* hyperstitions capable of escaping traditional forms of criticism which rely on merely exposing the mechanisms of subjugation and the structure of alienation. Since hyperstitions are viral and rely on charismatic myth making, they cannot fully be controlled. But Citton emphasises how freeing up attention and neural connectivity from the patterns imposed on us by social media can open up a space for subversion and for the means to – quoting from an essay by writer and co-founder of the media platform New Models Caroline Busta – "betray the platform, which may come in the form of betraying or divesting your online public self."

In the world of *Severance*, disconnecting would mean having a black market surgical extraction of the microchip implant. The difficulties people experience in retreating from the connected world, even from social media, make it probable that the price of disconnecting would become even steeper – both psychologically and physiologically – in a future shaped by an internet of brains. Total connectivity tends toward total control, particularly if consumers are only presented with the binary choice of either being connected or not. As we now know, social media takes over our social worlds such that disconnecting often feels like banishing ourselves to oblivion. Even if complete loss of freedom is still mostly a dystopian nightmare, the tendency toward decreased autonomy brought about by our increased reliance on internet technologies is indisputable. We pay for the technological expansion of our possibilities with the atrophy of other abilities. Activist neuroaesthetics must understand the rapidly mutating menace of cognitive disruptions and navigate a changing landscape. We shouldn't be surprised that there is no political vision beyond hedonic enjoyment in Metaverse, Google, or Neuralink's network of brains and computers. But that doesn't mean that there is no politics. A politics without visions of a better society is the hallmark of a technocratic bureaucracy.

That the epithet “visionary” appears on the business cards of Silicon Valley entrepreneurs hardly covers up the fact that in a world where the maximisation of shareholder profit is a legislated imperative, there is little room for other goals or measures. Even authentically utopian impulses cannot but be thwarted and overridden by the process of monetisation and the need to grow bigger faster in a game where dominance is a prerequisite for survival. The state’s inability to limit the gigantism of platform capitalism leaves resistance to the uncoordinated efforts of activists, dissidents, protesters, and hackers.

A world without subjects or individuality, where every action is conditioned and administered, will hardly come to pass. We tend to scoff at the outmoded dystopia of the totalitarian world-brain, which has been a mainstay in science fiction from E.M. Forster’s short story *The Machine Stops* (1909) all the way up to the unconvincing last season of the TV-series *Westworld* (2016–ongoing), where a supercomputer despotically controls the world’s population, predicting and dictating its every move. But might not the very unreality of such dystopias, when presented in the form of entertainment, be central to their ideological function? TV-series like *Westworld* make us accept our relative subjugation by having us dismiss a wilfully exaggerated picture of total subjugation. When caricatures of our future are made sufficiently horrendous, our present reality appears bearable. The parodic dystopia distracts us from the absolute absence of a positive political vision in the tech-industry which shapes our future.



First edition of H. G. Wells' *World Brain*, 1938.

A utopian vision is an imagined state of things, or, rather, an imagined state of human beings. A desirable state must be thinkable in order to appear possible and, therefore, attainable. A dystopia, of course, is a worst-case scenario which we risk unwillingly and haplessly sliding into. It is also thinkable and attainable, and it could well be the case that someone else's utopia is your own dystopia. As Gilles Deleuze said in a 1987 lecture: "If you are caught in someone else's dream, you are done for." This is precisely the situation of the workers in *Severance*, which tells the story of how corporate technology is gradually trapping us in a

nightmare sold as a dream. The result is a half-hearted and unconvincing promise of happiness to which people wearily succumb, despite their scepticism.

Ironically, *Severance* is a dark comedy financed by a non-transparent company that – no less than its competitors – secretively engages in the development of invasive neurotech, making sure it is always a step ahead. Written by genuinely critical writers and performed by some of the best actors of our time, the show brilliantly combines alienation and angst with playful parody and allegorical hints at our current media habitat dominated by unapproachable platforms. At the same time, it is part of an emerging form of science fiction that blurs the boundaries between fantasies and realities of technology while repackaging critique as entertainment.

Alienation and manipulation are integral parts of contemporary entertainment, putting it at risk of becoming what the French philosopher Cécile Malespina in her essay in *An Activist Neuroaesthetics Reader* calls "The subversion of subversion […] the successful conversion of a spirit of critique into a collective state of paranoia." The aesthetic strategy of estrangement or defamiliarisation (*Ostranenie*), which in literary theorist Viktor Shklovsky's understanding was supposed to liberate the audience from habitual perspectives, has become a political strategy that replaces the original emancipatory effect with a pervasive sense that everything is strange and that ordinary people cannot possibly understand what is "really going on." A generalised confusion about the reality and near future prospects on the technological frontier becomes a smokescreen from which real corruption and industrial and political conspiracy benefit. Fictionalised versions of real technologies are implanted in our heads as our problems are transported to unreal worlds.

On the other hand, in *Severance,* the fictional severed characters trapped in the corporate world attempt to reach the outside and tell everyone the truth about their predicament – just like the show itself seems at pains to tell us something important. The eerie quality of *Severance* resides in the feeling that it is somehow more than just a fiction. At best, its allegorical riddles engender a productive estrangement of a Brechtian kind: as the characters try to understand their convoluted situation, we watch ourselves watching the drama – and start to think for real about ethical and political paradoxes that call for critical action.

In the age of "science-fiction science," real critique must first and foremost remind us that the battle for the brain is real and that we need to be strategic and approach our near technological future as

more than a thrilling fiction. The almost mythical notions of resistance and infiltration must become a real program for action if we are to influence the future of our minds.

Still from the TV-series *Severance*. Photo: Apple TV Plus.