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A Free-Response ESP Test in Two Hypnotic Susceptibility Groups: A Pilot Study

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Abstract. We conducted two trials of a free-response ESP test. The aim was to determine if two groups, 'low'- and 'high'-scorers on a measure of hypnotic susceptibility, would score differently on a psi-hitting task. We used the *Harvard Group Scale of Hypnotic Susceptibility* which assesses the hypnotisability of subjects when tested in groups. The sample (*N* = 101 psi-believing participants; 69 females and 32 males) was split into 'High HS' (*n* = 20) and 'Low HS' groups (*n* = 81) based on HS scores. There was a significant difference between the two groups on Hypnotic Susceptibility and psi scores (i.e., number of hits), *t*(99) = 2.31, *p* = .012.

Keywords: anomalous experiences, ESP, free response test, hypnotic susceptibility, psi.

INTRODUCTION

Given the psi-facilitating effects of hypnosis, the question can be asked, Are highly hypnotically susceptible individuals (i.e., those who are especially sensitive to the effects of hypnosis) more prone to report paranormal and anomalous experiences than are low hypnotically-susceptible individuals? Because individuals highly susceptible to hypnosis report greater alterations in subjective experience in general, and increased alterations in attentional experiences relative to low- or medium-susceptible individuals, it is reasonable to posit that high-susceptible subjects may be more prone to report paranormal, anomalous, and unusual experiences (Kumar & Pekala, 1988; Pekala & Kumar, 1987-1988). Kumar and Pekala (2001), who reviewed studies that evaluated the relationship between hypnotisability and anomalous experiences and beliefs, found a positive correlation between hypnotisability and paranormal experiences.

Other studies found that reports of paranormal experiences correlated with paranormal belief (Wagner & Ratzeburg, 1987), and hypnotisability

(Nadon & Kihlstrom, 1987) as measured by the Harvard Group Scale of Hypnotic Susceptibility (Shor & Orne, 1962). Richards (1990) correlated the Harvard Group Scale with psychic experience, where the correlations were low and marginally significant, suggesting that hypnotic susceptibility (HS) or fantasy proneness could be used to explain self reports of psychic experiences. The personality characteristics of absorption and hypnotic susceptibility have also been found to be associated with psi experiences (Glickson, 1990; Kennedy, Kanthamani, & Palmer, 1994; Nadon & Kihlstrom, 1987; Richards, 1990; Wilson & Barber, 1983).

Although earlier meta-analyses by Schechter (1984), and Stanford and Stein (1994), found a significant group difference between treatment and control for psi performance following a hypnotic induction than during a control condition, May, Banyai, Vassy, and Faith (2000) reported no evidence of a positive correlation between hypnotisability and psi performance in a remote viewing experiment. Tressoldi and Del Prete (2007), replicating the results of an earlier experiment (Del Prete & Tressoldi, 2005), found significant psi scoring in the first of two hypnotic sessions, and significant weak-to-moderate correlations between psi performance and the personality traits of absorption and transliminality, which have been related to anomalous experiences and, on occasion, significant psi scoring. Cardeña, Marcusson-Clavertz, and Wasmuth (2009) did not find a precognition effect for hypnotisability, but high hypnotisables, low in dissociation, scored significantly higher compared to high hypnotisables, high on dissociation, as well as low hypnotisables, both groups of which scored below chance. These results suggest there is merit in using selected groups to isolate the source(s) of psi effects, and they suggest that dissociation may mediate the effects of hypnotisability in psi performance.

The aim of the present study was to determine if two groups—low- and high-scorers on hypnotic susceptibility (HS)—score differently in terms of psi hitting. Put another way, we hypothesise that there is a significant psi scoring difference (measured as a number of psi hits) between High and Low Hypnotic Susceptibility groups.

METHOD

Participants

The sample was comprised of 101 participants (69 females [68%], and 32 males [32%]), all of whom were well-educated, psi-believing participants. Their ages ranged between 18 and 72 years (Mean = 48 years; *SD* = 12 years). Personal experiences suggestive of psi were reported by the

majority of the participants (93.5%). Seventy-eight percent of participants had some training in meditation or other techniques involving internal focus of attention. They were recruited by mailed announcements (pamphlets), and also by an announcement placed on the Internet (<www.alipsi.com.ar>).

Participant Orientation

The participants met once a week, during two-hour workshops, organized at the Institute of Paranormal Psychology (IPP) in Buenos Aires. In total, fourteen workshops were conducted, free-of-charge, by the authors (AP and JCA) over a period of two years. The participants received some preliminary information about the tests. The authors, AP and JCA, aimed to create a friendly and informal social atmosphere, engaging in conversation with the participants before the test. After completing the amnesia section of the Harvard scale (a requirement of the scale), participants then completed the 11 response items of the scale (see below). Then they took the ESP test. Joining the group was voluntary, and all data collected were treated confidentially. As a part of the recruiting procedure, the participants completed and signed a Consent Form.

Hypnotic Susceptibility Scale

The *Harvard Group Scale of Hypnotic Susceptibility*—Form A (HGSHS–A; Shor & Orne, 1962) assesses hypnotisability levels of participants (this test can be administered to a group); it is a widely used method for initial screening of hypnotic susceptibility. It is a behavioural method in which the participants, evaluate their overt responses with a self-rating scale comprised of eleven items (theoretical score range: min. = 5; max = 55). The HGSHS–A is regarded as an efficient and reliable device for initial screening of hypnotizability within groups (Sheehan & McConkey, 1979), with Cronbach's alpha = .92. Comparisons between normative studies which are available for American (Coe, 1964), Australian (Sheehan & McConkey, 1979), and Canadian students (Laurence & Perry, 1982) show that the psychometric properties of HGSHS–A are comparable across different sociocultural contexts. We used the normative data on a Spanish translation of the HGSHS–A scale (Lamas, del Valle-Inclán, Blanco, & Diaz, 1989).

ESP Test

The ESP test took the form of a conventional free-response experimental design using pictures for targets. Target pictures were randomly selected from a pool of 2000 well-differentiated images with such motifs as animals, people making things, landscapes, religious symbols, scenery, caricatures, and humorous cartoons (NB: target sets of four are not created at this point in time, but decoy sets of three are randomly selected later prior to the judging session). Randomization was done using random numbers generated by a web-based program (www.randomizer.org). The order of the target pictures within the target set was also randomized for each participant. In a double-blind procedure, images were recorded and selected prior to the experiment by the co-experimenter.

In his home, a research assistant (JV) selected eight pictures, of which two were randomly selected to serve as target pictures. The pictures were printed on glossy paper (from CD clip art) and put in separate envelopes. Then JV delivered the envelopes to the second author (JCA). Prior to the session, for the first trial, JCA delivered the envelope containing one target picture for each participant. Then, for the second trial, JCA delivered the second envelope containing another different target picture for each participant. We used one target per participant, and each participant received two envelopes/trials with one target each. Both trials were performed sequentially; the first one was a different image from the second one. Each trial used one target; that is, one per participant. AP, who was in contact with the participants during the experimental session, did not know which target pictures the co-experimenter had put in the envelope. JCA and JV kept their paper-and-pencil records isolated.

The records of target selection, once made, were kept locked away when the experimenter was out of the room. This procedure was employed for five reasons: (i) the pictures were easily categorized; (ii) the procedure facilitated the randomization procedure; (iii) target pictures were characterized by their diversity and visual valence to serve as good targets for an ESP experiment; (iv) the procedure avoided any sensory (visual) cues; and (v) the procedure avoided any target manipulation, especially during the target-viewing and judging periods.

Before the experimental session, the two target-pictures were adequately screened in opaque materials (two black cardboard sheets, pressed with two poster boards to avoid marks on the paper print-out, and placed inside an envelope which was closed and sealed with wax by JV). The participants remained seated in a chair. AP delivered the sealed envelope with the target picture to the participants. The instructions given to each participant were to stay quiet during the test with eyes closed and wait a few minutes for mental images to appear.

AP remained silent in the room, observing throughout the experimental session. Two forms were used (one for each trial) for each participant to recording their impressions. Participants were not given any trial-by-trial target feedback of the target's identity until the debriefing session at the end of the second trial. Once participants had completed the first trial, the judging procedure started. Then the second trial took place followed by the judging procedure for that trial.

Judging Procedure

AP handed the envelopes and the forms to JCA, who opened all the envelopes, re-ordered the target pictures in four random sequences, having added the three randomly selected decoy pictures, and re-enclosed them in envelopes before giving them back to AP. The distribution of the four images (the target picture and the three decoys) was also randomized to establish that neither AP nor the participant knew the position of any of the images, and to avoid place preference during the judging procedure. A duplicate of the target set for judging was not used when the target was handled separately from the decoys.

AP then distributed the envelopes to each participant, who viewed the four potential targets (the actual target and three decoys). The participants viewed each picture as though it were the actual target, describing any similarities they perceived between the item and the written reports made on the forms above: A score of 1 was assigned to the picture the participant judged as best corresponding to his/her reported experience; a score of 4 was given to the candidate the participant felt was least like his/her experience. Each form was individually signed by the participant.

Hypnotic Susceptibility Categorization Procedure

We used the following criteria based on prior classification (Parra & Argibay, 2006) to split the sample into a low hypnotic susceptibility group (i.e., Low HS) and a high-hypnotic susceptibility group (i.e., High-HS). Participants who scored 75 or above on the HS scale were categorised as the High-HS group (n = 20; 20%); participants who scored 25 or below were categorised as the Low-Middle HS group (n = 81; 80%). All analyses used SPSS (20.0). An alpha level of .05, one-tailed was used for all statistical tests.

RESULTS

Table 1 shows the statistics for the two Hypnotic Susceptibility (HS) groups (Low-HS and High-HS). As expected, the mean score for the High-HS group is higher compared to the Low-HS group.

Table 1
Descriptives: Harvard Group Scale of Hypnotic Susceptibility (HS)

Statistic	Low HS	High HS
Mean	2.74	4.25
SD	0.84	0.30
Median	3.00	4.10

Table 2 shows that the group hit-rate (as number of hits, and as a percentage) was higher in the High-HS group (40%) compared to the Low-HS group (21%). The difference between the two groups was significant, $t(99) = 2.31$, $p = .012$.

Table 2
Hit Counts (One-Trail and Two-Trial) for Low and High Hypnotic Susceptibility Groups

Number of Hits	Hypnotic Susceptibility Group		
	Low (n = 81)	High (n = 20)	Total (N = 101)
None	108/108	14/14	122/122
One	20/40	10/20	30/60
Two	7 (× 2) = 14/14	3 (× 2) = 6/6	10 (× 2) = 20/20
Total	34/162 (20.99%)	16/40 (40%)	50/202 (24.75%)

Note: Total number of trials (i.e., 202) is twice the total number of participants (N = 101) as each participant gets two trials.

Participants' performances are given in Table 3. For the Low-HS group, 33.3% got *at least* one hit, and for High-HS group, 65% got *at least*

one hit. In terms of the number of successful participants, psi performance was superior in the High-HS group data, $t(99) = 2.66$, $p < .005$ (one-tailed).

Table 3
ESP Performance Comparison Between the High-HS and Low-HS Groups

Group	Participants with *at least* 1 hit	%
Low HS ($n = 81$)	27	33.3
High HS ($n = 20$)	13	65.0
$N = 101$	40	39.6

DISCUSSION

We conducted a free-response ESP test to determine if two ('High'/'Low') hypnotic susceptibility (HS) groups would score differently in terms of psi-hitting. We found significant differences between groups on hitting outcomes, as well as on participant-based performance.

One problem with the study was that, in summing the trials for a single psi score, we did not test the outcomes of first and second trials separately. While we argue, from the statistical findings, that a two-trial design appears to have merit, the advantage of that design, in terms of psi process, might only be brought to light through comparisons of performances across both trials to see where the source of psi may actually be. That being said, and assuming that there are hitting differences across trials, we would certainly then need to give heed to the fact that, *when a participant knows they have a second chance*, the first trial may be performed under a 'psychology' (attitudinal and behavioral set) that differs to that of the second. In the process of trying to understand those differences, we may find measuring the possible between-trial psychological differences introduces methodological problems that must be resolved.

Apart from that major consideration, a next step might be towards assessment of a variety of individuals to find those who report a range of paranormal experiences. Testing ESP with these subjects might increase the effect size associated with parapsychological phenomena, especially if hypnosis is used. Since research (Kumar & Pekala, 1988; Pekala & Kumar, 1987-1988) suggests that hypnosis alters subjective experience (especially in high-HS individuals), and may facilitate performance in objective psi

tests (Schechter, 1984), we suggest that the use of hypnosis may prove fruitful for parapsychological investigation.

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REFERENCES

Cardeña, E., Marcusson-Clavertz, D., & Wasmuth, J. (2009). Hypnotizability and dissociation as predictors of performance in a precognition task: A pilot study. *Journal of Parapsychology*, *73*, 137-158.

Coe, W. C. (1964). Further norms on the Harvard Group Scale of Hypnotic Susceptibility, Form A. *International Journal of Clinical and Experimental Hypnosis*, *12*, 184-190.

Del Prete, G., & Tressoldi, P. E. (2005). Anomalous cognition in hypnagogic state with OBE induction: An experimental study. *Journal of Parapsychology*, *69*, 329-339.

Glickson, J. (1990). Belief in the paranormal and subjective paranormal experience. *Personality and Individual Differences*, *11*, 676-683.

Kennedy, J.E., Kanthamani, H., & Palmer, J. (1994). Psychic and spiritual experiences, health, well-being, and meaning in life. *Journal of Parapsychology*, *58*, 353-383.

Kumar, V. K., & Pekala, R. J. (1988). Hypnotizability, absorption, and individual differences in phenomenological experience. *International Journal of Clinical and Experimental Hypnosis*, *36*, 80-88.

Kumar, V. K., & Pekala, R. J. (2001). Relation of hypnosis-specific attitudes and behaviors to paranormal beliefs and experiences: A technical review. In J. Houran & R. Lange (Eds.), *Hauntings and poltergeists: Multidisciplinary perspectives* (pp. 260-279). Jefferson, NC: McFarland.

Laurence, J.-R., & Perry, C. (1982). Montréal norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *International Journal of Clinical and Experimental Hypnosis*, *30*, 167-176.

Lamas, J. R., Valle-Inclán, F., Blanco, M. J. & Albo-Díaz, A. (1989). Spanish norms for the Harvard Group Scale of Hypnotic Susceptibility, Form A. *International Journal of Clinical and Experimental Hypnosis*, *37*, 264-273.

May, E., Banyai, L., Vassy, Z., & Faith, L. V. (2000). Hypnotic susceptibility as a predictor of anomalous cognition performance [Abstract]. Third *Simpósio da Fundação Bial: Aquí e Além do Cérebro*, p. 417.

Nadon, R., & Kihlstrom, J. F. (1987). Hypnosis, psi, and the psychology of anomalous experience. *Behavioral and Brain Sciences*, *10*, 597-599.

Parra, A., & Argibay, J. C. (2006). Interacción entre susceptibilidad hipnótica y experiencias disociativas en una población que reporta experiencias anómalo/paranormales. *Revista Interamericana de Psicología, 40*(2), 233-240.

Pekala, R. J., & Kumar, V. K. (1987-1988). Phenomenological variations in attention across low, medium, and high susceptible subjects. *Imagination, Cognition and Personality*, *7*, 303-314.

Richards, D. G. (1990). Hypnotic susceptibility and subjective psychic experiences. *Journal of Parapsychology*, *54*, 35-52.

Schechter, E. I. (1984). Hypnotic induction vs. control conditions: Illustrating an approach to the evaluation of replicability in parapsychological data. *Journal of the American Society for Psychical Research*, *78*, 1-27.

Sheehan, P. W., & McConkey, K. M. (1982). *Hypnosis and experience*. Hillsdale, NJ: Erlbaum.

Shor, R. E., & Orne, E. C. (1962). *Harvard Group Scale of Hypnotic Susceptibility*. Palo Alto, CA: Consulting Psychologists Press.

Stanford, R. G., & Stein, A. G. (1994). A meta-analysis of ESP studies contrasting hypnosis and a comparison condition. *Journal of Parapsychology*, *58*, 235-269.

Tressoldi, P., & Del Prete, G. (2007). ESP under hypnosis: The role of induction instructions and personality characteristics. *Journal of Parapsychology*, *71*, 125-137.

Wilson, S. C., & Barber, T. X. (1983). The fantasy-prone personality: Implications for understanding imagery, hypnosis, and parapsychological phenomena. In A. A. Sheikh (Ed.), *Imagery: Current Theory, Research, and Application* (pp. 340-386). New York: Wiley.

Wagner, M. W., & Ratzeburg, F. H. (1987). Hypnotic suggestibility and paranormal belief. *Psychological Reports*, *60*, 1069-1070.

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