

The secret of neuroscience boom: are there secret human experiments in Latin América?

David Salinas Flores

Department of Internal Medicine, Guest Professor, National Mayor San Marcos University, Section Cardiology, Alberto Sabogal Hospital, Essalud, Lima, Peru

Correspondence to David Salinas Flores, MD, Federico Villarreal 592 Urbanización Ingeniería, San Martín de Porres. Lima, Perú
E-mail: dsalinas2009@yahoo.com

Received 08 December 2015

Accepted 14 December 2015

The Egyptian Society of Internal Medicine
2016, 28:1–4

About 6 years ago there sparked a phenomenon in science called the neuroscientific boom. Neurologists underpin this phenomenon to cost reduction techniques such as electroencephalograms and to improved noninvasive technology such as functional MRI. But the human brain, the most complex organ in the universe, has not yet been fully investigated with the existing noninvasive technologies. Thus, there is a suspicion that the real reason for this boom is a secret, forced, and illicit human experimentation in Latin America. Physicians should investigate, be alert, and report these potential unethical human experiments to prevent any further damage to the public health of the citizens of Latin societies.

Keywords:

bioética, BRAIN initiative, brain research, human brain project, neuroscience

Egypt J Intern Med 28:1–4

© 2016 The Egyptian Society of Internal Medicine
1110-7782

Since about 6 years, a phenomenon in science has arisen: the so-called neuroboom [1], or furor over neurosciences. Surprising neuroscientific research and technological innovations based on neuroscience have been announced. The BRAIN initiative announced by the President of the USA, Barack Obama, on the development of new technological tools to perform brain mapping [2], the human brain project about the construction of an artificial brain announced by the European community [3], and the development of a similar project announced by China [4] are at the head of this neuroscience boom (Fig. 1) The main milestones of this phenomenon are as follows:

- (1) In 2013, Deep Learning was considered a breakthrough technology of the year. It is a software to mimic the activity in layers of neurons in the neocortex. The software learns, in a very real sense, to recognize patterns in digital representations of sounds, images, and other data.
- (2) Clarity, a research that allows seeing a transparent brain, was considered a technological progress by Science magazine in 2013 and by the Massachusetts Institute of Technology in 2014.
- (3) In 2013, Thomas Südhof received the Nobel Prize in Medicine and Physiology for his research on the formation of synapses in the adult.
- (4) In 2014, William E. Moerner received the Nobel Prize in Chemistry 2014 for advances in nanoscopy, a technique that facilitates one to see how cells produce neuronal synapse.
- (5) In 2014, John O'Keefe, May-Britt Moser, and Edvard I. Moser received the Nobel Prize in Medicine and Physiology for their research on brain GPS [6].

- (6) In 2015, neuromorphic chips, chips based on the brain, were considered emerging technology [7].

In parallel, DARPA announced the development of technological creations like the cortical modem, which allows human telepathy [8]. Major technological transnational companies such as Google are interested in artificial intelligence. In 2010, France's government established an office of neuropolitics; conferences in programs such as TED, in which researchers such as Regina Dugan, Thomas Kelley, Facundo Manes, Rafael Yuste, Sebastian Thrun, and Mariano Sigman talk to the society about innovations based on neuroscience, were scheduled. Books on neuroscience that became bestsellers were published; among them were 'How to create a mind' and 'Creative Confidence: unleashing the creative potential with us all'. Workshops on teaching neurology to nonspecialists about everyday and marketing applications and all this neuroscientific boom has created a million-dollar industry related to it.

In Argentina, the neuroscientific boom has caused an impact on many sectors of the Argentinean society; thus, the so-called neuropsychoeeducation [9] has been applied in the education sector and some teachers promote it in Chile [10]. The Favaloro Foundation, through its Institute of Neuroscience and its main speaker Facundo Manes (Fig. 2), states through conferences for teachers that neuroscientists cannot be isolated; they will join school teachers in neuroscientific research projects.

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

Figure 1



The Neuroscience boom. The economic powers have led the boom, creating The BRAIN Project, the Human Brain Project, and BRAIN China ^[5] (<http://medicalxpress.com/news/2013-10-swiss-university-human-brain.html>).

‘The new neuroimaging technology is promising to analyze the brain processing of mathematics, reading and other specific learning-related tasks’.

‘Neurosciences can contribute in the search for answers and the teachers must not fear their discoveries’ [9].

Neuroscience has had an impact on the Argentinean justice as well. The President of the Supreme Court of Justice of the Nation, Judge Ricardo Lorenzetti, presented a new institute, the Institute of Neuroscience and Law. Thus, across the world, different areas of knowledge have begun to acquire a neurodimension and new areas like neuroeconomics, neurotheology, neuropolitics, neuroeducation, neuromarketing, and neuroarts have been formed.

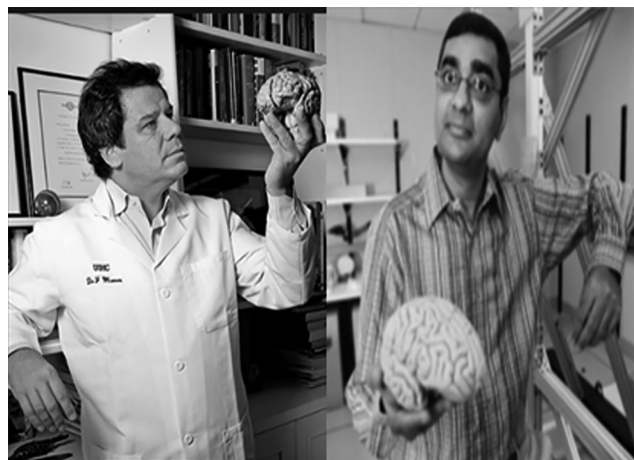
Mariano Sigman, physician, Director of the ‘Decision Making’ program in the human brain project, who has organized the integrative neuroscience laboratory in Argentina and has published neuroscientific experiments performed on teachers and students in Argentina, and also on neonates, explains the reason for the neuroscientific boom as follows [11]:

‘The fundamental change for this neuroscientific boom is the capacity to access the human brain from outside.’

Sigman, who nowadays conducts neuroscience workshops for nonspecialists, states:

‘... it is as if a sort of ‘thought radiograph’ had been obtained, with the advance and lowering costs of technologies like the electroencephalograms, the PET or images of functional magnetic resonance ‘What is the mental landscape of a newborn? Is a patient in

Figure 2



The secret of the neuroscience boom. Facundo Manes, one of the promoters of the neuropsicoeducaci3n in schools in Argentina (right), and Dharmendra Modha, the head of research at IBM (left). There is a suspicion that he built the IBM chip with information from illegal human experiments.

a vegetative state conscious? Discussions that once belonged in a caf3 become debates based on observable data’ [11].

However, an objective analysis of current neuroscientific knowledge does not support such explanation based on the noninvasive technology to research the brain.

The human brain is the most complex object in the universe. It has 86 trillion neurons and 100 quintillion synapses; moreover, it is different from one individual to another, and in the same individual each second. To date, no brain function theory is universally accepted. Therefore, there is little consensus about how to study it. To be able to imitate the human brain, it is necessary to understand it. The ability to understand the brain is limited by current existing technology and there is still no complete human brain map. There are only two types of techniques to perform ideal brain mapping: invasive technology and noninvasive technology.

Regarding the noninvasive technique, functional magnetic resonance, one of the most advanced noninvasive techniques, captures local changes in blood flow and oxygen consumption, but produces low-resolution images. In 2013, DARPA, agency of the US. Department of Defense, mentioned that there is no technology that can acquire signals to inform scientists of exactly what is happening inside the brain. Until 2014, the current imaging techniques could not record the action potential of each neuron, and the most modern imaging techniques to show neuronal function, such as PET, produce only blurred images [12]. In short, the current noninvasive technology does not

allow performing an appropriate mapping of a live human brain.

Regarding the invasive technology, there are two types of techniques: nanorobots and brain implants.

Brain implants stimulate and record the neuronal function. They are technologies that provide high resolution but require neurosurgery. Therefore, they are in experimental stage. Implantation of human brain chips will be done invasively through microsurgery, and there is no guarantee for safety in the short or long term.

Nanobots are little robots capable of traveling through our circulatory system; they can scan the brain structure thoroughly. However, they are a recent invention and still under development.

Under this perspective, an objective analysis proposes as a possible explanation for the so-called neuroscientific boom the suspicion that transnational technological companies, in illegal association with the US government, the European Community, China and some Latin American governments, are developing, in Latin America, illegal and forced secret neuroscientific human experimentation with brain implants and nanotechnology, where brain mapping would be performed, and obtaining the real source of information about brain function. This illegal human experimentation would probably have the involvement and confidence of the press, which continually promotes it through reports about the use of brain implants in humans. Suspiciously, scientific magazines of repute, such as *Science*, *Nature*, and *Scientific American* among others, have accepted these surprising neuroscientific research studies.

There are several indications for that, the most important being the following:

- (1) Transnational technology companies like Google do not want to initiate healthcare projects in countries with a solid legislation [13]; they complain about health in the USA being too regulated. However, Google invests billions in brain chips. It is a mystery where it conducts its biomedical research.
- (2) Transnational technology companies transmit a message in their lectures that reveals an uncontrolled dehumanized attitude toward Latin America, probably because of the great economic power that they wield and the poor control that such countries have. In a recent meeting, the following was expressed as basic lessons for Latin innovators in technology:

'If necessary, cannibalize'

'Kill something that works to create something that may or may not work' [14].

- (3) Recent scientific research has led to suspect forced inhuman experimentation with brain implants: for example, in manufacturing neuromorphic chips like the True North [15] IBM chip, in the European Human Brain project [16] and the US BRAIN project [5], and in neuroscience bestsellers [17]

For example, in August 2014, IBM announced the most advanced brain-like chip created to date, the True North chip, one of the greatest and most advanced chips ever created. It is incredibly efficient, 768 times more efficient than any other that has been built. The absence of studies on human beings is really striking, and the speed at which the brain chip was built, over only 6 years, leads one to suspect that other sources of information may be hidden, perhaps secret human experimentations that have facilitated brain mapping with nanodevices and to reproduce the human brain architecture, probably the real source of information of the brain chip [15].

The long history of unethical human experiments performed by economic powers in poor countries, as well as the history of corrupt governments in Latin America allowing them to do so officially, forces doctors to investigate, be alert, and report possible inhuman neuroscientific experiments performed by economic powers in Third World countries.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

- 1 Campanario S. Neuro-boom: la ciencia de moda llega a la vida cotidiana *La Nación*. Available at: <http://www.lanacion.com.ar/1619642-neuro-boom-la-ciencia-de-moda-llega-a-la-vida-cotidiana>. [Accessed 14 September 2013]
- 2 Jorgenson LA. The BRAIN Initiative: developing technology to catalyse neuroscience discovery. *Philos Trans R Soc Lond B Biol Sci* 2015; 370.
- 3 Europa quiere construir un cerebro *BBC Mundo*. Available at: http://www.bbc.co.uk/mundo/noticias/2013/02/130201_tecnologia_cerebro_electronico. [Accessed 7 February 2013]
- 4 Versace M. The China Brain Project Neurdon. Available at: <http://www.neurdon.com/2011/03/25/the-china-brain-project/>. [Accessed 5 March 2011]
- 5 Salinas D. El Proyecto BRAIN: ¿Sólo se estudia en computadoras? *Rev Med Chile* 2015; 143:1081–1082.
- 6 Descubridores del 'GPS del cerebro' ganan Premio Nobel de Medicina 2014 *BBC Mundo*. Available at: http://www.bbc.com/mundo/ultimas_noticias/2014/10/141006_ultnot_premio_nobel_medicina_2014_jp. [Accessed 6 October 2014]
- 7 Meyerson B. Top 10 emerging technologies of 2015 *World Economic Forum*. Available at: <https://agenda.weforum.org/2015/03/top-10-emerging-technologies-of-2015->

4 The Egyptian Society of Internal Medicine

- 8 Cuthberston A. DARPA Cortical Modem connects brain directly to computer for 'electronic telepathy and telekinesis' International business Review. Available at: <http://www.ibtimes.co.uk/darpa-cortical-modem-connects-brain-directly-computer-electronic-telepathy-telekinesis-1488476>. [Accessed 18 February 2015]
- 9 Manes F. Las neurociencias y la educación pueden trabajar codo a codo Clarín. Available at: http://www.clarin.com/zona/neurociencias-educacion-pueden-trabajar-codo_0_489551165.html. [Accessed 28 May 2011]
- 10 Gloria C, Osses S. Creativity and Neuroscience: An essential binomial in educational context. Rev Med Chile 2015;143: 948–949.
- 11 Kukso F. The political brain or how to you to be chosen Revista Ñ February 13 de 2012. Available at: http://www.revistaenie.clarin.com/ideas/Candidatos-politico-elecciones-voto_0_644335575.html. [Accessed 27 August 2015]
- 12 Collins J. Letter from the editor: brain activity mapping. Semin Roentgenol 2014; 49:1-2.
- 13 Entis L. Google is interested in your health, but deterred by regulations. entrepreneur. Available at: <http://www.entrepreneur.com/article/235426>. [Accessed 7 July 2014]
- 14 Massa F. Innova Net: Seven basic lessons for entrepreneurs. Available at: <http://www.lanacion.com.ar/1792650-red-innova-siete-lecciones-basicas-para-emprendedores>. [Accessed 14 May 2015]
- 15 Salinas D. True north: lbm's brain chip are there secret human experimentations? INT J ELEC ENG 2015; 8:221-224.
- 16 Neurofuture. Open message to the European Commission concerning the Human Brain Project Neurofuture. Available at: <http://neurofuture.eu>
- 17 Salinas D. How to Create a Mind: The Secret of Human Thought Revealed- Are there Human Secret Experiment? Archivos de Medicina 2015; 29:112-113.