

PERSONALITY FACTORS IN THE FREQUENCY OF REPORTED SPONTANEOUS PRÆTERNATURAL EXPERIENCES¹

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A sub-sample of 120 subjects were chosen from a previous non-random survey of mystical, visionary and remote perception experiences (præternatural experiences). The sample consisted of equal numbers in each of five frequency ranks of total præternatural experience remembered over a life-time. All subjects were administered the Differential Personality Questionnaire and the sub-scales from this self-administering instrument were subjected to direct discriminant function analysis across rank of frequency of occurrence of præternatural experience. This analysis yielded two significant factors. Absorption and Positive Affectivity were the most powerful discriminators on the first factor ('Capacity') which separates rank in order. The second factor indicates the existence of a 'Conformity' function (Constraint, Harmavoidance and Traditionalism) which separates the middle ranks from the highest and the Non-experient ranks.

INTRODUCTION

This paper presents the results of an empirical study into the factors of personality which are associated with the occurrence of reported spontaneous mystical, visionary and remote perception experiences. There has already been considerable survey research into these reported phenomena (Laski, 1961; Back and Bourque, 1970; Hay and Morisy, 1978; Thomas and Cooper, 1978; Hardy, 1979; and Hay, 1979, 1982; Haraldsson, 1985; Nelson, 1989) which has attempted to redress a general lack of 'grassroots' information regarding these reports. These studies not only indicate that mystical and related experiences are more widespread than previously thought, but they appear to be a part of an entire class of non-veridical experience which, for heuristic and operational purposes, will be called *præternatural experience*.³ Thus, for the purposes of this paper, præternatural experiences are operationally defined as that class of reported experiential events which are given as responses to either the catch-all questions of Hay (1979) and others or the more specific categories of Nelson (1989) and, further, by the criterion of having the quality of 'supernatural' givenness as defined by Hultkrantz (1983).⁴ The experiences appear to fall within ten general categories: 1) encounters with God, 2) introvertive and extrovertive mystical experiences, 3) encounters with the numinous and/or sacred, 4) near death encounters of a 'spirit realm', 5) visionary episodes, 6) sensing of non-corporeal presences, 7) out-of-body-experiences, 8) remote perceptions (pre- and post-cognitions and telepathy),

9) a sudden sense of ontological uncertainty or loss of a sense of 'existential self' and 10) shamanistic-like 'other-world' adventures (Nelson, 1989).

The research on the occurrence of mystical and related experiences cited above has been somewhat *ad hoc* and has not attempted to rigorously answer questions as to cause or triggering mechanisms associated with these experiences.⁵ Hay (1979) claims that his studies of graduate students and the general population suggest the existence of 'deep structures' in human biology which are the basis for mystical and related experiences. This appears to fit with Fischer's (1971) earlier hypothesis, based on a neurophysiological model, that increasing levels of arousal are associated progressively with the onset of creative, ecstatic, and mystical states. Hunt (1984) has called the capacity to enter into mystical or ecstatic states the 'negative capability' and this capacity can be conceptualized as a constellation of biologically determined personality attributes which facilitate the onset of præternatural experiences. The anthropological literature also seems to support the notion of a 'præternatural type'. Shamans traditionally look for characteristic 'marks', behaviors and initiatory 'illnesses' when choosing apprentices (Eliade, 1964; Elkin, 1977). There have also been both personal accounts (Boisen, 1971) and speculation from case studies (Lukoff, 1985, 1988) on the relationship of mystical and transpersonal states to psychosis. However, this paper will attempt to address personality differences between præternatural experiencers and non-experiencers without reference to a model drawn from psychopathology.

Some evidence of personality differences between non-experiencers (those claiming never to have had a præternatural experience) and præternatural experiencers was revealed in a study by Thomas and Cooper (1980) in which they observed that non-experiencers scored significantly higher on a scale measuring intolerance of ambiguity. They concluded that individuals claiming intense spiritual experiences are no more pathological than those not claiming them and experiencers are certainly less "constricted" (in affect) than their non-experiencer counterparts. Hood et al (1979) also found that those reporting mystical experiences showed higher levels of tolerance, were more creative and less traditional yet more socially adapted. In addition, MacPhillamy (1986), using the MMPI (Hathaway and McKinley, 1951) as an assessment device, found that those Zen Buddhist practitioners who have had a *kensho* ('enlightenment') experience produced positive changes in "psychological functioning" in one year similar to those personality changes

seen in individuals after five years of monastic training but who have had no *kensho* experience. These changes on the MMPI sub-scales were, according to MacPhillamy, all indicative of "increased personal adjustment (1986: 317)." In addition, Hay and Morisy (1978) found generally higher affect levels in experiencers who reported a variety of præternatural experiences.

Although the above research has suggested a connection between reported spontaneous præternatural experiences and fundamental character traits, both biological and psychological, there is no systematic study to date which explores this issue in any depth. This study attempts to explicate this relationship by examining whether personality measures can successfully discriminate præternatural experiencers from non-experiencers and whether personality factors vary with differences in the frequency of occurrence of these experiences taken over an experiencer's lifetime.

A first problem to address is that many of the older instruments of personality assessment were developed from psychological models based on psychopathology (Hood et al, 1979) and there has been a tendency to implicitly connect transpersonal experiences to regressive and psychotic states (Prince and Savage, 1972; Committee on Psychiatry and Religion, 1976; Lukoff, 1985, 1988). More recently, research into personality factors and hypnotic susceptibility by Tellegen and Atkinson (1974) has revealed the existence of a higher order personality factor which has been called 'Absorption'. This trait is not recognized by instruments such as the MMPI and this factor appears to not only correlate highly with hypnotic behavior, but with the occurrence of paranormal experiences (ESP and out-of-body-experiences) as well (Irwin, 1981, 1985; Stanford and Angelini, 1983). In addition to its apparent role in paranormal phenomena, others have observed a definite relationship between absorption capacity and a tendency to have mystical experiences (Mathes, 1982; Spanos and Moretti, 1988).

Irwin (1985) differentiates the "capacity" for absorption from two other aspects of absorption which seem to play a role in the occurrence of præternatural experiences - "opportunity" and "need". He concludes that in the case of "subjective" (spontaneous, non-controlled occurrences) extrasensory experiences there is a positive relationship between occurrence and the "need" for "absorbed mentation" (p. 7). This "need" may result from the existence of a personality constellation such as that which the Absorption scale of the *Differential Personality Questionnaire* (DPQ) purports to measure (Tellegen,

1982). Tellegen and Atkinson (1974) liken this absorptive capacity to the “fascination” and “complete absorption” which characterizes ‘peak experiences’ as described by Maslow (1968) and the “allocentric” perceptual mode which involves a total interest in and openness to objects with all one's senses as suggested by Schachtel (1959). It also appears to be not unlike the ‘Fascinans’ of Otto's description of the *Mysterium Tremendum Fascinans et Augustum* (Otto, 1958).

Tellegen and Atkinson (1974) believe that the absorptive state represents a “total attention” and “a full commitment of available perceptual, motoric, imaginative and ideational resources to a unified representation of the attentional object” (p. 274) in which:

Objects of absorbed attention acquire an importance and intimacy that are normally reserved for the self and may, therefore, acquire a temporary self-like quality. These object identifications have mystical overtones. And, indeed, one would expect high-absorption persons to have an affinity for mystical experience, even if true *unio mystica* is, itself, a rare attainment (p. 275)

This alteration in perceptual activity may redefine, for the experient, the quality of reality itself leading to a) a heightened sense of the reality of the attentional object; b) imperviousness to normally distracting events; and c) an altered sense of reality in general and of the self in particular (Tellegen and Atkinson, 1974: 274). However, Tellegen (1982) states that, by itself, high levels of Absorption do not indicate any psychotic disorder, but when combined with unusually high levels of negative affect one may have a “...tendency to experience aversive and ego-alien reality changes that can have a psychotic quality” (p. 4).

AN EMPIRICAL STUDY

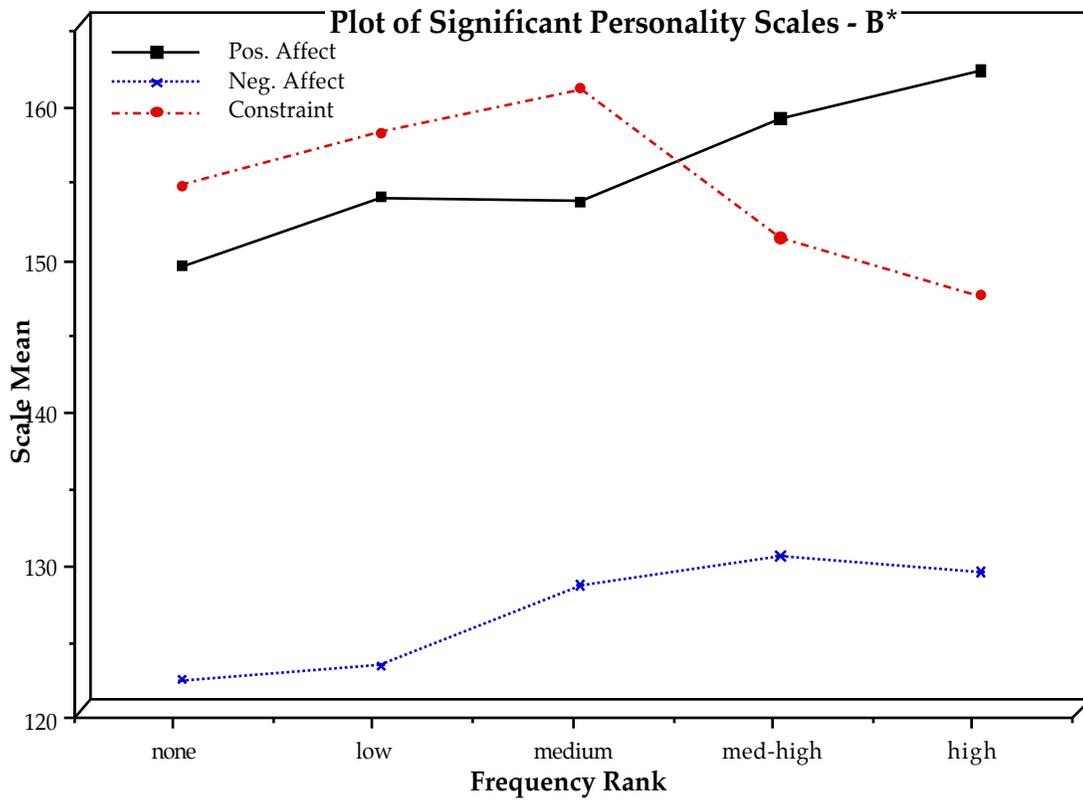
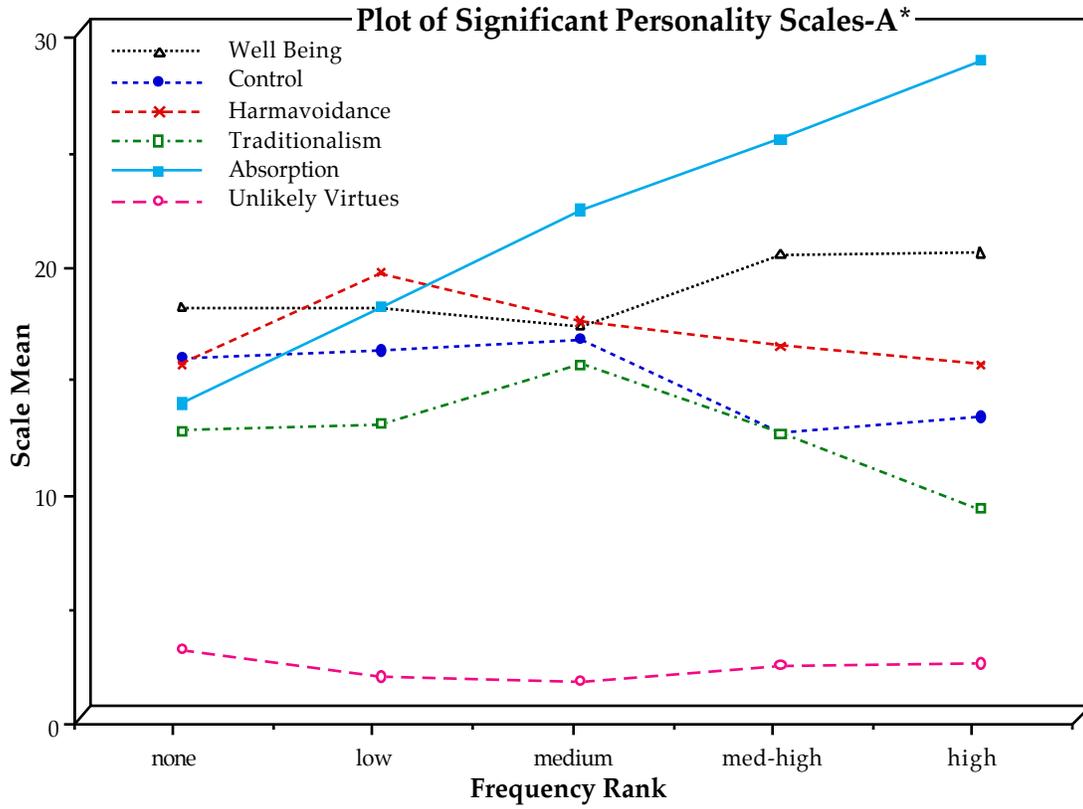
From the previous discussion, it would seem that any assessment of personality in the occurrence of præternatural experiences should include an ‘Absorption’ scale in addition to measures of affect. The DPQ⁶ represents just such a self-administering instrument and was administered to a sample of 120 subjects⁷ drawn from an earlier non-random survey of præternatural experiences conducted by the author at two universities in Australia (Nelson, 1989). The individuals who volunteered to participate in the study were sorted into five equal groups of 24 each according to the total number of præternatural experiences they each had had in a lifetime. This grouping provided five

frequency ranks, ranging from no præternatural experiences to many such experiences, across which personality characteristics could be compared.⁸

An exploratory statistical study was conducted employing a one-way analysis of variance (ANOVA) across all experience ranks for each personality dimension, higher order factor and validity scale. All sixteen scales became the variables in a multivariate direct discriminant function analysis (DFA). On the one-way ANOVA the variables demonstrating significant capacity to differentiate the ranks of total life-time præternatural experience frequency are, in descending order, Absorption, Positive Affectivity, Traditionalism, Constraint, and Control.⁹ As can be seen in Figure 1, Absorption demonstrates the most consistent and linear rise across the ranks of experience frequency with Positive Affectivity showing the second most significant increase with increasing rank. Traditionalism, on the other hand, is very similar for the 'None' and 'Low' ranks, increasing somewhat at the 'Medium' level and then dropping off sharply at the upper two ranks. Not surprisingly, Control and Constraint somewhat parallel one another, rising through the first three ranks and then descending to the lowest levels in the last two ranks.

A post hoc statistical test¹⁰ comparing Non-experients to the average of all the experience ranks taken together reveals that individuals reporting præternatural experiences can be differentiated from those not reporting experiences on the scales Absorption, Positive Affectivity, and Negative Affectivity. Non-experients compared to a combined average of the 'Low' and 'Medium' ranks reveal significance on Absorption and Unlikely Virtues with Non-experients showing less Absorption and more claims of Unlikely Virtues. When Non-experients are contrasted with the combined 'Medium-High' and 'High' ranks Absorption, Control, Positive Affectivity, Negative Affectivity, and Unlikely Virtues all act as discriminators. From the results of post hoc tests and an examination of Figure 1, it is apparent that experients who have statistically significant greater numbers of præternatural experiences above the 'Medium' level show less Control, Harmavoidance, Traditionalism and Constraint, but have significantly greater levels of Well Being, Absorption and Positive Affectivity.

Figure 1



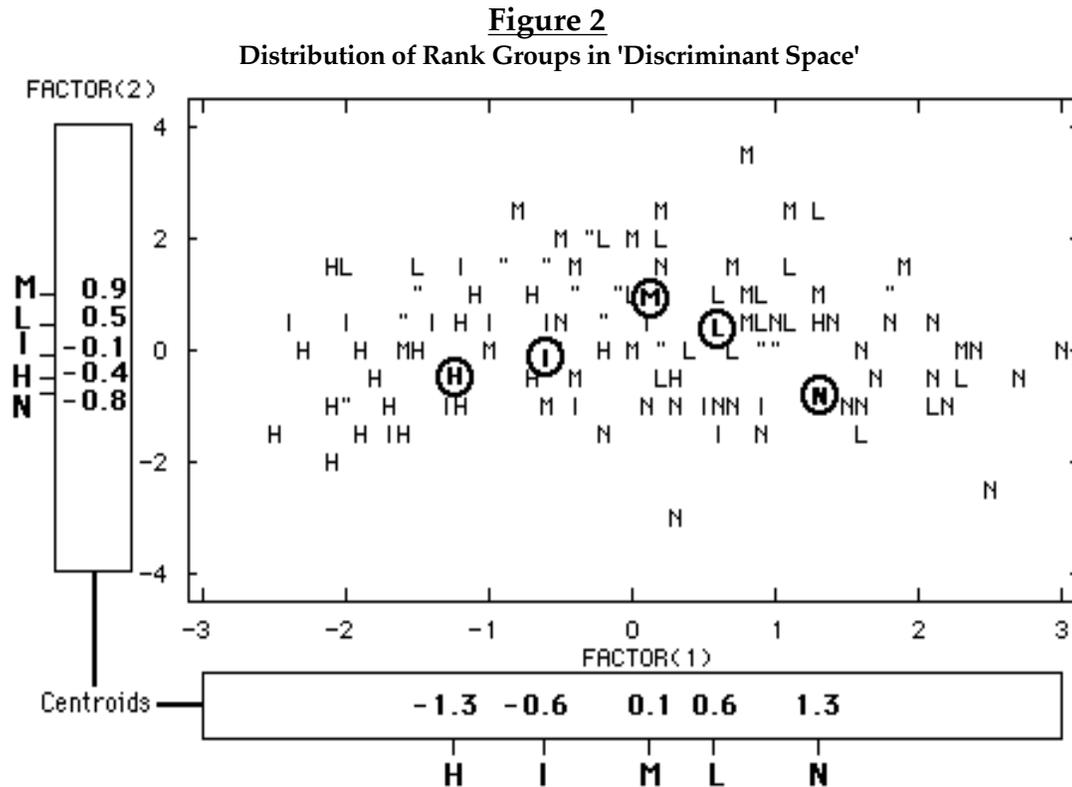
*See NOTES, Table 1 for a listing of mean values.

The results also reveal Non-experients as having the highest mean score (2.913) for Unlikely Virtues followed by the 'High' group and that Non-experients can be significantly differentiated from all præternatural experient ranks combined on this scale. The Unlikely Virtues scale offers statements to subjects which, when affirmed, indicate the subject believes s/he has virtuous behaviors and attitudes not likely to be found in most of us (For example, "My opinions are always completely reasonable.") It is logical to assume that this scale also would be sensitive to denial in self-perception and therefore may be related to a measure of 'neuroticism' (Eysenck and Eysenck, 1969).

These univariate ANOVA's and associated post hoc comparisons taken in the context of their associated rank and group means show a progressive rise in mean values of Well Being, Absorption, Positive and Negative Affectivity across increasing rates of reported, life-time præternatural experiences. The most convincing linear relationship between rank and personality, however, is seen in the Absorption scale. Highest level experients show the greatest differentiation from lower level experients and Non-experients on this dimension. Although the changes in affect across ranks are not as strong as in the case of Absorption, there is a definite increase in overall positive and negative affect from Non-experients to the highest ranks of præternatural experience. On the other hand, it appears that personality aspects most related to control and conformity (Control, Harmavoidance, Traditionalism and Constraint) separate the high level cases from those experients who have only occasional experiences.

The above findings were also confirmed when all scales were employed in an exploratory DFA.¹¹ Four discriminant functions were calculated and only the first two reached significance and these two functions together account for 74.3 percent of the between group variability. Therefore, it can be considered that all of the discriminatory power in this analysis is in these first two functions (factors) and only these two need be considered.¹² We can use these two factors as the axes to plot all the cases in what can be conceptualized as 'discriminant space' (Figure 2). The 'centers of gravity' for each rank are the centroids and can be seen as letters in a circles distributed across the plot. It can be observed from an examination of the centroids that there is a maximum separation of 'High' (H) experients from the Non-experients (N) on the first factor as well as a progressive distribution of the centroids of the intermediate ranks, in order, between H and N. With a much less sharp and curvilinear relationship, Factor 2 appears to offer

some discriminatory power separating the 'High', 'Medium-High' and Non-experients from the 'Medium' and 'Low' experients.¹³



(Symbol repeated more than once at the same point in 'factor space' is replaced with ")

N = Non-experient; L = Low Rank (1 - 5 times in life); M = Medium Rank (6 -20 times in life); I = Medium-High (21 - 99 times in life); H = High (100+ times in life)

Of the two factors used from the DFA, it is Factor 1 which seems to be most important in the study of frequency of occurrence of reported præternatural experiences. The Absorption and Positive Affectivity scales load significantly ($r > 0.300$) on this factor while Constraint, Traditionalism, Harmavoidance and Unlikely Virtues provide the significant canonical loadings on Factor 2.¹⁴ The first factor most highly discriminates amongst all ranks and, again, it is the Absorption scale which shows the most significant result, thus making it the single most important personality variable in this study. From the univariate results and Factor 1 from the DFA one can conclude that increasing Absorption and Positive Affectivity are the two most significant scales for discriminating individuals reporting different levels of spontaneous præternatural experience.

DISCUSSION

The results of this study thus appear to indicate the existence of two factors which are capable of discriminating non-experients from præternatural experients. The first of

these functions can be labeled as a 'Capacity' Factor (Absorption-Positive Affect) and the second as a 'Conformity' Factor (Constraint-self protection). The first appears to separate the ranks from Non-experient to 'High', in order, while the second separates the middle ranks from the extremes. Thus, these results tend to suggest the conclusion that Factor 1 may determine overall "capacity", such as that suggested by Irwin (1985), for having præternatural experiences which includes an ability for absorptive behavior in the context of a necessary positive arousal state. Factor 2, on the other hand, may modulate this capacity through the background level of emotional constraint and/or conformity. Therefore, Factor 2 can be conceptualized as a regulatory function which provides a mechanism for setting the level of "need" and "opportunity" controlling the overall use of the capacity found in Factor 1.

The results of the DFA suggest that the præternatural experient (mystic, visionary and psychic) is an individual who is higher than non-experients in the capacity for absorptive behavior and one who is emotionally responsive (positively and negatively) and therefore likely to be more flexible and open to new experiences. These findings confirm those of Irwin (1981, 1985), Stanford and Angelini (1983), Mathes (1982) and Spanos and Moretti (1988) with the addition of the unique observation that levels of Absorption rise with a positive, linear slope across rank of experience rate for those claiming to have this class of experience. In addition, the role of affect in these findings fits well with those of Hay and Morisy (1978), Thomas and Cooper (1980) and MacPhillamy (1986) whose studies reveal experients as more flexible and improving in personal adjustment as either a prerequisite to or as a result of their experiences. As in the case of Absorption, this study is unique in demonstrating a progressive rise in Positive Affectivity across levels of experience rate as well as indicating a relationship of an overall Constraint/Harmavoidance/Traditionalism factor which separates high level experients and non-experients from medium level ones.

Factor 2, although curvilinear and therefore in need of further study, suggests the existence of some additional aspects of personality operative in the separation of experience rate levels. Constraint, Traditionalism, Harmavoidance and Unlikely Virtues may be significant contributing causes to this difference, but the situation is somewhat confusing because of the similarity between high level experients and non-experients on these scales. One would expect to find, in a factor which separates the highest levels from

the medium ones, even less similarity with non-experients. Perhaps, this can be conceptualized as part of a general inhibitory factor whose function it is to provide an aversion mechanism to what are seen as non-traditional, irrational, unusual, and, therefore, potentially dangerous experiences. In Non-experients, who have little capacity for præternatural experiences, this mechanism is less activated because there is less need. On the other hand, high level experients are those with high capacity but in the context of their higher positive arousal and greater emotional flexibility they feel less threatened by 'unusual' experiences and thus are less conforming to the usual social/perceptual boundaries.

An observation made repeatedly in the context of this study is the greater interpersonal inhibition and conservatism seen in members of the lower experience ranks. Although these individuals are often insistent concerning the authenticity of their experiences, they tend to express more caution and reserve about relating them, frequently offering assurances to the researcher regarding their own rationality and normality. Some went so far as to insist that they were in no way desirous of having a præternatural experience nor would they return to what they saw as the necessary conditions for generating more experiences in the future.

These results may indicate that Non-experients and 'High' rate experients are both higher risk takers than low to medium range experients as well as being more likely to deny common foibles as part of a manifest bravado. This would indicate that the highest experience rates not only require a high degree of Absorption, but a more fearless attitude toward uncertainty as well. Such fearlessness in an individual with very low absorption would not necessarily lead to præternatural experiences. However, in the case of individuals with reasonably high levels of Absorption and in the context of a decreased Constraint, Harmavoidance and Traditionalism, low overall conformity may be the most important factor in determining how frequently they allow themselves to 'step' into such encounters. In sum, *the high-level experient may result from an individual being in a continuous and sufficiently high-level of positive affect (arousal - Fischer, 1971) and having an ongoing "need" for absorption (Irwin, 1985) in the behavioral context of lower constraint, fear and conformity when engaging in absorptive activities.*

The similarity of scores for the Unlikely Virtues scale for both Non- and 'High' experients may indicate a somewhat less 'realistic' self evaluation in both groups.

However, without further research it is impossible to tell whether these two very disparate groups show similar scores for different reasons. It is possible that either group may actually have, in fact, more unlikely virtues or may manifest more denial in self-perception. On the other hand, in the case of high level præternatural experients, it has often been asserted that individuals who have had mystical and/or religious experiences make great ethical and behavioral changes in their lives which may account, in part, for the claims of the 'High' group.

One can imagine the high-level experient as being more 'open' and experimental but possibly manifesting a noticeable degree of lack of inter- and intra-personal control and, in the worst instances, demonstrating psychotic-like behavior when negative affect is extremely high and self-worth and personal well being very low. This observation was also made by Spanos and Moretti (1988) and, as mentioned previously by Tellegen (1982) who believes that a combination of high Absorption and high Negative Affectivity appears to indicate a tendency to experience psychotic-like states. On the other hand, these individuals more likely will be above average in creativity and thus appear somewhat eccentric to others.

It is just these personality characteristics of high absorption and greater emotional reactivity and variability shown by those capable of præternatural experiences which may, in part, underlie the manifestation of what has been called 'initiatory illness' (Eliade, 1964). This 'illness' has been a traditional signal in many pre-literate societies alerting shamans, as in the case of the Yakut, for example, to a potential apprentice for the role of conduit to the 'supernatural' world. Eliade describes the characteristics sought by the elders as changes in which:

The candidate becomes meditative, seeks solitude, sleeps a great deal, seems absent-minded, has prophetic dreams and sometimes seizures. All these symptoms are only the prelude to the new life that awaits the unwitting candidate. (Eliade, 1964: 35)

A number of these characteristics listed by Eliade appear to be related to absorptive behavior and may be accompanied by increased positive and negative affect as well. Thus, the results of this current study appear to be congruent with these anthropological descriptions of personality characteristics and behavior necessary for the præternatural 'practitioners' of many pre-literate shamanistic societies.

From this study and the others cited previously it appears that Absorptive capacity, with its attendant freedom of imagination and openness to experiences of a novel type, is the most potent predictor of the ability to have præternatural experiences. The Absorption scale of the DPQ does tap a disposition for ‘altered states of awareness’ by asking specific questions regarding the occurrence of paranormal experiences. This may, in part, account for the positive linear relationship of frequency of occurrence with Absorption scores found in this study. However, most of the items of the Absorption scale appear to deal with deployment of attention and the ability to lose oneself in activity, perception and mentation and would therefore easily connect to non-paranormal experience as well. The Absorption scores measured in this study for non-experients are representative of individuals who are either students, staff or faculty at two Australian universities. These individuals, one would presume, are capable of and, in fact, do engage in activities requiring intense concentration. This type of concentration, however, must be of a substantively different sort than that manifested by præternatural experients or the mean score of Non-experients would not be as low as it is. Therefore, præternatural experients may still be tapping some unique capacity of personality, as recorded by the Absorption scale, other than the scale’s items which directly address præternatural experience.

The “full commitment” of attentional resources ascribed to absorptive capacity may be the basis for the ability to enter into ‘other-reality’ experiences. It may be that, at the psychological level, Absorption represents the working of the biological ‘deep structures’ referred to by Hay (1978), the basis for the capacity for ‘interoception’ as described by Tart (1975), and the mechanism underlying the process of deautomatization germinal to mystical experience as suggested by Deikman (1982).¹⁵ Thus, Absorption appears to be an important key in our ability to enter into a particular type of directed focus which may lead to an altered state experience.

In this present study it is not possible to ascertain whether the measured personality characteristics are a result of the occurrence, type and frequency of præternatural encounter or whether the personality factors are part of the psychological ‘set’ necessary, but not sufficient, for the production of præternatural experiences. It would seem more likely that the experiences and personality factors tend to feed each other. The ‘deep structures’ or the ‘negative capability’ may set the stage, in part, but the actual occurrence of the experiences may then reinforce some of these personality traits in

question. The nature of the causal relationship of personality to præternatural experience remains as a potentially fruitful area for future research.

NOTES:

¹Special thanks to Peter Pamment of the Psychology Department of the University of Queensland for his advice on some aspects of the use of multivariate statistical methods.

²This work was completed as part of the requirements for a Ph.D degree at the Department of Studies in Religion of the University of Queensland.

³Stace (1960) makes the point that 'paranormal' experiences are often grouped together with mystical experiences. However, he states that it is usually the case that mystics go to some length to separate their experiences from those deemed 'paranormal'. From the perspective of transpersonal psychology, on the other hand, it would seem reasonable to place all these experiences in a single category since, when experiencers are asked the general type of question such as that in Hay's (1979) study, individual responses range across all category types.

⁴Hultkrantz (1983) posits a notion of the 'supernatural' as a quality which makes certain events in human life appear to differ sharply from 'normal' perceptions. These præternatural occurrences are motivated by belief in the possibility of the 'supernatural', viz., they are intentional acts arising from a 'will to believe'.

⁵Laski (1961) has suggested triggers from her studies of ecstasy, but this was a collection drawn from her mass of anecdotal data without any clearly defined methodology or theoretical overview.

⁶The DPQ is a factor-analytically developed, self-report instrument designed to provide an output of eleven primary personality dimensions (**Wellbeing, Social Potency, Achievement, Social Closeness, Stress Reaction, Alienation, Aggression, Control, Harmavoidance, Traditionalism, and Absorption**), three higher-order traits (**Positive Affectivity, Negative Affectivity, and Constraint**), and six validity scales, only two of which were used in this study (**Associative Slips and Unlikely Virtues**). The primary dimensions show substantial communality with other inventories such as the Eysenck Personality Questionnaire (Eysenck and Eysenck, 1969) and the California Psychological Inventory. The meaning of each primary scale is summarized as follows (Tellegen, 1982):

1. **Wellbeing** - High scorers have happy cheerful optimistic disposition and feel good about themselves and their future. Low scorers show little joy and excitement and are seldom happy.
2. **Social Potency** - High scorers are forceful and decisive, persuasive, like to influence others and like leadership roles. Low scorers prefer others to take charge, do not like to persuade or be the centre of attention.
3. **Achievement** - High scorers work hard and long hours, enjoy challenge and are perfectionistic. Low scorers do not like to work harder than absolutely necessary and have little ambition.'
4. **Social Closeness** - High scorers are sociable, like people, are warm and affectionate and turn to others for help and comfort. Low scorers prefer to be alone, are aloof and prefer to solve problems on their own.
5. **Stress Reaction** - High scorers are nervous, feel vulnerable and sensitive, moody, irritable, easily upset and have a general sense of guilt. Low scorers can put fears and worries to the side, get over upsets quickly and are not easily troubled by guilt.
6. **Alienation** - High scorers feel the victim of bad luck, mistreated, a target of others' spite and ill-will. Low scorers do not feel victimized, mistreated or taken advantage of.
7. **Aggression** - High scorers will hurt others for their own advantage, act physically aggressive and are attracted to violence. Low scorers will not take advantage of others and do not like physical aggression.
8. **Control** - High scorers are reflective, cautious, careful, plodding, rational, sensible and they like to anticipate events. Low scorers are impulsive, spontaneous and prefer to 'play things by ear'.
9. **Harmavoidance** - High scorers do not like dangerous adventure and prefer safer activities even when tedious. Low scorers go in for risky stunts, enjoy the danger of emergencies and disasters and are more willing to expose themselves to possible attack and injury.
10. **Traditionalism** - High scorers endorse high moral standards, religious institutions and traditional values, but deplore permissiveness while endorsing strict child-rearing practices. Low scorers do not stress high moral values, consider religion outdated, question traditional institutions and values and are more rebellious.
11. **Absorption** - High scorers are emotionally responsive to engaging or entrancing stimuli, tend to be eidetic thinkers, experience synaesthesia more often, can become absorbed in memories or experiences and experience episodes of expanded awareness. Low scorers do not get caught up in sensory or imaginative experiences and do not easily relinquish a 'realistic' framework.

Watson and Tellegen (1985) describe Positive and Negative Affectivity as being orthogonal scales and suggest that:

...DPQ Positive Affectivity involves a group of personality traits reflecting at the high end behavioural and temperamental characteristics conducive to joy, excitement, vigor, and generally to states of positive engagement. In contrast, low Positive Affectivity is associated with tendencies to experience joylessness, fatigue, and loss of interest reflecting nonpleasurable and possibly depressive disengagement...A similar relationship holds between DPQ Negative Affectivity and negative affective states. Its high end tends to be associated with anxiety, anger, and related states of negative engagement, while the low end represents a more phlegmatic temperament disposing to calm, relaxation, and other non-unpleasant states of disengagement. (p. 2)

They complete a description of the higher order factors with a delineation of Constraint:

The third large dimension, Constraint, may reflect variations in overall pleasure-pain regulatory style: self-restrictive and cautious among high Constraint persons, more self-indulgent and impulsive among lows....If a state of fear involves perception of danger and the wish to avoid harm, then a behaviour-inhibiting trait of fearfulness can be viewed as a component of Constraint....Although states of fear and anxiety overlap, our three-dimensional structure implies compatibility between varying degrees of Negative Affectivity/trait anxiety and of Constraint/fearfulness. (pp.3-4)

⁷54 males; 66 females; age range 17-65 years, mean age = 31.3 years, SD = 12.8, median = 28 years.

⁸The five frequency ranks are: Never (0); Low (1-5 times in entire life); Medium (6-20 times in entire life); Medium-High (21-99 times in entire life); High (100+ times in entire life). The method for choosing the groups provided for maximum separation by sorting total raw frequency scores and selecting score ranges to maximize differences and non-experiences were chosen with a pseudo-random number generator.

⁹Alpha was set at 0.05 and the results of the attempts to discriminate frequency rank of experiences are presented in tables 1-3 and figures 1-2. Two of the original cases were dropped as statistical 'outliers' based on a visual inspection of a plot of the total scores for all variables across cases.

Table 1

ONE-WAY ANOVA's OF PERSONALITY VARIABLES ACROSS RANK OF EXPERIENCE FREQUENCY

Univariate F Tests

N = 118, Degrees of Freedom = 4, 113 for all variables.

Variable	F-Ratio	Prob.	Rank Means				
			NONE N=23	LOW N=24	MED N=23	M-H N=24	HI N=24
Wellbeing	1.715	0.151	17.826	17.875	17.043	20.125	20.250
Control	2.851	0.027*	15.652	15.958	16.478	12.375	13.042
Harmavoidance	1.822	0.129	15.304	19.375	17.304	16.167	15.333
Traditionalism	3.262	0.014*	12.478	12.708	15.304	12.375	9.000
Absorption	18.409	0.000*	13.609	17.875	22.087	25.167	28.583
Positive Affect.	3.930	0.005*	149.000	153.583	153.304	158.625	161.875
Negative Affect.	2.219	0.071	121.913	122.875	128.087	130.042	129.000
Constraint	3.239	0.015*	154.261	157.792	160.696	150.833	147.083
Unlikely Virtues	2.234	0.070	2.913	1.750	1.522	2.167	2.333

The personality dimensions and validity scales which did **not** reach statistical significance in either the overall one-way ANOVA or the post hoc tests were: **Social Potency; Achievement; Social Closeness; Stress Reaction; Alienation; Aggression; and Associative Slips.**

*Significant F-Statistic for overall ANOVA (p < 0.05).

10

Table 2

**POST HOC TESTS FOR NON-EXPERIENTS AGAINST EXPERIENTS
AND BETWEEN SELECTED RANKS OF EXPERIENTS**

GROUPS & RANKS*

VARIABLES	Non-Expert's vs. All Expert's	Non-Expert's vs. Low & Med	Non-Expert's vs. M-H & High	Low & Med vs. M-H & High
Well Being	<	>	<	F=6.0, p <.02 <
Control	>	<	F=4.7, p <.04 >	F=10.2, p =.002 >
Harmavoidance	<	<	<	>
Traditionalism	>	<	>	F=7.2, p <.01 >
Absorption	F=40.1, p <.001 <	F=14.1, p <.001 <	F=61.4, p <.001 <	F=25.3, p <.001 <
Pos.Affectivity	F=7.5, p <.01 <	<	F=13.0, p <.001 <	F=7.3, p <.01 <
Neg.Affectivity	F=3.9, p =.05 <	<	F=6.1, p <.02 <	<
Constraint	>	<	>	F=11.8, p =.001 >
Unlikely Virtues	F=5.7, p <.02 >	F=8.3, P =.005 >	>	<

*Comparisons involving two ranks per side use average of variables across those ranks. '<' and '>' indicate direction of magnitude difference between group or rank means, but statistically significant only where F-statistic is shown.

¹¹The calculation of a multivariate DFA yields a significant Wilks' Lambda statistic [0.297, F(64, 385) = 2.454, p < 0.01] for all personality variables taken together when attempting to discriminate amongst ranks.

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Table 3

<u>TEST OF RESIDUAL ROOTS</u>	<u>CHI-SQUARE</u>	<u>DF</u>	<u>PROBABILITY</u>
Roots 1 through 4	129.245	64	0.00
Roots 2 through 4	64.416	45	0.03
	FACTOR		
	<u>(1)</u>	<u>(2)</u>	
<u>Canonical Correlations</u>	0.675	0.531	
<u>Percentage of Between Group Variability</u>	45.9%	28.4%	
<u>Canonical Loadings*</u>			
Absorption	0.876		
Positive Affectivity	0.400		
Constraint		0.404	
Traditionalism		0.374	
Harmavoidance		0.307	
Unlikely Virtues		-0.436	

*Only loadings greater than 0.300 are large enough to consider (9-10% of variance).

¹³The cross-tabulation of actual group membership against predicted membership reveals that the discriminant functions classify all cases correctly 61.9% of the time. Non-experients are classified correctly 73.9%, 'Low' experients 54.2%, 'Medium' experients 56.5%, 'Medium-High' experients 50.0%, and 'High' experients 75.0% of all cases attempted.

¹⁴The loading values on the second factor are given less overall discriminative weight because of the lower associated canonical correlation and the greater alpha on the associated Chi-Square test statistic as well as the curvilinear nature of this factor. However, as seen in the univariate results, Constraint, Traditionalism and Harmavoidance tend to separate the low-level from the high-level experiencers and it is these variables which most strongly load on Factor 2.

¹⁵Deikman now believes that deautomatization is secondary to placing oneself in the 'receptive mode' of consciousness in the attainment of mystical experience. However from his discussion, this 'receptive mode' may be another way of describing Absorption.

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