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TRUE NORTH: IBM'S BRAIN CHIP: ARE THERE SECRET HUMAN EXPERIMENTATIONS?

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IBM considered by many, the company symbol of computing, began six years ago a project with the purpose of creating a neuromorphic chip, a chip similar to the brain. In August 2014, it announced the most advanced brain-like chip created up to date, the True North chip , one of the greatest and most advanced chips ever created; the most important thing is that it is incredibly efficient, 768 times more efficient than any other that has been built. IBM developed this chip financed by DARPA, a military agency of the U.S. Department of Defense. IBM confirms that it built the True North chip inspired in neuroscience ; it was based on the hypothesis that the cerebral cortex includes canonical cortical microcircuits and thus developed this way a micro model that combines computing and memory. BM team has not published studies in human brains, considering that it wants to imitate a human brain, the absence of studies in human beings is really striking, The absence of such studies and how quickly the brain chip has been built, only six years, lead one to suspect that other sources of information would be hidden, maybe secret human experimentations, which have served to perform a brain mapping with nanodevices and to reproduce the human brain architecture, probably the real source of information of brain chip.

Key Words: Human Experimentation, Biomedical Ethics, Brain, Brain Research

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"Six years ago, IBM and our university friends undertook a problem
-Build a machine inspired by the brain-
At that time it seems to us impossible."

Dharmendra S. Modha 2014
IBM Chief Scientist [1]

The human brain is the most complex object in the universe, is the most effective supercomputer known, it consumes little energy and is excellent in processing information efficiently, trillion of neurons are deeply connected to memory areas, which gives us the ability to quickly access the data to make a decision, its original structure is what differentiates us from the machines, and is the reason for which we can think, feel and process million pieces of information, within a split second. No existing computer compares to it, for that reason there has always existed the utopia of creating a computer that reproduces efficiency of the brain.

IBM considered by many, the company symbol of computing, began six years ago a project with the purpose of creating a neuromorphic chip, a chip similar to the brain. In August 2014, it announced the most advanced brain-like chip created up to date, the True North chip [1,2], one of the greatest and most advanced chips ever created; the most important thing is that it is incredibly efficient, 768 times more efficient than any other that has been built [2]. The chip is composed of 5.4 trillion transistors that are linked to simulate a brain with 1 million "neurons" that talk about from one path to another via 256 million "synapses." [2]

IBM developed this chip financed by DARPA, a military agency of the U.S. Department of Defense. Both work in the SyNAPSE project, the English initials of Systems of Neuromorphic Adaptive Plastic Scalable Electronics; the name refers to the brain synapses. IBM's SyNAPSE project is directed by Dharmendra Modha and seeks to capture existing systems that simulate brain function in software, such as deep neuronal networks to reproduce them artificially. (Fig. 1)

The brain chip developed by IBM uses the same basic components than the other commercial chips, silicon transistors, but that are configured to imitate behavior of neurons and their synapses.[3] The traditional chips work all the time, the new neurosinaptical chips work only when necessary, resulting in less energy use. [1] True North brain chip, that simulate the right cerebral hemisphere function , [1] surpasses the architecture of Von Neumann model and has been the standard to build the chips for decades.[3]

Based on its brain chip success, IBM mentions that its long term objective is to build a brain in a box that uses less than 1 kilowatt [1]

The brain and the computer are different basically in two factors, their technology and architecture. While chips use silicon technology, the human brain uses an organic, biophysical and biochemistry interconnected network, which can not be imitated yet; for that reason, IBM focused on imitating the second factor: *the brain architecture.* [1]

IBM confirms that it built the True North chip inspired in neuroscience [(2)]; it was based on the hypothesis that the cerebral cortex includes canonical cortical microcircuits and thus developed this way a micro model that combines computing and memory. [(1)] This scientific foundation is very weak to support building its super-efficient brain chip which looks like the human brain.

Although IBM researchers in 2009 made cat cerebral cortex simulations, and in 2010, they investigated the brain network in monkeys [(2)], these are not enough models to be able to extrapolate them as human model, and to assure the utopian objective of building an artificial human brain in a box, without more human models that support it. On the other hand, in 2013, DARPA, IBM's funder, revealed publicly that *there is no technology that can pick up signals that inform the scientists what is exactly happening inside the brain.* [(4)]

IBM team has not published studies in human brains, considering that it wants to imitate a human brain, the absence of studies in human beings is really striking, just as a prestigious magazine like Science accepting the scientific article without requesting further scientific model evidences in human brains. The absence of such studies and how quickly the brain chip has been built, only six years, lead one to suspect that other sources of information would be hidden, maybe secret human experimentations, which have served to perform a brain mapping with nanodevices and to reproduce the human brain architecture, probably the real source of information of brain chip.

In 2005, IBM and The Ecole Polytechnique Fédérale de Lausanne (EPFL) make a major joint research initiative, nicknamed the Blue Brain Project. This Blue Brain project was renamed as HUMAN BRAIN proyect**.** Some researchers affirm that this project of neuroscience could be taking place into human beings brains [(5)]

IBM is a U.S. multinational company that has bad ethical- historical background. During Second World War, IBM collaborated with Nazism. Its work was crucial to organize and execute the Jewish holocaust; although several dictators in history tried to eliminate the Jews, the support given by IBM in automation and information technology, facilitated the Nazis, the mass extermination of the Jews**.** IBM director at the time, was awarded with the German eagle cross of merit for its support to the III Reich by Adolf Hitler himself [(6)]

IBM has illegal human testing background with neural chips, for example with 2020 neural chip. In a document [(7)], IBM says:

"Federations regulations do not yet permit testing of implant on prisioners…We have also had major successes with privately owned sanitariums with implant technology. We need, however, to expand our testing to research .. In California, several prisoners were identified as members of Mexican Mafia. They were brought to the health services unit… The implant procedure takes 60-90 minutes Each subject had no knowledge of the implant for the test period .."

In general terms, the history is repetitive, for that reason it would be important to investigate the existence of human brain models in which IBM designed its brain chip. In the world there is a history of unethical human experimentation by the economic powers carried out in third world countries, projects that are promoted as lawful, but in which time discovers illicit human experimentation.

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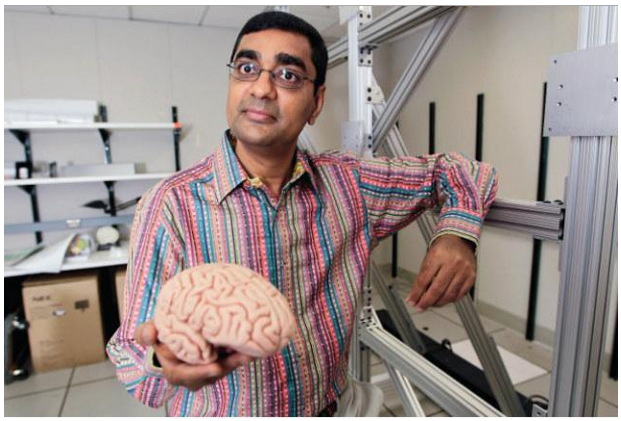

Dharmendra Modha, Principal Investigator IBM

TRUE NORTH Chip
Was it built from the brain of a living human being?

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http://eandt.theiet.org/magazine/2014/03/billion-core-brains.cfm