

Tech

Brain-computer interface will make people telepathic, scientists say

People will communicate 'not only without speaking but without words - through access to each other's thoughts at a conceptual level'

Anthony Cuthbertson • Tuesday 10 September 2019 02:11 EDT • [Comments](#)



(Neuralink)



Your support helps us to tell the story

[Read more](#) ∨

SUPPORT NOW



[Read more](#) ∨

Neural interfaces that link human brains to computers using artificial intelligence will allow people to read other people's thoughts, according to leading scientists.

A new report by the Royal Society outlines the benefits of such technology but warns that there could be severe risks if it falls into the wrong hands.

Brain-computer interfaces are already being developed by **Facebook** and Elon Musk's **Neuralink** and the report estimates that by 2040 neural interfaces will be an "established option" for effectively treating diseases like Alzheimer's.

More futuristic applications are expected to follow, such as brain implants that allow people to virtually taste, smell and see without actually physically experiencing the sensation. The report also details how such hardware could boost people's memory, improve their vision and even allow thoughts to be transmitted from one person to another.

“People could become telepathic to some degree, able to converse not only without speaking but without words – through access to each other’s thoughts at a conceptual level. This could enable unprecedented collaboration with colleagues and deeper conversations with friends,” the report states.

“Not only thoughts, but sensory experiences, could be communicated from brain to brain. Someone on holiday could beam a ‘neural postcard’ of what they are seeing, hearing or tasting into the mind of a friend back home.”

The report calls on the government to launch a national investigation into this emerging field in order to shape the development of the technology. It outlines the ethical concerns of the technology, such as protecting privacy and preventing it from being used as a tool for surveillance.

Questions are also raised about how such technologies affect what it means to be human. If implantable chips take control of certain decision processes, is that person still themselves or are they now part-machine?

“The applications for neural interfaces are as unimaginable today as the smartphone was a few decades ago,” said report co-chair Christofer Toumazou, a professor of engineering at Imperial College London.

“They could bring huge economic benefits to the UK and transform sectors like the NHS, public health and social care, but if developments are dictated by a handful of companies then less commercial applications could be side-lined. That is why we are calling on the government to launch a national investigation.”

Elon Musk unveils Neuralink 'threads' that hook human brain directly to computers

Earlier this year, **Neuralink made its first major announcement** by unveiling implantable "threads" that link a human brain directly to a computer.

It is aimed at helping paraplegics control computers in order to improve the communication skills but Neuralink CEO Elon Musk said the technology will "ultimately achieve a sort of symbiosis with artificial intelligence".

Mr Musk has consistently warned about the dangers of advanced artificial intelligence, claiming that in the future humans could fall so far behind machines that they eventually view humans in the same way humans currently view house pets.

"I don't love the idea of being a house cat, but what's the solution?" he said during a tech conference in 2016. "I think one of the solutions that seems maybe the best is to add an AI layer."

Key to achieving this parity with advanced AI, he said, is the sort of "neural lace" that is being developed at Neuralink. His company plans to begin clinical trials of the technology next year.



A fully implantable neural interface developed by Elon Musk's Neuralink connects to the brain through tiny threads (*Neuralink*)

Facebook has described this new cyborg era as "the next great wave in human-oriented computing" and is working on a headset that is perhaps the first step towards telepathic communication.

In July, the technology giant published a paper in *Nature Communications* describing a headset that can transfer a person's thoughts directly onto a computer screen. For now it can only decode a small selection of words but the firm hopes it will one day work seamlessly to transcribe thoughts.

"Imagine a world where all the knowledge, fun, and utility of today's smartphones were instantly accessible and hands-free," Facebook wrote in a blog post at the time.

"A decade from now, the ability to type directly from our brains may be accepted as a given. Not long ago, it sounded like science fiction. Now, it feels within plausible reach."

More about: [Neuralink](#) [Brain-computer interface](#)



Join our commenting forum

Join thought-provoking conversations, follow other Independent readers and see their replies

Promoted stories

Cinnamon: The Hidden Blood Sugar Enemy? Try This Tonight!

Sponsored | CINNAMON HELP

[Learn More](#)

The Truth About Metal Roofs

Sponsored | METAL ROOF NATION

[Learn More](#)

Chuck Norris: If You're Over 60, Avoid These 3 Foods Like The Plague

Sponsored | ROUNDHOUSE PROVISIONS

[Learn More](#)

Amazon Is Losing Money as Shoppers Are Canceling Prime For This Clever Hack

This simple trick can save tons of money on Amazon, but most Prime members are ignoring it.

Sponsored | ONLINE SHOPPING TOOLS

This 1 Simple Tip Keeps Mosquitoes Out From Your Yard!

Squito Stickers | Sponsored

Doctors Stunned: New ED Med Works in Just Minutes

Sponsored | MENS HEALTH

Seniors Born 1941-1979 Receive 55 Benefits This Month if They Ask

Ridiculous benefits seniors are entitled to in 2025, but often forget to claim.

Sponsored | WALLETJUMP

[Learn More](#)

All Senior Drivers Should Claim This Large Reward (Check If You Qualify)

US Drivers Somehow Missed This Important Notice

Top Podiatrist: This Mixture Burns out The Fungus After The First Use

Podiatrists Impressed: Seniors Praise This Easy to Use New Brush-On "Pen" for Toenail Fungus

Sponsored | LUNAVIA

[Learn More](#)

NEWS

British teenager reported missing in Thailand found detained in Georgian prison

Trump biographer Michael Wolff claims he and Melania are ‘separated’

Why Walgreens Hides This Cheap 87¢ Generic Cialis

Sponsored | HEALTH ALLIANCE BY FRIDAY PLANS

[Learn More](#)

An insider’s guide to the perfect Lisbon spring break and how it stole Paris’s crown

An insider’s guide to the perfect spring break in Lisbon and how the city stole Paris’s crown

Texas Gov Will Cover The Cost To Install Solar If You Live In These Zip Codes

Savvy homeowners are taking advantage of government incentives to install solar panels...

Sponsored | **SUNVALUE**

[Learn More](#)

MD: Building Muscle After 60 Comes Down To This 1 Thing

Sponsored | **APEX LABS**

SPORTS

Rosamund Pike says she was asked to ‘unzip and drop’ her dress at James Bond audition

Erling Haaland offers brutal assessment of Man City’s season

Men's Casual Non-Slip Breath Walking & Driving Shoes-70% OFF

Sponsored | **@ORTHOPEFEET**

[Shop Now](#)

NEWS

Murder accused says he cut dressing gown belt so he could hold dead wife



GET IN TOUCH

Contact us



OUR PRODUCTS

[Register](#)

[Newsletters](#)

[Donate](#)

[Today’s Edition](#)

[Install our app](#)

[Archive](#)

OTHER PUBLICATIONS

[International editions](#)

[Independent en Español](#)

[Independent Arabia](#)

[Independent Turkish](#)

[Independent Persian](#)

[Independent Urdu](#)

LEGAL

[Code of conduct and complaints](#)

[Contributors](#)

[Cookie policy](#)

[Donations Terms & Conditions](#)

[Privacy policy](#)

[Do Not Sell or Share My Information](#)

[User policies](#)

[Modern Slavery Statement](#)

The Standard EXTRAS

[Puzzles](#)

[All topics](#)

[Betting Offers](#)

[Voucher codes](#)

[Competitions and offers](#)

[Independent Advertising](#)

[Independent Ignite](#)

[Syndication](#)

[Working at The Independent](#)