# MIND-MATTER INTERACTION: PHASE TWO

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This is the continuation of a previous article entitled INTERACTION BETWEEN MIND AND MATTER, which concluded with the discovery of the fact that it is possible - and indeed the technique can be taught - for the mind to influence matter. In this specific case, it is the influence on a series of 1 and 0 states produced by a random number generator (Psyleron's™ REG-1), a small electronic device which is well-known and has been in use for a while for the scientific study of mind-matter interactions.
We believe to have demonstrated (MIND-MATTER INTERACTION AT A DISTANCE OF 190 KM: EFFECTS ON A RANDOM EVENT GENERATOR USING A CUTOFF METHOD, published in the journal NeuroQuantology | September 2014 | Volume 12 | Number 3 | Pag. 337-343) that it is possible to influence this device not just from a few centimetres away, but in fact from hundreds of kilometres away, without the need for any physical connection (cables, internet, EM waves, etc) and relying solely on mental intention.
As presented in the aforementioned MIND-MATTER INTERACTION article, the key points required for success appear to be:

1) A belief that it is possible to influence an electronic device while not connected with it in any way.
2) A belief that this can be achieved by simple intention.
3) A belief in one's own ability.
4) A belief in the availability of an efficient method for focusing one's intention.

## THE PK TRAINER

Armed with these devices, we set about making specific training equipment for influencing two different types of random number generators. One was the usual REG-1 made by Psyleron™ (Fig 2; see article entitled MIND-MATTER INTERACTION), and the other (Fig. 1) is a low-cost USB device called the TrueRNG 2 – Hardware Random Number Generator (from ***ubld.it***).
Our equipment's final version – which we called the PK Trainer – comprised of a small netbook (located in Bologna) containing software specifically designed by our team member Simone Melloni. The netbook was permanently connected to the local power network and the internet (Fig 3), but also has a long operating life when relying on its own power source for on-site tests.


*Fig 1: The TrueREG 2*


*Fig 2: Psyleron's™ REG-1, shown with a one Euro coin for comparison.*

*Fig 3: The PK Trainer with one of the software's many experimental versions.*

The equipment was therefore located more than 100 Km from both Patrizio Tressoldi's home and my home, but could be controlled by us remotely, and its files were accessible via internet. We both worked extensively with it, gaining familiarity and experience (see "TIPS FOR AN EFFICIENT MIND-MATTER ENTANGLEMENT") in influencing both RNGs (Random Number Generator) which, overall, performed equally.

RNGs generate strings of bits (1 or 0 state): "*In a sample of 200 bits there are on average 100 which are 1 (i.e. 50%) and 100 which are 0. The deviation from this 50% average becomes less probable the greater the gap between the states: for example, the probability of 114 x 1 (or equally 86 x 1 instead of 100 x 1) is much less than the probability of 107 x 1 (or 93 x 1). Small deviations from 50% are considered normal, but larger sudden deviations are extremely unlikely; if they do occur, the cause is almost certainly something physical officially unknown to us.*" (taken from INTERACTION BETWEEN MIND AND MATTER).

The PK Trainer begins with the user giving each test a name, and then choosing the desired number of bits per second to be studied (we opted for 200 bit/s), followed by the numerical value of the minimum threshold with three possible options for how to override it (each override classified as a "success"); then there is the duration (in minutes and seconds) of each test, and the type of number generator used (whether REG or TrueRNG).

Furthermore it was also possible to choose to stop the test after attaining "success", to choose whether or not to be given a sound warning, and whether or not a large bright LED light (connected to the netbook) should be turned on. On the screen were two red circles: one turned green when the pre-chosen threshold was passed for one second, and the other circle turned

green upon reaching the last “success” according to the programmed procedure. Other than the program icons to start, exit, and move to the next step, the screen also showed various statistics relating to the test currently underway or just finished. Eventually all data relating to each test were saved on the hardware and made available online.

## MIND SWITCH

PK Trainer has proved invaluable for acquiring sufficient confidence in the unusual activity of mentally influencing random number generators, helping us to identify the most ideal mental and physical conditions for interacting with these devices. It has led to the design and creation of a portable demonstration device which we have called Mind Switch (Fig 4).


*Fig. 4: Mind Switch*

Mind Switch is a miniature and simplified version of the PK Trainer, based on a Raspberry Pi (a single-board computer), a TrueRNG 2, and a high-capacity battery, as well as a software program resulting from experience with the PK Trainer. This was created and put together by our team member Simone Melloni.

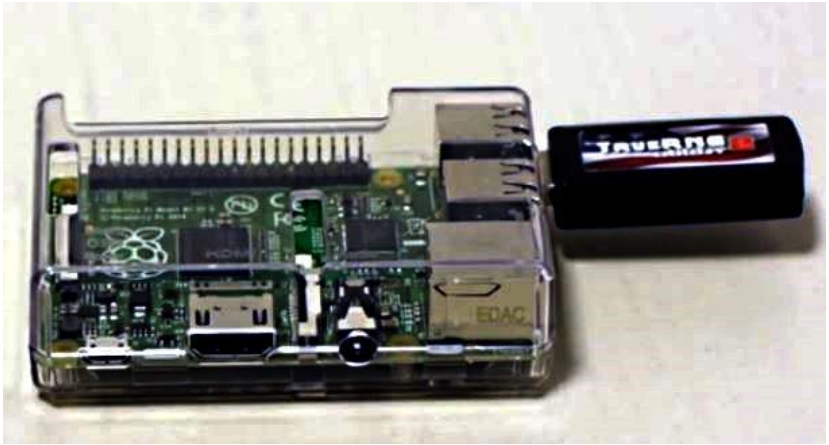

*Fig 3: The essential components of Mind Switch: Raspberry Pi + TrueRNG 2.*

This device is for demonstration purposes, is stand-alone and has a long operational life, and therefore during demonstrations can be placed anywhere as long as it is unaffected by the usual means, even inside a Faraday cage (Ref: MINDSWITCH PROTOTYPE). When "success" at influencing the True RNG 2 has been reached (the defining parameters of which can be pre-programmed), a large green LED turns on and remains on long enough to be seen.
Mind Switch has already been demonstrated by Patrizio Tressoldi in London in July 2015 at the *58th Annual Convention of the Parapsychological Association* and few days ago in Berlin at the *4th International Workshop on Symbiotic Interaction.* It has evoked surprise and stirred interest.

**INTERACTION WITH A PHOTOMULTIPLIER**

In the recent past we performed a number of pilot experiments in collaboration with John Kruth from the Bioenergy Lab of the Rhine Research Center in Durham, North Carolina, USA (Fig. 5), over 7300 Km from Florence (Italy). Since these pilot tests produced inconsistent results, this year we performed another three experiments, each comprised of ten "active" sessions and ten control sessions.

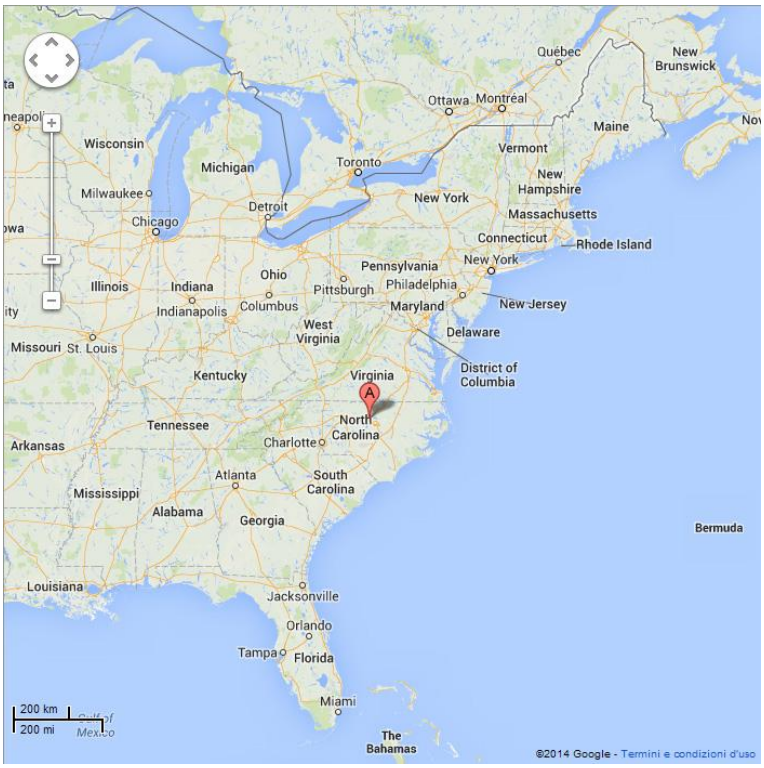

*Fig. 5: Map showing location of Durham in North Carolina, USA.*

The participants' task in the experiments was to always attempt to mentally influence a special photomultiplier (Fig 9) located in a darkroom (Fig 8) inside the Bioenergy Lab (Fig 6). The door leading to the darkroom is in a small (also dark) room (Fig 7), in which sit the experiment's assistant and the computers tracking the results.
The conclusive results of these experiments are presented and analyzed in our work entitled: CAN OUR MINDS EMIT LIGHT AT DISTANCE? A PRE-REGISTERED CONFIRMATORY EXPERIMENT OF MENTAL ENTANGLEMENT WITH A PHOTOMULTIPLIER.


*Fig. 6: Front door of the Rhine Center*

*Fig. 7: Anteroom and darkroom's door*

*Fig. 8: Darkroom with photomultiplier*

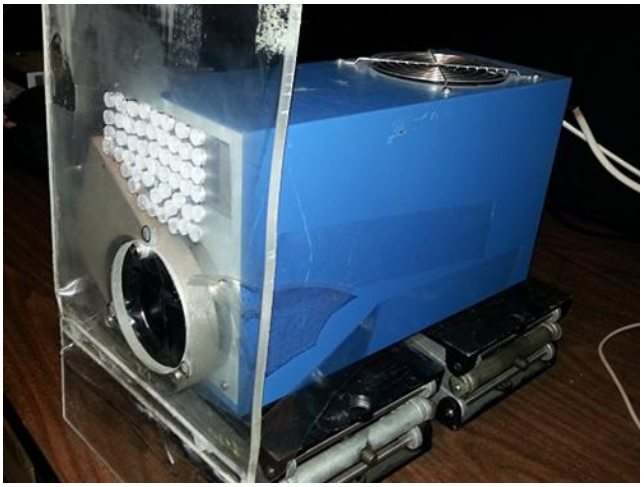

*Fig. 9: The Photomultiplier*

In all three experiments the sessions were performed during the day at pre-agreed times, the participants working from their own homes and co-ordinating via videochat using ooVoo™. The number of participants was small, and they were close friends and highly motivated. The final experiment consisted of Patrizio Tressoldi, Marzio Matteoli, Elena Prati and myself.
These experiments are described in our works entitled:
CAN OUR MINDS EMIT LIGHT AT DISTANCE? A PRE-REGISTERED CONFIRMATORY EXPERIMENT OF MENTAL ENTANGLEMENT WITH A PHOTOMULTIPLIER and
MENTAL INTERACTION AT DISTANCE ON A PHOTOMULTIPLIER: A PILOT STUDY.
The device in the Rhine Center's darkroom is based on a PhotoMultiplier Tube (PMT) with thermoelectric cooling to about -23 °C and is only sensitive to UV photons (400 – 200 nm). The device counts photons every 0.5 seconds and once operating temperature is reached, it records a background average noise of just over two photons per second. We can assume therefore that even just ten photons per second are a sure sign of an external effect.
UV photons have a higher energy than those of visible light and even more so than Infra-red; their energy is high enough to irritate the skin (in high quantities) and to provoke DNA mutations (at 200 nm), therefore seem to be particularly 'difficult' to create from nothing.
During the initial attempts we assumed the effect, if produced, would be immediate and directly proportional to the number of participants, but we were wrong. The experiments carried out – with 30 sittings during the last three and as many control periods – actually showed that the effect undoubtedly exists, occurs in bursts, and appears mostly AFTER (up to 30 minutes) the participants' concentration period (5 minutes) of intention to produce effects in the photomultiplier. In other words, the effect continues even when the participants are no longer focused on or consciously involved in the experiment.
The correctness and repeatability of the results were confirmed by our last experiment, this one specifically dedicated to confirming our observations and so especially careful in its methods and measurement accuracy. In fact, a long period of adjustment was allowed for the PMT's temperature, and the control sessions were taken the same day as the experiment while the device was activated, and a short time interval away from the concentration and post-concentration periods. Furthermore, concentration periods were assigned by chance and J. Kruth remained unaware of these times until the experiment was terminated.
In particular, we observed that when the photons from the burst segments (≈ 0.5 s) were counted, there were around 5% more, or at least six standard deviations, with respect to the average count (6σ, a very significant statistical parameter. The bursts were 0.5 seconds of ≥11 photons, corresponding to >20 photons/second). We are therefore convinced that it is possible to increase the number of photons recorded by a photomultiplier at a distance of over 7300 Km using a small number of chosen participants, and now have a clear idea of how to measure the effects of directed intention (i.e., Mental Entanglement).
Currently we are not yet able to explain the probable causes of this phenomenon; we can be certain however that the participants ceased consciously concentrating after the 5-minute period, and also that the photons were not sent from Italy to the photomultiplier. Even external causes are extremely unlikely, given that the recorded photon increases and the concentration periods coincided very strongly, not to mention that the effects were absent during control periods.
If this is not due to an effect on the photomultiplier's electronic components – and we can exclude this because the device has a shutter and no increase in photon count has been detected while the shutter is closed – a tentative explanation could be that the "extra" photons are generated locally by a process of entanglement between the participants and the PMT, involving purely information exchange with no energy transmission.
As often happens in research, a new discovery gives rise to many questions. This is a good reason to continue investigating.