

Implantable ‘neural lace’: How we may be able to stimulate our brain to regain youthful functions

[Elon] Musk stated publicly that given the current rate of A.I. advancement, humans could ultimately expect to be left behind—cognitively, intellectually—“by a lot.” His solution to this unappealing fate is a novel brain-computer interface similar to [an] implantable “neural lace.”

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Nautilus spoke with [Charles Lieber, the Mark Hyman Professor of Chemistry at Harvard University], arguably one of the scientists capable of making this sci-fi prediction come true.

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The brain grows literally throughout the neural lace. When it’s injected, this two-dimensional mesh ends up being like a cylinder that’s still a mesh, and it gets filled with the tissue...You could envision co-injecting this network, the mesh or lace, with stem cells and literally regrowing damaged tissue. Using some stimulation and stuff, you could help to rewire this in the way you want—somewhat science fiction, but also not totally crazy. In science, I’ve been disappointed at times, and this is a case where we’ve been more than pleasantly surprised. It’s certainly in the realm of what’s physically possible.

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It could follow, at the individual neuron level, the changes that are associated with aging in the neural circuit. We do have the capability to input stimulation into these circuits that were slowing down. You could, in fact, stimulate it again and try to get the behavior back to what it was when you were 30 or 50 versus whatever.

Read full, original post: [Will This “Neural Lace” Brain Implant Help Us Compete with AI?](#)