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).
   Comparing individual versus group judgements and testing for displacement effects in a Dream ESP Study

2. The name, affiliation, and email address for the lead experimenter(s) for the study.
   Prof. Chris Roe, University of Northampton, chris.roe@northampton.ac.uk

3. A short description or abstract of the purpose and design of the experiment.
   The proposed study is a 40-trial dream ESP experiment involving a repeated measures design that allows us to explore the effects upon performance of factors within the person that vary over time, such as mood and sleep quality, and also factors associated with the target material, such as emotional valence and intensity. In order to explore displacement (in which participants are drawn to the nontarget clips shown during judging), an independent judge will compare the diary accounts with clips from the judging set and also a decoy set.

4. A statement or list of the specific hypothesis or hypotheses being tested, and whether each hypothesis is confirmatory or exploratory. (confirm/explore guidance)
   1. Consensus judgements will be more successful than individual participant judgements (based on a sum of ranks analysis of target ranks across the set of 40 trials)
   2. Individuals will be more successful than chance expectation in identifying target video clips using their dream diary mentations (based on a sum of ranks analysis of target ranks across the set of 40 trials)
   3. Displacement. The mean rank awarded by an independent judge to clips that were seen by participants during a judging session will be higher than the mean rank awarded to a 'decoy set' of clips that were not seen during judging.
   4. There will be an association (two-tailed) between participant success in identifying the target video for that trial (using z-scores of similarity ratings) and scores on intra-subject individual differences measures, specifically:
• How good was your night's sleep?
• How vivid would you rate your dream imagery?
• How emotional would you rate your dream imagery?
• How positive in emotion would you rate your dream imagery?
• Did your dream imagery simply reflect recollections/distortions of recent experiences or preoccupations?
• How confident are you that you will correctly identify the target clip on the basis of your dream mentation?

5. There will be an association between video clip characteristics as independently rated (numinosity, dynamism, emotional valence, emotional intensity) and success in identifying the target video for that trial (using z-scores of similarity ratings)

These predictions are consistent with previous work at the University of Northampton that explores dream ESP performance (particularly our choices of outcome measures -- sum of ranks for differences tests, z-scores of similarity ratings for tests of association). Nevertheless, we would still characterise all the above predictions as exploratory given the inconsistency of results to date. We confirm that for association tests, all measured factors will be included in reports of outputs.

5. The planned number of participants and the number of trials per participant.
Participants are co-experimenters and have contributed to the study design. There will only be between 4 and 6 participants who will each aim to contribute to all 40 trials, divided across two 20-trial sessions.

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.
I hereby confirm that this project has not yet begun. No trials have been undertaken and no data have been collected.

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.)

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

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

The study uses a computer program developed by Paul Stevens and used in previous published experiments. It uses a pseudorandom generator seeded from the PC's internal clock to select the target set of videos, the target video from within that set, and the order of presentation of the target and decoys during judging.

10. A detailed description of the experimental procedure.

The number of participants will be 4-6, with the final figure determined by availability. No participant will be able to join the study after commencement of the first trial. Two additional persons will act only as researchers, managing the process for running trials and keeping data securely. Only one researcher need attend any particular trial.

We propose to adopt our standard dream ESP experiment protocol in which all participants are volunteers from among lab personnel, each of whom (in this case) participates in a set of 40 trials over 6 months. For each trial, participants sleep at home as normal but keep a dream diary. During the night a computer based at the CSAPP laboratory randomly selects a video from a pool of approximately 240 1-minute clips to serve as their target. The video is played repeatedly through the night (from 2:00-6:00 a.m.) by the computer, which is located in a locked and alarmed laboratory to preclude any possibility of accessing the material by normal means.

In the morning the participant emails a copy of their dream diary content to the researcher and then attends the laboratory. Should a participant fail to lodge a copy of their dream diary with the researcher via a time-stamped email then they will be disallowed from participating in that session. Some absences from sessions are likely across so long a study period. We have pre-specified (as for Saunders, Roe, Gladstone, Grierson, & Lomas, 2014) that where one participant is absent from the session then that trial will continue as normal, but where more than one person is absent from that trial then it will be declared a 'practice trial' and the procedure will continue as normal but the trial outcome will not count. In exceptional circumstances we will allow a participant to 'attend' by Skype so long as they meet to submission requirement above.

A record of practice trials will be retained and can be reported as part of the study outcome irrespective of whether they are inferior or superior to official trials.
For every trial, each participant completes measures of mood, dream quality and expectations of success. Once this is completed, each person shares their dream diary content with other members of the participant group. The computer then presents the target video clip and also three decoy videos (presented in random order) so that each participant can compare them against their dream content. The experimenter can facilitate this process since they are also blind to the identity of the target. Once all clips have been reviewed each participant gives similarity ratings that allow the clips to be rank ordered (with the one in first position most like their dream content and the one ranked fourth least like).

Once these individual judgements are recorded on a standard record sheet, the group will discuss any notable correspondences, particularly where they are shared across a number of participants' dreams, and will vote to produce a consensus set of ranks based on collective experience. The researcher will complete a record sheet to note the group's consensus judgements. These data are also entered into a computer file that must be completed and saved before the computer the program automatically reveals the actual target identity.

Trials on which the target video was ranked in first place are deemed 'hits' and other trials are 'misses'. This information will be reported for completeness but the principal outcome measures are sums of target ranks for differences tests and z-scores derived from similarity ratings for tests of association.

Written records (which incidentally do not include space to record the target identity) will be kept securely by the researchers. Copies of the emailed dream diaries will be provided to an independent judge who is experienced in making comparisons between dream diary content and video targets. This allows us to explore 'displacement' effects in which dream descriptions are compared against all four clips viewed during judging but also a 'decoy set' of 4 clips that was not viewed by participants during judging.

Additional details: To ensure that participants do not become jaded or overly preoccupied by outcomes from previous trials, we have introduced scheduling conditions that trials cannot take place on consecutive nights and there can be no more than 2 trials in any given calendar week. Also, the 40 trials will be broken into two series of 20 trials to allow for a 'natural break' between them. At this point we reserve the right to modify the intra-subject questions in the questionnaire or refresh the pool of target videos. The primary analyses, however, cannot be changed in any way at this point.