Questions and Answers
Towards an Understanding of Psychokinetic Effects

The Balancing Effect in Brain-Machine Interaction

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(Transcript of the Questions and Answers session following my lecture given at the *Österreichische Gesellschaft für Parapsychologie und Grenzbereiche der Wissenschaften*, on June 28th 2016, 8 pm)

Q.1 *Have you performed a bit by bit analysis of the data generated in each study included in the MicroPsychokinesis (MicroPK) meta-analysis by Bösch et al[1]?*

A1. No, I have not. It was not possible to create a time series consisted of the bits created in each MicroPK study from the existing data generated many years ago. The authors of this MicroPK meta-analysis have converted the published MicroPK results of each study into total number of bits collected, N, and have identified the equivalent number of bits that corresponds to the proportion of hits in the study, pi. It is like a machine that creates yellow and blue ping-pong balls that are thrown inside a bag as they are being created. There is no information what color was generated first in this study, what was the color that followed, etc. We only know the equivalent proportion of 'hit'-bits, pi, (e.g. yellow color) and the number of total bits, N, collected in each study (the total of blue and yellow objects).

My (Markov) analysis showed that on average and across all independent studies, generated over a period of 35 years, there was a high probability for a hit to follow a hit and the same high probability for a miss to follow a miss. This assumption had simulated the funnel plot of the MicroPK database very well (i.e. a: the pi value to which it converges and b: its broadening of scatter).

If I had available the sequence by which all bits were generated in each and every study and have plotted their funnel plot as N vs. pi, I would have come to the same estimate of transition probabilities, p_{11} and p_{00}. This does not mean that such probabilities (i.e. frequencies of two 1's generated in a row and frequencies of two 0's generated in a row) have occurred in each and every MicroPK study exactly at this frequency. The estimate, based on graphic representation, is only approximate, but quite indicative that those frequencies are (a) equal and (b) much larger than 50%.

Q2. *Have you collected all possible MicroPK data in your analysis?*

A2. The authors of this meta-analysis (Bösch et al, whose database I have further analyzed) have collected all MicroPK test results that "*Investigate the correlation between direct human intention and the concurrent output of true RNGs*". The applied inclusion/exclusion rules were strict. So, the result of my analysis refers exactly to the hypothesis of "correlation between direct human intention and the concurrent output of true RNG's".

Bending the rules to introduce data from additional studies, would have blurred the accuracy of the investigated hypothesis.

Q3. *How can you merge in the same analysis data generated by different types of RNG's*?

A3. The merging of data refers to published experimental results of MicroPK tests with true RNG's, that were converted into total number of generated bits, N, and the proportion of hit-bits in each study, pi. Therefore, all such results depicted the same property, pi, and could therefore be rightfully merged. It is as if tests of tossing a fair coin were performed many times, N, by different experimenters and the proportion of heads, pi was estimated. Naturally, the pi values from each experiment would scatter above and below the most representative pi value as in any experiment. So, we can merge these pi values together even if they were obtained by different coins, or tossed by different hands.

There were protests against the merging of MicroPK data obtained in large studies (often generated by fast RNG processes) with MicroPK data obtained in small studies (often generated by slow RNG processes). Yet, the faster the MicroPK data are being generated the lower is the opportunity to interfere in their generation to introduce errors. This is why in small studies (e.g. 1000, 10,000 bits) there are huge deviations from statistical expectations both in support of the MicroPK hypothesis but also against it (the latter being not as frequent, but nevertheless present), enough to yield the overall character of the presence of correlations in the MicroPK database.

Smaller MicroPK studies have a better chance, therefore, to display an overall statistical average significantly deviating from chance in the direction of intention, due to the Experimenter Expectancy Effect. This element is subconsciously known by those who protest against the merging of data from fast and slow RNG's.

But the parameter under test is *the correlation between direct human intention and the concurrent output of true RNGs* and not *the correlation between direct human intention and the concurrent output of either slow (or fast) RNGs.* The rules of investigation are strict and clear.

Q4. *It is known that one cannot prove that a phenomenon does not exist. How can you say that you have proved that MicroPK does not exist?*

A4. I showed that the MicroPK-true-RNG hypothesis stating that "*the statistical average of random numbers generated by Random Number Generators (RNG) is shifted in the desired direction by thought processes alone"* is not confirmed. The statistical average of random bits generated by true RNG's is exactly 50%, chance; it is not shifted away from chance.

Therefore, the MicroPK hypothesis as defined is not confirmed; it is refuted. This refutation results on the basis of the entire appropriate database. Conclusion: our thoughts cannot directly influence physical reality.

Q5. *The PEAR protocol introduces High (PK^+), Low (PK^-) and Baseline (BL) aims during their MicroPK-RNG tests and not the binary 'intention' and 'no-intention' conditions adopted in your tests where your balancing effect was first observed. How do you say that the balancing effect was also observed in the PEAR database*?

A5. In chapter 4 titled 'Baseline Bind' in the book: Margins of Reality. The Role of Consciousness in the Physical World[2], the authors describe that the merging of intention data (PK^+ and PK^-) with the no intention data (BL), has rendered the theoretically expected perfect Gaussian, thus exhibiting no shift from chance. This is exactly the manifestation of the observed balancing effect. In the PEAR lab there are two types of 'intention' data.

The modes of operation in the Schmidt machine that I used were operating in a somewhat similar fashion: e.g. try to mentally affect the progression of flashing LED lamps more to the left than to the

right, etc. But these were not separated into 'left' intention data and 'right' intention data. They were all 'intention' data. The same approach was applied in the PEAR database when merging data.

Q6. How do you know that the RNG's whose data were included in the Bösch et al meta-analysis were actually true RNG's?

A6. This information regarding the identity and operation of the RNG's was provided in the experimental part of each publication from which the MicroPK data were obtained. The 'Bösch et al' meta-analysis, and also my own analysis, have to take for granted that the studies have had honestly reported the true nature of their RNG's.

(Apologies if I forgot to add a question in the above list).

REFERENCES

[1] (2006) H. Bösch, F. Steinkamp, E. Boller, *Examining Psychokinesis: The Interaction of Human Intention With Random Number Generators—A Meta-Analysis* Psychological Bulletin, Vol 132(4), 497-523.
[2] R. G. Jahn, B.J. Dunne (Orlando: Harcourt Brace Jovanovich), 1987, pp. 116-119