Psi Experiences and the "Big Five": Relating the NEO-PI-R to the Experience Claims of Experimental Subjects

Nancy L. Zingrone, Carlos S. Alvarado and Kathy Dalton Centro de Estudios Integrales de Puerto Rico and University of Edinburgh

Abstract: This study was based on an analysis of data collected for a ganzfeld study conducted at the University of Edinburgh (Morris, Dalton, Delanoy, & Watt, 1995). In this study we attempted to relate psi experiences to the five factors and corresponding facets of the NEO-PI-R and to a variety of dream experiences, absorption experiences and other variables. We used data from 97 artists and musicians recruited for the purpose of conducting ESP tests in the Ganzfeld. We predicted that an index of claims of psi experiences would correlate significantly and positively to the Openness factor and to the Fantasy facet of the NEO-PI-R, and that the Psi Index would correlate positively to two questions about spontaneous alteration of consciousness taken from a participant information form, namely losing sense of your surroundings and the passage of time while engaged in an activity. Our predictions of a positive correlation between the Psi Index (a combined measure of the incidence of several psi experiences) and openness to experience (r = .20, p = .02, one-tailed) and Fantasy (r = .22, p = .02, one-tailed) were confirmed. The Psi Index was significantly correlated to the question of losing awareness of the sense of time (r = .16, p = .05, one-tailed), but not to the questions about losing awareness of surroundings (r = .13, p = .10, 1t). The Psi Index correlated significantly and negatively with the Order facet of the Conscientiousness factor (r = -.29, p = .004, two-tailed). In addition, there were significant positive relationships between the Psi Index and being raised in an environment with a tradition of paranormal abilities (t = 3.03, p = .003, two-tailed, Cohen's d = .73) and having members of the family with psi experiences (t = 3.01, p = .004, two-tailed, d = 1.05). The authors encourage further research using the experiential claims of experimental subjects.

In recent decades there have been many questionnaire studies that have attempted to relate spontaneous parapsychological experiences to a variety of psychological variables. Some have studied ESP claims and other phenomena in relation to dream variables such as recall, lucidity and vividness (e.g., Haraldsson, Gudmundsdottir, Ragnarsson, Loftsson, & Jonsson,

Acknowledgements: We wish to thank the Society for Psychical Research, the Parapsychology Foundation, the Perrott-Warrick Fund (Cambridge University) and the Institut für Grenzgebiete der Psychologie und Psychohygiene for their support of our research. Professor Robert Morris kindly gave us access to the Koestler's Chair data to conduct these analyses.

1977; Kohr, 1980; Palmer, 1979; Usha & Pasricha, 1989). Others have explored a variety of personality and cognitive variables as correlates of parapsychological experiences (e.g., Alvarado & Zingrone, 1997; Haight, 1979; Irwin, 1985; Nelson, 1989; for a review see Irwin, 1994 and Stokes, 1997). In this paper we report on our attempts to study personality variables, as measured by the NEO-PI-R (Costa & McRae, 1992), with a group of creative individuals recruited to participate in ganzfeld ESP testing at the Koestler Parapsychology Unit. Most of this work was conceived as frankly exploratory, designed to uncover possible relationships to test in other experimental databases.

We were particularly interested in testing for a possible positive correlation between psi experiences and Openness to Experience (OE), as measured by the above mentioned scale (NEO-PI-R). OE has been considered to contain "active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity, and independence of judgement" (Costa & McRae, 1992, p. 15). Individuals high on OE "are curious about both inner and outer worlds, and their lives are experientially richer. They are willing to entertain novel ideas and unconventional values, and they experience both positive and negative emotions more keenly than do closed individuals" (Costa & MacRae, 1992, p. 15). These characteristics seem to be related to absorption, as measured by Tellegen's Absorption Scale (Tellegen & Atkinson, 1974). In fact, there is evidence of a positive and significant relationship between absorption and OE (Gliski, Tataryn, Tobias, Kihlstrom, & McConkey, 1991; Wild, Kuiken, & Schopflocher, 1995). Because several studies have related ESP and other parapsychological experiences to absorption (Alvarado & Zingrone, 1997; Glicksohn, 1990; Irwin, 1985; Kennedy, Kanthamani, & Palmer, 1994; Nadon & Khilstrom, 1987; Nelson, 1989), we hypothesized that psi experience claims would be positively related to OE as well. After we conducted this study we learned that Palmer (1996) found a significant positive correlation between OE and a different measure of psi experience from that used in the present study.

The OE factor of the NEO-PI-R includes a Fantasy facet. Costa and McRae (1992) the developers of the NEO-PI-R, have said: "Individuals who are open to fantasy have a vivid imagination and an active fantasy life. They daydream not simply as an escape but as a way of creating for themselves an interesting inner world. They elaborate and develop their fantasies and believe that imagination contributes to a rich and creative life" (p. 17). Because this facet seemed similar to the construct of fantasy proneness (Lynn & Rhue, 1988; Wilson & Barber, 1983), which, in turn, has

been positively correlated to parapsychological experiences in previous work (Alvarado & Zingrone, 1994; Council & Huff, 1990; Lawrence, Edwards, Barraclough, Church & Heatherington, 1995; Myers & Austrin, 1985; Rao, 1992; Sherwood, 1997; Wilson & Barber, 1983), we also predicted a significant and positive association between psi experiences and the Fantasy facet of the NEO-PI-R.

One of the measures we used from the experimental data set, a general information form to be described later, had a variety of questions about dreams, imagery and alteration of consciousness experiences in daily life. In light of the relationship between Tellegen Absorption Scale and psi experiences documented in the literature (Alvarado & Zingrone, 1997; Glicksohn, 1990; Irwin, 1985; Nadon & Khilstrom, 1987; Nelson, 1989), we speculated that responses to a combined measure of psi experiences to be described later would also be related to two other items covering the loss of a sense of the passage of time and the loss of a sense of the surroundings while engaged in physical activities. These questions could be interpreted as absorption experiences or as dissociative experiences, to which it should be mentioned claims of spontaneous parapsychological experiences have associated in previous studies (Richards, 1991; Ross & Joshi, 1992; Zingrone & Alvarado, 1994).

of the past work with Some spontaneous ESP experiences (of the unverified type) and personality variables has not found evidence of a relationship with neuroticism (Greiner, 1964; Sandford, 1979) or extroversion (Greiner, 1964; Hearne, 1984; Sandford, 1979). However, Haight (1979) found a positive relationship with a facet of Cattell's High School Personality Questionnaire that may be indicative of a relationship between psi experiences and neuroticism (cortertia). More recently, Hearne (1984) found elevated scores of neuroticism in a study of precognitive experiences using Eysenck's Personality Inventory. Although these findings are not consistent enough to generate hypotheses, we decided to perform exploratory analyses of the relationship between psi experience claims in our data set and measures of neuroticism and extroversion.

In summary, we predicted that an index of claims of psi experiences would correlate positively to Openness factor scores and to Fantasy facet scores on the Openness factor, and that a Psi Index constructed from individual experience claims would also correlate positively to self-ratings on two spontaneous alteration of consciousness questions, losing a sense of awareness of one's surroundings, and losing a sense of the passage of time while engaged in an activity.

The data used in this paper was originally collected for a ganzfeld-ESP study conducted at the Koestler Parapsychology Unit (Morris, Dalton, Delanoy, & Watt, 1995). In the section that follows we summarise the method section reported in the original report. Further uses of this data in relation to those participants who reported out-of-body experiences will appear in a different report (Alvarado, Zingrone & Dalton, in press).

Method

Participants

Ninety-seven artists and musicians were recruited from art and music colleges and from other sources in Edinburgh, Scotland. Fifty-four percent were females and 46% were male. The mean age of the participants was 27 (range: 17 - 61). The participants were selected on the basis of presumed artistic talent, and on the basis of having had spontaneous psi experiences, and having a positive attitude for the existence of psi phenomena. The participants came to the Koestler Parapsychology Unit to be tested in an ESP experiment and expected to complete a variety of questionnaires as part of the study.

Procedure

The participants arrived laboratory of the Koestler Parapsychology Unit, were greeted by the experimental team and were briefed for about 30 minutes on the ganzfeld project itself. Before taking part in a ganzfeld session, participants completed the NEO-PI-R, the Participant Questionnaire collected from all participants of the Koestler Unit's experiments, and a questionnaire on creativity developed for this particular study by one of us (K.D.). After completing the questionnaires the participants completed a formal ganzfeld session. After the session participants completed post-session questionnaires, the content of which are not relevant to the present study, and were debriefed, thanked and shown out of the laboratory. For information about the laboratory layout the reader is referred to the paper by Dalton et al. (1996).

Questionnaires

Form S of the NEO-PI-R was used in this study (Costa & McRae, 1992). This instrument has a considerable literature behind it (for a review see Costa & McRae, 1992), which shows good evidence for validity and reliability. The instrument has five scales that include neuroticism, extroversion, openness, agreeableness, and conscientiousness. Each of these has six sub scales. The questionnaire has 240 statements that are answered on a five-point scale with the following choices: strongly disagree, disagree, neutral, agree, and strongly agree.

The Participant Questionnaire (PQ)¹ is used in the Koestler Chair to collect general information about the participants' back-

¹ The PQ is the equivalent to the better known Participant Information Form (PIF). While other research reports with the present data base have called this questionnaire PIF (Morris et al., 1995), we prefer to call the questionnaire by the name which appears on the current form and which the participants saw when they answered the questions.

ground (demographics, psi experiences, belief in psi, spontaneous alterations of consciousness, and practices related to meditation and self-exploration). It contains 77 items, many of which have subsections (the relevant questions for this study are reproduced in the Appendix). The participants were asked to tick a box along a 7- point scale ranging from "yes" to "no" with the option of "uncertain" in the middle. We decided to use only those participants who chose "yes" (a score of seven) or "no" (a score of one) in the analyses related to the questions about claims of psychic experiences because we felt that it was conceptually problematic to interpret the middle range of scores, all of which reflected levels of participant uncertainty. The ambiguity of the response format, we felt, could complicate the interpretation of an already ambiguous question as well as artificially inflate the results of the analyses. That is, because a score of four was assigned to an answer that did not necessarily represent frequency or intensity, but more likely expressed some level of doubt, we felt resulting correlations would not be easily precisely interpretable. Our decision to select only the "yes" and "no" answers reduced the number of data points at our disposal and forced us to use less sensitive analysing statistical tests when relationships of the variables in questions. The decision did, however, allow us to be clearer about the meaning of those relationships because in all cases we contrasted unequivocal "yes" with unequivocal "no" responses.

Some of the 7-point response scales in the questionnaire were reversed during data entry so as to maintain a positive range of 1-7 as opposed to a negative one of 7-1. Only selected questions of the PQ were used. Three questions of the PQ did not use the 7-point scale but rather had a "yes" and "no" response format. These were the items about lucid dreams, having been raised in an environment with a tradition of paranormal abilities, and the practice of mental disciplines.

We constructed an index, or count, of psi experiences (called the Psi Index) for each subject based on the number of "yes" replies to questions about having had experiences of telepathy, clairvoyance, precognition, psychokinesis and visions (possible apparitions). The question about out-of-body experiences was not included in the index because we have performed independent analyses with this question (Alvarado, Zingrone, & Dalton, in press). The Psi Index had a range from 0 (no experiences reported) to 5 (having reported all the experiences listed). This index was correlated to the factors and facets of the NEO-PI-R.

Before the respondents answered the questions about parapsychological experpresented in the Appendix, they read the following definitions printed on the questionnaire: "Extrasensory Perception (ESP): Reception of information without the use of known senses or logical inference. ESP is for convenience further subdivided into three categories: pathy: ESP of the thoughts, feelings or behaviour of another person or organism. Clairvoyance: ESP of distant physical events or concealed objects. Precognition: ESP of the future. Psychokinesis (PK): Mental influence on the physical world."

In addition to the PQ, we used one question from the Creativity Questionnaire developed by one of us (KD). This question asked the participant to rate his or her level of creativity on a scale ranging from one to ten (the question appears in the Appendix).

Analyses

Data analysis was conducted using independent group t tests and Pearson correlations. We set an alpha of .05 (one-tailed) for our predicted analyses, and an alpha of .01 (two-tailed) for the rest. We are aware that we can be accused of over-analysing our data, but because our purpose was exploratory we felt that it was necessary to exhaust the comparison options that the individual psi experiences and the facets and factors of the NEO-PI-R

afforded us. Therefore, because the ratio of number of observations (Ns ranged from 3 to 65) to variables on the NEO-PI-R (5 factors and 36 facets by 5 individual psi experiences) was not sufficient to use a more comprehensive technique such as multiple regression, we made the decision to run the t tests. Because we were interested in uncovering as many useful relationships as possible for future testing, we decided not to correct for multiple analyses. However, we did decide to limit our discussion only to those resultant t test statistics that were associated with

large effect sizes (\geq .80) as measured by Cohen's d.

Results

Incidence of claims of parapsychological experiences

Table 1 shows the frequency of claims of parapsychological experiences. As can be seen in the table experiences of telepathy were the most common ones, while psychokinesis experiences were the least common.

Table 1
Incidence of parapsychological experiences

Experience	Percent	N
Telepathy	93	41
Clairvoyance	44	46
Precognition	73	45
Apparitions	48	54
Psychokinesis	17	52

Note: The N represents all the participants who answered "yes" or "no" to each question

Table 2
Form of ESP

·····	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Form	Percent	N
Sense, feeling, intuition or thought	85	96
Vision of a figure or of an object	21	95
Internal mental imagery	46	94
Mainly visual	*56	*71
Mainly auditory	7	68
Mainly olfactory	10	68
Mainly kinesthetic	22	69

Note: The N represents all the participants who answered "yes" or "no" to each question. The imagery category had six options indicating different modalities. Three of them were unclear or indeterminate. The other three indicated a general feeling, intuition, and dreams and thoughts.

^{*} These columns refer to those participants who answered "yes" to having had internal mental imagery in their experience, not to the total sample.

Table 3
Psi experiences index and the factors of the NEO-PI-R

Factor	Pearson r	p
Neuroticism	0.01	0.95
Extroversion	0.02	0.84
Openness	0.20	*0.02
Agreeableness	0.13	0.20
Conscientiousness	-0.19	0.07

Table 2 shows the frequency of form of manifestation of ESP experiences in the sample. The category of "sense, feeling, intuition or thought" was the most frequent one, followed by mental imagery and by visions. Those participants who claimed to have had imagery experiences reported that the most common mode was visual, followed by kinaesthetic, olfactory and auditory.

The Psi Index

The Psi Index had a mean of 1.30 (N = 97, Range: 0-5, SD = 1.32). The percent of responses for each score was: 0 (35%), 1 (30%), 2 (16%), 3 (10%), 4 (8%), and 5 (1%).

The mean Psi Index of males (N = 45, M = 1.36) was slightly higher than the mean Psi Index for female participants (N = 52, M = 1.25), but not significantly so, t [95] = .39, p = .70, two-tailed, Cohen's d = .08. The direction of the relationship between the Psi Index and Openness was predicted. The alpha level set for this analysis was .05, one-tailed. All other relationships were tested against an alpha of .01, two-tailed.

Psi experiences and the five factors of personality

Table 3 contains the Pearson correlations between the five factors of the NEO-PI-R and the Psi Index. Our prediction of a positive correlation between the index and openness to experience was confirmed (r = .20, p = .02, one-tailed). None of the other analyses of factor scores were significant, although mean scores on the Conscientiousness factor were sugges-

tively negatively correlated with the Psi Index (r = -.19, p = .07, two-tailed).

Our prediction of a positive correlation between the Psi Index and the Fantasy facet of the Openness Factor of the NEO-PI-R was confirmed (r[94] = .22, p = .02, one-tailed). In addition, we obtained a significant negative correlation with the Order facet of the Conscientiousness factor (r[94] = -.29, p = .004, two-tailed). This, and other non-significant correlations appear on Table 4.

Psi experiences and spontaneous alterations of consciousness

We predicted positive correlations between the index of Psi Experiences and questions about spontaneous alterations of consciousness during physical activity. Both questions had seven point scales ranging from "never" to "always." One question asked: "How often do you lose awareness of your surroundings when you get involved in an activity?" This question obtained a mean of 4.59 (N = 97, Range: 1-7, SD = 1.45). The other question was "How often do you lose your sense of time when you get involved in an activity?" This item obtained a mean of 4.79 (N = 96, Range: 1-7, SD = 1.39). The correlation of the Psi Index and losing awareness of the passage of time was significant and positive (r[94] = .16, p = .05, one-tailed). The analysis about losing awareness of surroundings was in the expected direction but was non-significant (r[95] = .13,p = .10, one-tailed).

Table 4
Psi experiences and the facets of the factors of the NEO-PI-R

Facets	Pearson <i>t</i>	p
Neuroticism:		•••••••••••••••••••••••••••••••••••••••
Anxiety	0.05	0.65
Angry/Hostility	-0.08	0.44
Depression	0.05	0.63
Self-Consciousness	-0.03	0.76
Impulsiveness	0.07	0.52
Vulnerability	-0.01	0.86
Extroversion:		
Warmth	-0.05	0.63
Gregariousness	-0.08	0.42
Assertiveness	0.04	0.70
Activity	0.15	0.16
Excitement Seeking	-0.10	0.35
Positive Emotions	0.15	0.15
Openness:		
Fantasy	0.22	*0.020
Aesthetics	0.19	0.060
Feelings	0.16	0.130
Actions	0.10	0.350
Ideas	-0.07	0.520
Values	0.13	0.220
Agreeableness:		
Trust	0.00	0.990
Straightforwardness	0.18	0.090
Altruism	-0.11	0.280
Compliance	0.13	0.210
Modesty	0.18	0.090
Tender-Mindedness	0.11	0.280
Conscientiousness:		
Competence	- 0.18	0.080
Order	-0.29	0.004
Dutifulness	-0.10	0.350
Achievement Striving	-0.13	0.220
Self-Discipline	0.00	0.970
Deliberation	-0.10	0.350

^{*} The relationship between the Psi Index and Fantasy was predicted. Therefore it was tested at an alpha of .05, one-tailed. All other relationships were not predicted and were tested for significance against an alpha of .01, two-tailed.

Table 5
Incidence of lucid dreams, practice of mental disciplines and having being raised in an environment with a tradition of paranormal abilities, and family members with psi experiences

Variable Lucid dreams Practised any form of mental discipline/exercise Raised in an environment with a tradition of belief in	Percentage	N	
	90	96	
	69	07	
	09	97	
	2.4		
***************************************	24	97	
paranormal ability			
Member of family			
had paranormal experiences	41	97	

Note: The N represents all the participants who answered "yes" or "no" to each question.

Other analyses with the Psi Index

Tables 5 and 6 present descriptive information about the variables related to the Psi Index in this section.

The Psi Index was correlated to the 10-point creativity scale developed by one of us (K.D.), but the outcome was non-significant (r[95] = .16, p = .13, two-tailed). Marginally significant results were obtained between the Psi Index and lucid dreams, which was measured with a "yes" and "no" question (Yes, N = 86, M = 1.38; No, N = 10, M = .40; t[94] = 2.28, p = .02, two-tailed, d = .77). However, frequency of lucid dreams did not significantly correlate to the index (r[86] = .16, p = .14, two-tailed).

The frequency of dream recall claimed by the participants was not significantly correlated to the Psi Index, r[94] = .12, p = .25, two-tailed.

Another marginally suggestive relationship was obtained in a comparison of mean Psi Index scores for those who practised mental disciplines and those who did not (Yes, N = 67, M = 1.46; No, N = 30, M = .93; t[95] = 1.84, p = .07, two-tailed, d = .41). Frequency of current practice was suggestively correlated to Psi Index scores (r[62] = .27, p = .03, two-tailed), given our set alpha of .01.

The Psi Index was also suggestively and positively correlated to the practice of spiritual and physical regimes such as Hatha Yoga, Tai Chi, and Aikido

(r[93] = .24, p = .02, two-tailed), given our set alpha level of .01.

Finally, a significant difference was found between the Psi Index scores of those who had been raised in an environment in which a tradition of paranormal ability existed and those who had not. Participants who answered "yes" to the environment question obtained a mean Psi Index of 2.00 (N = 23), while those who answered "no" obtained a mean of 1.08 (N = 74) (t[95] = 3.03, p = .003, two-tailed, d = .73).

Similarly, those participants who indicated they had a member in their family who had had paranormal experiences (N = 40, M = 1.95) obtained a significantly higher Psi Index that those participants who did not have relatives with such experiences (N = 11, M = .64), t[49] = 3.01, p = .004, two-tailed, d = 1.05

Exploratory analyses of specific psi experiences and the NEO-PI-R

One hundred and seventy-five t-tests were conducted to explore exhaustively any potential relationships with personality variables and the claim of individual psi experiences. The results of 11 comparisons were associated with large effect sizes as measured by Cohen's $d \geq .80$). Upon examination, 3 of these were discarded because the group numbers of participants were wildly disparate (38 and 3 respectively) and the associated p values

Table 6
Descriptive statistics for ratings of creative ability, frequency of lucid dreams, current practice of mental disciplines, and practice of physical and/or spiritual regimes

Variable	N	Mean	Range*	SD
Creative artistic ability	97	8.15	1-10	1.28
Lucid dream frequency	88	2.62	1-7	1.58
Dream recall frequency	96	5.08	1-7	1.62
Current frequency of practice of mental disciplines	64	3.22	1-7	1.93
Current frequency of practice of physical and/or spir-	95	2.19	1-7	1.67
itual regimens such as hatha yoga, tai chi, and aikido			*************************	

^{*} This represents both the theoretical range of the scale and the actual range obtained.

were .10 or greater thus leading us to believe that these differences would not replicate. Of the remaining 8 results associated with large effect sizes, 3 were significant differences between persons who claimed to have experienced precognition and those who had not, and 5 significant differences between persons who claimed to have experienced psychokinesis and those who had not. That is, "precognizers" had significantly higher mean scores than did "non-precognizers" on the Openness factor (t[42] = 2.60, p = .01, d = .90), and on the Feelings facet of the Openness factor (t[42] = 2.60, p = .01, d =.90) and significantly lower scores on the Order facet of the Conscientiousness factor (t[42] = 2.53, p = .02, d = .88). Persons who claimed to have experienced psychokinesis had significant higher mean scores on the Tender-Mindedness facet of the Agreeableness factor (t[50] = 2.54, p = .01, d =.95), and significantly lower scores on the Anger/Hostility facet of the Neuroticism factor (t[50] = 2.20, p = .03, d = .82), and on the Gregariousness facet (t[50] = 2.33, p =.02, d = .87), the Activity facet (t[50] = 2.55, p = .01, d = .95), and on the Excitement-Seeking facet (t[50] = 2.55, p = .01, d = .95) of the Extroversion factor. Table 7 provides the details of these analyses.

Discussion

It is clear that our sample cannot be

considered representative because it was selected from a creative population and screened for having experienced parapsychological phenomena and having a positive belief in the existence of ESP and similar phenomena. In addition, those who participated in the study came to the Koestler Parapsychology Unit with the understanding that they were going to be tested for ESP. It is possible that these conditions affected our results. For this reason it would be worthwhile to attempt to replicate our findings using other methods of data gathering and less restrictive criteria. The sample constraints of the initial study should not be considered a flaw in that study, because the hypotheses of that study demanded the narrowing of the population tested to creative individuals (Morris et al., 1995). Our wish to have a wider sample only highlights one of the limitations of reanalysing data collected with other purposes in mind.

It is interesting to see that the incidence of parapsychological experiences is consistent with that of previous studies in the sense that psychokinesis experiences are less frequent than ESP experiences (see Table 1). This pattern has been found in other studies summarised in graphic form by Alvarado (1996, p. 16).

Our predictions regarding the relationship of the Psi Index and the Openness factor (r = .20, p = .02, one-tailed)

Table 7
Relationship between psi experiences and non-experiencers on specific facets and factors of the NEO-PI-R

NEO Factor / Facet & Type of Psi Experience Openness Factor Score		Yes		No		df	р	Cohen's d	Relative Effect Size
		NEO Mean	N	NEO Mean			•••••••		••••••••
Telepathy	38	143.61	3	149.00	0.65	39	0.52	0.40	
Clairvoyance	20	146.30	26	140.46	1.23	44	0.23	0.37	
Precognition	32	146.09	12	134.08	2.60	42	0.01	0.90	Large
Psychokinesis	9	148.67	43	140.72	1.76	50	0.08	0.66	
Vision	25	145.84	28	142.50	0.80	51	0.43	0.22	
NEO-O3, Feelings									
Telepathy	38	26.21	3	28.33	1.04	39	0.30	0.64	
Clairvoyance	20	26.35	26	25.42	0.91	44	0.37	0.28	
Precognition	32	26.78	12	24.00	2.60	42	0.01	0.90	Large
Psychokinesis	9	26.56	43	25.63	0.76	50	0.45	0.29	
Vision	25	27.00	28	24.89	2.32	51	0.02	0.65	
NEO-A6, Tender-Mindedness									
Telepathy	38	21.71	3	22.67	0.46	39	0.65	0.28	
Clairvoyance	20	21.75	26	21.92	0.18	44	0.86	0.06	
Precognition	32	21.88	12	21.92	0.04	42	0.97	0.01	
Psychokinesis	9	24.44	43	21.53	2.54	50	0.01	0.95	Large
Vision	25	22.44	28	20.96	1.58	51	0.12	0.44	
NEO-C2, Order									
Telepathy	38	13.92	3	15.67	0.53	39	0.60	0.33	
Clairvoyance	20	14.65	26	15.69	0.68	44	0.50	0.21	
Precognition	32	13.31	12	17.75	2.53	42	0.02	0.88	Large
Psychokinesis	9	13.56	43	15.21	0.90	50	0.37	0.34	
Vision	25	13.20	28	15.68	1.73	51	0.09	0.49	

Table 7(continued)
Relationship between psi experiences and non-experiencers on specific facets and factors of the NEO-PI-R

***************************************	~~~	************	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		**************	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	********		
NEO-N2, Anger / Hostility									
Telepathy	38	15.50	3	18.67	0.93	39	0.36	0.57	
Clairvoyance	20	15.95	26	15.38	0.35	44	0.73	0.11	
Precognition	32	15.75	12	14.67	0.61	42	0.55	0.21	
Psychokinesis	9	12.22	43	16.26	2.20	50	0.03	0.82	Large
Vision	25	15.44	28	14.64	0.57	51	0.57	0.16	
NEO-E2, Gregariousness									
Telepathy	38	16.05	3	17.33	0.33	39	0.74	0.21	
Clairvoyance	20	14.45	26	18.69	2.45	44	0.02	0.75	
Precognition	32	16.22	12	18.50	1.21	42	0.23	0.42	
Psychokinesis	9	12.56	43	17.51	2.33	50	0.02	0.87	Large
Vision	25	22.16	28	17.25	0.79	51	0.43	0.22	
NEO-E4, Activity									
Telepathy	38	19.39	3	21.67	0.96	39	0.34	0.56	
Clairvoyance	20	19.85	26	19.08	0.67	44	0.50	0.2	
Precognition	32	18.88	12	17.00	1.26	42	0.21	0.44	
Psychokinesis	9	15.22	43	18.63	2.34	50	0.02	0.88	Large
Vision	25	19.12	28	18.75	0.31	51	0.76	0.09	
NEO-E5, Excitement Seeking									
Telepathy	38	18.63	3	21.67	1.08	39	0.29	0.66	
Clairvoyance	20	17.95	26	19.62	1.35	44	0.18	0.41	
Precognition	32	18.25	12	19.17	0.60	42	0.56	0.21	
Psychokinesis	9	15.33	43	19.23	2.55	50	0.01	0.95	Large
Vision	25	18.16	28	18.57	0.33	51	0.75	0.09	

Note: A total of 175 analyses were conducted. The comparisons not shown here did not yield significant results associated with large effect sizes. The complete table with the rest of the *t*-test analyses is available from the first author.

and the Fantasy facet of the Openness factor (r = .22, p = .02, one-tailed) were confirmed. Although these results are encouraging, it is important to keep in mind the low magnitude of the relationships in question. Nonetheless, the results make conceptual sense when compared to a variety of previous findings. That is, other researchers have suggested that claims of psi phenomena are associated with other measures of cognitive openness sensitivity such as frequency of dream recall (e.g., Kohr, 1980; Palmer, 1979), fantasy proneness (e.g., Myers & Austrin, Wilson & Barber, 1983) and 1985; absorption (e.g., Irwin, 1985; Nelson, 1989).

One outcome we found that was totally unexpected for us was correlation between the Psi Index and the Order facet of the Conscientiousness factor (r = -.29, p = .004, two-tailed). This significantly negative correlation suggested to us that incidence of psi experiences may be associated to a low level of Order in the experiencers in this study. According to Costa and McRae (1992): "High scorers on this scale are neat, tidy, and well-organised. They keep things in their proper places. Low scorers are unable to get organised and describe themselves as unmethodical" (p. 18). According to a table of validation correlations published by the authors of the NEO-PI-R (Costa & McRae, 1992, p. 47) the Order facet of the NEO-PI-R is significantly correlated to the following subscales of other personality inventories: positively to the Order subscale of the Personality Research Form (r = .71); positively to the Orderly and Persistent subscales of the Interpersonal Style Inventory (.68 and .43, respectively); negatively to the Passive-Aggressive subscale of the MMPI (-.40); and negatively to the Judging/Perceiving subscale of the MBTI (-.44) such that high scores on the Order facet of the NEO were negatively correlated to scores indicative of a Perceiving style. This latter finding has appeared in other research as well (Furnham, 1996).

This relationship between lower scores on the Order facet of the NEO-PI-R and

high scores on the Psi Index may mean that persons who are more relaxed in their daily lives have more psi experiences or are willing to report more psi experiences than those persons who are more "neat, tidy and well-organised". Persons who score lower on Order may have a higher tolerance for ambiguity in life or may reject or question authority more often than those who obtain higher scores. We are speculating here, of course, but these results confirmed our suspicions that a great deal of potentially useful and meaningful psychological data may be uncovered by examining data collected in the context of laboratory experiments.

Another support for our suspicions about the fruitfulness of "mining" the Participant Questionnaire and other similar data collected by experimental teams is the relationship of Order to the Judging / Perceiving subscale of the MBTI. previous studies Perceiving has been positively related to reports of spontaneous psi experiences on the PQ and to ESP scores in the Ganzfeld (Bem & Honorton, 1994, p13). Perceiving has also been found to be negatively correlated to Order and Order is significantly negatively correlated to the Psi Index in this sample. We feel that our unexpected finding on the relationship of this facet to the Psi Index may in fact provide some indirect support for the previously found relationship between Perceiving and psi experiences mentioned above.

Comparison of mean scores on the Order factor was also associated with a large effect size in our exhaustive exploratory analyses of the relationship between the factors and facets of the NEO-PI-R and the specific psi experiences. In this case, as mentioned above, the differences occurred between those who claimed to have experienced precognition and those who did not.

We would like to encourage further research on the effects of being raised in a tradition of parapsychological phenomena and having family members with psi experiences on the frequency of parapsychological experiences. Our results

indicate a relationship between frequency of experiences and the above-mentioned variables but it is not clear what is the nature of this relationship. Further explorations of this issue could follow the recent work conducted by Cohn (1994, 1996) which used survey and interview techniques to study "second sight."

More complex analyses might reveal a group of characteristics that tend to occur in tandem with certain other experiences or certain clusters of experience types in our experimental participants. This, in turn, could lead to a more consistent set of predictors of successful ESP scoring in the laboratory.

Finally, it is not our intention to put forth the exploratory analyses we have done here as "findings" as such, but rather to illustrate how much useful information probably resides in the file cabinets of This information experimentalists. whether collected through participant information forms, the NEO-PI-R, the MBTI or a variety of other informal and formal questionnaires and psychological instruments - provides a resource not only for more effective screening of experimental participants but also for uncovering the differential psychological characteristics of experiencers.

Clearly the data from one study, given the number of variables encoded by the various questionnaires in use, is not enough to accomplish our task. What is needed to fully examine the relevant variables in more powerful and statistically appropriate ways is a much larger data set with a sufficient ratio of N to variables to multiple perform regressions, analyses and other higher order statistical tests. It would be difficult for individual laboratories to conduct a ganzfeld study of the necessary size given the lengthy duration of a single session. However, by aggregating data across series and across laboratories into a large single database containing psi scores, psychological inventory scores and responses on various participant questionnaires, belief experience scales, we may be able to develop consistent and robust profiles of those who report psi experiences and those who are able to score significantly in the laboratory. At this point it is our hope that active laboratories will follow our lead and analyse their participant-specific data much more fully. If they cannot, then we would like to take this opportunity to offer to conduct the study ourselves provided such data is made available to us.

Appendix Questions used in the study

The following questions were taken from the Participant Questionnaire, a questionnaire used at the Koestler Parapsychology Unit to collect information about individuals who participate in research projects, mainly experiments. Except for the four "yes" and "no" questions, and three others with different response formats, most of these questions used seven point scales. We are presenting here only the middle and the extreme points that had labels. Questions with an asterisk were originally answered in a seven-point scale, but the data was changed to "yes" and "no" answers.

Appendix Participant Questionnaire **Absorption Experiences** How often do you lose awareness of your surroundings when you get involved in an activity? (please tick one box) □Never □Half the time □Always. How often do you lose your sense of time when you get involved in an activity? (please tick one box) □Never ☐Half the time **□**Always Parapsychological Experiences Have you ever had an experience which is best explained as telepathy? (please tick one box) **□**No □Yes □Uncertain Have you ever had an experience which is best explained by clairvoyance? (please tick one box) □Yes □Uncertain \Box No Have you ever had an experience which is best explained by precognition? (please tick one box) □Yes □Uncertain $\square No$ Have you ever had an experience which is best explained by psychokinesis? (please tick one box) □Yes ☐Uncertain □No Have you ever experienced a vision for which you could find no normal explanation? □Uncertain \Box No

If you have had an ESP experience(s), was the ESP information conveyed to you primarily (most commonly) by means of: (tick as many boxes as appropriate)

□A sense, feeling, intuition or thought

Seeing a vision of a figure or an object

□Internal mental imagery

If the experience consisted primarily of internal mental imagery, was the nature of the experience primarily: (tick as many boxes as appropriate)

□Visual

□ Auditory

□Olfactory (a sense of smell/odour)

□Kinaesthetic (a physical sensation)

□Other (please specify)

Appendix (continued) Participant Questionnaire Creativity Please rate yourself for level of creative /artistic ability Notatall = $\Box 1$ $\Box 2$ $\Box 3$ $\Box 4$ $\Box 5$ $\Box 6$ $\Box 7$ $\Box 8$ $\Box 9$ $\Box 10$ = Very much **Dream Experiences** Have you ever had a dream in which you were aware that you were dreaming? (only two options) □Yes QNo If you have had a dream in which you were aware you were dreaming, how often does this occur? (please tick one box) **□**Rarely □Once a week □Almost everyday How often do you clearly recall the content of your dreams? (please tick one box) **□**Rarely □Once a week □Almost everyday Meditation Practices / Mental Disciplines Have you ever practised any form of mental discipline/exercise, e.g., meditation, biofeedback, hypnosis, relaxation exercises? (only two options) **Q**Yes QNo If yes, do you still practice: (please tick one box) □Never □Weekly □Daily Have you ever studied any physical and/or spiritual regimen such as hatha yoga, tai chi, aikido, etc.? □Never □Weekly \Box Daily **Environment Growing Up / Family Members With Psi Experiences** Were you raised in an environment where there is a tradition of paranormal ability which is still believed in to some degree (e.g., second sight in the Highlands)? (only two options) **□**Yes **□**No Has any member of your family had paranormal experiences? (only two options) □Yes \Box No

References

- Alvarado, C.S. (1996). The place of spontaneous cases in parapsychology. *Journal of the American Society for Psychical Research*, 90, 1-34.
- Alvarado, C.S., & Zingrone, N.L. (1994). Individual differences in aura vision: Relationships to visual imagery and imaginative-fantasy experiences. European Journal of Parapsychology, 10, 1-30.
- Alvarado, C.S., & Zingrone, N.L. (1997). Relación entre la experiencia fuera del cuerpo y la absorción: Estudios con participantes Puertorriqueños y Norteamericanos. Revista Argentina de Psicologia Paranormal, 8, 249-261.
- Alvarado, C.S., Zingrone, N.L., & Dalton, K. (in press). Out-of-body experiences, alterations of consciousness and the five-factor model of personality. *Imagination, Cognition and Personality*.
- Bem, D.J., & Honorton, C. (1994). Does psi exist? Replicable evidence for an anomalous process of information transfer. Psychological Bulletin, 115, 4-18.
- Cohn, S.A. (1994). A survey of Scottish second sight. Journal of the Society for Psychical Research, 59, 385-400.
- Cohn, S.A. (1996). The Scottish tradition of second sight and other psychic experiences in families. Unpublished doctoral dissertation, University of Edinburgh.
- Costa, P.T., & McRae, R.R. (1992). Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI): Professional manual (Rev. ed.) Odessa, FL: Psychological Assessment Resources.
- Council, J.R., & Huff, K.D. (1990). Hypnosis, fantasy activity, and reports of paranormal experiences in high, medium and low fantasisers. British Journal of Experimental and Clinical Hypnosis, 7, 9-15.
- Dalton, K., Morris, R.L., Delanoy, D.L., Radin, D., Taylor, R., & Wiseman, R. (1996). Security measures in an automated Ganzfeld system. Journal of Parapsychology, 60, 129-147.
- Furnham, A. (1996). The big five versus the big four: The relationship between the Myers-Briggs Type Indicator (MBTI) and the NEO-PI five factor model of personality. *Personality and Individual Differences*, 21, 303-307.
- Glicksohn, J. (1990). Belief in the paranormal and subjective paranormal experience.

- Personality and Individual Differences, 11, 675-683.
- Gliski, M.J., Tataryn, D.J., Tobias, B.A., Kihlstrom, J.F., & McConkey, K.M. (1991). Absorption, openness to experience, and hypnotisability. *Journal of Personality and Social Psychology*, 60, 263-272.
- Greiner, R.P. (1964). An investigation into the personality traits of people with so-called spontaneous paranormal phenomena. *Journal of Parapsychology*, 28, 284. (Abstract)
- Haight, J. (1979). Spontaneous psi cases: A survey and preliminary study of ESP, attitude, and personality relationships. Journal of Parapsychology, 43, 179-204.
- Haraldsson, E., Gudmundsdottir, A., Ragnarsson, A., Loftsson, & Jonsson, S. (1977).
 National survey of psychical experiences and attitudes towards the paranormal in Iceland. In J.D. Morris, W.G. Roll, & R.L. Morris (Ed.), Research in Parapsychology 1976, 182-186. Metuchen, NJ: Scarecrow Press. (Abstract)
- Hearne, K.M.T. (1984). A survey of reported premonitions and of those who have them. *Journal of the Society for Psychical Research*, **52**, 261-270.
- Irwin, H.J. (1985). Parapsychological phenomena and the absorption domain. Journal of the American Society for Psychical Research, 79, 1-11.
- Irwin, H.J. (1994). The phenomenology of parapsychological experiences. In S. Krippner (Ed.), Advances in Parapsychological Research, 7, 10-76. Jefferson, NC: McFarland.
- Kennedy, J.E., Kanthamani, H., & Palmer, J. (1994). Psychic and spiritual experiences, health, well-being, and meaning of life. *Journal of Parapsychology*, 58, 353-383.
- Kohr, R.L. (1980). A survey of psi experiences among members of a special population. Journal of the American Society for Psychical Research, 74, 395-411.
- Lawrence, T., Edwards, C., Barraclough, N., Church, S., & Hetherington, F. (1995). Modelling childhood causes of paranormal belief and experience: Childhood trauma and childhood fantasy. Personality and Individual Differences, 19, 209-215.
- Lynn, S.J., & Rhue, J.W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. American Psychologist, 43, 35-44.
- Morris, R.L., Dalton, K.D., Delanoy, D.L., & Watt, C. (August 1995). Comparison of the

- sender / no sender condition in the Ganzfeld.
 Paper presented at the 1995 Annual
 Convention of the Parapsychological
 Association, Durham, North Carolina.
- Myers, S.A., & Austrin, H.R. (1985). Distal eidetic technology: Further characteristics of the fantasy-prone personality. *Journal of Mental Imagery*, 9, 57-66.
- Nadon, R., & Kihlstrom, J.F. (1987). Hypnosis, psi, and the psychology of anomalous experience. Behavioural and Brain Sciences, 10, 597-599.
- Nelson, P.L. (1989). Personality factors in the frequency of reported spontaneous praeternatural experiences. *Journal of Trans*personal Psychology, 21, 193-209.
- Palmer, J. (1979). A community mail survey of psychic experiences. Journal of the American Society for Psychical Research, 73, 221-252.
- Palmer, J. (August 1996). Individual differences in face-to-face psychic readings. Paper presented at the 39th Annual Convention of the Parapsychological Association, San Diego, California.
- Rao, P.V.K. (1992). Fantasy proneness, reports of paranormal experiences and ESP test performance. *Journal of Indian Psychology*, 10, 27-34.
- Richards, D.G. (1991). A study of the correlation between subjective psychic experiences and dissociative experiences. *Dissociation*, 4, 83-91.
- Ross, C.A., & Joshi, S. (1992). Paranormal experiences in the general population. Journal of Nervous and Mental Disease, 180, 357-361.
- Sandford, J. (1979). Personality and paranormal experience: The relationship between social adjustment, extroversion, neuroticism, and the report of psychic phenomena. Journal of Parapsychology, 43, 54-55. (Abstract)
- Sherwood, S. (1997, August). Relationship between childhood hypnagogic / hypnopompic experiences, childhood fantasy proneness and anomalous experiences and beliefs: An exploratory WWW survey. Paper presented at the 40th Annual Convention of the Parapsychological Association, Brighton, England.
- Stokes, D. (1997). Spontaneous psi phenomena. In S. Krippner (Ed.), Advances in Parapsychological Research, 8, 6-87. Jefferson, NC: McFarland.

- Tellegen, A., & Atkinson, G. (1974). Openness to absorbing and self-altering experiences ("Absorption"), a trait related to hypnotic susceptibility. *Journal of Abnormal Psych-ology*, 83, 268-277.
- Usha, S., & Pasricha, S. (1989). Claims of paranormal experiences - II: Attitudes toward psychical research and factors associated with psi and psi-related experiences. NIMHANS Journal, 7, 151-157.
- Wild, T.C., Kuiken, D., & Schopflocher, D. (1995). The role of absorption in experiential involvement. Journal of Personality and Social Psychology, 69, 569-579.
- 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, 340-387. New York: John Wiley.
- Zingrone, N.L., & Alvarado, C.S. (1994, August). Psychic and dissociative experiences: A preliminary report. Paper presented at the 1994 convention of the Parapsychological Association, Amsterdam.

N.L.Z. & C.S.A.
Department of Psychology
University of Edinburgh
7 George Square
Edinburgh EH8 9JZ
SCOTLAND, UK

& Centro de Estudios Integrales de Puerto Rico P.O. Box 194176 San Juan 00919-4176 PUERTO RICO

email (N.L.Z. & C.S.A.) 72240.3357@compuserve.com

K.D.
Department of Psychology
University of Edinburgh
7 George Square
Edinburgh EH8 9JZ
SCOTLAND, UK

Psi-Ervaring en de "Big Five" Correlatie tussen de NEO-PI-R en Beweringen over Ervaringen door Proefpersonen

Samenvatting: Dit onderzoek was gebaseerd op een analyse van data die werden verzameld voor een Ganzfeld-experiment door de University of Edinburgh (Morris, Dalton, Delanoy & Watt, 1995). In dit onderzoek probeerden we psi-ervaringen te correleren met de vijf factoren en de bijbehorende facetten van de NEO-PI-R en met verschillende droomervaringen, absorptieervaringen en andere variabelen. De data waren afkomstig van 97 kunstenaars en musici die waren benaderd voor ESP-onderzoek in een Ganzfeld-setting. We voorspelden een significant positieve correlatie tussen een index van claims over psi-ervaringen en de factor Openness en het facet Fantasy van de NEO-PI-R. Bovendien voorspelden we dat de psi-index positief zou correleren met de antwoorden op twee vragen over spontane bewustzijnsverandering op het informatieformulier dat de proefpersoon had ingevuld. Die vragen gingen over het verliezen van het gevoel voor de omgeving en voor het tijdsverloop tijdens het uitvoeren van een activiteit. Onze voorspellingen over een positieve correlatie tussen de psi-index (een gecombineerde meting van het optreden van verschillende psi-ervaringen) en het openstaan voor ervaringen (r = .20, p = .02, enkelzijdig) en fantasie (r = .22, p = .02, enkelzijdig) werden beide bevestigd. De psi-index toonde een significante correlatie met het verliezen van de tijdsbeleving (r = .16, p = 0.05, enkelzijdig), maar niet met het verlies van het gevoel voor de omgeving (r = .13, p = 0.10, enkelzijdig). De psi-index correleerde significant negatief met het facet Order van de factor Conscientiousness (r = -.29, p =.004, dubbelzijdig). We vonden significant positieve verbanden tussen de psi-index en opgevoed zijn in een omgeving met een traditie van paranormale vaardigheden (t = 3.03, p = .003, dubbelzijdig, Cohen d = .73) en gezinsleden met psi-ervaringen (t = 3.01, p = .004, dubbelzijdig, d = .0041.05). De auteurs zijn voorstander van verder onderzoek gebaseerd op claims over ervaringen van proefpersonen.

Psi-Upplevelser och "Big Five": Förhållande Mellan NEO-PI-R och Uppgifter från Testpersoner

Sammanfattning: Denna undersökning byggde på en analys av information avsedd för ett Ganzfeld-experiment vid Edinburghs Universitet (Morris, Dalton, Delanoy & Watt, 1995). I undersökningen har vi försökt att relatera psi-upplevelser till de fem faktorer och de motsvarande aspekterna på NEO-PI-R och till flera sorters drömupplevelser, absorptionsupplevelser och andra variabler. Vi har använt information från 97 artister och musiker som vi rekryterade för att utföra ESP-tester i en Ganzfeld-miljö. Vi har spått ett signifikant positivt förhållande mellan ett index över uppgifter om psi-upplevelser och faktorn Openness och aspekten Fantasy på NEO-PI-R. Dessutom har vi spått att Psi-indexet skulle relatera positivt till svaren på två frågor om spontan medvetenhetsförändring på blanketten som deltagaren fyllde i. Dessa frågor hade att göra med att tappa känslan för omgivningen och tidens gång i en aktivitet. Våra förutsägelser om ett positivt förhållande mellan psi-indexet (en kombinerad mätning av olika psi-upplevelser) och mottagligheten för upplevelser (r = .20, p = .02, ensidig) och Fantasy (r = .22, p = .02, ensidig) har blivit bekräftade. Psi-indexet visade ett signifikant förhållande med att tappa tidkänslan (r = .16, p = .05, ensidig), men inte med att tappa känslan för omgivningen (r = .13, p = .10, ensidig). Psiindexet korrelerade signifikant och negativt med aspekten Order på faktorn Medvetenhet (r = -.29, p = .004, tvåsidig). Dessutom fanns det signifikant positiva förhållanden mellan Psi-indexet och att vara uppfostrad i en miljö med en tradition av paranormala kunskaper (t = 3.03, p = .003, tvåsidig, Cohen d = .73) och släktingar med psi-upplevelser (t = 3.01, p = .004, tvåsidig, d = 1.05). Författaren uppmanar till mer forskning med uppgifterna från testpersoner.

Psi-Erfahrungen und die "Big Five": Beziehungen zwischen NEO-PI-R und den Behaupteten Erfahrungen von Versuchspersonen

Zusammenfassung: Diese Untersuchung stützt sich auf eine Analyse von Daten aus einer Ganzfeld-Studie an der University of Edinburgh (Morris, Dalton, Delanoy & Watt, 1995). Wir

versuchten, Psi-Erfahrungen zu den fünf Faktoren und den entsprechenden Facetten des NEO-PI-R und zu verschiedenen Traumerfahrungen, Absorptionserlebnissen und anderen Variablen in Beziehung zu setzen. Wir verwendeten Daten von 97 bildenden Künstlern und Musikern, die für Ganzfeld-ASW-Tests einbestellt waren. Vorausgesagt wurde, daß ein Index von Psi-Behauptungen signifikant und positiv mit dem Faktor Offenheit und der Facette Fantasie des NEO-PI-R korrelieren würde, ferner, daß der Psi-Index positiv mit zwei Fragen über spontane Bewußtseinsveränderung korrelieren würde, die einem Informationsblatt für Teilnehmer entstammten. Diese Fragen betrafen den Wahrnehmungsverlust für die räumliche Umgebung und für das Verstreichen der Zeit, während der man anderweitig beschäftigt (abgelenkt) ist. Unsere Voraussagen hinsichtlich einer positiven Korrelation zwischen Psi-Index (einem kombinierten Maß für das Auftreten verschiedener Psi-Erfahrungen) und der Offenheit für Erfahrungen (r = .20, p = .02, einseitig) sowie der Fantasie (r = .22, p = .02, einseitig) wurden bestätigt. Der Psi-Index korrelierte signifikant mit der Frage zum Verlust des Zeitgefühls (r = .16, p = .05, einseitig), allerdings nicht mit jener zum Verlust der Umgebungswahrnehmung (r = .13, p = .10, einseitig). Der Psi-Index korrelierte signifikant und negativ mit der Facette Order des Faktors Conscientiousness (r = .29, p = .004, zweiseitig). Zudem fanden sich signifikant positive Beziehungen zwischen dem Psi-Index und dem Aufwachsen einer Versuchsperson in einer von paranormalen Fähigkeiten geprägten Umwelt (t = 3.03, p = .003, zweiseitig, Cohen's d = .73) und der Existenz von Familienmitgliedern mit Psi-Erfahrungen (t = 3.01, p = .004, zweiseitig, d = 1.05). Die Autoren befürworten weitere Untersuchungen unter Verwendung der behaupteten Erfahrungen von Versuchspersone

Esperienze Psi e i "Grandi Cinque" Correlare il NEO-PI-R Alle Affermazioni di Esperienza di Soggetti Sperimentali

Sommario: Questo studio consiste nell'analisi dei dati raccolti durante una ricerca con la tecnica del ganzfeld effettuata all'Università di Edimburgo (Morris, Dalton, Delanoy e Zatt, 1995). Nel presente lavoro abbiamo tentato di correlare le esperienze psi ai cinque fattori e corrispondenti aspetti del NEO-PI-R, a una serie di esperienze oniriche, a esperienze di coinvolgimento e ad altre variabili. Abbiamo usato i dati relativi a 97 artisti e musicisti, che erano stati arruolati per condurre prove ESP in condizioni di ganzfeld. Ci aspettavamo che un indice delle dichiarazioni di avere esperienze psi avrebbe correlato positivamente e significativamente con il fattore Apertura e con l'aspetto Fantasia del NEO-PI-R, e che l'Indice Psi avrebbe correlato positivamente con due aspetti dell'alterazione di coscienza rilevati dal questionario completato dai partecipanti, cioè la perdita di senso dell'ambiente circostante e la mancata percezione dello scorrere del tempo mentre si è impegnati in un'attività. La nostra predizione su una correlazione positiva tra Indice Psi (che è una misura cumulativa dell'incidenza di più esperienze psi) e disponibilità all'esperienza (r = .20, p =.02, a 1 coda) e Fantasia (r = .22, p = .02, a 1 coda) è stata confermata. L'Indice Psi correlava significativamente con la perdita di consapevolezza del senso del tempo (r = .16, p = .05, a 1 coda), ma non con il distacco dall'ambiente (r = .13, p = .10, a 1 coda). L'Indice Psi correlava significativamente ma negativamente con la componente Ordine del fattore Coscienziosità (r = .29, p = .004, a 2 code). Abbiamo inoltre trovato significative correlazioni positive tra l'Indice Psi e l'essere cresciuti in un ambiente con tradizione di capacità paranormali (t = 3.03, p = .003, a 2 code, d di Cohen = .73) e l'avere famigliari con esperienze psi (t = 3.01, p = .004, a 2 code, d = 1.05). Gli autori sollecitano ulteriori ricerche basate sulle dichiarazioni dei soggetti sperimentali a proposito delle loro esperienze.

Les Experiences Psi et les "Cinq Grand": Relation du NEO-PI-R aux Expériences Spontanées de Sujets Experimentaux

Résumé: Cette étude repose sur l'analyse de données collectées à l'occasion d'une expérimentation ganzfeld menée à l'université d'Edimbourg (Morris, Dalton, Delanoy, & Watt, 1995). Dans cette étude, nous avons tenté de corréler les expériences psi aux cinq facteurs du NEO-PI-R et aux facettes correspondantes, ainsi qu'à une variété d'expériences de rêve, expériences d'absorption et autres variables. Nous utilisons des données de 97 artistes et musiciens recrutés dans le but de

conduire des tests PES dans le ganzfeld. Nous prédisions que l'index des expériences psi rapportées serait positivement et significativement corrélé au facteur d'Ouverture (Openness) et à la facette Imaginaire (Fantasy) du NEO-PI-R. Nous prédisions également que l'index Psi serait positivement corrélé aux réponses à deux questions concernant la modification spontanée de l'état de conscience, extraites d'un formulaire d'information rempli par les participants, notamment la perte du sens de l'environnement immédiat et celle du temps lorsque le participant est engagé dans une activité. Nos prédictions quant à une corrélation positive entre l'index Psi (une mesure combinée de l'incidence de plusieurs expériences psi) et l'Ouverture à l'expérience (r = .20, p = .02, 1t) et l'Imaginaire (r = .22, p = .02, 1t) ont été confirmées. L'index Psi était significativement corrélé à la question de la perte de conscience du sens de temps (r = .16, p = .05, 1t), mais pas à la question relative à la perte de vigilance quant à l'environnement immédiat (r = .13, p = .10, 1t). L'index Psi était significativement corrélé de manière négative à la facette d'Ordre du facteur de Conscience (r = -.29, p = .004, 2t). En outre, des corrélations positives significatives ont été observées entre l'index Psi et le fait d'avoir été élevé dans un environnement avec une tradition d'aptitudes paranormales (t = 3.03, p = .003, 2t, Cohen's d = .73) et d'avoir des membres de la famille ayant vécu des expériences psi (t = 3.01, p = .004, 2t, d = 1.05). Les auteurs encouragent les recherches utilisant les récits expérientiels des sujets d'expérimentations.

Experiencias Psi y los "Cinco Grandes": Relacionando al NEO-PI-R a las Experiencias de Sujetos Experimentales

Resumen: Este estudio se basó en análisis de datos recopilados para un estudio ganzfeld llevado a cabo en la Universidad de Edinburgo (Morris, Dalton, Delanoy, & Watt, 1995). En este estudio tratamos de relacionar a las experiencias psi a los cinco factores y facetas del NEO-PI-R y a una variedad de experiencias de sueño, experiencias de absorción, y a otras variables. Utilizamos datos de 97 artistas y músicos/as reclutados para participar en un experimento de percepción extrasensorial en el ganzfeld. Nuestras predicciones fueron que un índice de experiencias psi mostraría una correlación significativa y positiva con el factor de Apertura (Openness) y la faceta de Fantasía del NEO-PI-R, y que el Indice Psi (una medida combinada de la incidencia de varias experiencias psi) correlacionaría positivamente con dos preguntas de alteraciones de conciencia espontáneas tomadas del cuestonario de información de los participantes, experiencias de perder la noción de los alrededores y del paso del tiempo mientras se estaba haciendo algo. Nuestras predicciones de una correlación positiva entre el Indice Psi y la Apertura a la Experiencia (Openness to Experience) (r = .20, p = .02, 1t) y Fantasía (r = .22, p = .02, 1t) fueron confirmadas. El Indice Psi se correlacionó signiicativamente con la pregunta de perder la noción del tiempo (r = .16, p = .05. 1t) pero no a la pregunta de perder la nición de los alrededores (r = .13, p = .10, 1t). El Indice Psi se correlacionó significativamente y de forma negativa con al faceta de Orden del factor de Conscientiousness (r = -.29, p = .004, 2t). Por afiadidura, hubo relaciones significativas y positivas entre el Indice Psi y crecer en un ambiente con una tradición de habilidades paranormales (t = 3.03, p = .003, 2t, Cohen's d = 1.05) y con tener miembros en la familia con experiencias psi (t = 3.03, p = .003, 2t, Cohen's d = 1.05)3.01, p = .004, 2t, d = 1.05). Las/os autoras/es enfatizan la necesidad de hacer más investigaciones utilizando las experiencias de los/as sujetos experimentales.

Experiências Psi e os "Cinco Grandes": Relacionando o Neo-PI-R às Alegações Sobre as Experiências Vivenciadas por Sujeitos Experimentais

Resumo: Este estudo foi baseado em uma análise de dados coletados para um estudo ganzfeld realizado na Universidade de Edimburgo (Morris, Dalton, Delanoy e Watt, 1995). Neste estudo, tentamos relacionar experiências psi aos cinco fatores a facetas correspondentes do NEO-PI-R e a uma variedade de experiências oníricas, experiências de absorção e outras variáveis. Utilizamos dados de 97 artistas e músicos recrutados com o propósito de realizar testes de ESP em ganzfeld. Previmos que um índice de alegações de experiências psi estaria significativa e positivamente correlacionado ao fator de Abertura, e à faceta Fantasia do NEO-PI-R, e que o Índice Psi estaria

positivamente correlacionado a duas questões sobre a alteração espontânea da consciência, tiradas da ficha informativa de um participante, a saber, a perda da noção do espaço à sua volta e da noção de tempo enquanto engajado em uma atividade. Nossas previsões de uma correlação positiva entre o Índice Psi (uma medida combinada da incidência de diversas experiências psi) e da abertura à experiência (r = .20; p = .02; 1t) e Fantasia (r = .22; p = .2; 1t) foram confirmadas. O Índice Psi foi positivamente correlacionado à questão da perda de consciência e da noção de tempo (r = .16; p = .05; 1t), mas não para as questões sobre a perda da consciência dos arredores (r = .13; p = .10; 1t). O Índice Psi fois correlacionado significativa e negativ-amente com a faceta Ordem do fator Consciência (r = -.29; p = .004; 2t). Além disso, houve relações positivas significativas entre o Índice Psi a ser elevado em um ambiente com a tradição de habilidades paranormais (t = 3.03; p = .003; 2t; Cohen's d = .73) e ter membros da família com experiências psi (t = 3.01; p = .004; 2t; d = 1.05). Encorajamos para que sejam feitas mais pesquisas utilizando as alegações sobre experiências pessoais de sujeitos experimentais.