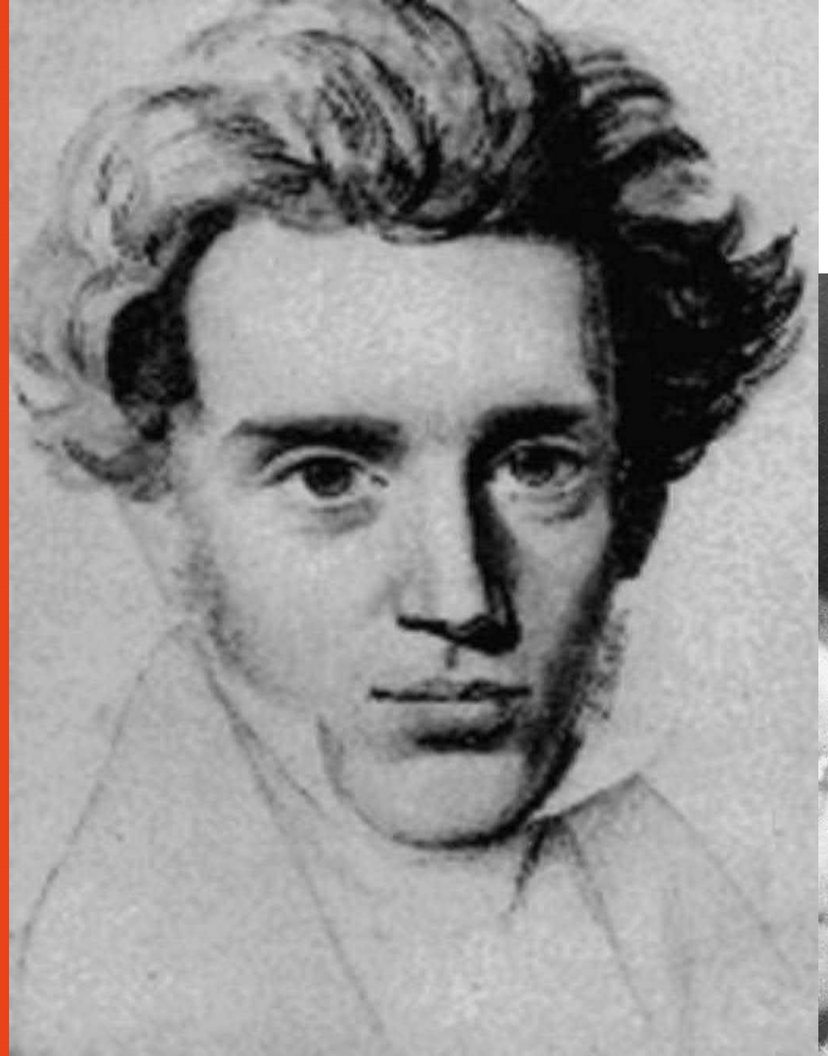

SK ANNUAL
CONFERENCE
7 NOVEMBER 2019

BETWEEN AUTHENTICITY AND AUTHENTICATION

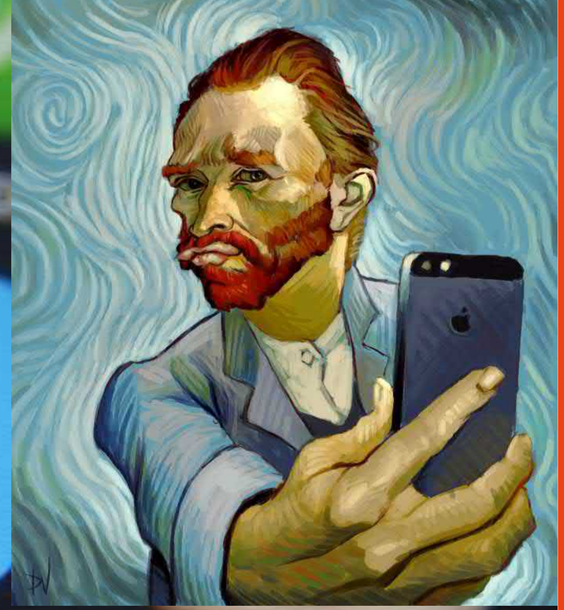
Pim Haselager

Ancient Delphi maxim: Know yourself

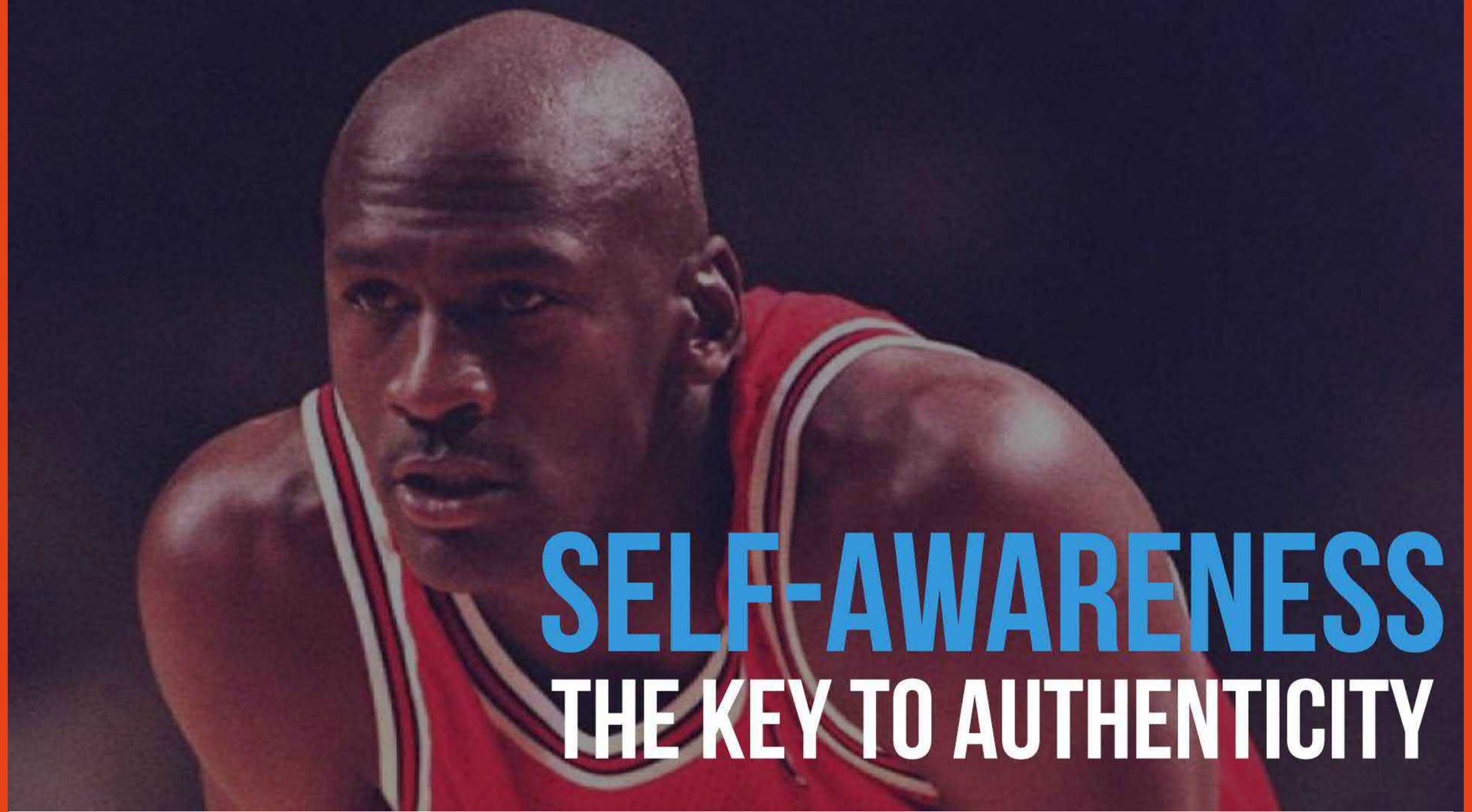


20th century Existentialism: Be yourself

Internet: Show yourself



21st century:
Prove yourself

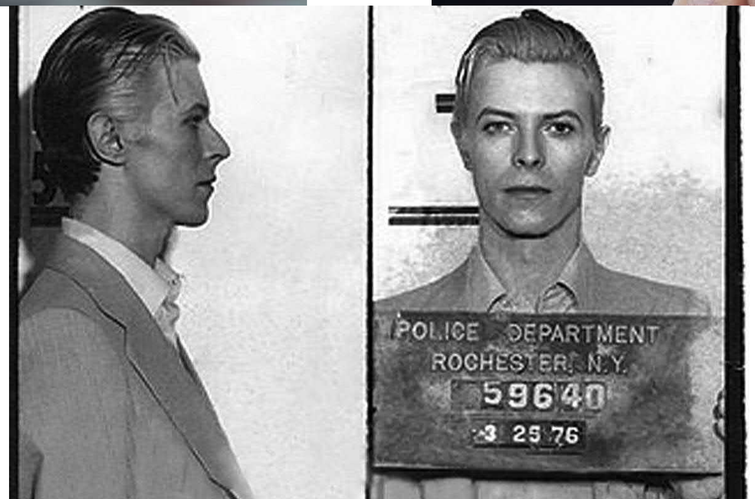

SELF-AWARENESS
THE KEY TO AUTHENTICITY

AUTHENTICATION

KEY TO SELF-EXPRESSION

The myriad aspects of ourselves


VOTE


POLICE DEPARTMENT
ROCHESTER, N.Y.
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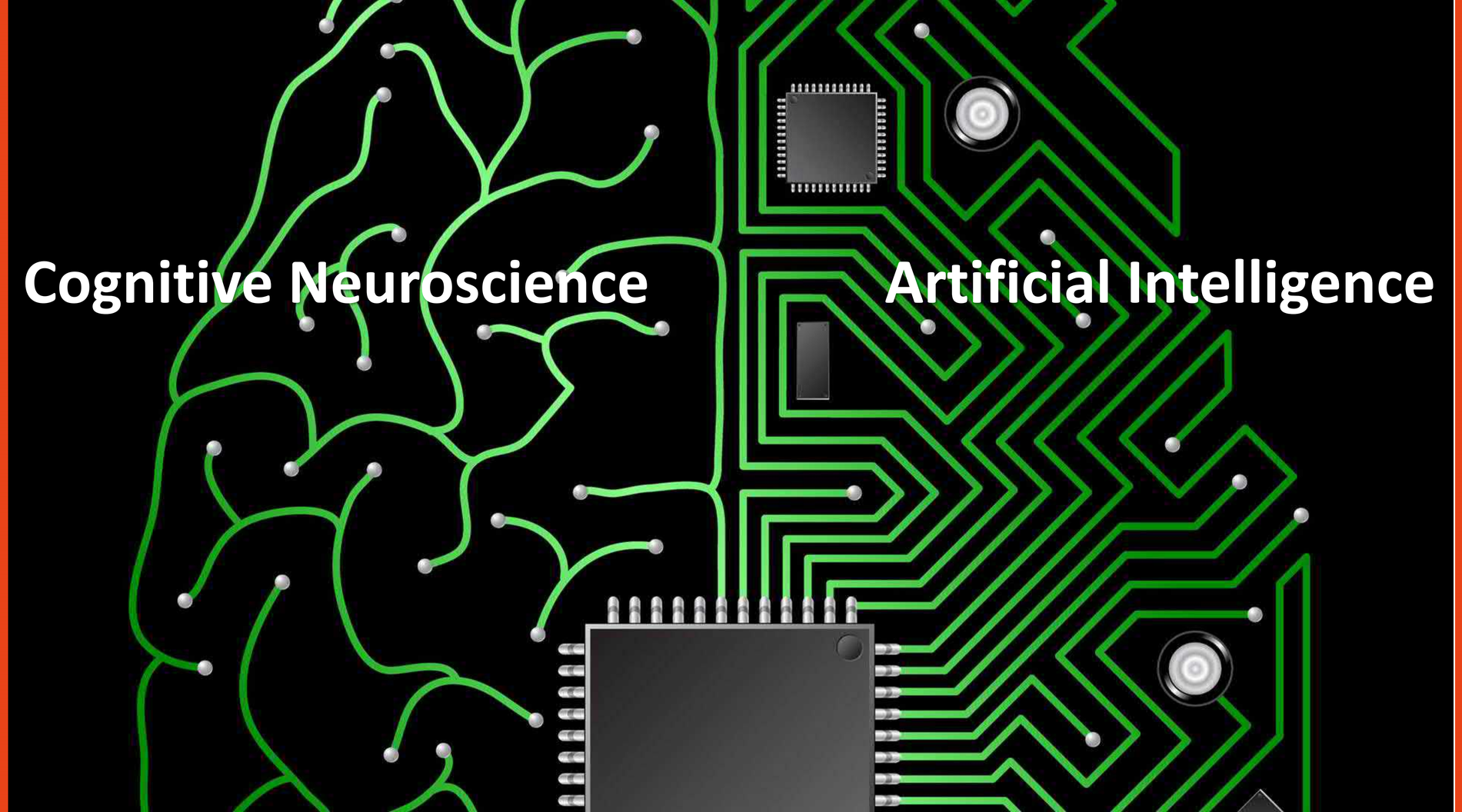
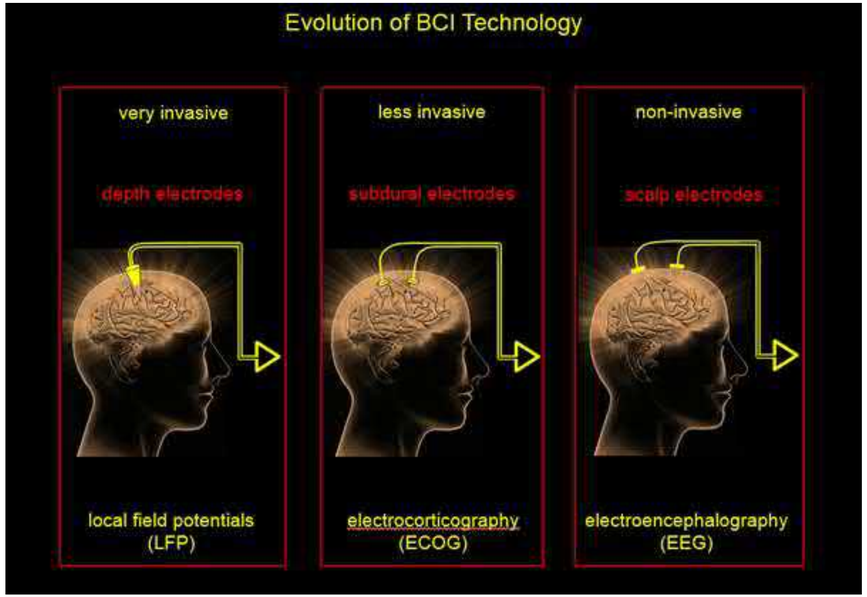
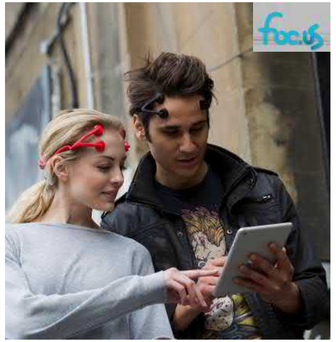
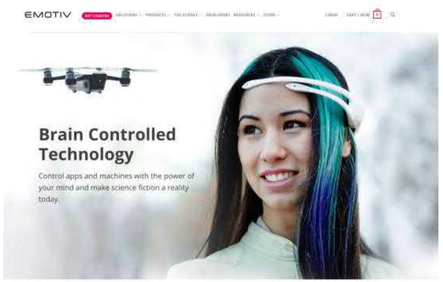
Authenticity
Authentication

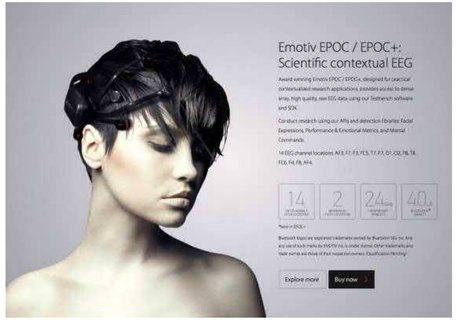

Cognitive Neuroscience
Artificial Intelligence

NEUROTECHNOLOGY









HI-TECH Chronicle

HOME BUSINESS CULTURE MEDICINE SCIENCE SPORT TECHNOLOGY CONTACT US

Home › Brain-Reading Technology › Facebook & Neuralink Working On Brain-Reading Technology

Brain-Reading Technology Facebook

Facebook & Neuralink Working On Brain-Reading Technology

By htc – September 2, 2019 57 0

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BUSINESS INSIDER DEUTSCHLAND INTERNATIONAL

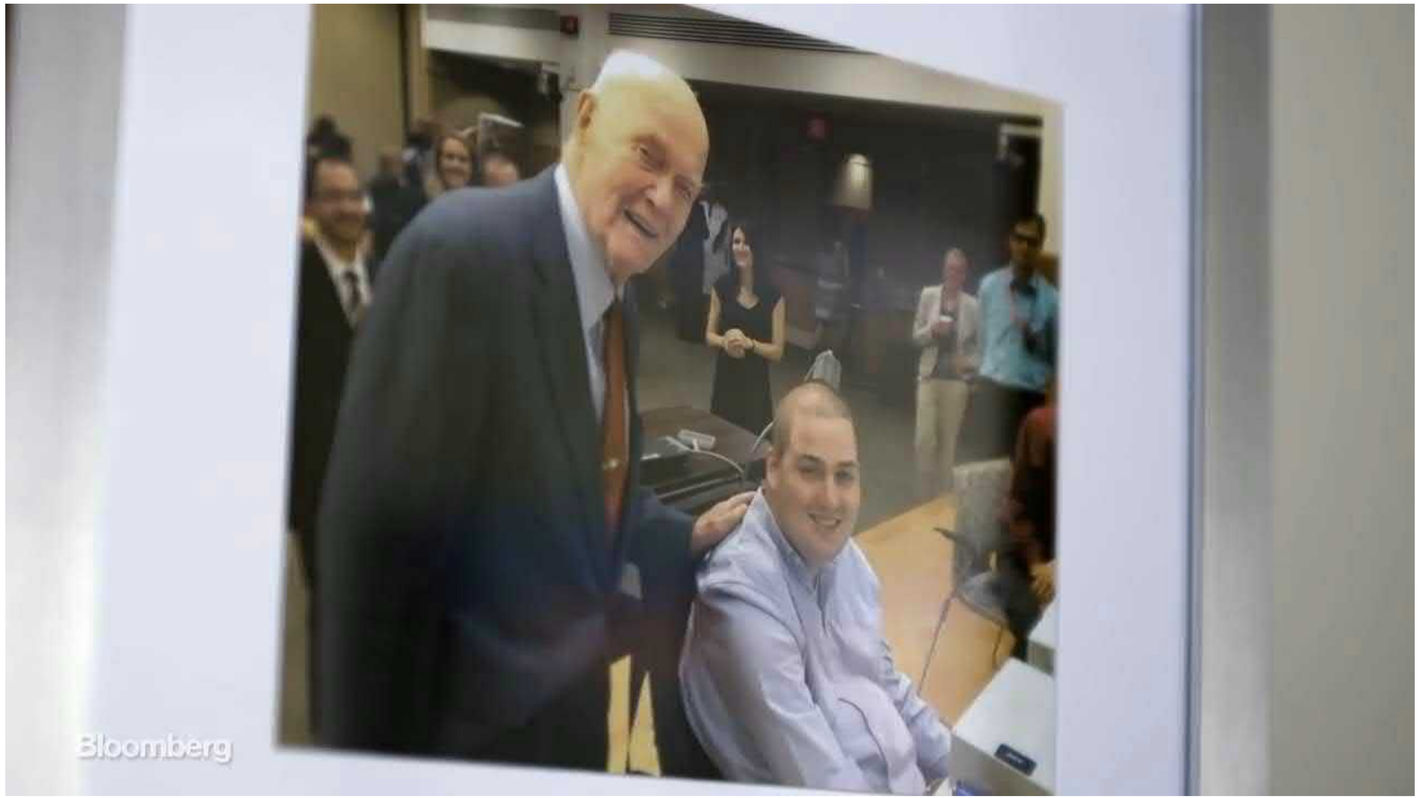
Elon Musk has launched a company that hopes to link your brain to a computer

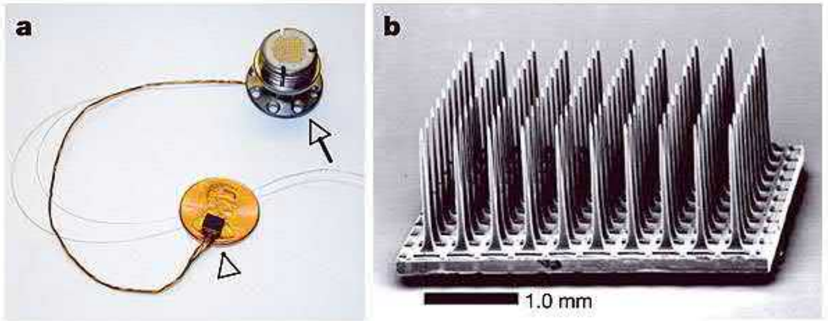
BI Danielle Muoio, Business Insider
27.03.2017, 21:43

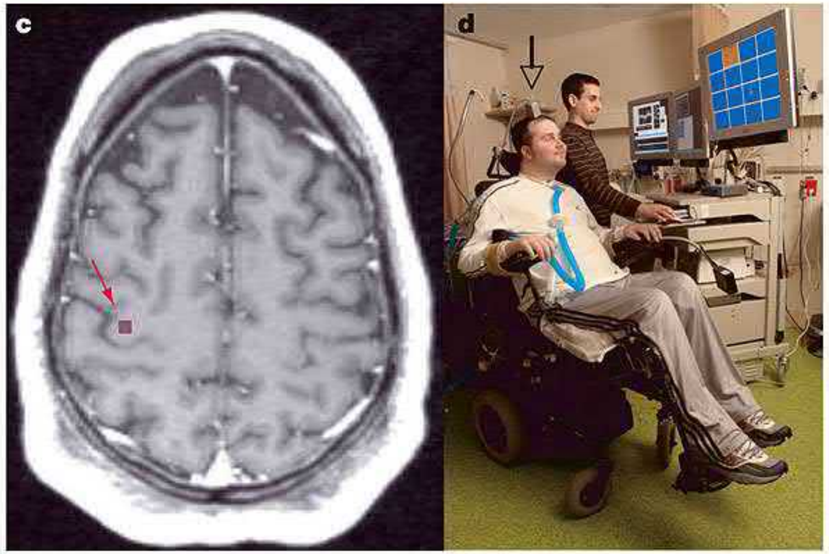
FACEBOOK LINKEDIN TWITTER

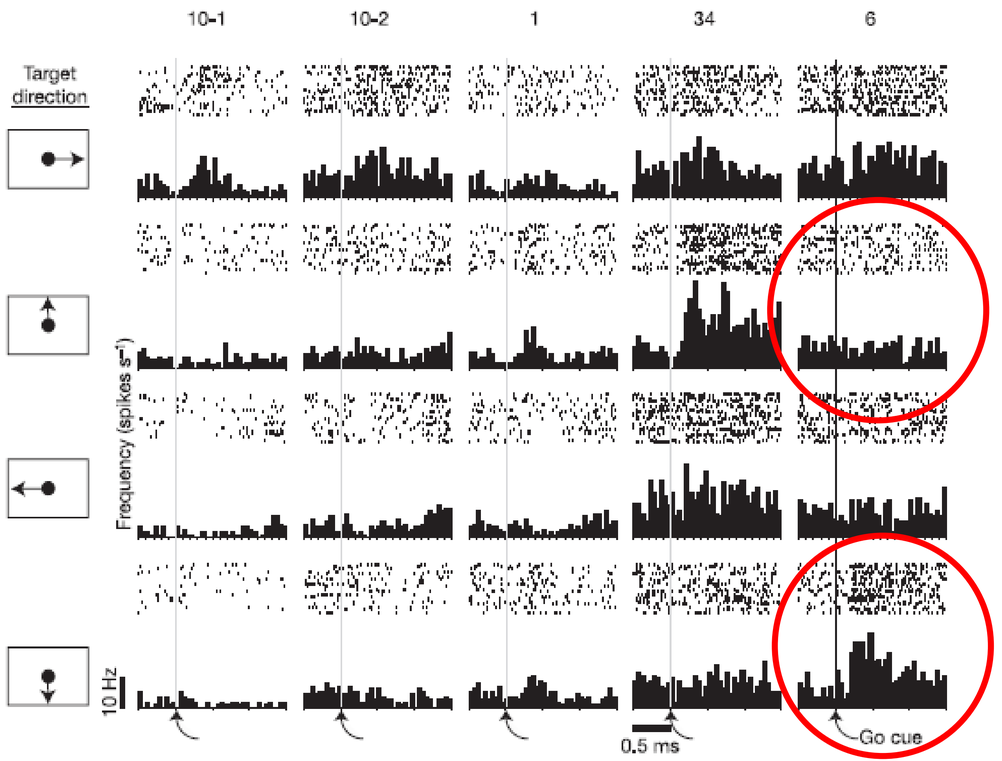
Elon Musk has launched a company dedicated to linking human brains with computers, The Wall Street Journal's Rolfe Winkler reported Monday.

BRAIN-COMPUTER INTERFACING









Neuronal ensemble control of prosthetic devices by a human with tetraplegia

Leigh R. Hochberg[1,2,4], Mijail D. Serruya[2,3], Gerhard M. Friehs[5,6], Jon A. Mukand[7,8], Maryam Saleh[9]†, Abraham H. Caplan[9], Almut Branner[10], David Chen[11], Richard D. Penn[12] & John P. Donoghue[2,9]

HEARING COLORS THE CYBORG WAY

Neil Harbisson

https://www.ted.com/talks/neil_harbisson_i_listen_to_color

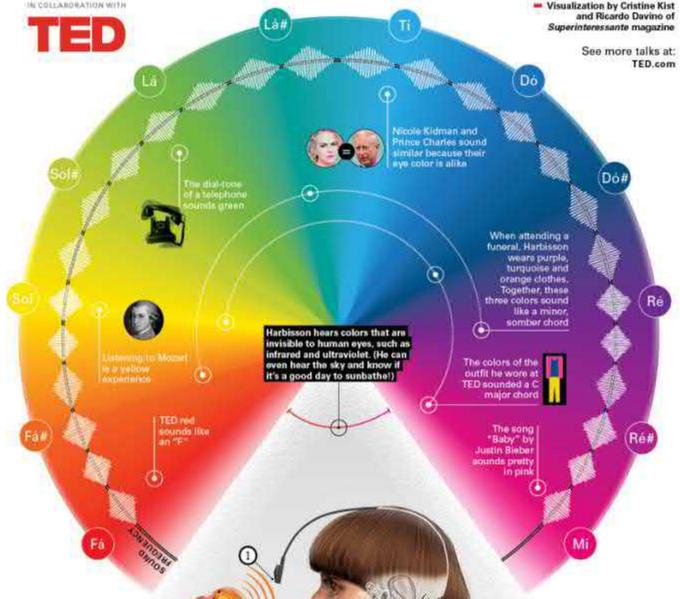
{IDEA VISUALIZATION} The sound of colors

In his talk at TEDGlobal 2012, colorblind artist Neil Harbisson delighted the audience with his brightly colored outfit, his quirky personality, and his eyeborg — a device implanted in Harbisson's head that lets him hear a rainbow of color. Instead of seeing a world in grayscale, he can listen to the audible frequencies transmitted by the colors in faces, paintings, even the weather. Step inside the mind of Neil's symphony of color.

IN COLLABORATION WITH TED

Visualization by Cristine Kist and Ricardo Davino of *Superinteressante* magazine

See more talks at: TED.com



THE EYEBORG

Understand how the device implanted in Neil's head transforms color into sound.

1. A sensor detects the frequency of the color in front of Harbisson and transmits it through a chip installed on the back of his head.
2. The chip converts the colors into sound waves. Each color corresponds to a musical note.
3. These sound waves travel through the skull using bone conduction and arrive at Harbisson's auditory system.

Illustration by Pedro Henrique Ferreira

{IDEA VISUALIZATION} The sound of colors

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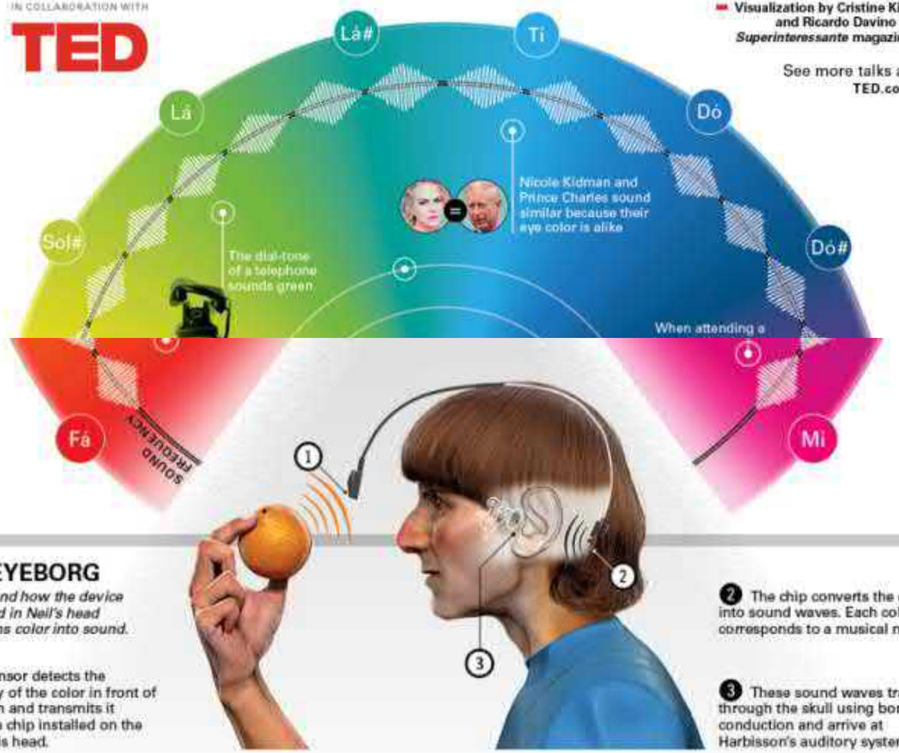

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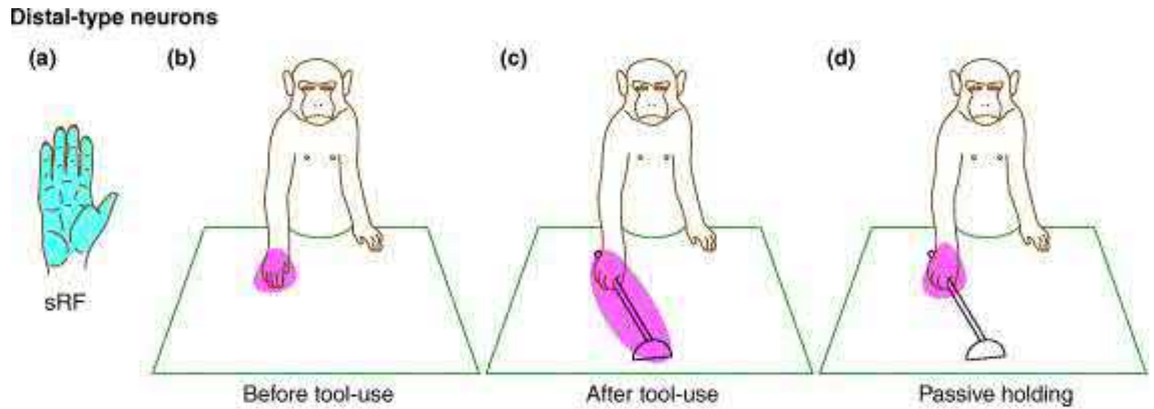
Illustration by Pedro Henrique Ferreira

“A NEW PART OF MY BODY”

NEURAL PLASTICITY: BRAIN ADAPTS

Change in neural responses to visual stimulation after two weeks of training



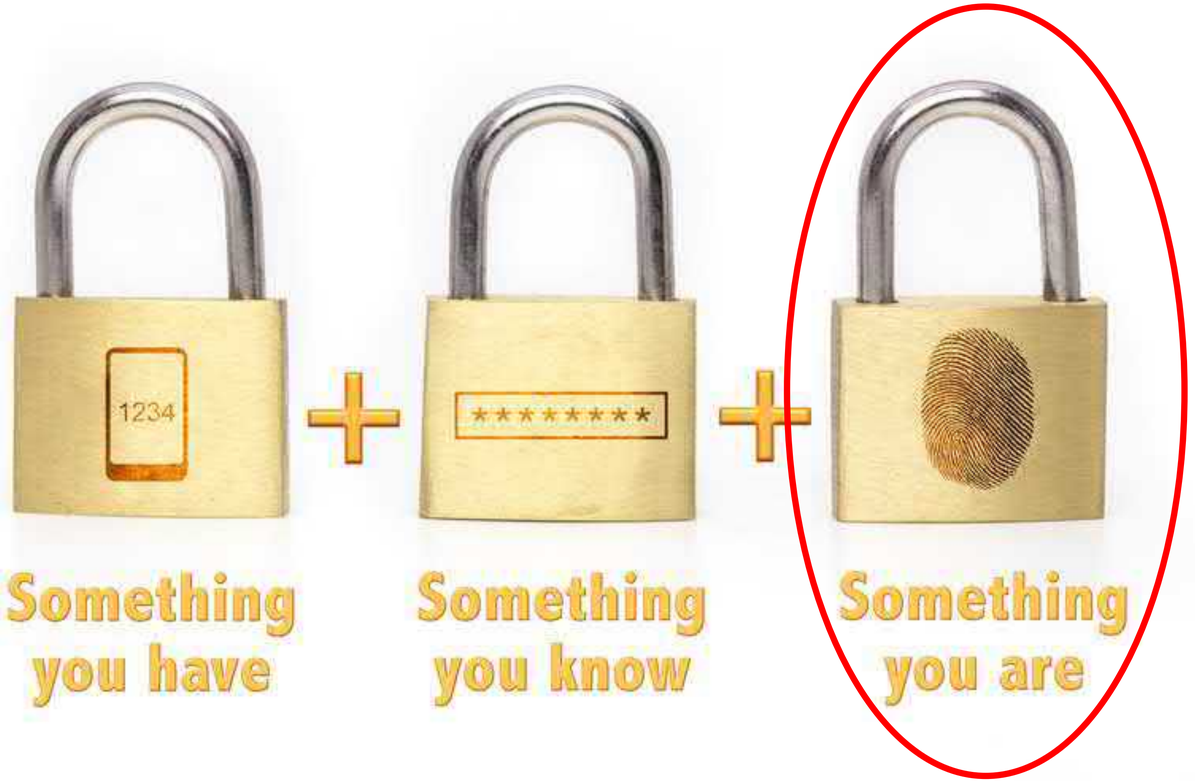
Maravita & Iriki 2004

TRENDS in Cognitive Sciences

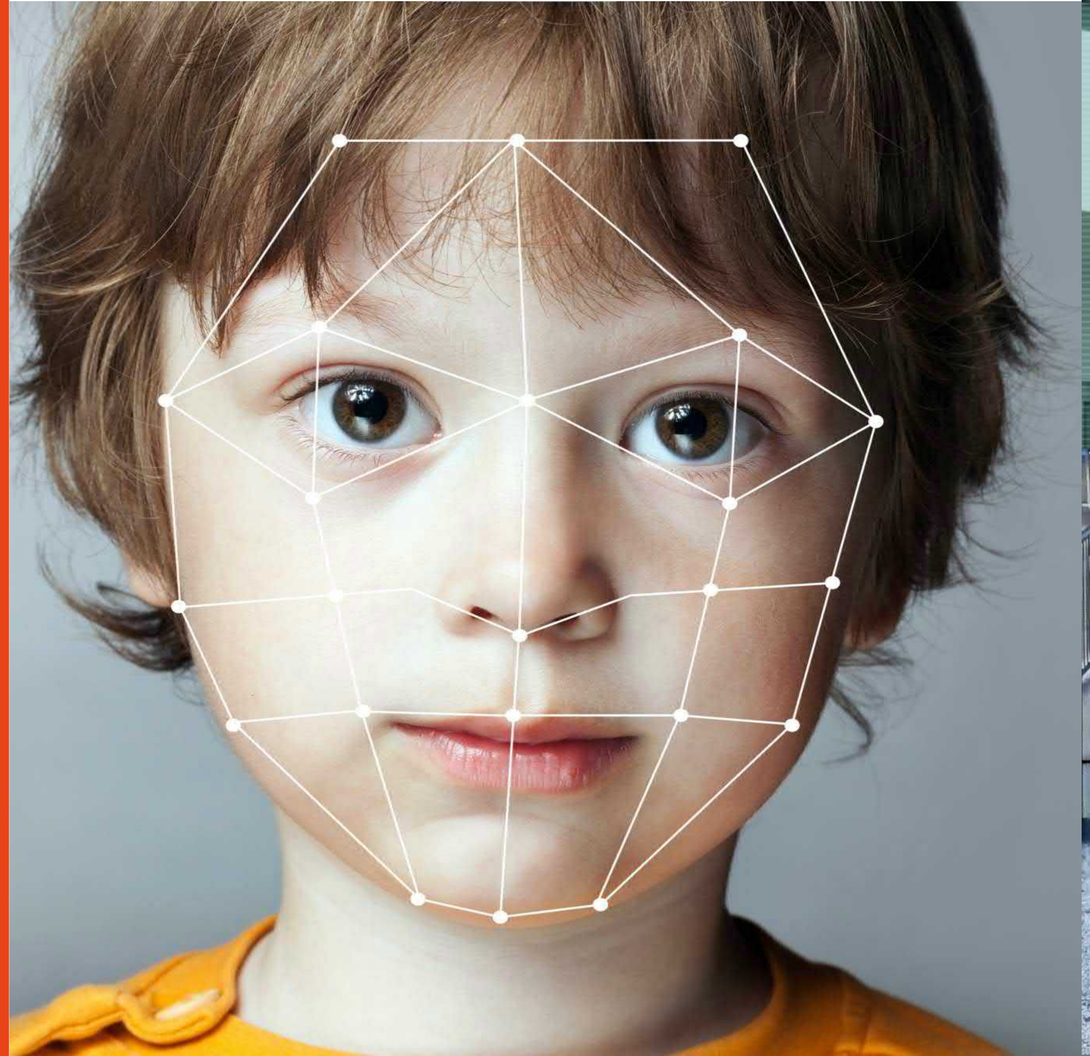
“A NEW PART OF MY BODY”

Physically, the Eyeborg device can be detached
Mentally and neuronally, it is fully integrated
H. is more complete, more authentic, with the device

Multi factor authentication



From the surface to the inner core




Staff
Marie Williams
Senior Portfolio manager
Contractor
Pedro Luis de Souza


16:37:38
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WILL THE IPHONE® X RECOGNIZE YOU AFTER PLASTIC SURGERY?

Posted on September 29, 2017 by Houtan Chaboki, M.D.

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SECTIONS SEARCH NEW YORK POST

Women who traveled for plastic surgery can't fly home again

By Amanda Woods October 9, 2017 | 9:53am | Updated

News / Lifestyle / Beauty /

Women face identity issues post transformative plastic surgery in South Korea

Plastic surgery procedures in South Korea have now attained such level of perfection that women who have undergone transformative surgeries are rendered unrecognizable post-surgery and are having trouble getting through passport control.

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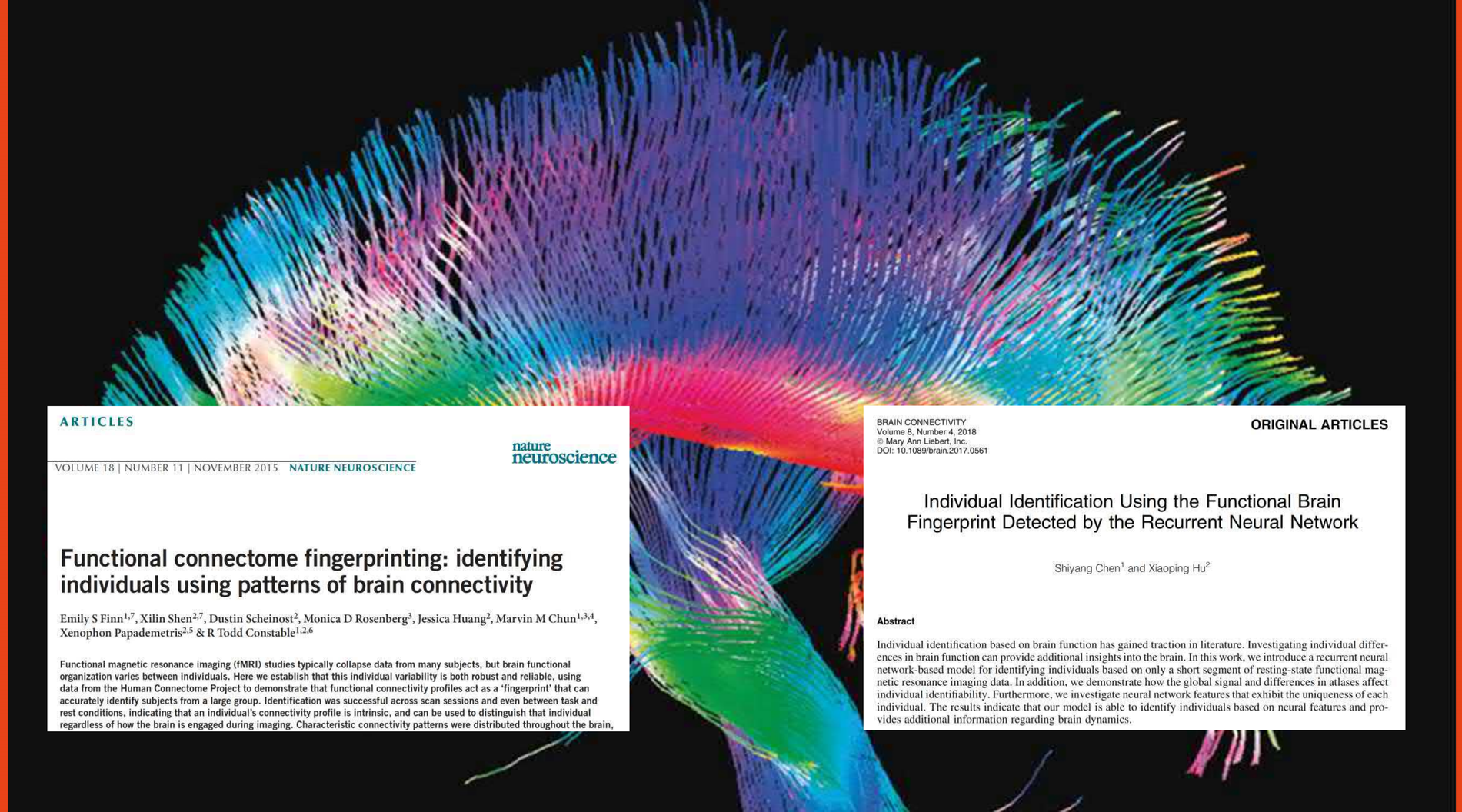
IndiaToday.in
New Delhi
April 25, 2014 UPDATED: April 25, 2014 18:51 IST



ARTICLES

VOLUME 18 | NUMBER 11 | NOVEMBER 2015 NATURE NEUROSCIENCE

nature neuroscience

Functional connectome fingerprinting: identifying individuals using patterns of brain connectivity

Emily S Finn[1,7], Xilin Shen[2,7], Dustin Scheinost[2], Monica D Rosenberg[3], Jessica Huang[2], Marvin M Chun[1,3,4], Xenophon Papademetris[2,5] & R Todd Constable[1,2,6]

Functional magnetic resonance imaging (fMRI) studies typically collapse data from many subjects, but brain functional organization varies between individuals. Here we establish that this individual variability is both robust and reliable, using data from the Human Connectome Project to demonstrate that functional connectivity profiles act as a 'fingerprint' that can accurately identify subjects from a large group. Identification was successful across scan sessions and even between task and rest conditions, indicating that an individual's connectivity profile is intrinsic, and can be used to distinguish that individual regardless of how the brain is engaged during imaging. Characteristic connectivity patterns were distributed throughout the brain,

BRAIN CONNECTIVITY
Volume 8, Number 4, 2018

DOI: 10.1089/brain.2017.0561

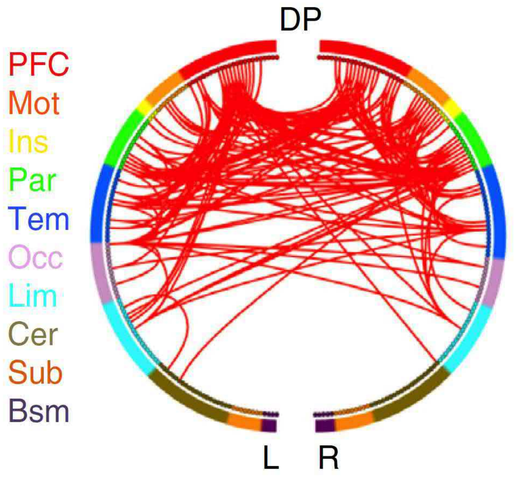
ORIGINAL ARTICLES

Individual Identification Using the Functional Brain Fingerprint Detected by the Recurrent Neural Network

Shiyang Chen[1] and Xiaoping Hu[2]

Abstract

Individual identification based on brain function has gained traction in literature. Investigating individual differences in brain function can provide additional insights into the brain. In this work, we introduce a recurrent neural network-based model for identifying individuals based on only a short segment of resting-state functional magnetic resonance imaging data. In addition, we demonstrate how the global signal and differences in atlases affect individual identifiability. Furthermore, we investigate neural network features that exhibit the uniqueness of each individual. The results indicate that our model is able to identify individuals based on neural features and provides additional information regarding brain dynamics.

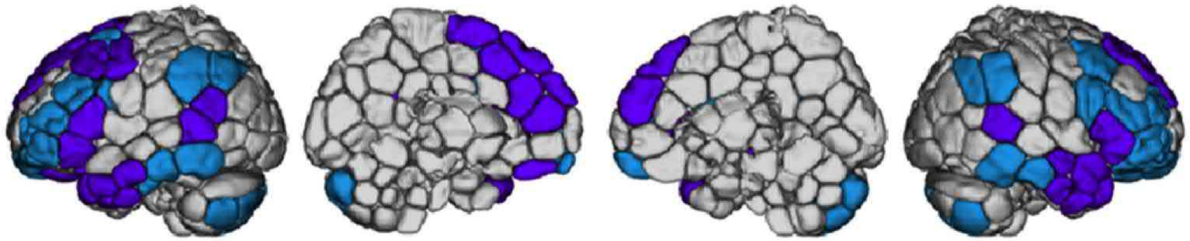


nature neuroscience

Functional connectome fingerprinting: identifying individuals using patterns of brain connectivity

Emily S Finn[1,7], Xilin Shen[2,7], Dustin Scheinost[2], Monica D Rosenberg[3], Jessica Huang[2], Marvin M Chun[1,3,4], Xenophon Papademetris[2,5] & R Todd Constable[1,2,6]

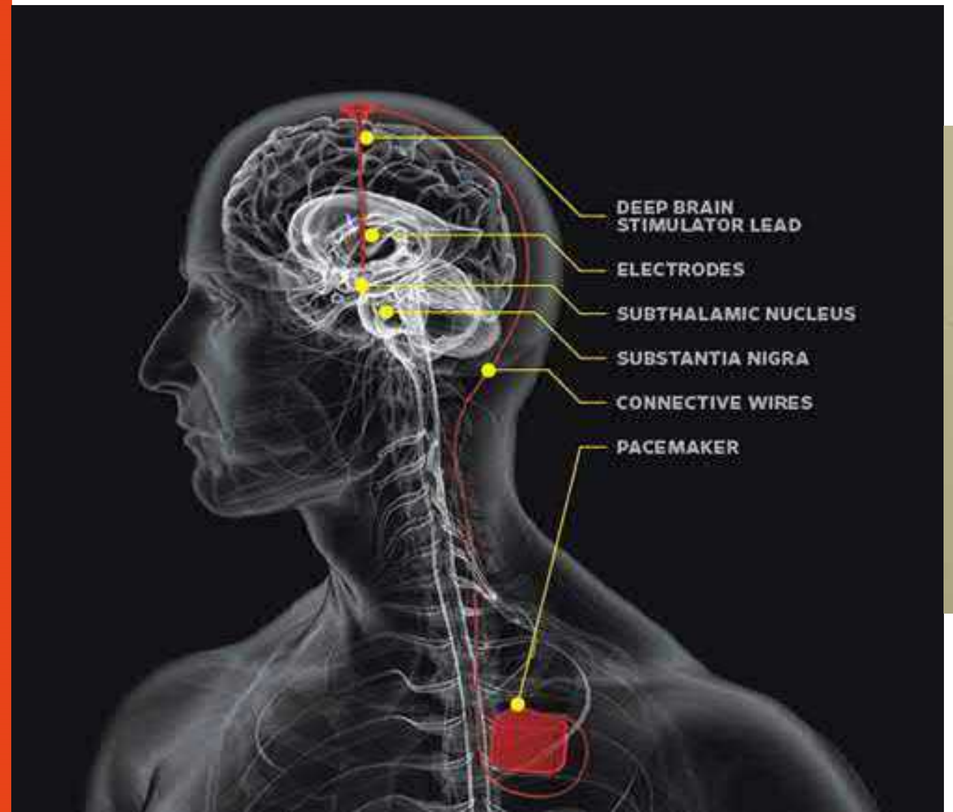
Frontoparietal networks



"an individual's functional brain connectivity profile is both unique and reliable, similarly to a fingerprint"

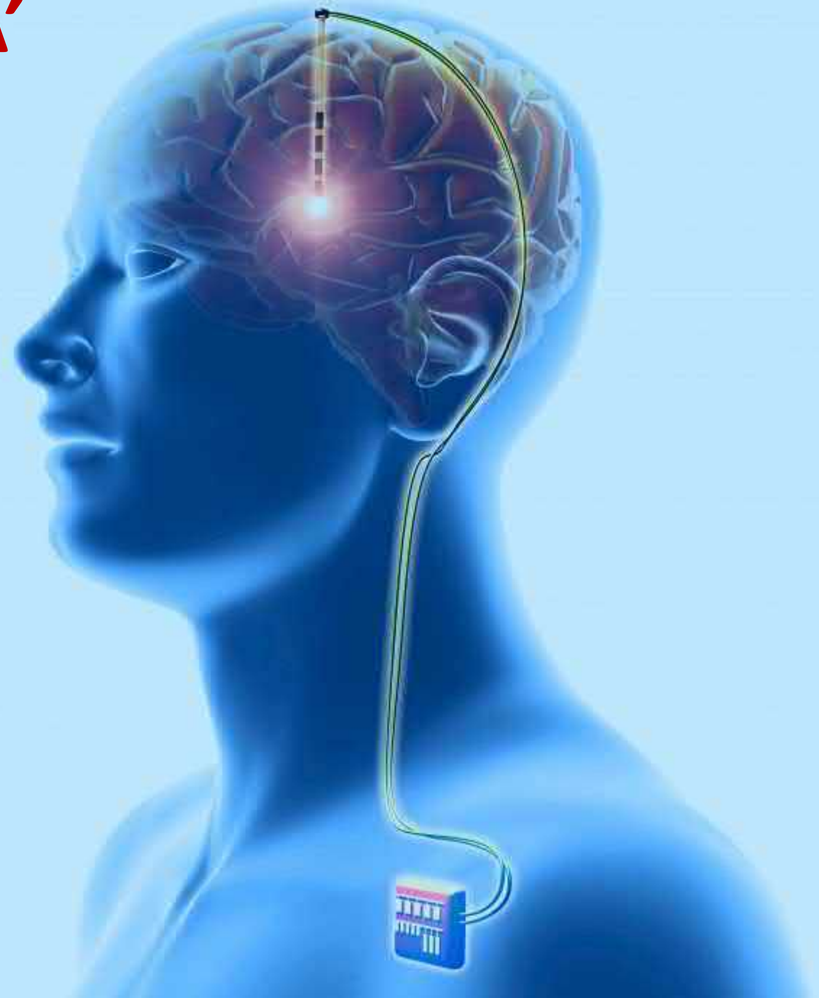
"performance was best using a combination of two frontoparietal networks"

AUTHENTICITY &
DEEP BRAIN STIMULATION



THE CASE OF ‘PATIENT A’

67 years old with Parkinson Disease
Compulsive buying of clothes, cars, houses, country estate



Memory modification

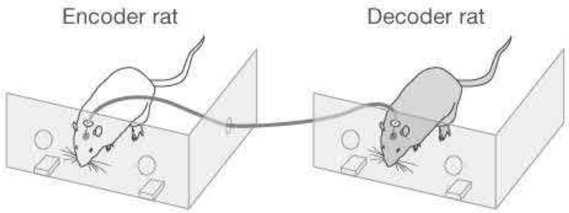
International Review of the Red Cross, Page 1 of 27.
doi:10.1017/S1816383118000437

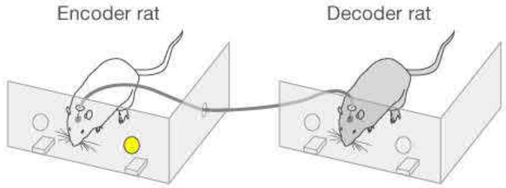
INTERNATIONAL
REVIEW
of the Red Cross

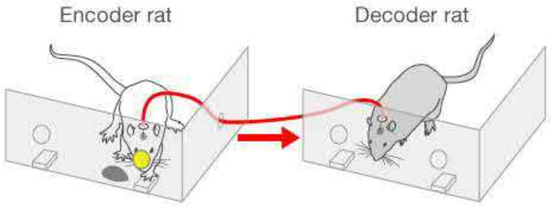
Eradicating war memories: Neuroscientific reality and ethical concerns

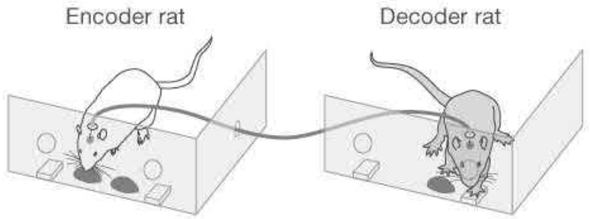
Marijn C. W. Kroes and Rain Liivoja*
Marijn C. W. Kroes is Assistant Professor in Cognitive Neuroscience at the Donders Institute for Brain, Cognition, and Behaviour at the Radboud University Medical Center, Nijmegen. His research focuses on the neural mechanisms that support the modification of emotional memories and decision-making,

BRAIN TO BRAIN COMMUNICATION









www.nature.com/scientificreports

A Brain-to-Brain Interface for Real-Time Sharing of Sensorimotor Information

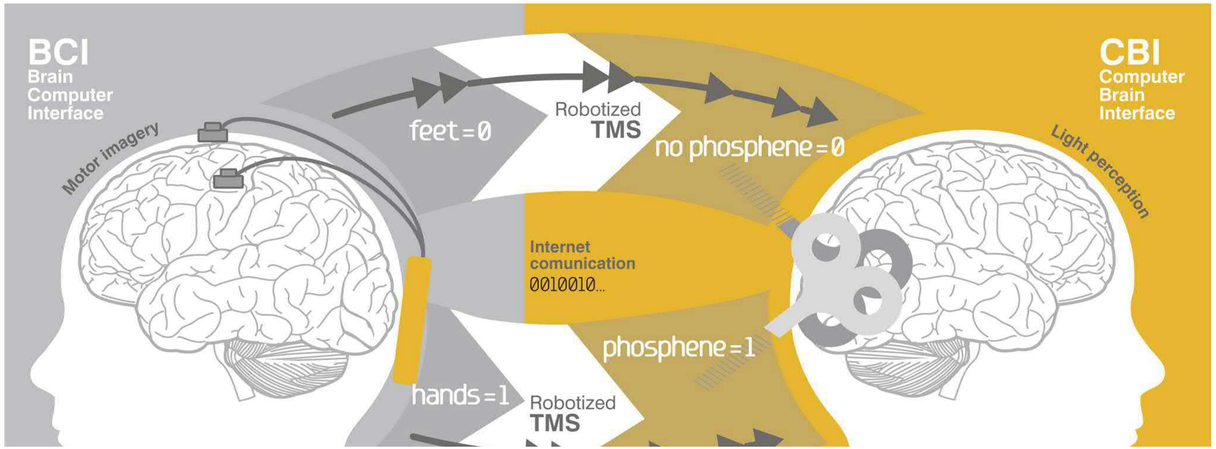
Miguel Pais-Vieira[1], Mikhail Lebedev[1,4], Carolina Kunicki[5], Jing Wang[1]* & Miguel A. L. Nicolelis[1,2,3,4,5]

OPEN ACCESS Freely available online

PLOS ONE

Conscious Brain-to-Brain Communication in Humans Using Non-Invasive Technologies

Carles Grau[1,2], Romuald Ginhoux[3], Alejandro R
Michel Berg[3], Julià L. Amengual[5], Alvaro Pascu



frontiers in
NEUROENGINEERING

OPINION ARTICLE
published: 12 February 2014
doi: 10.3389/fneng.2014.00004

When "I" becomes "We": ethical implications of emerging brain-to-brain interfacing technologies

John B. Trimper[1], Paul Root Wolpe[2,3] and Karen S. Rommelfanger[2,4]*


AUTHENTICITY
STRAIGHT AHEAD