

## The Scientific Frontiers of Neuroengineering, the Treatment of Schizophrenia and the Visionary Future

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**Abstract:** Science, civilization and mankind are today in the path of newer scientific divination as regards application of neuroscience and neuro-engineering in diverse areas of science and technology. Neuroengineering is the agglomeration of neuroscience, experimental neuroscience, computational neuroscience, neurology, electrical engineering and nanotechnology. The scientific frontier of neuro-engineering needs to be envisioned and revamped with the passage of scientific history and time. Scientific provenance, scientific divination and scientific revelation are the key highlights of neuroengineering, neuroscience and electrical engineering science today. Today the science of psychiatry and psychology are merged with neuroengineering and neuroscience. The author is a schizophrenic patient since November, 2023. From October 2012, he is diagnosed with glaucoma in his both eyes. In this article, the author deeply and profoundly highlights the lucid and insightful world of neuroengineering and the science of psychiatry. This article is targeted towards a newer world in the field of neuroengineering with a deep interface with the trials and tribulations in his life as regards treatment of schizophrenia.

**Keywords:** Schizophrenia, neurology, neuro-engineering, vision, medical, vision.

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### 1.0 INTRODUCTION

Science, vision and mankind are in the present day human civilization are today in the avenues of scientific regeneration. The triumph of engineering science and technology needs to be envisioned with the economic progress of human civilization. Carbon sequestration, zero carbon emissions and Fourth Industrial Revolution needs to be implemented in human race immediately as medical science and neuroengineering moves from one frontier over another. The author was diagnosed with schizophrenia in November, 1993. In October, 2012, he was diagnosed with glaucoma in his both eyes. In this article the author revisits and re-envisions those days of agony, ardor and challenges of his life. In this article the author highlights the needs of merging of the science of neuroengineering, neuroscience and the science of psychiatry and psychology. Today in the era of United Nations and Global Sustainable Development Goals, success of medical science and biomedical engineering are one of the pillars of sustainability. In his entire life from 1993 to present, he was replete with immense agony and pain

in life. There was little support from doctors, relatives and family members as agony and travails of life just surmounted. The author in this article with immense agony and pain elucidates his case history of long years of sufferings due to schizophrenia.

### 2.0 Scientific Ingenuity, Scientific Fortitude and the Futuristic Emancipation of the Science of Neuro-Engineering:

The ingenuity and fortitude of the science of neuroengineering are today in the frontiers and crossroads of scientific introspection and scientific contemplation. Neuroengineering and neuroscience needs to be integrated with the science of psychiatry in the global firmament and global landscape. The author was diagnosed with schizophrenia in November, 1993. With the progress of his illness, he had tremendous hallucination since 1993. Till today, he is diagnosed with a tremendous form of auditory and visual hallucination. He is a graduate and postgraduate in Chemical Engineering from Jadavpur University, Kolkata, India in the years 1992 and 1994 respectively. After

postgraduation he got a chemical engineering job in New Delhi, India, the capital city of India. He was restless and anxious at that moment of his life. There was immense worries and uncertainties in his life. He left the job in August, 1994 and came back to Kolkata, his hometown. There was immense agony, trials and tribulations in his life. Also there was auditory hallucination as well as visual hallucination. He went on an assignment outside Kolkata in Madhya Pradesh, India. There also he had tremendous hallucination. Again he lost the job as that time he was seriously ill. Throughout his service life, he changed jobs frequently. In September 1996, he got a teaching job at BITS, Pilani, Rajasthan, India. He became seriously ill as he frequently discontinued medicines. He again came back to Kolkata totally bedraggled and in conundrum and quagmire of life. In the year 1997, the author along with his parents went to NIMHANS, Bangalore, India for a psychiatric health check-up. He was prescribed with Clozapin for the first time in the year 1997. Till today he is on the wonder drug of schizophrenia that is Clozapin. Today in our present day human civilization schizophrenia has no effective medicine. Schizophrenia patients are really helpless and hapless as the science of psychiatry and psychology treads forward. With this illness he went to Queen's University, Belfast, Northern Ireland, United Kingdom to work in a research project in the area of environmental engineering in 2008. Also he went to Salalah, Oman in a teaching assignment for 8 months in the year 2011-2012. Thus, neuroscience and neuroengineering needs to be revamped and reenvisioned with the treading of science and human civilization ahead. There will be surely a newer epoch and a newer era in human mankind and human race in the field of psychiatry if scientists, engineers and doctors takes effective steps in unfolding the scientific intricacies of neuroengineering and cognitive neuroscience [1-4]. Civilization, neuroscience and neuroengineering will surely unfold the scientific intricacies of the treatment of schizophrenia in decades to come.

### **3.0 The March of Human Civilization Ahead and the Science of Neuroscience and Neuro-Engineering:**

The science of cognitive neuroscience and neuroengineering are in the visionary path of scientific regeneration, introspection and provenance. Today is the era of Fourth Industrial Revolution and Internet 3.0. Civilization, man and mankind needs to re-envision itself as regards application of United Nations and Global Sustainable Development Goals. In this article, the author deeply elucidates and pronounces the needs of integration of the science of psychiatry and the science of neuroscience and neuroengineering. Scientific destiny, scientific imagination and scientific ingenuity needs to be integrated with each other. In the similar vision, the science of psychiatry needs to be merged with the science of neuroengineering and cognitive neuroscience. Since November, 1993, the author is replete with immense agony and pain. There was immense travails and challenges in the path of his life.

He is really waiting with bated breath a new dawn in his life. Neuroengineering is a wonder and marvel of engineering science and technology today. Medical science in the similar vision is in a futuristic path of neuroengineering and cognitive neuroscience. The march of human civilization is today replete with challenges, ardor, trials and tribulations. This article deeply elucidates and reiterates the need of integration of the science of psychiatry, bi-polar disorders and the science of neuro-engineering [5-8]. The march of human civilization will remarkably witness a newer eon in the treatment of schizophrenia and other mental health disorders.

### **4.0 The Futuristic Vision of Cognitive Neuroscience and Neuroengineering and the Visionary Future:**

The author has struggled a lot in life as regards his ailment of schizophrenia. Today he is leading a helpless and hapless life. Human race, science and vision are today in the middle of deep scientific comprehension and scientific forbearance. The author deeply with lucid and cogent insight portrays and depicts the tremendous mental health challenges a person encounters in his life. Deep scientific provenance, scientific ingenuity and scientific revelation will surely go a long and visionary way in truly unfurling the scientific and medical intricacies as man and mankind moves forward. The futuristic vision of cognitive neuroscience and neuroengineering should be targeted towards the human wellbeing and medical treatment of schizophrenia and other bi-polar disorders [5-8]. Human scientific vision and ingenuity will surely and remarkably enhanced if there is a proper treatment of the difficult ailment of schizophrenia.

### **5.0 CONCLUSION, SUMMARY AND NEUROENGINEERING PERSPECTIVES**

Science, civilization and scientific vision are in the evergrowing path of provenance and revelation. Neuroengineering and cognitive neuroscience are the needs of medical science and technology today. Neuroengineering perspectives and biomedical science perspectives needs to be holistically revamped as humankind trudges forward crossing one visionary frontier over another. The world of challenges in the field of the science of psychiatry and psychology are in the affirmative path of scientific alacrity and scientific validation. The author deeply elucidates the needs of immense psychological support in the treatment of schizophrenia and other bi-polar disorders. Surely and remarkably a newer dawn in human civilization will evolve if science, psychiatry, psychology and scientific ingenuity are in the path of newer visionary era. At that epoch of human civilization, the science of neuroengineering and cognitive neuroscience will witness drastic and dramatic challenges. Neuroengineering will surely usher in a newer era in treatment of schizophrenia if psychiatrists and psychologists across the globe takes affirmative steps in devising newer medicines and newer diagnosis.

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