

Mind-Switch: a first prototype of a new generation of mind-controlled technologies

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Abstract

1 Introduction

Can our mind interact at distance, that is without any direct connection, with physical devices? The answer is a clear “yes” if we can send biosignals, for example the EEG activity, via wireless, Bluetooth or internet, to distant sensors which may use it to control other apparatuses for entertainment or sending information.

If we exclude any physical transmission of biosignals, is it still possible for our mind to influence some distant devices? If we assume a materialist or, if we prefer, a biologist reductionism of human mind (Smart, 2007), the response is a clear “no”. However if we adopt a different theoretical approach, for example a mental monism, a dual-aspect monism (Atmanspacher, 2012), or the more recent Generalized Quantum Theory (GQT) (Walach, 2014; Walach, von Lucadou and Römer, 2014; Walach and von Stillfried, 2011; Filk and Römer, 2011; Lucadou, Römer and Walach, 2007), we can postulate that human mind may manifest not only local but also non-local characteristics, that is it may extend its perceptual and interactive capability beyond the limits of sensory organs and the human body.

2 The Generalized Quantum Theory

According to this theoretical model it is possible to assume the existence of mental connection phenomena at a distance or mind-entanglement similar to the phenomena of entanglement in space studied in quantum physics. A peculiar property of this model is that it predicts generalized non-local correlations under certain circumstances not only in physical but also in other types of systems, regardless of their size or physical make-up. Whenever a system which contains individual elements that can be defined and has to be described by an observable whose description is complementary or incompatible with the descriptions of individual elements, the theory predicts non-local entanglement-like correlations between those individual elements comprised by the larger system. A theoretical consequence of this model is that such generalised non-local correlations must not be used for direct signal transfer, as this would engender time-reversal paradoxes that seem to be forbidden. While for physical quantum theory this can be proven formally, for GQT we assume this to be the case and have labeled this assumption the “no-signal-transfer (NT) theorem (Lucadou et al. 2007).

According to these authors: “*The genuinely quantum theoretical phenomenon of entanglement can and in general will show up also in GQT if the following conditions are fulfilled:*

1) *A system is given, inside which subsystems can be identified. Entanglement phenomena will be best visible if the subsystems are sufficiently separated such that local observables pertaining to different subsystems are compatible.*

2) *There is a global observable of the total system, which is complementary to local observables of the subsystems.*

3) *The total system is in an entangled state. For instance, eigenstates of the global observable are typically entangled states (Walach, von Lucadou and Römer, 2014, pag. 618).*

Whenever global descriptions of a system and local descriptions of parts of that system are complementary, we would expect non-local correlations between those systemic elements.(Walach, 2014, pag. 101)

A graphical representation of a system of this sort is represented in Figure 1.

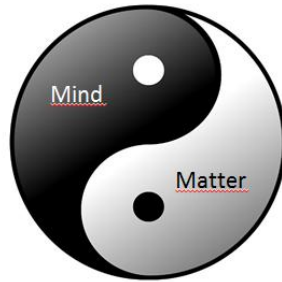


Figure 1: *A graphical Yin-Yang-like representation of a mind-matter entangled system.*

The entanglement of the two subsystems constituting this global Mind-Matter observable may obviously be obtained only at the informational, not physical, level. As informational here we refer to the contents inside the two subsystems. In the Mind subsystem, the contents are clearly of different types, e.g. aims, emotions, thoughts, etc. In the Matter subsystem, the available information depends on the type of stuff it is made of. For example it may be made of particles without mass, like photons, or of very heavy atoms or complex molecules, etc. In the case of MindSwitch, the apparatus we will describe later, the type of information we will try to entangle with the intention of the human participants, will be the streams of 0 and 1 produced by a true random number generator (RNG).

Is this theoretical framework testable and, even more, can it open the way to devise new practical applications?

The proof-of-concept that expert participants can reduce the randomness of a RNG output to a pre-specified level simply directing their mental intention on it, by the application of an experimental protocol used for MindSwitch too, has recently been experimentally demonstrated (Tressoldi et al. 2014).

3 MindSwitch

MindSwitch is intended as one of the first prototypes of a new generation of mind-controlled technologies based on the nonlocal characteristics of the human mind. The MindSwitch core component is a random number generator (RNG). Reliable RNGs are getting cheaper and cheaper and with our prototype version we are using a TrueRNG. This device must be a real true RNG and not a RNG based on pseudo random number generator software. The TrueRNG Hardware uses the avalanche effect in a semiconductor junction to generate true random numbers at a speed of 350 kilobits/second through a USB CDC serial port. The random data can then be used to fill the entropy pool in an operating system, or used directly in a custom application, a Raspberry PI in our case. The pre-specified level of reduced randomness is controlled by a software installed on the Raspberry PI. Once this level is reached, the Raspberry PI, may send a signal to another device connected directly with it or via Bluetooth. A visual representation of a predefined reduced randomness is presented in Fig. 2. This signal can then be used to switch on and off whichever electric or electronic

apparatus. Our MindSwitch prototype is presented in Fig. 3. A demo video is available on <https://www.youtube.com/watch?v=-W6SZ1fKFeY>.



Fig. 2. Example of a deviation from randomness of a REG.

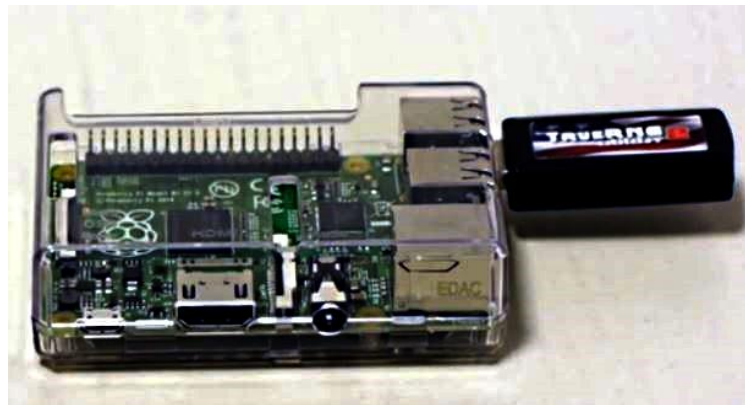


Fig. 3: The MindSwitch prototype's core.

3.1 How to entangle mind with MindSwitch?

Some useful tips:

- Be convinced that this interaction is possible and you can get it with a high level of effectiveness;
- Feel at one with the RNG with which you interact. To achieve this you can use various types of mental representation, e.g. feeling inside the object, feeling the object, etc;
- The ideal mental state to take when in entanglement is that typical of non-focused meditation, i.e. complete awareness without any thought activity, maintaining a positive emotional state and feeling immersed in the Whole.

4 Future developments

The potential applications of this new generation of mind-controlled technologies only depend on our creativity. For example, we are studying how to implement a true RNG on commercial smartphones and use the mind-triggered signals to send SMS or other types of messages.

References

- Atmanspacher H. (2012). Dual-aspect monism à la Pauli and Jung. *Journal of Consciousness Studies*, 19: 96-120.
- Filk T, Römer H. (2011). Generalized quantum theory: Overview and latest developments. *Axiomathes*, 21(2): 211–220.
- Lucadou Wv, Römer H, Walach H. (2007). Synchronistic phenomena as entanglement correlations in Generalised Quantum Theory. *Journal of Consciousness Studies*, 14(4): 50-74.
- Smart JJC. (2007). The mind/brain identity theory.
<http://stanford.library.usyd.edu.au/entries/mind-identity.ù>
- Tressoldi, P. E., Pederzoli, L., Caini, P., Ferrini, A., Melloni, S., Richeldi, D. ... & Duma, G. M. (2014). Mind-Matter Interaction at a Distance of 190 km: Effects on a Random Event Generator Using a Cutoff Method. *NeuroQuantology*, 3, 337-343.
- TrueRNG: <http://ubld.it/products/truerng-hardware-random-number-generator>
- Walach H, von Stillfried N. (2011). Generalised Quantum Theory - basic idea and general intuition: a background story and overview. *Axiomathes*, 21(2), 185–209
- Walach, H. (2014). Mind-matter interactions - on the rollercoaster from data to theory and back again. *Proceedings of the 10th Bial Foundations Symposium, "Behind and Beyond the Brain"*, 85-114.
- Walach, H., von Lucadou, W., & Römer, H. (2014). Parapsychological Phenomena as Examples of Generalized Nonlocal Correlations—A Theoretical Framework. *Journal of Scientific Exploration*, 28(4), 605-631.

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