Study Registration for the KPU Study Registry

The registration information for the study is given below. Each section can be expanded as needed.

1. The title or name of the experiment (for listing the experiment in the registry).

PsyPhotos

2. The name, affiliation, and email address for the lead experimenter(s) for the study.

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3. A short description or abstract of the purpose and design of the experiment.

The main aim of this study funded by the Bial Foudation is to test the mental influence at distance on the pixels forming the image-sensors of the photos of a professional digital photographic camera.

After converting the original 1024 x 683 pixels raw images to a 16 x 16 pixel format in order to increase the signal-to-noise ratio with a custom made software (posted open access here: https://drive.google.com/drive/folders/18xi63RFMfTEmUMe5E64yXfzipyPiTJBV), the effect of mental influence on the photos, will be estimated by comparing the difference between the total pixels values of the black and white photos obtained with and without a mental interaction. A future development of the software will allow a comparison of the 2D form of the images.

The camera will always have the lens closed and will be protected from external electromagnetic influences. With the lens closed, the only information detected by the photos is the default electronic activity of the memory card. Even if the lens is closed it is possible to obtain photos simply triggering the start button.

4. A statement or list of the specific hypothesis or hypotheses being tested, and whether each hypothesis is confirmatory or exploratory. (confirm/explore guidance)

The only confirmatory hypothesis is that the mean of the pixel values of the photos influenced mentally at distance will be lower than the mean of the pixel values of the photos not influenced mentally at distance.

5. The planned number of participants and the number of trials per participant.

We plan to collect 10 series of 20 photos with and without mental interaction using one, two and three selected participants in order to explore a possible "dose effect", for a total of 30 series.

All participants have experience in mind-matter experiments.

6. A statement that the registration is submitted prior to testing the first participant, or indicating the number of participants tested when the registration (or revision to the registration) was submitted.

At present we have completed the collection of the 10 series of 20 photos with and without mental interaction with a single participant. This series has been critical for defining the estimated effect size.

The following additional information is needed for studies that include confirmatory analyses:

7. Specification of all analysis decisions that could affect the confirmatory results, including: the specific statistical test for each confirmatory hypothesis, whether the test is one-sided or two-sided, the criterion for acceptable evidence, any transformations or adjustments to the data, any criteria for excluding or deleting data, and any corrections for multiple analyses. Checklists and examples for registering classical analyses, permutation and bootstrap analyses, Bayesian analyses, and classification analyses are provided in the statistics registration document. **(This information can be included in section 4 above for simple experiments.)**

The means of the pixel values of mentally vs non mentally influenced photos will be statistically compared with a one-sided paired t-test, because we expect a decrease of the pixel values in the photos influenced mentally at distance.

The unit of analysis is the mean of the 256 pixel values of the 10 pairs for each of the 20 photos with and without mental interaction which gives a one-sided paired t-test with 19 degrees of freedom.

8. The power analysis or other justification for the number of participants and trials.

With the first series of 10 photos we estimate to observe a Cohen's *d* of 1.5.

Using a one-sided paired t-test, because we expect a decrease of the pixel values in the photos influenced mentally at distance, 10 series of 20 photos are sufficient to achieve a statistical Power = .95 with an alpha = .05

The comparison will be among the total number of the 16 x 16 pixel values calculated by our software between the 10 pairs of mentally vs non mentally influenced photos for a total of 20 photos.

9. The methods for randomization in the experiment. If a pseudorandom generator is used, specify how and when the seed(s) will be obtained.

Randomization is not required for this experiment

10. A detailed description of the experimental procedure.

The experimental protocol will consist in 10 series of 20 photos of 30 sec duration each, both with and without mental interaction aimed at influencing the photos pixel values.

The 20 photos without mental interaction will be obtained in the same days and 5 to 10 minute before the 20 photos with mental interaction. They will be always obtained before the 20 photos with mental interaction in order to control possible "spill effects" already observed in previous experiments.

For each of the 10 series, one of the participant will be close to the camera in order to start and end the automatic sequence of 20 photos (30 sec x 20 = 10 minutes).

The same participant, will collect the 20 photos without mental interaction at distance.

Each participant, both when single, in pair or in a group of three, will be requested to try to "mentally print" at distance on the camera, one (the same for all participants) of the images presented in the Appendix.

The other participants will be connected via Skype at the agreed time.

Every participant will be free to use the preferred strategy for "printing" the chosen image. After each series, participants will be requested to describe the strategy used. These strategies will be analyzed qualitatively.

Appendix

Images to be "printed" at distance on the digital camera