



Battle for Your Brain: Defending The Right To Think Freely In The Age Of Neurotechnology, Nita A. Farahany, 2023. Afterword, 2024. 291 pages, including footnotes and index, (<https://www.nitafarahany.com/the-battle-for-your-brain>).

“A new dawn of brain tracking and hacking is coming. Will you be prepared for what comes next?”

In *The Battle For Your Brain*, Farahany jumps right into a number of issues surrounding the recent “renaissance” in human augmentation (AR, augmented reality, and VR, virtual reality) and neuro-mapping. Two key questions: “Will unlocking our brains open our minds to targeted assaults and hacking, and if so, how do we protect ourselves against that risk? Is embracing neurotechnology necessary for the very survival of our species to compete against the growing capabilities of artificial intelligence?” (p. 8)

For an example of brain direct advertising and targeting see <https://www.emotiv.com/> (p. 9). See also key opposition in “The Brain Initiative,” <https://braininitiative.nih.gov/>; since the Trump administration has compromised the integrity of the NIH, note their disclaimer, “Due to current HHS and NIH restructuring, some content on this site is not being updated regularly. Please refer to [nih.gov](https://www.nih.gov/).”

Thus, the primary concern and warning of the book speaks to the growing problem, especially since ChatGPT and LLM synthetic-media-generated content, of tracking and hacking our brains. Many people have already been primed for “jacking-in” via FB, META, Instagram, Google’s Gemini, Microsoft’s Copilot, Leonardo.ai, and Anthropic’s Claude. With the ease and “convenience” of AI-generated content for business and for fun and entertainment, as well as the growing acceptance of AR and VR there is also the growing problem of VR immersion addiction and its related reality disconnectedness issues. “If people are willing to give up reams of personal data to keep in touch with their friends on Facebook, it seemed likely they would be willing to trade their brain privacy to swipe a screen or type with their minds.” (p. 16)

LLMs are getting ever more powerful, and these “machine learning algorithms are getting better and better at translating brain activity into what we are feeling, seeing, imagining, or thinking.” (p. 17) Possible early responses to this reality may even be that we “attempt to censor even our [own] thoughts.” (*ibid*)

Philosophically, epistemically, one’s thoughts, often referred to as one’s mental states, have always been deemed “privileged access,” one’s unqualified “intellectual property.” This universal human existential reality is for the first time in human history being threatened by a mind-machine connectivity which can then allow for brain hacking and tracking. Killware becomes KILLware.

For example, see CTRL-labs, founded in 2015, now owned by Meta, whose tagline is “Reality Labs brings together a world-class team of researchers, developers, and engineers to build the future of connection within virtual and augmented reality” (<https://tech.facebook.com/reality-labs/>); see also the related article at <https://www.neurofounders.co/articles/inside-the-billionaire-brain-race>. “Meta’s head of augmented reality (AR) and virtual reality (VR), Andrew ‘Boz’ Bosworth, announced the acquisition [of CTRL-labs by META] on his personal Facebook page. Bosworth explained how the wristbands would become the ‘universal controller for all your interactions with technology’. So far, Meta has showcased typing and swiping with AR and VR as its likely first application, but as Meta founder and CEO Mark Zuckerberg summed it up, ‘In some ways the holy grail of all this is a neural interface’.” (p 20)

Written three years ago in 2023 (the Afterword in 2024), Farahany’s warning is even more prescient today: “When Shoshana Zuboff coined the concept of surveillance capitalism, our personal data had already been widely commodified and our ability to claw it back largely gone. With neurotechnology, it’s not too late to protect against that same fate for our brains. We stand at a fork in the road – where the coming dawn of neurotechnology could change our lives for the better or lead us to a more dystopian future where even our brains are hacked and tracked. The choice is still ours to make.” (p. 211)

Farahany understands the important distinction between on the one hand “medically critical interfacing” as with brain/spinal-cord damaged patients and on the other hand “voluntary and cosmetic interfacing.” It is this latter side of the technology that concerns the author, with for example the 29 January 2024 post on X by Elon Musk about the first “Neuralink” human interface: “‘The first human received an implant from @Neuralink yesterday and is recovering well. initial results show promising neuron spike detection’. This unconventional announcement set off a flurry of media speculation, suggesting a potential milestone in brain-computer interface technology.” (p. 216-17)

“The question now is whether we will passively accept a future where our thoughts may no longer be our own or take decisive action to champion cognitive liberty and shape a future where our neural narrative remains our own.” (p. 225)

I’ll end this delightful if brief review/summary of Farahany’s excellent clarification of our new age of brain-based “intellectual property rights” with a couple quotes from the enigmatic LX (from *KillWare III*, by K. D. Kragen):

"i can trust my own mind only as far as i can trust the creator of my mind. as for 'noninvasive' neural implants, the same thing logically holds true: i can trust my implants only as far as i can trust the programmer." --Linuxus Xianicus

"the old saying still goes, 'if you can hack into their system, they can hack back into yours'. in the old days they got into your files, stole your 'stuff'; now they get into 'you', steal your soul." --Linuxus Xianicus

Three Excellent Related Discussions:

If Anyone Builds It, Everyone Dies: Why Superhuman AI Would Kill Us All, Eliezer Yudkowsky & Nate Soares, 2025, 260 pages, with notes and interspersed QR Codes for further resources. Eliezer Yudkowsky is a founding researcher of the field of AI alignment and the co-founder of the Machine Intelligence Research Institute (MIRI), San Francisco. Nate Soares is president of MIRI. (<https://ifanyonebuildsit.com/>) Yudkowsky & Soares map out their case, and compelling arguments, with a clarity that even non-geeks and non-hackers (white-hat of course) should be able to follow. The book is also full of creative futurist scenarios to help illustrate potential outcomes – to be wise concerning, and to avoid.

Office Shock: Creating Better Futures for Working and Living, by Bob Johansen, Joseph Press, Christine Bullen, 2023. 296 pages. (<https://www.iftf.org/projects/officeshock/>)

We will all be cyborgs – human/machine/VR-computer/augments – trans-speciesism – oy! This claim of universal cyborgism is somewhat central to the book’s conclusions about the future of officing (pp. 9-10). The “spectrum of augmentation” is the basis of amplifying the intelligence of your officeverse. “Thinking futureback we will all be cyborgs, part human, part computer.” Later in Chapter eight we get some details and implications of this new human *cyborgness* that is key to the future of officing and interfacing with that future.

Deep Fakes, The Coming Infocalypse, by Nina Schick, 2020, 206 pages, with Resources and Endnotes. (<https://ninaschick.org/about-nina-schick>)

Nina Schick ends this account of a growingly polluted information ecosystem on a positive note: “If you do not want the [infocalypse]... to become a permanent reality, engage now. Be careful [and mindful] about what information you share. Verify your sources. Correct yourself when you get something wrong. Be wary of your own political biases. Be skeptical, but not cynical” (pp. 205-206). She then lists three pages of excellent resources for fact-checking, media provenance, disinformation detection and protection, and media best practices.

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