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GUESSING STRATEGIES AND CONFIDENCE-CALL CRITERIA OF UNINSTRUCTED PARTICIPANTS IN A FORCED-CHOICE ESP EXPERIMENT

by JULIE MILTON

ABSTRACT

One hundred and three people took part in a forced-choice ESP test conducted by mail. The study was designed to establish the characteristics of uninstructed subjects' preferred cognitive strategies for producing and detecting ESP-related responses in a forced-choice setting, to identify what factors might influence their preferences, and to examine whether participants' choice of strategies related to their ESP performance. The findings suggest that many participants in forced-choice studies may be adopting maladaptive cognitive strategies in an effort to produce spontaneous guesses. The implications for current forced-choice research practice and future research on cognitive strategies are discussed.

INTRODUCTION

Certain questions encountered in ESP research are best or most easily addressed using forced-choice, rather than free-response, methods. However, forced-choice effect sizes appear to be much smaller than those obtained in free-response research. Honorton (1977) found that, in hypnosis studies, the mean effect size (Φ^2) in free-response studies was approximately ten times that in forced-choice studies ($t = 3.54$, $df = 40$, $p < 0.001$). There may be a number of reasons for this comparatively small effect size, but one possibility appears particularly likely: differences between the two methodologies in the cognitive strategies that participants use for attempting to produce and detect psi-related responses.

In 1964, Rhea White published an influential paper in which she reviewed anecdotal accounts of how 'gifted' ESP subjects produced their responses to a hidden target, and how they decided when they had made a correct response. These subjects were, for the most part, making free rather than forced-choice responses to target material such as objects and pictures. A number of common features emerged from their accounts. First, subjects engaged in more or less lengthy physical relaxation procedures. Next, they took some time, and some effort of concentration, to clear their minds of extraneous thoughts (that is, thoughts generated by rational or sensory processes) and tried to be passively receptive. Then, maintaining this state of mind, they waited (for some considerable time, in several cases) for an image to appear. White describes the apparent purpose of these steps as being "to allow the freest response possible to well up in some form of spontaneous expression from the deeper levels of the percipient's mind" (p.27). Once an image had appeared the subjects used various criteria to determine whether it was likely to be correct. Several subjects shared confidence about images that were spontaneous, vivid, or accompanied by a feeling of certainty. White contrasted the amount of mental work that these 'gifted' subjects gave to making their responses with the

amount of individual attention likely to be given to each guess by subjects in a typical forced-choice ESP study, with its relatively rapid rate of guessing. In particular, she questioned whether rapid guessing rates were associated with the spontaneous expression of the deeper levels of the unconscious, or with the expression of merely mechanical guessing habits.

The 'gifted' subjects upon whom White based her observations mostly did not have the opportunity to demonstrate under tight experimental conditions with appropriate statistical evaluation whether they really were as successful as anecdotal reports suggested; nor were there direct tests of whether it was likely that their apparent success really did depend upon their cognitive strategy. However, Honorton's (1977) review of a large number of experimental studies generally supports White's view that the deployment of attention away from sensory and proprioceptive input and towards internal mentation processes is associated with stronger ESP performance. There are also indications from free-response studies that the experiential characteristics of individual mentations may be useful in identifying psi-related responses (see Milton, 1990, for a review). Subjects are asked to reveal the basis for their confidence calls in only a very few studies, and even then the categories are often chosen by the experimenters (e.g. McCallam & Honorton, 1973). Again, however, results suggest that identification of psi-related mentation on the basis of experiential characteristics is possible in a forced-choice setting.

Despite these positive indications, little is known about what cognitive strategies and discrimination criteria subjects use in forced-choice ESP experiments. Subjects are rarely instructed in these matters, and are presumably falling back upon their own ideas to choose strategies that they believe will be successful. If subjects are using methods that the research suggests are suboptimal, then there may be some potential for increasing effect sizes in forced-choice research by means of appropriate instruction and training.

The present study was a preliminary attempt to establish the characteristics of uninstructed subjects' preferred cognitive strategies and discrimination criteria in a forced-choice ESP study. One of the most likely design features to lead to the rapid guessing that White criticizes in forced-choice studies is a large number of trials per subject. Honorton and Ferrari's (1989) description of the characteristics of 309 forced-choice precognition studies suggests a median number of roughly 75 trials per subject. In clairvoyance and GESP studies, this figure is likely to be somewhat higher, because precognition studies are better suited to mass-testing methods that allow the experimenter the option of using fewer trials per subject for the same statistical power. The figure of 100 trials per subject was therefore chosen for this study as being representative of forced-choice studies in general. An additional purpose of the study was to examine some of the factors, such as test type and subject characteristics, that might influence which strategies and criteria are adopted. The relationship of strategy and criteria types to ESP scoring was also examined. A number of planned analyses that dealt with the relationship between call randomicity and the sheep-goat effect are not reported here.

Method

Participants

ESP-test booklets were mailed to 853 UK members of the (London) Society for Psychical Research and the Scottish Society for Psychical Research, roughly five weeks before the reply deadline. Members received either a precognition test or a clairvoyance test, determined by whether their position on their Society's mailing list was odd or even. One hundred and three respondents fulfilled the pre-specified criteria for inclusion in the study; namely, answering every questionnaire item, completing all 100 ESP trials, and returning the material to the author by the deadline. Forty-nine respondents were excluded by these criteria. All subsequent references to respondents refer to the 103 people who satisfied the criteria for entry into the study.

Of the 103 study participants, 36 were female, 67 male. The mean age of participants was 47.4 years ($S.D.$ = 17.8, range of 18 to 84). Seventy-three participants had never taken part in a formal ESP study before. Fifty-six of the respondents had received a precognition test, 47 a clairvoyance test. According to their forced-choice answers to the question, "Do you believe that ESP exists?", 82 respondents were classified as 'sheep' ("I am fairly sure that ESP exists" or "I am certain that ESP exists"), 15 as 'undecided' ("I am not sure whether ESP exists; both options seem equally likely"), and six as 'goats' ("I doubt that ESP exists" or "I am certain that ESP does not exist"). Responses to the question, "Do you believe that ESP is possible under the conditions of this experiment?", with response alternatives phrased similarly to those for the previous question, indicated 39 sheep, 36 undecided respondents and 28 goats.

Materials

Participants received a four-page test booklet. The first page contained task instructions and questions on age, sex, previous experience of formal ESP-study participation, and the two items concerning belief in ESP. The next two pages contained the ESP task, and the final page a questionnaire concerning the participant's cognitive strategy during the task.

In the task instructions, the purpose of the study was described to the participants as "looking at the different ways that people have of trying to succeed when they're making ESP guesses". The author offered to write to each participant immediately on receipt of the test to let them know how they had got on. For the ESP task, participants were provided with two sheets of paper, each with two columns of 25 blank boxes. They were instructed to fill in each box with either the digit '0' or '1', to match two corresponding 'target' sheets bearing their participant number, which had either already been prepared by the author and were stored at the author's office (clairvoyance condition), or which would be prepared by the author on receipt of the participant's response sheet (precognition condition). Participants were further instructed as follows:—

> The 0's and 1's are in a random order. Your job is to try to guess what is in each target box, and to write it down in your boxes. Please be sure to make a guess for each box. It may seem strange to be trying to make guesses about something that [is quite

some distance away from you (clairvoyance)] / [doesn't exist yet (precognition)], but experience seems to show that it is possible.

While you're making your guesses, you might feel more confident about some guesses than others. When you feel especially confident about a particular guess, I'd like you to place a '√' next to that guess in the column labelled 'CC' (for 'confidence call'). For each confidence call that you make, I'd like you to write down next to it exactly what it was that made you feel confident about that guess—what it was that made that call different from the others. This is very important: please don't make confidence calls without saying why you were confident. If it was just a 'hunch', a feeling of confidence for no reason that you can put your finger on, then please write, 'hunch'. If there was some specific reason, such as a particular physical feeling, or emotion, or type of mental image, or type of thought, or anything else that made you feel confident, then please tell me what it was. Please give me as good a description as you can!

In the cognitive strategy questionnaire following the ESP task (see Appendix) respondents were first asked to describe any "mental strategy" or "special way of thinking" or any other method that they had used during the test to produce their guesses. A series of forced-choice items elicited specific information concerning: (i) the respondent's speed of guessing relative to the speed that would allow that respondent to attend to each guess individually, on a scale from 1 (slow) to 3 (fast); (ii) the respondent's estimated objective speed, measured as the number of minutes that had been spent on the 100 guesses; (iii) the number of breaks from guessing that the respondent had taken, and the average length of the breaks; (iv) whether the respondent had passively allowed guesses to come to mind, or had actively tried to think of guesses, on a dummy-coded two-point scale of 'activity'; (v) the extent to which the respondent had concentrated fully on the ESP task, on a three-point scale of 'distraction'; and (vi) whether the respondent had approached the task in an effortful or relaxed way, according to a dummy-coded two-point scale of 'effort'. Response alternatives were phrased to make each sound, as far as possible, as acceptable as the others.

ESP Target Randomization

Target preparation was conducted by the author. Target sheets for the clairvoyance condition were prepared in advance of testing, and target order was selected using the RAND tables (RAND Corporation, 1955). An entry point into the tables was selected by flipping a coin eight times (heads = 0, tails = 1) and using the denary value of the obtained eight-digit binary number to select the row number of random digits in the RAND tables to be used as the entry point. This row and the following row were the source of targets for the first clairvoyance participant's sheets, the second pair of rows were the source for the second participant's sheets, and so on. The even digits in the RAND tables were converted into the digit 0 on the target sheets, and the odd digits into 1, using a computer program written in QBASIC by the author, which also printed the target sheets.

Target preparation of the precognition targets followed a method specified in writing before testing. After preparation of the clairvoyance targets, a second baseline entry point further into the tables was chosen using the coin-flip method. On each day that any precognition response sheets were received, a

'weather key' was used to indicate the number of rows that should be passed over since the final row used on the last day that precognition sheets had arrived (or, on the first day that a precognition response sheet arrived, since the baseline entry point) before reaching the first pair of rows to be used to provide that day's targets. The 'weather key' was the sum of the last digit of the highest temperature of each of the first six cities listed in *The Guardian* newspaper's world weather report for the previous day. On each day, participants' response sheets were placed in ascending order of participant number, and consecutive pairs of rows provided targets for them in that order.

Data Checking

Before examining respondents' target sheets (or producing them, in the precognition condition), the author categorized their confidence calls in terms of type (e.g. hunch-based, imagery-based, etc.). Then, the ESP hits for each column were checked by the author, and the total written at the bottom of the column. At a later time, the author covered the indication of hits with a sheet of paper, and counted the number of misses. If the two did not add up to 25, the column was rechecked. Three errors were detected in the 10,300 trials by this method. Two assistants, Louise Ellis and Julie Ibbotson, then rechecked the number of hits in half of the data each, having covered up the author's markings. No further errors were detected.

Results

All analyses were planned and recorded in writing in advance of data collection, unless otherwise stated. No predictions were made.

Characteristics of Response Production Strategies

Fifty-seven respondents (55.3%) indicated that they made most of their guesses fast enough not to have thought about each guess individually, 40 (38.8%) at a medium speed at which they paid brief but individual attention to each guess, and six (5.8%) slow enough to think carefully about each guess. The distribution of estimated time taken to make all 100 guesses was highly skewed towards the low end; the median was 5.0 minutes (mean 10.2 minutes), and the range from 30 seconds to two hours. Sixteen respondents (15.5%) took breaks in guessing, ranging in number from one to four, and in duration from 20 seconds to seven days. Most of these respondents (63%) took only a single break, and the average length of each respondent's breaks was approximately 30 minutes or less for most respondents (63%).

Ninety respondents (87.3%) indicated that they mostly allowed guesses to come into their minds, rather than trying to produce them themselves, and 13 (12.6%) that they mostly actively tried to think of what guess to make, rather than waiting for guesses to come to them. Forty-eight respondents (46.6%) stated that they tried to concentrate fully on the ESP task, 43 (41.7%) that they tried neither to concentrate particularly nor to distract themselves, and two (1.9%) that they tried to distract themselves. Ninety-six respondents (93.2%) indicated that on the whole they made guesses in a relaxed way, and seven (6.8%) that they willed themselves hard to make the correct guesses.

A number of these aspects of respondents' guessing strategies were inter-correlated, as shown in Table 1. Natural logarithms of respondents' estimated total time taken to guess, and of average break length, replace the raw scores planned for use in this analysis, which were too strongly asymmetrically distributed for parametric analysis. Respondents' subjective speed of guessing was significantly negatively correlated with estimated time taken, with an 'active guessing' approach to the ESP task, and with an 'effortful' strategy, and positively and significantly correlated with level of distraction. The use of an 'active guessing' approach was positively correlated with the use of an 'effortful' approach and negatively correlated with the use of distraction. The number of breaks taken was positively correlated with the estimated time taken. However, it is possible that some participants interpreted the question about time estimates as including time spent on breaks, so this finding will not be discussed further.

Table 1

Pearson correlations between aspects of guessing

	speed	ln time taken	activity	effort	distr.	no. of breaks
ln time taken	-.48[e]					
activity	-.36[c]	.13				
effort	-.22[a]	.00	.33[d]			
distraction	.20[a]	-.10	-.23[a]	-.13		
no. breaks	-.17	.31[b]	-.10	-.05	.04	
ln break length ($N = 16$)	-.05	-.08	.47	.47	-.19	.05

[a] $p < 0.05$, two-tailed
[b] $p < 0.01$, two-tailed
[c] $p < 0.001$, two-tailed
[d] An expected cell frequency of less than one required this value of Φ to be based on a Fisher's exact probability calculation: $p < 0.0006$, two-tailed.
[e] $p < 0.0001$, two-tailed

ln = $\log_e$

Characteristics of Confidence-Call Criteria

Forty respondents used confidence calls. 47.5% used only one type; 35.0% used two types, 12.5% three types and 5.0% four types. The mean number of confidence calls of all types made by each respondent was 8.32, *S.D.* = 7.56,

with a median value of 6, a range from 1 to 38 and an interquartile range of 4 to 10.

Confidence calls based on a 'hunch' or 'feeling of confidence' were made by 18 respondents. Nineteen respondents made confidence calls when they had a visual image, or a more vivid or clear image than usual, of one of the target choices. One respondent made a confidence call when he had a vivid image of a building, an image apparently unrelated to the test; another made confidence calls when she had a visual image of something the same shape as one of the target choices (e.g. a pole). One respondent was confident when she had an auditory image of one of the choices. Three respondents were confident when they felt that they had to change the call that they had made. Four respondents were confident about spontaneous calls, but one was confident about a call sequence that seemed a 'logical' start pattern at the beginning of the task. In contrast, one respondent was more confident about a call at the beginning of the column because it was easier to avoid 'rational' concerns about randomness. Four respondents were confident when their guessing did not seem to them to be under their own control (e.g. a feeling that the "pen would only do these numbers"). Three respondents, who were using pendulums or coin flips to make their guesses, based confidence calls on unusual behaviour of those objects, such as the coins bouncing erratically. One participant, who shuffled playing cards and then used their values to make his responses, also guessed the value of each card before he looked at it. If his guess was correct, he gave a confidence call for that trial.

Factors Affecting Choice of Cognitive Strategy and Confidence-Call Criteria

Neither the type of test (precognitive or clairvoyant) nor the participant characteristics examined (sex, prior ESP-test experience, and belief in ESP either in general or under the conditions of the experiment) significantly affected respondents' choices of guessing strategy (as indicated by their forced-choice answers) or confidence-call criteria.

There were, however, some significant relationships between participants' scores on some guessing strategy questionnaire items and their use of hunch- and imagery-based confidence calls (the only types numerous enough for analysis), as summarized in Tables 2a and 2b. Participants who made image-based confidence calls rated their subjective speed as being significantly slower than participants who did not make such calls, and their mean log estimated time taken was correspondingly significantly higher than the other respondents'. Participants who made hunch-based confidence calls also had significantly longer mean log time estimates than others. Participants who made imagery confidence calls took a significantly greater number of breaks than others. Participants who made hunch-based confidence calls also took more breaks than others, but not to a significant degree. No significant relationships were found between the use of the two types of confidence call and break length, distraction scores or the use of active and effortful mental strategies.

Table 2a

Mean estimated speed, log estimated time taken, number of breaks, break length and distraction scores for participants using hunch-based and image-based confidence calls (S.D.s in parentheses)

	hunch participants	non-hunch participants	image participants	non-image participants
estimated speed	2.44 (0.62)	2.51 (0.61)	2.05 (0.71)	2.59 (0.54)
	$t(101) = 0.388$		$t(101) = 3.726^{***}$	
ln estimated time taken	2.27 (1.00)	1.51 (1.11)	2.17 (1.28)	1.53 (1.06)
	$t(101) = 2.687^{**}$		$t(101) = 2.280^{*}$	
no. of breaks	0.39 (0.78)	0.26 (0.80)	0.58 (1.02)	0.21 (0.73)
	$W(18,85) = 1042$		$W(19,84) = 1191^{**}$	
length of breaks (mins)	14.30 (11.28)	1818 (3116)	1460 (3801)	1094 (1621)
	$W(5,11) = 36$		$W(7,9) = 47$	
distraction score	1.61 (0.61)	1.54 (0.53)	1.37 (0.60)	1.60 (0.52)
	$t(101) = 0.500$		$t(101) = 1.676$	

$^{*}p < 0.05$, two-tailed
$^{**}p < 0.01$, two-tailed
$^{***}p < 0.0005$, two-tailed

Note: The Mann-Whitney *W* statistic replaces the planned *t*-tests when parametric analysis requirements were not met by the data.

Table 2b

Percentages of respondents using active and effortful guessing

	hunch participants ($N = 18$)	non-hunch participants ($N = 85$)	image participants ($N = 19$)	non-image participants ($N = 84$)
active guessing	11.11	12.94	21.05	10.71
	$\chi^2(1) = .045$		$\chi^2(1) = 1.502$	
effortful guessing	5.56	7.06	15.79	4.76
	$\chi^2(1) = .053$		$\chi^2(1) = 2.975$	

ESP Scoring

(i) Scoring in Relation to Aspects of Guessing Strategy

Using the respondent as the unit of analysis, the mean percentage of correct guesses was 49.08, which did not differ significantly from chance expectation of 50.00, according to a single-mean *t*-test: $t\,(102) = 1.823, 0.10 > p > 0.05$, two-tailed. Altogether, respondents made a total of 5,055 correct guesses in 10,300 trials. Pearson correlations between ESP scores and scores on guessing strategy questionnaire items were all non-significant, as shown in Table 3.

(ii) Scoring in Relation to Types of Confidence Call

Again using the respondent as the unit of analysis, the forty respondents who made any confidence calls did not score significantly differently on confidence-call trials (mean = 43.27% correct guesses, *S.D.* = 25.24) from other trials (mean = 49.52% correct guesses, *S.D.* = 5.99) according to a related *t*-test: $t\,(39) = 1.608$, $0.10 > p > 0.05$, two-tailed. Altogether, respondents guessed 147 confidence-call trials correctly out of 333, and ~~1,961~~ 1,814 errata non-confidence-call trials correctly out of 3,667.

Eighteen respondents made hunch-based confidence calls, and 19 made imagery-based calls; 6 of these respondents made calls of both types. There was no significant difference between hit rates on the two types of trial. The mean percentage of hits on hunch-based trials was 43.81, *S.D.* = 34.93, and

Table 3

Pearson correlations of number of correct guesses with aspects of mental strategy

	r	d.f.
estimated speed	-.034	101
ln estimated time	.020	101
number of breaks	.004	101
ln est. break length	.434	14
distraction	-.108	101
effort	.042	101
activity	.023	101

on imagery-based trials the mean percentage of hits was 51.31, *S.D.* = 27.20, t (35) = 0.731.

Discussion

The strongest feature to emerge from this study was how quickly most participants preferred to guess. Fewer than six per cent made their guesses slowly enough to think carefully about each response. It is not surprising when this happens in the laboratory: even when the experimenter does not set a high guessing rate, the subject may feel under pressure to guess fairly quickly in order not to keep the experimenter waiting. In the present study there were no such constraints, but rapid guessing was still the majority choice.

The large number of trials that each participant had to complete may have been a factor, but there are indications that, at least for some subjects, rapid guessing was used to help them to adopt the passive and effortless mental strategy that the vast majority were aiming for. Subjective guessing rate correlated significantly with the use of these two aspects of cognition, and respondents' comments offered some hints as to why rapid guessing might be an aid to passive and effortless thinking. It is well known that most people, when asked to generate a random string of digits, cannot do so: they tend to produce too many alternations and to match the expected frequencies of call types within groups of trials that are too short; in other words, they are influenced by their previous guesses (Budescu, 1987). Even people who are aware that the elements of a truly random series are independent of all the others find it difficult to avoid being influenced by spurious 'reasoning' about what a call 'ought' to be, given their previous guesses, when they are trying

to produce a series of calls, and twelve participants mentioned that this was a problem for them. Three explicitly stated that they were guessing quickly in order to outstrip their mental capacity for making these 'rational' calculations. A number of respondents encoded a variety of material (such as randomly-chosen words, or the uppermost faces of coins picked up at random) into binary digits, rather than generating digits by direct cognition, which might also have been attempts to bypass their own response biases.

However, although a fast response rate might result in guesses that feel more spontaneous from the participant's point of view, experimental evidence suggests that, as guessing becomes more rapid, responses become more stereotyped, not less so (Baddeley, 1966). Rapid guessers in both random generation and ESP studies may be replacing conscious calculation with unconscious response patterns, rather than genuinely spontaneous responses. This mental equivalent of knee-jerks is far from the consultation of the deeper levels of the subconscious that White (1964) recommended. Forced-choice methods provide a greater challenge to a percipient's ability to avoid response biases than is the case in free-response studies, and if participants in forced-choice studies are to be required to adopt the approach that White favours, the results of the present study suggest that they will need instruction and perhaps also training to do so.

The rapid rate of guessing used by most subjects probably accounts for the facts that relatively few respondents made confidence calls, most made very few of them, and the types of confidence call were very few in number. Participants may simply have been going too fast to pay much attention to the subjective qualities of their mentations, or too fast for their mentations to vary much in nature. Although only two respondents mentioned that the former was the case, the significant relationship between guessing rate and the use of confidence calls supports this view: participants who made hunch- and imagery-based confidence calls estimated that they took about twice as long over the ESP task as other subjects. Slower, more introspective guessing styles in forced-choice studies might lead to more types of confidence calls being made, and to confidence calls being more accurate in identifying psi-prone trials. It may also be necessary to suggest to subjects a range of criteria that they might use for confidence calls, in case subjects are in fact experiencing a relatively wide range of mentation types but are not using many characteristics to discriminate between them.

Neither the type of test (precognition or clairvoyance) nor any of the participant characteristics mentioned showed any significant relationships with either the guessing strategies adopted or with participants' readiness to make imagery- or hunch-based confidence calls. It should be noted that there were so few participants in this study who did not think it likely or possible that ESP existed that little can be concluded from the absence of significant relationships with this particular variable; the other variables, however, including belief in the possibility of ESP under the test conditions, had sufficient spread to offer adequate comparisons between groups. It is also possible that, in another subject population, significant differences would show up; SPR and SSPR members might be expected to have more of a shared view of the best way to succeed in an ESP test than others might, and any

such strong effect may have drowned out others. Some respondents' comments suggested that there may also be an association between being a 'goat' (and perhaps, in particular, being a 'goat' according to a sheep-goat question concerning belief that the participant can *personally* demonstrate ESP under the conditions of the experiment, a measure not used here) and using a guessing strategy in which the participant is merely concerned with generating a sequence of digits, rather than generating the right digits.

There was no evidence in the present study that guessing strategies or confidence-call criteria bear any relationship to ESP scoring, but the non-significant overall scoring, the lack of variation in participants' choice of most aspects of guessing strategy and the small number of participants using confidence calls prevented this study from providing a strong basis for observing any effects. The results of this study, although carried out with a population that may not be typical of most ESP studies, suggest that it will be necessary, in further research on the relationship of ESP performance to cognitive strategies and confidence-call criteria, to manipulate participants' cognitive strategies directly by means of instruction, and actively to encourage more introspection on the part of subjects in order to identify the characteristics of successful trials. It is surprising how seldom such methods have been explored in forced-choice studies: their potential for success should not continue to be overlooked.

Acknowledgements

I am grateful to the Society for Psychical Research for funding this study, and to both the S.P.R. and the Scottish S.P.R. for allowing me access to their membership, and of course to the participants in the study for their help with my research.

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Appendix

COGNITIVE STRATEGY QUESTIONNAIRE

(1) First, I'd like you to describe how you made your guesses. Did you use a particular 'mental strategy' or special way of thinking to help you make correct guesses? What else did you do? Imagine that you are giving me instructions about how to make guesses in exactly the same way that you did; please give me as full a description as you can. Attach extra sheets of paper if you wish.

(2) Here are some specific questions about how you made your guesses. Please answer each one. There are no 'right' or 'wrong' answers to these questions; the idea is to get an accurate picture of how you personally went about making your guesses.

(a) Did you make your guesses
..... at a medium speed at which you paid brief but individual attention to each guess?
..... fast enough so that you didn't have to think about each guess individually?
..... slow enough that you thought carefully about each guess?

(b) Roughly how much time did you take altogether on making all your guesses?
.....

(c) Did you make your guesses all in one sitting or did you ever stop and take a break?
..... I made all my guesses in one sitting
..... I took one or more breaks

(d) If you took one or more breaks, how many breaks did you take? .....
on average, how long were the breaks? .....

(e) Which statement best describes the approach you took most of the time?
..... I allowed guesses to come into my mind, rather than trying to produce them myself
..... I actively tried to think of what guess to make, rather than waiting for guesses to occur to me

(f) Did you
..... try to concentrate fully on the ESP task while you were doing it?
..... try to distract yourself from the ESP task while you were doing it?
..... neither particularly concentrate nor distract yourself

(g) Did you on the whole
..... will yourself hard to make the correct guesses?
..... make the guesses in a relaxed way?

can be read with
come away with a much better overview of the proble
parapsychology today.

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ERRATUM

GUESSING STRATEGIES AND CONFIDENCE-CALL CRITERIA OF UNINSTRUCTED PARTICIPANTS IN A FORCED-CHOICE ESP EXPERIMENT

by JULIE MILTON

JSPR 60 (837), 65-77 (October 1994).

The last sentence of the second paragraph on page 73 should read:—

Altogether, respondents guessed 147 confidence-call trials correctly out of 333, and 1,814 non-confidence-call trials correctly out of 3,667.