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### **Personality and emotional consequences of spiritual experiences**

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**Personality and Emotional Consequences of Spiritual Experiences**

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Bangor**

**Thesis submitted for the degree of Doctor of Philosophy**

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## Abstract

Problem-Solving models for spiritual experiences have been employed in an explanatory manner by a number of eminent psychological authors, including James (1902) and Jung (1938) and most recently Jackson (1991) and Clarke (2001). The present study focuses upon the Cognitive Problem-Solving Hypothesis, (CPSH: Jackson 1991; Jackson and Fulford 1997), as it is the most explicitly process-based explanatory description of the stages and underlying processes of spiritual experiences. This four-stage model proposes that antecedent stress, in the form of existential crises, precedes the occurrence of spiritual experiences, which in turn lead to new perspectives that directly address antecedent issues, providing a cognitive resolution. Further, this model proposes that schizotypal personality traits enhance the person's susceptibility for spiritual experiences.

The present study employed Confirmatory Factor Analyses, (chapter 2), to examine and modify measurement models of spiritual experience (the Spiritual Experiences Questionnaire: Jackson 1991), schizotypal personality trait (the Oxford-Liverpool Inventory of Feelings and Experiences: Mason 1995), existential life attitude (the Life Attitude Profile: Reker and Peacock 1981) and dissociative personality trait (the Dissociative Experiences Scale: Bernstein and Putnam 1986). Path Analyses were subsequently employed to examine the relationships between the same variables (Chapter 3).

Path Analytic models were constructed on the basis of (and drawn from) the CPSH. It was found that only one schizotypal dimension (Unusual Experiences) was significantly associated with two dimensions of spiritual experiences (Mystical and Numinous Experiences) while dissociative trait was exclusively and significantly associated with more negative qualities of spiritual (Evil) experiences.

The effects of spiritual experience were examined via the relationships between the dimensions of spiritual experience, existential life attitude and depression (measured using the SCL-90-R). It was found that Mystical experiences and Evil experiences were associated with elevations in current depressive symptoms. Numinous and Mystical experiences were associated with more positive existential life attitudes, while Evil experiences were associated with more negative life attitudes.

Some components of the CPSH were not amenable to quantitative examination. Chapter 4), employed an Interpretative Phenomenological Analysis (IPA: Smith 1996) to examine the personal meaning, encompassing context and effects that spiritual experiences had upon a sample reporting spiritual experiences of an elevated proto-typicality. It was found that spiritual experiences were valued for the attenuation of dysphoria. However, contrary to the proposal of the CPSH, it was the repeated occurrence of such experiences that facilitated this function. Further, this analysis showed the importance of socially derived feedback, obtained while attempting to understand and validate anomalous experience, was crucial in determining their outcome.

These studies have supported the more general proposal for a 'problem-solving' model of spiritual experiences. However, the findings also suggest a greater specificity regarding the way in which spiritual experiences address antecedent personal issues.

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## Chapter 1

Spiritual Experiences have been viewed from a large variety of perspectives and have been described using terms including religious, mystical, peak, transliminal, cosmic, visionary, psychedelic, ecstatic, Transpersonal, oceanic, and numinous (James 1902; Proudfoot 1985 Otto 1923; Stace 1960; Happold 1963; Thalbourne 1991; Maslow 1964; Jung 1938; 1956; 1959; Greeley 1974; Grof and Grof 1986; Pankhe 1963; Freud 1911; For reviews see Clarke 2001).

However defined, such experiences have been observed to occur within a range of contexts: during spiritual practices, or life crises (e.g. Boisen 1952), some under the influence of drugs (e.g. Pankhe 1963) or apparently out of the blue (e.g. Persinger 1983). For the large majority, such experiences are viewed as highly personally significant, life enhancing, and (not unusually), as life changing (Hardy 1966; Hay 1982).

From a theological perspective such experiences have been viewed as evidence for, and individual experience of, the presence and action of religious agency. The emphasis upon the 'mystical' aspects of divine experience, within Christian theology has been in decline since the Middle-Ages, and for this reason mainstream western theological perspectives may well have little to offer the present discussion (for a review see Douglas-Klotz 1999; 2001). Instead, the present study is conducted from a psychological perspective: adopting the metaphysical assumption that spiritual experiences occur within the domain, (and through the medium), of individual cognitive and emotion based

systems. For this reason, no review of the wider theological issues (such as the veridical nature of spiritual experiences) will be provided.

From a medical perspective spiritual experiences have frequently been regarded as indicative of psychopathology, specifically as comprising symptoms of psychotic disorder. The medical focus upon spiritual experience stems from observations of the strong correspondence between spiritual and psychotic experiences that have traditionally been assigned to separate categories (James 1902; Underhill 1930; Boisen 1952; Jung 1938; Laing 1967; Arieti 1976; Prince 1979; Buckley 1981; Watson 1982; Lenz 1983; Wootton and Allen 1983). The observation that spiritual experiences might represent benign expressions of psychotic-like phenomenology is contrasted with the distinct outcome of each. While psychosis is seen as a debilitating syndrome requiring intervention, spiritual experiences are not (Jackson 1991; Jackson and Fulford 1997; Thalbourne 1991; For reviews see Clarke 2001).

A number of perspectives have attempted to explain the apparent commonality between benign spiritual and pathological varieties of psychotic experience. Some have argued, via a medical model, for the identification of one with the other so that both classes of experience are viewed as indicative of psychopathology (e.g. Group for the Advancement of Psychiatry 1976). Others have argued, via an anti-psychiatric model, that *both* classes of experience are essentially spiritual, and only assume characteristics of pathology when confronted with the medical establishment (e.g. Laing 1967; Szasz 1974).

Prevalence rates for both spiritual experiences and psychotic disorders, which share a number of features, suggest that psychotic-like phenomenology is largely benign. There is now a large body of accumulated evidence on the occurrence of psychotic symptoms, for individuals receiving no diagnosis of a psychotic disorder. Recent large scale population studies have found that 10-15% of the general population has had some kind of hallucinatory experience (Tien 1991), and approximately 20% report delusional ideation (Poulton 2000). Similarly, Van Os et al (2000) found that while 17.5% of a large sample from the general population reach diagnostic criteria on at least *one* symptom of psychotic disorder, although only 0.4% qualified for a formal diagnosis. Such findings suggest that many psychotic-like experiences are essentially benign, and occur far more frequently than the more narrowly defined medical diagnostic category of psychotic disorder. Questions surrounding the validity of medically employed categories for the diagnosis of psychopathology, particularly psychotic spectrum disorder, are not new (for a review see, Fulford, Smirnoff and Snow 1993) but will not be discussed in greater detail here.

Across a series of large-scale surveys (reviewed in Hay 1982), it has been found that between 30-60% of the population respond affirmatively to questions designed to elicit accounts of spiritual experience. The spiritual experiences described by respondents display a number of features that, within a medically diagnostic framework, may easily be interpreted as positive symptoms of a psychotic disorder. Features of spiritual experiences that have been noted, as showing similarity to psychotic symptom expression, include a sense of 'spiritual presence', of extra-sensory or paranormal

phenomena, of being outside time, a radically altered perception of self, time, the significance of the experience and its contents, hallucinations in both visual and auditory modalities, and reflexive awareness of an altered state of consciousness (James 1902; Underhill 1930; Boisen 1952; Jung 1938; Ludwig 1966; Llaing 1967; Arieti 1976; Prince 1979; Buckley 1981; Watson 1982; Lenz 1983; Wootton and Allen 1983).

Debate concerning the apparent overlap between spiritual experiences and psychopathology has strongly influenced investigations, which have taken this issue as its starting point (for brief reviews see Jackson and Fulford 1997; Thalbourne 1991; and more extensive reviews Clarke 2001). The issue of whether spiritual experiences and psychotic disorders overlap, or can be distinguished, has therefore influenced the research of spiritual experiences more generally. While this issue is not the *central* motivation for the present review it will frequently be encountered as an influence on the research concerning spiritual experiences that is reviewed below. The main issues of interest for the present review are twofold. First the validity of explanatory models of spiritual experiences as serving a ‘problem solving’ function. The second issue concerns the links between personality and the occurrence of, (or susceptibility to) spiritual experience. Each of these issues will be discussed in turn, following an inspection of influential attempts to define and measure spiritual experience.

### Measurement and Definition of spiritual experience

The definition and measurement of spiritual experiences have a reciprocal relationship. The way in which such experiences are measured implies a definition while definitions are based upon an observed and quantified category of experience. Although not uncommon, this circularity presents problems in the case of spiritual experiences, which tend to be nebulous, and highly individual. The problem of defining a category of spiritual experience was first noted by James (1902) who suggested that attempts to draw sharp boundaries about such a category of experience was very difficult, and not entirely necessary.

Early descriptions of spiritual experience were often based upon historical accounts of experiences reported by the mystics of antiquity, including biblical sources (E.g. Starbuck 1901). William James (1902) described spiritual experiences that emphasised a sense of presence, an experience not perceived through use of the five conventional sense organs (p59). He also described mystical experiences, which he defined as brief in duration (p69) and characterised by the gaining of new insights and understanding (p72). James also emphasised the emotional significance, or 'noesis' of such experiences, and suggested that it was via this quality that spiritual experiences had their substantial impact upon the individual (p72).

Similarly, Rudolf Otto (1923) defined authentic spiritual experiences as those in which the individual reports sensing the presence of a tremendous being and the feelings of awe

(as a special type of terror) associated with such an experience. This 'being' Otto described as a *numens tremendum*, directly experiencing which he described as "Numinous" (Otto 1923 p22).

While James (1902) described some experiences that were characterised by feelings of terror (during and afterward) he suggested that such experiences were closer to the "delusional insanity" of "enfeebled minds" (p426), and drew a distinction between these experiences and authentic spiritual experiences. Recently an anthology of contemporary accounts of spiritual experiences has focussed upon experiences of spiritual evil (Jacobsen 1999). These experiences are characterised by feelings of terror in the sensed presence of an evil being that may be described as residing within or without the individual's self.

While a great many more recent authors have taken the features, described above, to be the central characteristics of spiritual experiences, Otto (1923) and James (1902) are amongst the earliest and most authoritative of those to describe spiritual experiences using these terms. For this reason a complete review of all authors who have subsequently noted the same features would be superfluous and shall not be provided here.

Stace (1960) performed a philosophical analysis of spiritual experiences from antiquity and forwarded the "unity thesis" (p79), proposing that an experience of unity is the central defining feature of a mystical experience. Further, it is suggested that all mystical

experiences have the experience of unity as a “common core”. In this argument descriptions of mystical experiences that emphasise different characteristics are merely elaborated interpretations. Stace also suggested that mystical experiences were marked out by the pleasant emotional qualities of bliss that accompanied them, and that by this definition an unpleasant experience was not one belonging to the category of the mystical.

More recent attempts to describe and define spiritual experiences have employed a number of different methods to elicit accounts of spiritual experiences from contemporary populations. The methods employed have ranged from single questions (e.g. Greely 1975; Hardy 1979) to multiple item instruments (e.g. Pahnke 1963; Hood 1975; Robinson & Jackson 1987; Hay & Heald 1987; Jackson 1991), and this issue requires discussion in greater detail.

#### Eliciting and Measuring Spiritual Experiences: Methodological Issues

A range of different approaches to measuring spiritual experiences have been attempted. These attempts have varied in levels of complexity and sophistication. Attempts to measure spiritual experiences employing single items, descriptive of specific feelings and sensations, impose a restrictive framework upon any response an individual may make. This is particularly the case where a single question is employed. For example, Hardy (1979) employed the question “have you ever been aware of or influenced by a presence or power, whether you call it God or not, that is different from your everyday self?”.



Greely (1975) employed the question “Have you ever felt that you were very close to a powerful spiritual force that seemed to lift you out of yourself?”. Should an individual respond affirmatively to such a question, it remains difficult to compare the features of independent experiences. Furthermore it becomes impossible to know what types of spiritual experience may be encountered, beyond the restrictive framework imposed. For example, both single questions previously employed (above) have emphasised the sense of an external agency as the key feature of spiritual experience. The assumption that this feature is the most salient reduces the chances of eliciting accounts of spiritual experiences that emphasise different features.

Attempts were, rightly, made to broaden the area of interest and make the circumscription of spiritual experience as comprehensive as possible. These have lead to the development of multi-item instruments for quantifying the different aspects of a spiritual experience. For example, Pankhe (1963) employed a detailed set of items allowing individuals to quantify a specific drug induced experience immediately following its occurrence. Similarly, Hood (1975) employed a multi-item method, though without clear reference to such an immediate experience.

Methods aimed at measurement of spiritual experience should ideally allow the individual to identify a specific class of experience, without referring to any of the potentially misleading labels. This has lead to the use of proto-typical examples of spiritual experience, to which an individual may respond by comparing their own range of experience. Some studies have been limited by the low number or singular prototypes

employed. Thus, Paffard (1973) employed only one prototypical example of a nature-mystical or “Wordsworthian” experience, and managed to elicit many well-furnished accounts of such experiences. However, such a method is limited by the range and representativeness of the prototypes employed. Hood (1975) employed 15 different prototypes to achieve diversity. However, the prototypes employed were all selected from a historically and culturally remote source (James 1902) and are therefore of questionable relevance for a contemporary population.

Notwithstanding, the Hood Mysticism Scale (HMS: Hood 1975; 1997; 2001) has undergone the most development of any contemporary instrument. The development of the HMS is based upon the proposals made by Stace (1960), that only the experience of ‘unity’ is the central defining feature of a mystical experience, that all such experiences have a positive emotional tone, and that mystical experiences are interpreted following their occurrence. Factor analytic studies of the HMS (see Hood et al 2001 for a review) have identified 8 factors within its 32-items that have subsequently been attributed to 8 inter-related dimensions. Five of these dimensions describe different aspects of the mystical experience of unity. These dimensions have been further divided into those describing “introvertive mysticism” and “extrovertive mysticism”. Introvertive mysticism is described as an experience of self-loss during which all sensory and cognitive contents are excluded from consciousness, so that only a void and empty unity remain. This type of inwardly directed mystical experience is associated with the (Mysticism Scale) dimensions of unity, timelessness / spacelessness and ineffability. Extrovertive mystical experiences are described as an experience of the unity of the self

with the multiplicity of objects in the universe. This type of outwardly directed mystical experience is associated with the (Mysticism Scale) dimensions of unity in diversity and inner subjectivity. Additional to the two dimensions of introvertive and extrovertive mysticism is a factor described as “interpretative” and is associated with (Mysticism Scale) dimensions of noesis (or the significance of the experience), religious interpretation and affect. The structure of the HMS has received recent support from studies employing confirmatory factor analysis (Hood 1997; Caird 1998) some of which have been cross-cultural (Hood et al 2001).

However, the development of the HMS is rooted in the philosophical analysis of Stace (1960). The assumptions underlying his analysis have received much criticism (for reviews see Katz 1977; 1992). The proposal that ‘unity’ is the essential feature of mystical experiences limits the scope of empirical enquiry, and reduces heterogeneous spiritual experiences into a narrowly defined category. Because of this, findings concerning the structure and character of spiritual experiences made using the HMS may lack ecological validity. Further restrictions follow from the assumption that all mystical or spiritual experiences have a positive emotional tone. As noted above, some recently collected accounts have described experiences of evil (Jakobsen 1999), which (although regarded as spiritual experiences) are not represented amongst the items of the HMS.

### Development of the Spiritual Experiences Questionnaire

Recently an attempt has been made to construct an instrument for the elicitation and quantification of spiritual experiences, which takes into account the shortcomings of previous instruments (Jackson 1991): the Spiritual Experiences Questionnaire (SEQ: Jackson 1991, see appendix 5). Initially, a large number of contemporary accounts of spiritual experience were reviewed. This process resulted in a list of core features, intended to reflect the heterogeneity and diversity of experiences reported by the contemporary population. These core features were identified as (Jackson 1991 p58):

- i) Unity: A change in the perceived relationship between the subjects self and external reality, involving a reduced sense of separateness or distinctness. The intensity of this experience varies from feelings of harmony and relatedness to feelings of complete identity.
- ii) Volitional Passivity: The partial or total loss of normal mental or somatic volition, ranging from feelings of influence or guidance from an external source, to feelings of being controlled, “struck dumb”, possessed etc.
- iii) Noetic Quality: An intellectual apprehension affecting the subject’s understanding of fundamental issues, experienced as being strongly authoritative.

iv) Peacefulness: A profound sense of peace. Examples include calmness , inner quiet, tranquillity, stillness of mind, receptivity and profound silence. Related feelings of being comforted, nurtured or reassured are also reported.

v) Changed Sense of Time or Space: Examples include loss of awareness of the passing of time or the dimension of space, awareness of a difference in the “speed” of time or relative distance, or gaining awareness of eternity or infinity.

vi) Intense Emotion: Usually, although not necessarily positive emotions. Typical examples are awe, wonder, love, relief, “holy terror” etc.

vii) Fresh Perspective: A change in perspective on external reality – either the immediate situation, or “life in general”. Examples include experiencing the environment as unusually vast; seeing old difficulties or problems as resolvable; being able to empathise or identify with a normally alien point of view; everything seeming to be ultimately beneficent.

viii) Altered State of Consciousness (A.S.C.): Reflexive awareness of a difference in the global state of consciousness, as compared to “everyday” states (i.e. normal waking or sleep). Often expressed metaphorically. Examples include feeling “as if” on another level or plain, in a new dimension, a different reality, or as if intoxicated, senses had been sharpened, or “my mind was incredibly clear” etc.

ix) Anomalous Perceptions, Physical Sensations or Feelings: These include a variety of anomalous perceptions, in all modalities: synaesthesia; the non-sensory feeling of awareness of the presence of an external agent – whether ghostly, sacred or evil; and any form of extra-sensory perception (E.S.P).

x) Ineffability or Paradox: The experience cannot be expressed in words or seems paradoxical when expressed verbally.

Together with a classification of the diverse features of contemporary spiritual experiences, this study also offers a working definition of spiritual experiences that is perhaps the most inclusive of those that have been forwarded (Jackson 1991). For these reasons the same broad working definition will be adopted here, and defines spiritual experiences as **“an altered state of consciousness of profound personal meaning which seem to be benign and do not lead to psychiatric intervention”** (Jackson 1991 p8). This definition is deliberately broad, and designed not to exclude experiences of potential interest. Further, due to the debate concerning the apparent overlap between spiritual and pathological experiences, (initially observed by James 1902), the adoption of this definition allows a clear distinction to be drawn between these states.

Previous instruments designed to elicit and quantify a spiritual experience have employed either prototypical accounts, or detailed individual items, reflecting specific sensations or impressions of a spiritual experience. The methodological problems inherent to employing *either* of these methods in isolation have been described above. The Spiritual

Experiences Questionnaire combines both the use of prototypical accounts to evoke recall of such experiences, and a detailed series of 43 items to facilitate quantification of the proto-typicality of experiences recalled. The 5 accounts of proto-typical spiritual experiences were selected to reflect the heterogeneity and diversity of the accounts initially reviewed.

### Dimensional Structure Amongst the Detailed Items of the Spiritual Experiences Questionnaire

A pool of detailed items was generated on the basis of the prototypical definition described above. The 43 items comprising the final selection described various individual sensations and impressions of which a personal spiritual experience may have been composed. For each of these items responses indicated whether the individual felt very much, felt roughly, or not at all like the sensation described. Responses made on the basis of these items provide an index of the prototypical *quality* of personal spiritual experiences.

These detailed items were examined for an underlying dimensional structure using exploratory factor analytic techniques. Three coherent dimensions or factors emerged, and were interpreted as three different dimensions or sub-classes of spiritual experience. The first dimension was characterised by feelings of increased meaning, joy, fresh perspective, serenity, detachment from 'everyday life' and aesthetic sensitivity. This factor is described as involving all cognitive aspects of positive mystical experience, with

relatively little evidence of perceptual anomalies, and no explicitly religious content. This factor was labelled 'Mystical'. The second dimension was characterised by all of the negative experience items including fear, ugliness, panic, isolation, being stuck in a rut, threat etc. Although one ESP item did have a weak loading upon this factor it was suggested (Jackson 1991) that there was no reason to view this as a dimension of spiritual experience (p72). Notwithstanding, this factor was labelled 'Evil'. The third factor was characterised by a sense of a supernatural presence, communication with the presence, ESP, reflexive ASC, feelings of sacredness, volitional passivity and ineffability. This factor was labelled 'Numinous'.

### Summary

On the basis of the critique provided above, the SEQ appears to potentially constitute the most comprehensive, contemporary instrument designed for the purpose of eliciting and describing spiritual experiences. It was constructed on the basis of observation of contemporary reports of spiritual experiences and is relatively free of *a priori* assumptions about the category of experience it is designed to measure. Because of this it is preferred to the rather more theory bound HMS. The SEQ is designed to be inclusive and represent the heterogeneous character of such experiences. By employing both the use of prototypical accounts of spiritual experience, (to broadly circumscribe the desired category of experience), and detailed items for the subsequent quantification of specific qualities of a spiritual experience, the SEQ avoids the methodological shortcomings of using either approach in isolation.



However, despite its apparent advantages, the Spiritual Experiences Questionnaire has not been employed since its development and the full potential of this instrument has not been assessed. The dimensional structure amongst the items of the SEQ, (described above), has not been validated through replication. This issue will be addressed by the present study.

### Models of spiritual experience

Models that attempt to explain the occurrence of spiritual experiences as having a ‘problem-solving’ function have been proposed from a variety of different authors (e.g. James 1902; Persinger 1983; Boisen 1936; Clarke 2001; Prince 1979) and a selection of which will now be briefly reviewed. James suggested spiritual experiences that were a product of “healthy mindedness” (1902 p78), and had regenerative properties allowing unification of a previously divided self. The ‘division’ of the self is described as a conflict between the moral and worldly selves that leads ultimately to a frustration of the personal will. The spiritual experience occurs as a moment of brief duration in which the personal will is temporarily forsaken, which in turn allows a new perspective of reality to be known. James felt that the emotional significance or ‘noesis’, characteristic of spiritual experiences, was the quality that allowed insights to impress upon the mind of the individual, leaving no doubt about the personal validity of the new perspective or knowledge thus acquired. Further, James proposes that it is the suddenness of the rising insight from a ‘subconscious realm’ that leaves the impression that the vision experienced has been imposed, from somewhere else, by an external force.

James also stressed the importance of the new perspective gained, via mystical insight, for the life of the individual. He proposed that mystical insights provide, and instruct, a purpose for the life of the individual. Further, he suggests that this should only be considered an advantage if the insight was a “true one” (p415), which the individual could live in accord with.

Another commonly cited source is Jung (1938; 1956; 1959) who emphasised the importance of the *integration* of material derived through personal or spiritual insight. Jung describes religious / spiritual experiences as a product of the personal unconscious mind. While this individual unconscious mind employs the symbols of the collective unconscious (archetypes), it is the job of the individual’s conscious ego to integrate and understand the personal meaning of the experience. Jung considered such experiences as attempts to address psychic conflict and self-division that were in turn the product of earlier failures at integrating the meaning of personal experiences. Jung believed that the content of spiritual experiences was idiosyncratic in their expression within the mind of an individual, but that *collectively* the spiritual experience reflected the emergence of a universal image of wholeness (the God archetype). Wholeness or completeness of the self was, for Jung, the primary drive of the individual’s mind and life, and this process he termed ‘individuation’. Jung laid greatest emphasis upon the spiritual work that constituted the integration of the meaning of spiritual experiences. Where this process was conducted successfully, the individual achieved a more completely individuated ego capable, he argued, of dealing effectively with the world of other people. The process of integration may well be a long and difficult one as that experienced by Brother Klaus,

whom Jung offers as an example (1938). Brother Klaus experienced a major and disrupting spiritual emergence, which led to his seclusion (living the life of a hermit) until a successful integration took place. This process is described as taking many years, during which time Brother Klaus did not effectively have a place in the world.

More recently Prince (1979) has suggested, in a review of the life and work of Anton Boisen (1952), that religious experiences serve as a 'homeostatic self-healing mechanism', which the brain has evolved to resolve acute stress. He also suggests that spiritual experiences emerge from a depression that is often resolved through the occurrence of such states. He describes the aetiology and impact of spiritual experiences as a sequence involving "despair over an unworthy life, a sense of divine forgiveness and acceptance, and finally a reform of lifestyle and improved mental health" (1979 p179).

Problem solving models of spiritual experience have strong parallels with recent models of the processes surrounding psychological healing, in the context of psychotherapy. The assimilation model (e.g. Stiles et al 1991; Williams et al 1999) comprises eight stages through which the individual passes when dealing with problematic experiences. First the problematic experiences are warded off, and the individual is successful in avoiding the problematic experience. Unwanted thoughts may then arise, accompanied by discomfort and feelings of overwhelming sadness, fear, anxiety or anger. During the third stage the individual acknowledges the existence of a problematic experience, but cannot formulate the problem clearly. This is followed by a fourth stage, during which the individual clarifies the problem as a personal project that could be addressed. At this

stage affect is negative, but manageable, and no longer characterised by feelings of panic. The stage that follows is one described as understanding and insight. This stage is that which most closely parallels descriptions of spiritual experiences, and comprises a new understanding of the problem with new connective links to other aspects of the person's experience. At this stage affect may be mixed and include some uncomfortable recognitions but is also characterised by curiosity and surprise of the 'aha' sort. Elsewhere (Watts and Williams 1988) the role of emotional salience in the recognition of personal insights has been emphasised. A distinction is drawn between those new understandings that are entirely intellectually appreciated and those that include a significant emotional aspect. In the case of the latter it is proposed that the emotional salience of the insight is the quality that separates genuine and valuable personal insight and the less personally impressing intellectual enhancement. This suggestion echoes that of James (1902) that it is the 'noetic', and profound emotional quality of spiritual experiences, which gives such experiences the sense of authority, convinces the experient of the validity of their experience and insights thereby gained.

The final three stages of the assimilation model (Stiles 1991; Williams et al 1999) focus upon the use of the new insight for understanding and working through material connected with the problematic experience, which has not previously been adequately addressed. The individual at this stage is described as feeling optimistic, and approaching their personal project in a business-like fashion. The penultimate stage describes the individual achieving a successful solution to a specific problem and accompanied by pride in the accomplishment, satisfaction and positive affect. The final

stage is described as that of mastery, during which the individual successfully employs their solution to new situations. At this final stage the generalisation of the solution is described as largely automatic, and not salient. While affect *may* be positive when the topic is raised, it is otherwise neutral. If mastery is achieved the problematic issue is considered to have been addressed and the previously ‘warded off’ content (and associated affect), integrated into the self-related schema of the individual. Again, parallels with the suggestions of James (1902) and Jung (1938; 1959) can be made, in the significance given to the integration and successful validation of insights gained via spiritual experiences.

The models of spiritual experience offered by some major authors within the field have been briefly reviewed. Each offers explanations of the phenomenon of spiritual experience that has laid emphasis upon the ‘problem solving’ function that such experiences appear to serve. Further, parallels with the assimilation model of psychotherapy have been observed. These parallels suggest an innate human capacity in attempting the resolution of psychological conflict and stress. However, more recent models of spiritual experiences have more directly made the problem solving function of spiritual experiences a specific theme of their proposals.

The two most contemporary explanatory models for spiritual experience are the discontinuity model (Clarke 2001) and the cognitive problem-solving hypothesis (Jackson 1991; 1997). Both of these models have emerged from the debate concerning the overlapping phenomenology of spiritual and psychotic experiences and the distinct

outcomes for each. Similarly both of these models view spiritual (as opposed to psychotic) experiences as adaptive processes for dealing with novel information and personal issues in the context of an ever-changing environment.

### The Discontinuity Model

Clarke (2001) emphasises the altered state that distinguishes spiritual and psychotic perceptions from those ordinarily experienced. It is suggested that this “discontinuity of consciousness” (p 129), experienced as an *altered* state of consciousness, is the characteristic central to both phenomena. It is suggested that this discontinuity allows access to a “transliminal realm” (p129) that facilitates experiences termed both spiritual and psychotic. This model draws heavily on Personal Construct Theory (PCT: Kelly 1955) and proposes that the radical alterations in perception and understanding are best understood as changes in the individual’s personal constructs. Personal Construct theory allows for such fluctuations as an essential aspect of flexible adaptation to an ever-changing environment. According to PCT, the individual’s constructs of reality, (upon which both understanding and behaviour are based), proceed through cycles of loosening, to incorporate new information, and tightening to form hypotheses about reality which are tested against experienced reality. On this model, spiritual experiences, and specifically the characteristic of paradigm shift, are viewed as an extreme variant of the natural cycle of personal construct modification.

The application of PCT to the understanding of spiritual experiences is provided with a further context in Barnard and Teasdale's (1993) interactive cognitive subsystems model. This model proposes the interactive operation of two primary sub-systems, described as prepositional and implicational. While the prepositional sub-system represents the logical, verbal and discriminating capacities, the implicational sub-system operates in a holistic way, dealing with emotional meaning, self-perception and judgement. It is proposed (Clarke 2001, p136) that processes described by PCT can be grafted onto the sub-system model, so that the propositional subsystem is the domain of assumed (or tightened) personal constructs, while the adaptive (or loosening) processes are viewed as properties of the implicational sub-system.

It is the characteristics and issues that comprise the function of this sub-system that most closely mirror those of spiritual experiences. On this aspect of the discontinuity model, spiritual experiences are suggested to comprise a dominance of the implicational sub-system. The discontinuity model also allows for distinction between spiritual experiences, which result in the successful integration of new personal constructs, and psychotic experiences where integration is less successful. The way that such revised personal constructs are received, particularly inter-personally, is viewed as crucial to the process of integration. This suggestion is supported by recent findings (Wamer 1985) that long-term prognosis is better for individuals living in societies where spiritual / psychotic experiences are valued.

The discontinuity model is unique in the extent to which wider psychological theory is employed as a context for understanding spiritual experiences. In addition, it shares similarities with another contemporary model of spiritual experiences, described as the Cognitive Problem Solving Hypothesis (Jackson 1991; 1997).

### The Cognitive Problem Solving Hypothesis

The Cognitive Problem Solving Hypothesis (CPSH: Jackson 1991; Fulford and Jackson 1997) also begins from the observed occurrence of psychotic-like phenomenology as a characteristic of spiritual experiences. The CPSH is proposed as a descriptive model of the relationship between spiritual and psychotic experiences, and contrasts the debilitating aspects of the latter with the often life-enhancing, and problem-solving character of spiritual experiences. This model proposes that spiritual experiences are essentially benign and serve to resolve, and allow adaptation to, personal stress. The form adopted by the CPSH is determined largely by the suggestion of parallels between spiritual experience and those involved in creative processes (e.g. James 1902; Hadamard 1945; Kris 1952; Jung 1956; Grof and Grof 1986; Storr 1996). This model is founded upon, and employs the language of, process models of creative problem solving, (proposed by Wallas (1926) and later developed by Batson and Ventis (1982)). The four stages of the CPSH are:



**Preparation;** Initial awareness of a problem, exploring and working to find a solution, and arriving at an ‘impasse’ situation in which it seems impossible to make any further progress using established problem solving strategies.

**Incubation;** The persistence of the impasse situation generates cognitive or emotional tension, and is followed by a period of withdrawal from the problem during which conscious attention is diverted away.

**Illumination;** This stage of the process is precipitated by the unresolved and incubated cognitive or emotional tension, and comprises the emergence of the happy idea that resolves the impasse. In the case of spiritual experience it is this stage that occurs in an altered state of consciousness and may comprise psychotic-like phenomenology. The resolution is often achieved through a modification of the experiencers’ explanatory framework or creating a paradigm shift. The prototypical example in spiritual experience is conversion to a new spiritual world-view.

**Verification;** This final stage of the process involves systematising the illumination in rational terms and testing its validity empirically. This stage is accompanied by a release of the cognitive or emotional tension that initiated the process.

This process model was adopted following research that investigated the borderline between spiritual and psychotic experiences (Jackson 1991;1997). This research employed a sample of individuals all of whom reported spiritual experiences with a

significant number of psychotic features, while only half the sample had received diagnosis of a major psychotic disorder. This research concluded that spiritual experiences are benign expressions of psychotic-like phenomenology, and that such experiences play an adaptive role in the resolution of stress. The creative problem-solving model, upon which the CPSH is based, centres about the resolution of intellectual or cognitive issues. It is suggested that, in applying this model to spiritual experiences, the issues addressed are those of personal meaning and that the problematic issues and 'impasse' experienced, has an existential nature (Batson and Ventis 1982). The existential impasse is described as characterised by feelings of despair, fears of an inability to cope, and hopelessness (Jackson 1991).

The research that supported the adoption of this model (Jackson 1991) suggests that the stage of verification is conducted socially. Thus, the individual tests the validity of their new perspectives, derived through spiritual experience, by assessing its concordance with the perspectives of others. The social feedback gained during this final stage of the process is considered crucial to the over-all success of the illumination (or solution) in the resolution of the precipitating stress.

The CPSH also proposes that the relative success of the solution derived through spiritual experience (the illumination stage) is the factor that determines the outcome of such experience. Where the spiritual experience successfully resolves antecedent crises a process of negative feedback reduces the occurrence of future experiences. Where the spiritual experience is not successful, the experience may occur repeatedly, via a process

of positive feedback, as further attempts at resolution are made. Thus, in the former case the experience is essentially benign or life enhancing and most likely to be classed as spiritual. Where positive feedback occurs the experience may repeat frequently resulting in disruptions to cognitive and social functioning, becoming more reminiscent of psychotic episodes.

### Summary

Explanatory models of spiritual experiences have been offered from a number of psychological perspectives. While each has given greater emphasis to different aspects of the proposed models there appears to be a consensus suggestion that spiritual experiences are largely benign and may serve a problem solving function. In addition, contemporary psychological models, such as the discontinuity and cognitive problem-solving models of spiritual experience, are rooted in an established tradition of research and opinion, which view spiritual experiences as having a 'problem-solving' function, and have incorporated many elements from previous proposals. These more recent models have focussed more specifically upon the cognitive processes underlying the aetiology, occurrence and outcome of spiritual experiences. While the discontinuity model employs wider psychological theory the cognitive problem-solving hypothesis (CPSH) has its foundation in process models of creative problem solving. The CPSH is unique in the extent to which it offers an explicit, process or stage based model, for understanding the aetiology, occurrence and outcome of spiritual experience. Because of this the CPSH appears to be the model most amenable to empirical examination. The

present study will focus upon and attempt to examine the CPSH, and assess how well it models the spiritual experiences of a contemporary population as measured by the Spiritual Experiences Questionnaire.

### Affect and spiritual experience

Within the cognitive problem-solving hypothesis (CPSH) the stress preceding the occurrence of spiritual experience is described as an 'existential impasse' (Batson and Ventis 1982; Jackson 1991). The CPSH suggests that the existential impasse is addressed and resolved by benign spiritual experience. The impasse is described as characterised by feelings of despair, fears of an inability to cope and hopelessness (Jackson 1991), and appears to have strong parallels with that of depression. This suggestion is supported by the observation that feelings of hopelessness and meaninglessness are central to the experience and phenomenology of depression (Beck 1967; Frankl 1963; 1978). The inclusion of subjective feelings of depression, in the context of spiritual experiences, is supported by previous commentators (e.g. Boisen 1952; Prince 1979) that such experiences often occur in the context of a depression that is subsequently resolved. Additionally, depression is characterised by low self esteem, self devaluation and a view of the self as insufficient to live up to the individual's aspirations or effect outcomes, especially positive ones (Seligman 1978). This suggestion has strong parallels with the comments of previous authors (e.g. James 1902; Prince 1979) that spiritual experiences occur in the context of life crises or questions surrounding the personal moral worth of life.

Dramatic changes in affect and the intense emotional qualities of spiritual experience have been noted by a variety of authors (for reviews see James 1902; Jackson 1991; Clarke 2001). In addition, dramatic affective changes are also a noted feature of bi-polar affective disorders (DSM IV: APA 1994) and in some respects display similarity to spiritual experiences. Indeed, spiritual experiences have been observed as frequently occurring amongst those diagnosed as suffering a bi-polar affective disorder (Gallemore et al 1969).

Mania is usually regarded as a state that exists at the opposite end to depression on a spectrum of affect, as reflected by the term *bi*-polar to describe patients that experience both (Lyon, Startup and Bentall 1999). It has been a common theme within psychoanalytic literature to regard mania as a radical defence against painful dysphoric mood (e.g. Dooley 1921; Rado 1928). Recent evidence has suggested that depressed affect and mania may not be distinct, but frequently co-occur (e.g. Goodwin and Jamison 1990). Such findings suggest that if mania is to be regarded as a defence it is at best an intermittent, and thereby an inadequate, one (Kotin and Goodwin 1972). Recent investigations employing implicit and explicit measures of self-esteem and attributional style have provided support for suggestions that mania, as a component of bi-polar disorder, serves a defensive function (Bentall and Thompson 1990; Lyon, Startup and Bentall 1999).

Both the discontinuity model, and cognitive problem-solving hypothesis, suggest that spiritual experiences have an adaptive, stress resolving function by providing a paradigm

shift or cognitive solution to antecedent stress. On these models it is suggested that changes in affect and the *resolution* of preceding cognitive and emotional tension are achieved by the restructuring of predominantly ideational or cognitive components. However, the idea of mania as defence suggests that positive changes in affect may be a more significant characteristic of the process, than ideational or cognitive changes alone. Further, the noted features of 'euphoria' (Clarke 2001) and 'bliss' (Stace 1960) may on this model provide intermittent relief from an underlying depression rather than providing a lasting resolution as suggested by the CPSH.

Problem-solving models of spiritual experiences, including the CPSH, suggest that individuals reporting spiritual experiences will also report the relative absence of depressive symptoms. More specifically, the CPSH proposes that spiritual experiences are preceded by and address an existential impasse. For this reason variables of both depression and existential meaning and purpose in life will be incorporated into the present study's examination of the CPSH as an explanatory model for spiritual experiences. While there are a variety of widely accepted instruments for the measurement of depressive symptoms, the measurement of existential issues is less common. The following section of this chapter will review issues in the measurement of existential issues.

### Meaning and Purpose in Life: The Measurement of Existential Issues

The importance of the individuals' ability to discover a satisfying meaning and purpose in life has always been the central tenet of major existential theory (e.g. Camus 1942; Sartre 1953) and more latterly major psychological theory (e.g. Antonosvky 1987; Maddi 1973; Frankl 1963; 1978; Jung 1956; 1959).

Social scientists have begun to agree that the presence of positive aspects of psychological well-being is a crucial factor in the assessment of mental health (Diener 1984). However, recent commentators (Ryff 1989) have noted that investigations which have included indexes of positive well-being have tended to focus upon short term affect (e.g. mood, happiness) while overlooking more constant life challenges such as finding a satisfying meaning and purpose in life. More recently a number of studies have emphasised the important contributions by constructs of meaning and purpose in life upon mental health prognosis (Reker and Wong 1984), psychotherapeutic outcome (Debats 1996), coping style and suicidal ideation (Edwards & Holden 2001), and quality of life in the presence of chronic pain (Germano, Misjon & Cummins 2001).

Early approaches to the measurement of meaning and purpose in life relied exclusively upon the quantification of the meaning and purpose in life, felt by the individual at the present moment, through use of the Purpose In Life (PIL) Test (Crumbaugh & Maholick 1969). The recognition, consistent with the theory of Frankl (1963; 1978), of the importance of the individuals will to *seek* meaning and purpose in life led to the

development of the Seeking Of Noetic Goals (SONG) test (Crumbaugh 1977). Both the PIL and SONG tests, although complementary have received criticism for their inflexibility and uni-dimensional character which does not adequately reflect the complex multi-dimensional nature of the constructs of meaning and purpose (Reker & Peacock 1979).

More recently multi-dimensional instruments have been employed in the quantification of meaning and purpose in life. The most popularly employed have been the Life Regard Index (LRI; Battista & Almond 1973) and the Life Attitude Profile (LAP; Reker & Peacock 1981). The LRI relies upon the bi-dimensional constructs of a personally meaningful framework (FR) from which an individual can develop aims and goals and fulfilment (FU) achieved in their attainment. Recent research has sought to clarify the psychometric properties of the LRI with regard its dimensional structure (Harris & Standard 2001).

The LAP (Reker, Peacock & Wong 1987) is an 46-item instrument containing seven dimensions drawn directly from the theory of Frankl (1963; 1978) and are described as measuring; Life Purpose (LP) purpose in and zest for life, fulfilment and satisfaction; Existential Vacuum (EV) meaninglessness, lack of goals and existential anxiety; Life Control (LC) the freedom to make life choices, exercise personal responsibility and personal control for life events; Death Acceptance (DA) or the absence of fear and anxiety about death; Will-to-Meaning (WM) the willingness to seek a personal meaning in existence; Goal Seeking (GS) the desire to achieve new goals, and; Future-Meaning-



to-Fulfil (FMF) expectations regarding the seeking of personal meaning in the future and the changing nature of future potentialities. Individual items are phrased as statements to which the individual may respond by marking a 7-point Likert type scale at any position between “strongly agree” and “strongly disagree”.

The LAP possesses a high degree of flexibility due to the seven dimensions it contains. It could be claimed that some of the seven dimensional constructs, due particularly to the relations between them, have only a spurious dimensionality. For example the constructs of Life Purpose (LP) and Existential Vacuum (EV) may appear to comprise the opposite ends of a meaningfulness continuum, thereby belonging to a single dimension. However, the psychological observations and theory of Frankl (1963; 1978) suggests that these constructs can be conceptualised as dimensionally distinct. According to Franklian theory it is quite conceivable that an individual may express a satisfying life purpose even in the presence of overwhelming feelings of existential vacuum. Specifically, Frankl (1952) cites the case of a depressed woman who made it her life’s mission to deal with her feelings of meaninglessness who subsequently expressed both a satisfying life purpose and feelings of existential vacuum simultaneously.

The LAP has also received substantial statistical validation through employment of both exploratory and confirmatory factor analytic techniques (Reker & Peacock 1981), comparison with related measures to assess external and concurrent validity (Reker & Peacock 1984), and with measures of perceived well-being to assess ecological validity (Reker & Wong 1984; Reker, Peacock & Wong 1987). Most recent (Priem 1995)

exploratory factor analyses have resulted in the isolation of only five of the seven dimensions proposed.

The LAP is a well-developed and modern instrument that sensitively reflects the multi-dimensional nature of personal existential attitudes. The present study will employ this instrument and examine its structure as proposed by previous research (described above). While such a process will allow further validation of this instrument it will also be employed as a measure of existential attitudes, which are a significant feature of the model for spiritual experiences proposed by the Cognitive-Problem Solving Hypothesis.

### Spiritual Experiences and Personality

Research concerning links between individual personality variation and the occurrence of spiritual experience have been significantly influenced by the debate regarding the apparent similarity between these and pathological states such as psychosis. Because of this, much research has focussed upon the personality predispositions that may commonly underpin the susceptibility to spiritual and pathological varieties of psychotic-like phenomena. This common trait, or aspect of personality, was first noted by James (1902) and Underhill (1930) who felt that a mobile threshold between preconscious and conscious cognitive content, was common to people experiencing spiritual or psychotic states. The development of research within this field will now be reviewed.

### Schizotypy and Spiritual experience

The 'nervous type' model of psychosis (Claridge 1987; 1997) proposes that a cluster of traits, collectively referred to as schizotypy, form a basic dimension of human inter-individual differences. Individuals who are high in trait schizotypy have been shown to share various psychophysiological, neuropsychological, cognitive and phenomenological characteristics with diagnosed psychotics. However, although high levels of schizotypy are conceived as involving increased risk of psychotic breakdown, they are not (on this model) thought of as being essentially pathological. Importantly, it has been suggested (Claridge 1987) that the dimension of schizotypy may be an important factor in the degree of adaptive flexibility displayed by individual's central nervous system. Such a model suggests the existence of a population of psychologically healthy high schizotypes, predisposed to psychotic like experiences, yet not adversely affected by them. The hypothesis of a connection between schizotypy would predict that, in the normal population, high schizotypes should report relatively high levels of spiritual experience. On similar grounds diagnosed psychotics, who are by definition highly schizotypal, should also report high levels of relatively benign spiritual experience. Although only limited evidence exists it has been found that manic-depressive patients report significantly higher rates of the 'conversion experience' (Gallenmore et al 1969) and that 30% of a small sample of schizophrenics reported 'the experience of God' (Bradford 1987). The lone study to date (Jackson 1991; 1997) which makes a direct examination of these hypotheses found that measures of schizotypy were correlated with measures of spiritual experience in a normal sample. This was particularly the case with the

numinous dimension of spiritual experience, characterised by the sense of a supernatural presence, prominent sensory phenomena, volitional passivity and intense emotion. In an examination of the second hypothesis, it was found that the measure of spiritual experience, particularly the numinous dimension, predicted membership of a group of diagnosed psychotics. The predictive power of this relationship was found to be higher than the formally adopted (DSM-III) diagnostic scales for the assessment of schizotypy. Such findings offer strong support for the hypothesis that the personality dimension of schizotypy represents a common pathway underlying both spiritual and psychotic experience.

It is suggested (Jackson 1991) that the personality trait of schizotypy, in reflecting a common pathway for both spiritual and psychotic experience, may be the variable that, in relatively high measures, may predispose the individual to either spiritual or psychotic experience. The schizotypy trait model, when applied to spiritual experience, suggests that individuals with elevated levels of schizotypy, have a lower threshold for stress. It is suggested by the cognitive problem-solving hypothesis that such individuals are more susceptible to spiritual or psychotic phenomena, which constitute a direct attempt to cope with the stressful circumstances by means of a paradigm shift.

The present research aims to examine the relationship between inter-individual schizotypic variation and the occurrence of spiritual experiences. The measurement of this aspect of personality and individual differences has received much research attention

and the development of both its' conceptualisation and measurement will now be reviewed.

### Quantifying Psychosis-Proneness

There has been a long history of attempts to construct instruments that will reliably quantify, and thereby allow measurement of, traits disposing the individual to psychotic like experiences and behaviour. Initially as such instruments were created such traits were not labelled as schizotypic. First serious attempts assumed that such a trait was uni-dimensional and led to the Eysenck Personality Questionnaire (EPQ: Eysenck & Eysenck 1976) containing a scale for the measurement of "psychoticism". According to such a theory the likelihood of such a predisposition being transformed into a psychotic disorder is greatest with higher measures of psychoticism. Variations in type of pathology, or trait expression, are thought to be due to the influence of other traits of personality such as neuroticism and extraversion (Verma and Eysenck 1973). However, no single marker for psychotic disorder has ever been located (Claridge 1994). Further evidence has pointed to the multi-dimensional nature of symptoms within the heterogeneous category of psychotic disorder (Arndt, Alliger & Andreasen 1991) suggesting that several risk factors may be needed to explain the role of personality in the aetiology of disorders of the psychotic spectrum.

The rejection of the uni-dimensional model of schizotypy has led to the postulation of different multi-dimensional formulations. A two-factor model which divides dimensions

of positive symptoms and negative symptoms has been proposed (e.g. Crow 1980). It has also been suggested that a three-factor model containing an added dimension of 'disorganisation' is more appropriate for both schizophrenia (Arndt et al 1991) and schizotypal traits (Raine, Reynolds, Lencz, Scerbo, Triphon & Kim 1994).

Many of the multi-dimensional models forwarded, and the analyses upon which they are based, are limited by the content of the items included in the measurement model. It has been suggested (Mason 1995) that such a limitation potentially limits the number of dimensions, which may be isolated using factor analytic techniques. As a result of such suggestions research attention has also been focussed upon the inter-relationships that may exist between different instruments designed to measure schizotypy. In an exploratory factor analysis of the items of many instruments designed to measure schizotypy (Bentall, Claridge and Slade 1989; Mason, Claridge and Williams 1997) a four-factor model has consistently emerged. In analysis of a large data sample the four-factor model was confirmed using a confirmatory factor analytic technique to test between alternative models comprising two, three and four factors (Mason 1995). The confirmation of the four-factor model led to the inclusion of the items, from each of the four factors, in new scales for the assessment of schizotypy. These new scales comprising the Oxford-Liverpool Inventory of Feelings and Experiences (OLIFE: Mason, Claridge & Jackson 1995) have been subjected to an exploratory factor analysis that isolated a four factor structure. Such results have provided further evidence for a four-factor model of schizotypy. The four dimensions of schizotypy comprising the OLIFE are described as: (a) Unusual Experiences, including aberrant perceptions and magical

thinking, (b) Introvertive Anhedonia, including lack of enjoyment from social sources, solitariness and dislike of intimacy, (c) Cognitive disorganisation, including attentional difficulties, social anxiety, odd behaviour and odd speech; and (d) impulsive non-conformity including poor self control, mood swings and antisocial or even destructive tendencies.

Most recent research has found evidence supporting three of the four dimensions proposed to comprise the OLIFE measurement of schizotypy. From direct interviews it has been found (Battaglia, Cavallini, Macciardi & Bellodi 1997) that three dimensions consistently emerge in the diagnosis of schizotypal personality disorder. These dimensions have been labelled cognitive-perceptual, interpersonal and oddness. In a cross-cultural comparison, three dimensions consistently emerged during the measurement of vulnerability to psychotic disorder (Chen, Hsaio & Lin 1997). These dimensions were described as cognitive-perceptual, interpersonal and disorganisation. Employment of a cluster analytic technique has provided evidence to support the validity of three of the four dimensions within the OLIFE (Loughland & Williams 1997). The dimensions that emerged were those of unusual experiences, introvertive anhedonia and cognitive disorganisation.

Most recent research suggests that the most robust dimensions of schizotypy are those of unusual experiences (cognitive perceptual), introvertive anhedonia (interpersonal) and cognitive disorganisation. Although the OLIFE was developed via employment of various confirmatory and exploratory factor analytic techniques, it has not been subjected

to a confirmatory analysis of the dimensions/ scales in their current form. In particular the analyses which isolated the dimensions of schizotypy as they are currently understood, (Mason 1995) employed composite scale scores, while factor examinations of the resulting dimensions incorporated into the OLIFE employed exploratory factor analyses. To date no comprehensive confirmatory analysis based upon the binary (Yes / No) data has been conducted. It is the aim of the current research to provide a confirmatory factor analysis of the three most robust dimensions of schizotypy as represented by scales of the Oxford-Liverpool Inventory of Feelings and Experiences.

Confirmatory factor analysis is confirmatory in that it begins with a test of the hypothesised factor structure of the model under examination. The theory driven nature of this method requires that the most robust and parsimonious model is taken as the starting point for examination of the model. In the specific instance of the OLIFE model of schizotypy a three factor model appears the most robust and is more parsimonious than a four factor model. The three factor model appears the most robust starting point as, (described above), this model has most consistently emerged from studies that have employed diverse methodologies.

### Transliminality

While Schizotypy is conceived of as the individual's predisposition to respond to stress in a schizotypal way, and experience states described variously as spiritual or psychotic, the concept has its roots in far earlier observations. First described (James 1902; Underhill



1930) as a mobility threshold, it has most recently been described as ‘transliminality’ (Thalbourne 1991) and is thereby defined as: “a largely involuntary susceptibility to, and awareness of, large volumes of inwardly generated psychological phenomena of an ideational and affective kind” (Thalbourne and Delin 1995).

The effects of variation in individual ‘transliminality’ are thought to comprise psychological characteristics common to depression, mania and manic depression, magical ideation, absorption and belief in the paranormal and mystical /spiritual experiences (Lange, Thalbourne, Houran and Storm 2000). ‘Transliminality’ is also considered to relate to a person’s ability to recall dreams, religiosity and death acceptance.

Recently the Revised Transliminality Scale (Lange, Thalbourne, Houran and Storm 2000) has been devised as the most validated measure of individual variation in transliminality. This research conducted a hierarchical analysis of the items and dimensions underlying the unified dimension of transliminality and found that these sub-dimensions were ranked (in order of representativeness) as: magical ideation; mystical experience; absorption; hyperaesthesia; manic experience; dream interpretation, and fantasy proneness. Magical ideation is a concept common to both transliminality and the Unusual Experiences dimension of the O-LIFE measure of schizotypy (reviewed above). The fantasy proneness and absorption dimensions of transliminality have more traditionally been conceived as representing dissociative trait and experience (e.g. Bernstein and Putnam 1986), as opposed to predispositions representative of schizotypy. A limited amount of

research supports the notion of a link between individual capacities for absorption (Pekala, Wenger and Levine 1985), fantasy proness (Wilson and Barber 1983; Lynn and Rhue 1988) and spiritual experiences.

The Cognitive Problem-Solving hypothesis of spiritual experiences (Jackson 1991; Jackson and Fulford 1997) has incorporated findings of an association between the personality trait of schizotypy. On this model individuals who display elevated levels of this trait are more prone to experiencing spiritual experiences. However, as displayed by the research concerning relationships between dimensions of dissociative trait, transliminality and spiritual experience, dissociation is a personality trait that may make a significant contribution to the aetiology of spiritual experiences. The present study will examine the relationship between dissociative trait and spiritual experiences. Issues in the measurement of dissociative trait and experiences will now be reviewed.

#### Dissociation: Issues of Conceptualisation and Measurement

Definitions of dissociation vary but most include the idea of failures in the integration of memory, identity and perception (Steinberg 1995). Dissociation in each of these areas of cognition are described as amnesic dissociation, depersonalisation and derealisation. The instrument most widely employed for the quantification of dissociative experiences is the Dissociative Experiences Scale (DES; Bernstein & Putnam 1986). The DES is a 28 item, self report measure of the frequency of dissociative experiences. The scale was conceptualised as a trait measure (as opposed to a state measure) and it enquires about the

frequency of dissociative experiences in the daily lives of subjects. The scale was developed to provide a reliable, valid and convenient way to quantify dissociative experiences. The scale was designed to be useful in determining the contribution of dissociation to various psychiatric disorders with significant dissociative components and as a screening instrument for such disorders (E.g. Post Traumatic Stress Disorder (PTSD) and Dissociative Identity Disorder (DID)).

The DES displays good reliability (Carlson & Putnam 1993) and impressive predictive (and thereby ecological) validity for dissociative disorders such as PTSD and DID (Ijzendoorn & Schuengel 1996). The DES was designed for use in clinical populations and although this instrument has been used to measure dissociation in non-clinical populations this was not its intended purpose (Carlson & Putnam 1993). This suggestion is somewhat at odds with the conceptualisation of dissociation as a dimensional trait manifest in relatively common dissociative phenomena (e.g. day-dreaming) as well as pathological types. Taxometric analysis of DES data suggests the existence of two distinct types of dissociative experience. It is suggested that non-pathological dissociative experiences are manifestations of a dissociative trait, whereas pathological dissociative experiences are manifestations of a latent class variable (Waller, Putnam & Carlson 1996). It is suggested that individuals belonging to the taxon of pathological dissociative experiences may be identified by using an 8-item measure called the DES-T, developed as a result of the same analysis. The items comprising this instrument describe dissociative experiences which are more uncommon and predictive of a pathological dissociative disorder. However, the DES-T has received recent criticism (Ijzendoorn &

Schuengel 1996) for its transparency, subsequent vulnerability to response bias and inability to distinguish between pathological and non-pathological dissociation, particularly in the case of PTSD patients.

A parallel debate emerging from the literature concerns the dimensional structure of dissociation as represented by the items of the DES. A number of factor analytic studies (Carlson, Putnam, Ross, Torem et al 1993; Ross, Joshie & Currie 1991; Frischholz, Schwartz, Braun and Sachs et al 1991) have suggested that dissociation comprises three dimensions: amnesic dissociation; imaginative involvement and absorption; derealisation and depersonalisation. However, such multi-dimensional formulations of the DES have often disagreed regarding the sub-dimension to which each item belongs. This finding implies that the meaning of some DES items is ambiguous. It has also been found (Waller & Ross 1997) that the DES data, which have been employed in factor analytic studies is frequently skewed. When distributive non-normality is controlled only a uni-dimensional model of the DES emerges. Taken together such findings indicate that dissociation, as operationalised by the DES, is better represented as a uni-dimensional construct.

The present study will, prior to examining the contribution of this trait to the aetiology of spiritual experiences, conduct an examination of the dimensional structure of this trait as operationalised in the Dissociative Experiences Questionnaire (DES: Bernstein and Putnam 1986).

### Summary: Personality and Spiritual Experience

Research concerning the relationship between personality and spiritual experience has arisen from an encompassing debate surrounding the features common to benign spiritual and pathological varieties of experience. Because of this, such research has examined relationships between psychosis-proneness, as aspects of individual variation and personality, and spiritual experiences. Some limited research has attempted to examine this relationship directly, (Jackson 1991) and some has incorporated both variables into a common dimension (Lange, Thalbourne, Houran and Storm 2000). However, neither has employed contemporary conceptualisations or the most recent instruments designed to measure individual schizotypic variation. The present research will examine the dimensional structure of the Oxford-Liverpool Inventory of Feelings and Experiences and subsequent to the validation of the assumed dimensions, will examine the relationship between these and reports of spiritual experience.

Some research has implicated dissociative traits such as absorption (Pekala, Wenger and Levine 1985) and fantasy proneness (Wilson and Barber 1983; Lynn and Rhue 1988) in the aetiology of spiritual experience. Other research has included these dissociative dimensions in a single dimension that includes these as well as schizotypy variables and proneness to mystical experiences. The Cognitive Problem-Solving Hypothesis for spiritual experiences includes only individual schizotypic variation, as a predisposing personality variable, in its formulation. The present study will examine directly the relationship between dissociative trait and reports of spiritual experience.

### The Present Research

The variables of interest to the present study have been drawn from the assumptions implicit to the Cognitive Problem-Solving Hypothesis (CPSH: Jackson 1991; Jackson and Fulford 1997). The central variable is the measure of spiritual experiences, gained via employment of the Spiritual Experiences Questionnaire (SEQ: Jackson 1991). The personality trait variables predisposing to schizotypal and dissociative experiences will be measured using the Oxford-Liverpool Inventory of Feelings and Experiences (OLIFE: Mason 1995) and the Dissociative Experiences Questionnaire (DES: Bernstein and Putnam 1986) respectively. The CPSH proposes that spiritual experiences address antecedent stresses that have resulted in the experience of an existential impasse. Due to the conceptual links between existential issues and depression a measure of each shall be employed. The former shall be measured via the Life Attitude Profile (LAP: Reker and Peacock 1984), while the latter will be measured via use of the 13-item subtest for depressive symptoms contained within the Revised version 90 Symptom Check –List (SCL-90-R: Derogatis and Cleary 1977).

### Aims and Hypotheses

The present study is conceived of having three main themes, which can be broadly described as phases of the present research. The first is a measurement model / variable validation phase; the second, an examination of the relationships between personality trait and measures of spiritual experience, and finally an examination of the inter-variable

relationships predicted by the Cognitive Problem-Solving Hypothesis of spiritual experiences.

The first (studies 1a – 1d, chapter 2) involves issues concerning the dimensional structure of each of the measurement instruments employed. For the majority of the variables of interest to the present study, there are issues surrounding their conceptualisation and measurement. These have been extensively discussed above. Prior to any substantive examination of the relationships amongst these variables, the dimensional structure of each will be examined. On this basis it will be possible to observe any discrepancies between the *a priori* assumed structure and that evidenced by the present data, but possible also to modify and so optimise, the representativeness of each. The proposed examination of each of the measurement models, (representing each variable of interest), will take as a point of departure the following specific hypotheses:

1. Dissociative Experiences Scale (DES: Bernstein and Putnam 1986): The DES will be observed to have a uni-dimensional structure.
2. Oxford-Liverpool Inventory of Feelings and Experiences (OLIFE: Mason 1995): The OLIFE will be observed to contain the three robust dimensions of Unusual Experiences, Cognitive Disorganisation and Introverted Anhedonia.

3. Spiritual Experiences Questionnaire (SEQ: Jackson 1991): The detailed items of the SEQ will be observed to fall within the three dimensions of Numinous, Mystical and Evil experiences.

4. The Life Attitude Profile (LAP: Reker and Peacock 1981): The LAP will be observed to contain the seven existential life attitude dimensions of Life Purpose, Existential Vacuum, Goal Seeking, Will-to-Meaning, Future-Meaning-to-Fulfil, Death Acceptance and Life Control.

The second theme of the present research is an examination of the links between individual personality trait variation and reports of spiritual experience (study 2, chapter 3). Previous research (Jackson 1991) has found links between measures of schizotypy and the occurrence of spiritual experience. Dissociative personality trait has also been implicated in the susceptibility to spiritual experiences and has been incorporated into the related concept of transliminality (Thalbourne 1991). The relative contribution of each of these personality trait variables, as a predisposing factor for spiritual experiences, will be examined. Specifically, as suggested by previous research findings, (cited above), elevated schizotypal traits will predispose the individual to more prototypical spiritual experiences, and a positively directed association will be found between these variables. By examining the relationship between each of the schizotypal dimensions reliably measured by the OLIFE (Unusual Experiences, Cognitive Disorganisation and Introvertive Anhedonia) and each of the dimensions proposed for the SEQ (Numinous Experience, Mystical Experience and Evil Experiences) it will be possible to examine the



individual relationships between them. The independent contribution of the dissociative trait, in the aetiology of spiritual experiences, will also be examined. If dissociative traits significantly predispose the individual to more prototypical spiritual experiences, it is expected that this trait, (measured using the DES) will display a positively directed association with measures of the prototypicality of spiritual experiences, (measured using the SEQ). The proposed examinations can be summarised as two hypotheses:

1. The variable of schizotypy as operationalised in the dimensions of the OLIFE will display a significant positively directed association with the variable of spiritual experience as operationalised in the dimensions of the SEQ.
2. An examination will be made of the relationship between the variable of dissociative trait, as operationalised by the DES and the variable of spiritual experience as operationalised by the SEQ. Due to inclusion of aspects of dissociative experience and spiritual experience in the concept of transliminality (Thalbourne 1991), it is predicted that dissociative trait and measures of spiritual experience will be significantly associated in a positive direction.

The final phase or theme of the present research, is that of an examination of the Cognitive Problem-Solving Hypothesis as a model for spiritual experiences. This problem solving model, including all those upon which it has also drawn, is contrasted with the possible alternative that spiritual experiences do not resolve antecedent problems by providing cognitive solutions, but provide instead an intermittent affective relief from

an underlying depression. If the latter, alternative suggestion, is actually the case it would be found that, for those reporting spiritual experiences, psychological well-being would be less than good and unresolved problems (particularly those relating to existential issues) will remain in evidence. Specifically it is expected, in such instances, that when individuals report elevated numbers of features proto-typical of spiritual experiences, the individual will also display a negative existential life attitude and experiences / symptoms characteristics of depression. Thus, if spiritual experiences serve a problem-solving function, it is expected that depressive symptoms and experiences will be inversely associated with the number of prototypical features of a spiritual experience. Thus, from the over-all Cognitive Problem Solving Hypothesis the following, specific hypotheses are drawn:

1. The relationship between the variable of spiritual experience (SEQ) is predicted to display an inverse relationship with the variable of depression, as operationalised by the revised Symptom Check List version 90 (SCL-90-R).
2. An examination of the relationship between the variables of existential life attitude, as operationalised in the seven dimensions of the Life Attitude Profile (LAP) will be conducted. It is predicted that elevations in the measures of spiritual experience (SEQ) will display a positively directed relationship with life attitude dimensions indicative of satisfactory existential well-being (Life Purpose, Will-to-Meaning, Future-Meaning-to-Fulfil, Life Control and Death Acceptance), and an inverse relationship with those

dimensions indicative of unresolved existential issues (Existential Vacuum and Goal Seeking).

There are some aspects of the CPSH that cannot be reliably examined through the use of even the most sophisticated quantitative analyses. These include the personal meaning of a spiritual experience; the extent to which antecedent stresses are existential in character; how well a spiritual experience addresses antecedent stresses; what methods are employed as an individual attempts to validate their experience; the impact of their experience upon their perspectives of themselves, the world and other people, and; what kind of feedback processes might be observed to operate in the regulation of the occurrence of further spiritual experiences.

These issues can only be reliably examined through the qualitative analysis of narrative interview data and sensitive interpretation. For this reason it is envisaged that a second major study in the present research will comprise a series of interviews with a selected sample of individuals reporting spiritual experiences. The proposed examination of context, personal meaning and impact of spiritual experiences lead to the following predictions made on the basis of the Cognitive Problem-Solving Hypothesis:

1. The antecedent context of spiritual experiences will be characterised by stressful circumstances.

2. The antecedent stresses will have an existential character and be described in terms of meaning and purpose in life.
3. An individual's spiritual experience will result in a new perspective of reality, or a paradigm shift, and will directly address the issues pertinent to the individual's antecedent circumstances.
4. Spiritual experiences will not result in chronic, negative alterations of affect.
5. Spiritual experiences will result in no relative loss of ability to function.
6. Individuals reporting spiritual experiences will describe attempting to validate their experience, and interpretation of it, socially.
7. Where an individual describes their spiritual experience as providing a satisfactory resolution for antecedent stresses / issues, a process of negative feedback will reduce the subsequent occurrence of such experiences.

## Chapter 2

### Introduction to Studies 1 and 2

The first and second studies of the present research will employ quantitative variables for examination of the hypotheses detailed above. The hypotheses that will be considered throughout the two following chapters are those concerning the variable and measurement model validation, and subsequently the substantive variable inter-relationships.

The issues salient to the measurement models employed can be located in the previous chapter. The variable validation phase of the present research (studies 1a – 1d, this chapter) will involve the employment of Confirmatory Factor Analytic (CFA) techniques and the specific methods employed for the analysis of each instrument employed, will be described here.

Following the variable validation the present research will conduct an examination of the inter-relationships, between each of the validated measurement models, subsequently employed (Study 2, chapter 3). This examination will employ Path Analytic methods and a full description of the methods can be located at the beginning of that study.

The sample data collected for the purposes of studies one and two is the same and was collected at one time interval. For this reason a description of the method of data

collection, the instruments employed and descriptive data will be presented prior to the results of studies 1a – 1d.

## Method

### Instruments

The first questions asked of all respondents were those pertaining to personal and demographic information (see appendix 1). Respondents were asked to provide a contact name and address if they wished to be included in the draw for the £100 cash prize. They were also asked to indicate, by ticking a box, whether they would be interested in taking part in any follow up studies. The questions that followed required the respondent to indicate their age, sex, marital status, preferred spoken language, highest qualification and present occupation.

Life Attitude was measured through employment of the Life Attitude Profile (LAP : Reker, Peacock and Wong 1981). The LAP (see appendix 2) is a 46 item questionnaire which requires responses to be made upon a 7 point Likert scale and measures life attitude across 7 psychologically related dimensions relating to Purpose in Life : the degree to which the individual has, for this moment, discovered a satisfying life purpose, (e.g. *My life is running over with exciting good things*) ; Existential Vacuum : the degree to which the individual feels the vacuous sensations related to a lack of meaning in life, (e.g. *I feel the lack of and a need to find a real meaning and purpose in my life*) ; Goal

Seeking ; the degree to which the individual feels the absence and need of a satisfying goal in life, (e.g. *I feel the need for adventure and 'new worlds' to conquer*) ; Life Control ; or the extent to which the individual feels a personal control over the events of their life, (e.g. *My life is in my hands and I am in control of it*) ; Death Acceptance ; how well the individual accepts the inevitability of personal, physical death, (e.g. *Some people are very frightened of death but I am not*) ; Will-to-Meaning ; or how determined the individual is to locate a satisfying meaning and purpose in life, (e.g. *I think about the ultimate meaning in life*) ; Future Meaning to Fulfill ; the degree to which the individual looks forward to the challenge of finding a satisfying meaning and purpose in life, in future times, (e.g. *I am determined to make my future meaningful*).

The questionnaire was reduced in size from the original 46 items to 28 items. The reduction was accomplished by employing only the four highest loading items from each of the 7 scales. Each scale of seven items had been previously employed and validated by comparisons with other indices of psychological well-being such as the Psychological Well-Being questionnaire, (PWB : Reker and Peacock 1981 / 1984) and the Purpose in Life test, (Crumbaugh and Maholick 1969). The items were presented with the first question from each scale following each other. These 7 items were then followed by the second item from each of the 7 scales. This order continued until all 28 items were exhausted. This short form of the LAP was constructed so as to reduce the bulk of the total questionnaire and thus encourage participants to respond.

The individual's level of Depression was assessed by means of a 13 item sub-scale drawn from the Symptom Check List-90-revised. (SCL-90-R : Derogatis and Cleary 1977). The SCL-90-R (see appendix 3) is an instrument widely employed in clinical practice for the initial screening of clients of mental health services. For the purposes of the present study the questionnaire was headed with the title '*Problems and Complaints*', and requires participants to respond upon 5 point Likert scales indicating the severity, over the course of the two preceding weeks, of 13 symptoms of depression. (e.g. *In the last two weeks how much have you been bothered by : feeling hopeless about the future?*).

Propensity for dissociative experiences was measured by the Dissociative Experiences Scale, (DES : Bernstein and Putnam 1986). The DES (see appendix 4) is a 28 item scale which gives examples of dissociative experiences that may occur in day-to-day life and asks participants to indicate upon 10 point scale of percentiles, what percentage of the time such dissociative episodes personally occur. (e.g. *Some people find that sometimes they are listening to someone talk and they suddenly realise that they did not hear all or part of what was just said. Circle a number to show what percentage of the time this happens to you*).

Spiritual experiences were measured by the Spiritual Experiences Questionnaire, (SEQ : Jackson 1991). The SEQ (see appendix 5) is divided into 4 distinct sections. Section A asks questions about the participants' present mood, religious affiliation, church attendance, religious inclinations, interest in reading about mysticism and the supernatural and the 'Hardy question', (Hardy 1979), which asks : "*Have you ever been*



*aware of or influenced by a presence or a power, whether you call it God or not, which is different from your everyday self.*” The section is completed by providing the respondent with the opportunity to describe an instance of such awareness or influence in long hand. Section B comprises 5 genuine, unedited descriptions of different spiritual experiences, to which the participant is asked to indicate upon a 3 point scale, whether each experience is either “*very similar*”, “*fairly similar*” or “*not at all similar*” to an experience of their own. Section C comprises 43 phrases describing sensations and feelings, which may have occurred during any such spiritual experience that the participant is able to recall, e.g. *Feeling that you could see things in a completely new way/A Feeling of sacredness or holiness*. To each item the participant is asked to indicate the presence of such a sensation or feeling during the experience that they are able to recall. This is accomplished by responding upon a 3 point scale that this was “*Very Much*”, “*Roughly*” or “*Not At All how I felt*”. The 43 items of section C have previously been subjected to factor analysis and yielded a 3 factor solution, (Jackson 1991). The three factors were identified as those describing Numinous experiences, involving the sense of the presence of an external agent, often not interpreted in religious terms. Mystical experiences, characterised by feelings of metaphysical or aesthetic insight, pantheistic experiences in nature and unity with a greater whole. The third factor to emerge was identified as describing the experience of evil. Section D asks the participant to describe, (longhand), the feeling or characteristic which was most central to the experience they are able to recall. This is followed by questions that ask participants about the duration, frequency and recency of the experience. The remaining questions are all concerned with the context in which the experience occurred and include questions asking whether any kind

of intoxicant could have caused or affected the experience, whether there were any special circumstances relating to the experience and whether the experience had made any long lasting impression upon the individual's life. The final questions also required longhand answers.

Measures of Schizotypy were obtained by employing the Oxford-Liverpool Inventory of Feelings and Experiences, (O-LIFE : Mason, Claridge and Jackson 1995). The O-LIFE (see appendix 6) comprises 4 scales, based upon the factor structure which schizotypic dimensions display, (Mason et al 1995/ Mason 1995). The four scales are ; Unusual Experiences, which assesses the individual's experience of abnormal perceptual phenomena, (e.g. *Have you occasionally felt that your body did not exist? : Do you hear voices?*). Cognitive Disorganisation, which measures the degree to which the individual is efficient in the organisation of attentional resources and able to assimilate and organise perceptual stimuli, (e.g. *Do you often have difficulties in controlling your thoughts when you are thinking?*). Introverted Anhedonia, which assesses the individual's experience of affective flattening and social withdrawal, (e.g. *Do you feel that making new friends isn't worth the energy it takes?*) and Impulsive Non-conformity, which measures the individual's propensity for impulsive, asocial or inappropriate behaviour, (e.g. *Would you take drugs which may have strange or dangerous effects?*). Also included in the original instrument were the Extraversion (E), and Lie (L), scales from the Eysenck Personality Questionnaire (EPQ : Eysenck and Eysenck 1975). For the purposes of the present research the questionnaire was reduced in size. The questionnaire employed included the first 3 of the schizotypy scales and omitted that assessing Impulsive Non-conformity.

The Extroversion (E), scale of the EPQ was also removed. The Lie (L), scale was included, as were any items assessing the individual's propensity for paranoid thoughts, (e.g. *Do you feel it is safer to trust nobody?*). The final questionnaire comprised 107 items, reduced from the original 159, and included scales for the assessment of Unusual experiences (30 items), Cognitive Disorganisation (24 items), Introvertive Anhedonia (27 items), Lie (19 items) and Paranoid thoughts (7 items). This reduction was performed in order to reduce the length of the total questionnaire battery and thus encourage a greater response rate. Each item was phrased as a question and the participant was required to respond with either a "Yes" "No" response.

The order of the instruments, within the total questionnaire battery was randomised in an attempt to counteract any order effects that may have occurred.

### Procedure

Members of the Community Participant Panel (N=450), of the University of Wales Bangor, were each sent a copy of the complete questionnaire battery and a cover letter, explaining the nature of the research. The cover letter (see appendix 7) also explained that by taking part and providing a contact name and address, they, (the participant), would automatically be entered in the draw for the £100 prize. Participants were instructed to complete the questionnaire battery at their leisure and return the completed questionnaire in the freepost envelope provided.

## The Sample

Of the 224 respondents, 80 (35.7%) were male while 144 (64.3%) were female. A binomial test shows that the sample comprised a disproportionately high number of females, ( $z$  approximated  $p < .0001$ ).

The age of respondents ranged between 17-85 years, while the mean was 39 years, (mean=39.07yrs,  $s=18.50$  yrs). There was no significant age difference between males, (mean=39.87yrs,  $s=18.47$ yrs), and females, (mean=38.62 yrs,  $s=18.57$ yrs). ( $t(220)=.48$ , n.s.). The distribution of age of respondent was significantly positively skewed, (skew=.643,  $z=4$ ,  $p < .01$ ).

Each respondent was labelled by the social class to which they belonged. This was accomplished by use of the Standard Occupational Classifications employed by the Registrar General. (Ref: Table A1 SOC - Derivation of Social class and Socio-Economic Groups). Table 1 below displays the frequencies of each of the class categories.

Table 1 : Sample frequencies of social class

| SOCIAL CLASS | FREQUENCY |
|--------------|-----------|
| I            | 15        |
| II           | 100       |
| IIIA         | 45        |
| IIIB         | 29        |
| IV           | 6         |
| V            | 1         |

A Mann-Whitney U test found no significant difference between the class of each sex, ( $U(214)=5226.5$ ,  $z= -.12$ , n.s.). A Kruskal-Wallis test found a significant difference in the ages between the categories of Social Class, ( $\chi^2(5)=25.51$ ,  $p<.001$ ).

Respondents were classified according to level of educational attainment. Table 2, below, displays the sample frequency observed for each of the educational categories and the mean age (rank), for each category.

Table 2: Sample frequencies of educational attainment

| QUALIFICATION | FREQUENCY |
|---------------|-----------|
| None          | 6         |
| O' Level      | 31        |
| A' Level      | 58        |
| Degree        | 94        |
| Post-Graduate | 26        |

Respondents were classified according to their marital status. Table 3, below, displays the frequencies for each of the categories of marital status.

Table 3 : Frequencies of marital statae

| MARITAL STATUS | FREQUENCY |
|----------------|-----------|
| Single         | 100       |
| Married        | 67        |
| Co-Habiting    | 27        |
| Divorced       | 13        |
| Separated      | 7         |
| Widowed        | 10        |

Respondents were also asked which was their preferred spoken language. A large majority of 204, (91.1%), respondents preferred to speak English, while 16, (7.1%), respondents preferred to speak Welsh and 4, (1.8%), preferred to speak other languages.

#### The Confirmatory Factor Analyses: Model Testing Strategy and Assessment of Fit

The confirmatory factor analytical (CFA) method employed (including indices of model fit chosen) for the Life Attitude Profile (LAP), Spiritual Experiences Questionnaire (SEQ) and Dissociative Experiences Scale (DES) was the same. This was possible due to the ordinal level data generated by the use of each of these instruments. The Oxford-Liverpool Inventory of Feelings and Experiences required the use of a different model testing strategy and indices of model fit due to the nominal level of data generated through use of this instrument. The two different model testing strategies and indices of model fit are described in full below.

The sections that follow describe the results from the analysis and modification of each measurement model examined.

#### Confirmatory Factor Analytic Method and Fit Indices for Analysis of the SEQ, DES and LAP

Factorial validity was tested by employment of a confirmatory factor analysis using AMOS version 4.0 (Arbuckle and Smallwaters co. 2000). A sequential model testing

approach was adopted (Joreskog 1993). The aim of the initial phase of the analysis was to eliminate any items that were poor indicators of the individual scale/ variables for the three dimensions of the SEQ, the seven dimensions of the LAP and the single dimension represented by the DES. This analysis was conducted by examining indices of global model fit, individual parameter estimates, residuals and modification indices. The second phase examined pairs of scales in every combination possible. This phase of the analysis allowed the identification of ambiguously loading items and estimation of the impact such cross loadings may have upon the global fit of the model. This phase of the analysis also permitted investigation of the discriminant validity of the scales. This was achieved by examining the 95% confidence interval ( $\pm 1.96$  standard errors) around each correlation between the factors (Anderson and Gerbing 1988).

Global model fit was assessed by means of a dual index testing strategy (Hu & Bentler 1999). Due to the well documented problems with employing the Chi-squared statistic, (e.g. Bentler & Bonnet 1980; Joreskog 1993; Marsh, Balla & McDonald 1988), Chi-squared was not employed as sole indicator of global model fit. In addition to the Chi-squared statistic further indices with accepted cut-off criteria were chosen on the basis of appropriateness for the data employed, sample size and the ability of each statistic (used in conjunction) to reduce the chance of type I and type II error. For analysis of the SEQ section c data it was decided that use of Chi-square would be supplemented by the Standardised Root Mean Square Residual (SRMR<0.06) and the Comparative Fit Index (CFI>0.95).

### Model Testing Strategy and Fit Indices for Analysis of the OLIFE

The phase-wise model testing strategy is also employed for analysis of the OLIFE. The main difference between the methods employed for this and the SEQ, LAP and DES lies in the choice of indices of model fit and the decision to set an *a priori* minimum number of items per scale at six.

It is conceived from the outset that in order that a reliable and valid measurement model be isolated, it may be necessary to modify the model initially specified. It is recognised that through modification of the initially specified model the meaning of the underlying variable(s) may also be changed. For this reason it is important that the analysis and any modification is theoretically driven. Only in this way can the resultant measurement model retain the conceptual coherence necessary to remain a valid quantitative measure of the variable(s)/ dimensions of schizotypy. Modification on the basis of statistical information may reduce the total number of observed variables / items indicative of each of the dimensions proposed for schizotypy. It will be necessary to maintain representative scales for each of the proposed dimensions. For this reason the lowest acceptable number of items per scale is determined *a priori* at six.

Alongside individual parameter estimates the global model fit for each scale will be assessed. Because the data arising from the OLIFE and subsequently employed in the analysis is binary (Yes / No), no baseline model can reliably be calculated (Arbuckle 2000) and no comparative fit indices can be employed for the assessment of global fit.



The Chi-Square statistic cannot be calculated and so the descriptive Function of Log Likelihood (FLL) will comprise the overall indicator of discrepancy magnitude. The FLL is not easily interpreted but values below 3000 are considered to reflect reasonable model fit (Arbuckle 2000). For this reason it has been recommended (Hu & Bentler 1999) that a dual index testing strategy is employed. Alternative absolute fit indices shall also be used, including the Goodness of Fit index ( $GFI > 0.95$ ) and the Standardised Root Mean-square Residual ( $SRMR < 0.06$ ). Good models, reflected in the sample data will maximise the value of the GFI and minimise the value of the SRMR.

Ideally a third phase, for the analysis of each of the four instruments employed, would have tested a single model in which all items and factors were included. However, the resultant model would have had too many parameters to allow accurate estimation even given a much larger sample than was available here. Consequently, the indices of global model fit and individual parameter estimates, presented in the results section, are for single scale analyses only.

### Study 1a: Confirmatory Factor Analysis of the Spiritual Experiences Questionnaire

Issues concerning the conceptualisation and measurement of spiritual experiences and the development of the Spiritual Experiences Questionnaire (SEQ: Jackson 1991) have been fully reviewed in the first chapter. The aims of the present study are twofold. Through a detailed replication of the previous research using the SEQ the validity and reliability of this instrument can be assessed. Second, it by testing the tri-dimensional model of spiritual experiences proposed for the detailed items (section C) it will be possible to refine notions of the prototypicality of the proposed dimensions, allowing isolation of spiritual experience variables for use in further multivariate analyses. The analysis of the present sample data will for this reason begin with a confirmatory factor analysis of the detailed items of section C. Following such an analysis it will be possible to examine the other findings of previous research, through examining the relationships observed to exist between the factor based scales generated and other salient data collected through use of the SEQ.

### Results of the Confirmatory factor Analysis:

#### Phase 1

Initial examination of each scale as originally specified (Jackson 1991) indicated sub-optimal model fit. Inspection of individual parameter estimates suggested that poor model fit could be due in part to multiple items with low loadings upon the given

dimensional scale. Low factor loadings indicate that a particular item represents an observed variable with poor validity in terms of its representation of an underlying dimension. Items loading lowest were deleted from the model and the fit re-assessed.

## Phase 2

During phase two of the analysis each scale was compared in a pair-wise fashion with every other scale. Examination of the residual co-variances revealed that a number of items loaded significantly upon non-intended dimensions. When such cross-loadings are identified it suggests that a particular item, or pair of items, are unreliable indicators of the dimension for which they were originally intended. Items displaying such ambiguity were deleted and the model fit re-assessed. Phase 2 of the analysis also included an examination of the discriminate validity of the scales. Table 4 (overleaf) shows the factor correlations from the pairings, together with their standard errors. Confidence intervals failed to include 1.0 in all cases allowing the conclusion that all scales showed good discriminant validity.

Table 4. Factor correlations and standard errors

|         | 1               | 2              | 3 |
|---------|-----------------|----------------|---|
| 1. MYSX |                 |                |   |
| 2. NUMX | .619<br>(.057)  |                |   |
| 3. EVIL | -.484<br>(.062) | .041<br>(.082) |   |

The scales resulting from both phases of the analysis now displayed good model fit on the basis of individual parameter estimates (significant factor loadings,  $p < .0001$ ) and indices of global model fit. The items representing each of the proposed dimensions showed good discriminability evidenced by the absence of significant loadings upon non-intended factors. The scales also possess good discriminative validity. The final scales for each of the proposed dimensions, indices of global model fit and individual parameter estimates are detailed in table 5, overleaf. The modified scales also displayed good reliability and internal consistency reflected in elevated coefficients of Cronbach's alpha. The descriptive statistics and alpha reliability for each of the modified scales is presented in table 6.

Table 5: Fit indices and item loadings following item elimination at phases 1 and 2

| Scale/Items   | Loading | $\chi^2$ | d.f. | $\rho(\chi^2)$ | SRMR | CFI  |
|---|---------|----------|------|----------------|------|------|
| <b>Mystical Experience</b>  |         | 25.86    | 20   | .170           | .030 | .991 |
| Feeling that you had had a very deep insight, or been able to understand something very profound about life | .648    |          |      |                |      |      |
| A feeling of belonging to or being a significant part of something far greater than yourself                | .662    |          |      |                |      |      |
| Feeling that you could see things in a completely new way   | .669    |          |      |                |      |      |
| Having the impression that everything around you was alive and aware  | .665    |          |      |                |      |      |
| Feeling that you had discovered who you really were   | .611    |          |      |                |      |      |
| Seeing a beautiful transformation in your surroundings  | .626    |          |      |                |      |      |
| A feeling of love or that you were loved  | .765    |          |      |                |      |      |
| Being in an unusually peaceful or serene state of mind  | .753    |          |      |                |      |      |
| <b>Numinous experience</b>  |         | .961     | 2    | .618           | .011 | 1.00 |
| A feeling of sacredness or holiness   | .653    |          |      |                |      |      |
| Feeling that you had entered another level or dimension of reality  | .612    |          |      |                |      |      |
| Feeling that you were in the presence of a supernatural being or source of power or energy                  | .708    |          |      |                |      |      |
| Feeling that you could contact, or were in communication with a spiritual being                             | .767    |          |      |                |      |      |
| <b>Evil Experience</b>  |         | 7.02     | 2    | .219           | .026 | .995 |
| A feeling of fear   | .709    |          |      |                |      |      |
| Feeling very isolated   | .612    |          |      |                |      |      |
| Being aware of a tremendous peril or threat   | .823    |          |      |                |      |      |
| Feeling exceptionally panicked or anxious   | .857    |          |      |                |      |      |

Table 6: Scale Means, standard deviations and Cronbach's alpha coefficients

|        | Scale Max | Mean | S.d. | $\alpha$ | Skewness |
|--------|-----------|------|------|----------|----------|
| 1.MYSX | 16        | 7.49 | 4.79 | .87      | -.050    |
| 2.NUMX | 8         | 2.22 | 2.28 | .80      | .867     |
| 3.EVIL | 8         | 1.34 | 2.20 | .82      | 1.830    |

As previously found (Jackson 1991) NUMX displays slight skewness while EVIL displays severe skewness.

Although each scale was composed of less items than the original formulation (Jackson 1991) each retained their essential character. For this reason, throughout the following analyses the scales in their present form shall be regarded as MYSX, NUMX and EVIL and taken to signify the same as those previously formulated. Greater consideration shall be given to the meaning of each of these proposed dimensions of spiritual experience in the discussion following the analyses.

#### Further Analyses

The responses to each of the five prototypical spiritual experiences (section B) were summed to create the BEX scale in the same manner as previous research (Jackson, 1991). The relationship between the BEX scale and other salient variables was

examined. Where the relationship under examination was between BEX and another ordinal variable Kendall's Tau-b was employed as this reduces the chances of type I and type II errors in the presence of tied ranks. The results of this analysis are presented in table 7, below.

Table 7: Correlation coefficients for the association between BEX and age, church attendance, esoteric reading, frequency, recency and duration of spiritual experience.

|                                      | Age  | Attendance | Reading | Freq.   | Recency | Duration |
|--------------------------------------|------|------------|---------|---------|---------|----------|
| BEX                                  | .062 | .131*      | .308*** | .281*** | .181**  | .042     |
| * p<.05      ** p<.01      ***p<.001 |      |            |         |         |         |          |

As BEX responses increase individuals report more frequent church attendance, having conducted more reading of esoteric subjects, more frequent spiritual experiences and more recent spiritual experience. No significant correlation was observed to exist between BEX and age, educational level, or the duration of individual spiritual experiences.

There are no significant gender differences in BEX responses. Those who consider themselves not to be at all religious display significantly elevated BEX responses, (Mann Whitney U= 2070.5, p<.001). Further, those answering yes to the Hardy question also display elevated BEX responses, (Mann-Whitney U=1157.5, p<.001). These findings are the same as those previously reported (Jackson 1991).

BEX responses are significantly positively correlated with both the MYSX scale, ( $\text{Tau-b}=.494$ ,  $p<.001$ ) and the NUMX scale, ( $\text{Tau-b}=.159$ ,  $p<0.01$ ), while no significant correlation is observed between BEX and the EVIL scale. Again, these findings mirror closely those findings previously reported (Jackson 1991).

Contrary to previous findings there was no significant gender difference in NUMX scale scores. However, a gender difference was observed in MYSX scale scores. Females obtain greater scores for MYSX, (Mann Whitney  $U=1954$ ,  $p<.001$ ). There was no observed relationship between age and scale scores for MYSX, NUMX or EVIL scale scores.

Significant correlations were observed between MYSX scale scores and amount of esoteric reading, ( $\text{tau-b}=.142$ ,  $p<.05$ ), duration of spiritual experiences, ( $\text{Tau-b}=.148$ ,  $p<.05$ ) and frequency of spiritual experience, ( $\text{Tau-b}=.168$ ,  $p<.05$ ). In previously reported results (Jackson 1991) these associations were observed to exist between NUMX scale scores. For the present data sample these associations were observed only between these variables and MYSX scale scores. For the variables of recency of spiritual experience and frequency of religious practice no significant associations were observed with MYSX scale scores.

For all of the variables examined there was no significant correlation observed with the NUMX and EVIL scale scores.

Finally, there was a significant elevation in the scale scores for MYSX for those who answered affirmatively to the Hardy question, (Mann-Whitney  $U=2106.5$ ,  $p<0.001$ ).



This finding is contrary to findings previously reported (Jackson 1991) which observed the same differences in NUMX scale scores on the basis of responses to the Hardy question.

## Discussion

Confirmatory factor analysis has allowed the isolation of three factor based scales reflecting underlying dimensions of spiritual experience. These dimensions are conceptually coherent with previous formulations and the resultant scales retain the essential character of the scales as originally proposed (Jackson 1991). The Mystical dimension is characterised by an increased sense of meaning, positive emotion, increased aesthetic sensitivity, feelings of insight and enhanced understanding of the true nature of reality. The Numinous dimension reflects an experience involving awareness of the presence of and communication with, a supernatural being, a reflexive awareness of being in an altered state of consciousness or different dimension and feelings of sacredness or holiness. The Evil dimension retains the characteristics of an experience involving feelings of threat, anxiety, panic, fear and isolation. While the Numinous and Mystical dimensions appear to be more positive, the Evil dimension reflects strikingly more negative experiential qualities.

Original formulations of the dimensional scale of Evil experiences (Jackson 1991) suggested that this dimension was not intended as a naturally occurring category of personal experience. Rather this scale was viewed as an artefact of the negative items included, amongst the section C items, to provide a counterweight to the predominantly positive character of the majority of items. Recently however,

research has begun which has focussed upon and collected personal accounts of spontaneously occurring evil experiences (Jakobsen 1999). In light of this new research direction it can be suggested that the dimensional scale for evil reflects a natural category of experience.

Due to the ambiguous nature of this scale as it was originally conceived it is at this stage difficult to interpret completely. Following modification, this scale is shown to be most represented by items conveying feelings of fear and panic, but no items relating aspects of a spiritual experience. It could be suggested that this scale should be labelled as a “panic” dimension, rather than one of spiritual “Evil”. However, due to the work mentioned briefly above, this dimension could be viewed potentially as an aspect of some spiritual experiences. For this reason this dimension will not be fully divested of its potential spiritual interpretations at this stage. However, from this point forward this dimension will be referred to as that representing experiences of “Evil / panic” to signify its ambiguous character.

A further point of discussion that is best mentioned here is the relationship between the dimensions of spiritual experience defined here and those of previous analysis of the Hood Mysticism Scale (HMS: Hood 1975). The HMS was based upon the philosophical analysis of spiritual experiences conducted by Stace (1960). The assumptions that arose from this analytical work were incorporated into the conceptualisation and measurement model represented by the HMS. These assumptions are twofold. First it is assumed that only experiences characterised by feelings of unity genuinely indicate a mystical experience. Beyond this experience all other attributions are interpretative and comprise a secondary phenomenon. Because

of this the Numinous dimension located by the present analysis would be viewed as an interpretative factor that does not reflect original aspects of the individuals experience. Second, spiritual experiences are assumed to be blissful and positive. This assumption immediately invalidates the inclusion of items representing more negative experiences such as those included in the dimension of Evil /panic described here. Indeed the HMS includes no such items. However, when externally derived measures of anxiety are employed (Hopkins Symptom Check-List: Derogatis, Lipman, Rickels, Uhlenhuth and Covi 1974) correlations have been found between scale scores for mystical experience (both introvertive and extrovertive) and the mental health measures of anxiety, depression and obsessive-compulsiveness (Hood et al 2001). Such findings suggest that spiritual experiences may occur in the context of these mental health phenomena. The exclusion of negative items from the HMS, on an *a priori* basis, does not allow assessment of the extent to which anxiety, depression and negative affect may actually express itself as an aspect of a spiritual experience.

The BEX additive scale was constructed and employed in analyses with not only the dimensional scales (discussed above) but also with other data collected by the SEQ. The BEX scale, interpreted as indexing a general disposition to spiritual experiences, holds a substantially similar relationship with other variables to those relationships explicated in previous analyses (Jackson 1991). These included the relationships between BEX and increased church attendance, more esoteric reading, more frequent and more recent spiritual experiences and an affirmative response to the Hardy question. Increases in BEX scale scores were also associated with elevated scores on the dimensional scales of Mystical and Numinous experiences.

The dimensional scales were employed in analyses examining their relationship with the same variables. Differences in Mystical scale scores were observed on the basis of gender. No gender or age based effects were observed for either the Numinous or Evil / panic scale scores. Mystical scale scores were also associated with higher levels of esoteric reading, frequency of spiritual experiences, duration of spiritual experiences and affirmative responses to the Hardy question. Previous research (Jackson 1991) has observed similar relationships between these variables and the Numinous experience scale scores. The present study has observed these relationships involving only the Mystical experience scale scores. It can be suggested on the basis of the present data that the Mystical dimension of spiritual experience has almost taken the place of the Numinous dimension observed in previous research. The present analysis, through the method of confirmatory factor analysis, has resulted in the dimensional scales being modified. Such modification, in light of the apparent exchange between Numinous and Mystical dimensions, can lead to the suspicion that such an exchange may be due to substantially changed operational meaning of the dimensions isolated and subsequently employed. However, the dimensional scales emerging from the analysis are essentially the same in character as those employed in previous research. For this reason it is suggested that differences between the analytical findings of this and the previous research should be attributed to the independent character of the present sample data. One notable such instance is the relationship between the dimensional scales and the Hardy question. Previous research (Jackson 1991) observed that a significant elevation could be observed only in the scale scores for Numinous experience for those who responded affirmatively to the Hardy question. Such a finding supported the notion of a single item, such as the Hardy question, excluding elicitation of spiritual experiences where the central

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aspects may be other than sense of an external agency. The current study observed a significant elevation only in the scale scores for Mystical experience for those responding affirmatively to the Hardy question. This finding supports the notion that a single item may exclude certain types of spiritual experience. However, the way in which the Hardy question is interpreted by the present sample would seem to be less literal than previous research has suggested.

The present study has examined the characteristics of the Spiritual Experiences Questionnaire and has validated the dimensional scales central to the instrument and detailed psychometric measurement of spiritual experiences. The independent nature of the present sample data may have lead to some variation in the relationship observed between these scales and other sample characteristics. However, the independent nature of the present sample lends an ecological validity to the statistical validation of the dimensional scales and it is ultimately these that shall be employed in forthcoming substantive analyses.

## Study 1b: A Confirmatory Factor Analysis of the Life Attitude Profile

Issues concerning the conceptualisation and measurement of existential attitudes and the development of the Life Attitude Profile (LAP: Reker and Peacock 1981) have been fully reviewed in the review chapter. The present study will employ a shortened 28-item instrument within which 4 items will comprise observed variables for each dimensional construct and will test the multi-dimensional structure proposed for the LAP using confirmatory Factor Analysis. Employment of confirmatory factor analysis will permit a detailed examination for each of the constructs proposed, and allow generation of coherent factor based scales for use in subsequent multivariate analyses.

### Results of the Confirmatory Factor Analysis

#### Phase 1

Initial inspection of each of the individual dimensions displayed good model fit in terms of individual parameter estimates and global model fit. Such parameters suggest that for each of the proposed dimensions the individual items were reliable indicators for the dimensional construct under inspection.

## Phase 2

During phase two of the analysis each scale was compared in a pair-wise fashion with every other scale. Examination of the residual covariances revealed that a number of items loaded significantly upon non-intended dimensions. When such cross-loadings are identified it suggests that a particular item, or pair of items, are unreliable indicators of the dimension for which they were originally intended. The significant cross loadings all occurred amongst three (GS, EV & WM) of the seven dimensions of the LAP. The three dimensions of Goal Seeking, Existential Vacuum and Will-to-Meaning were examined as one model, allowing the simultaneous examination of any significant cross loadings and the discriminate validity of these dimensions. Examination of the correlations (and standard errors) between these dimensions showed that these three dimensions lacked discriminate validity. For this reason the three dimensions were collapsed to form a single dimension. From this starting point it became possible for the analysis to examine the items comprising the most reliable indicators of the combined construct, on the basis of individual parameter estimates, indices of global model fit and residuals. When the individual items were examined in this way it became clear that the most reliable indicators of the dimension were those statements signifying feelings of a lack of personal meaning and absence of clear purpose in life. Items expressing this meaning are most appropriately considered, in light of the theory and conceptualisation of the LAP, to be representative of the life attitude dimension of Existential Vacuum (EV). For this reason the newly formed dimension retained the label of EV and analysis proceeded, as in the first phase of the analysis, by examining individual parameter estimates and indices of global model fit. This process resulted in a new dimension (EV) with four



reliable item-indicators all of which possessed good conceptual coherence. A total of eight individual items (2, 5, 6, 12, 13, 19, 26, 27) from the three originally defined dimensions were excluded on the basis of this procedure. Four of these items originally represented the dimension of Will-to-Meaning (WM) and so the loss of these items resulted in the loss of the dimension of WM. Three of these items originally represented the dimension of Goal Seeking (GS). One item from the GS dimension loaded significantly upon the new combined factor and thus became relabelled as an item representing EV, as this was more in keeping with the other items loading on the new dimension and was consistent with theoretical derivations. The single item from the GS dimension effectively replaced a single item from the original EV dimension that was also excluded from the analysis at this stage. Following this procedure of model modification, the discriminant validity was reassessed by examining each of the five remaining factors in a pair-wise fashion. Table 8, overleaf, shows the factor correlations from the pairings, together with their standard errors. Confidence intervals *now* failed to include 1.0 in all cases allowing the conclusion that all scales showed good discriminant validity.

Table 8: Factor correlations and standard errors

|        | 1 | 2               | 3               | 4               | 5               |
|--------|---|-----------------|-----------------|-----------------|-----------------|
| 1. LP  |   | -.557<br>(.070) | .485<br>(.076)  | .250<br>(.093)  | .362<br>(.092)  |
| 2. EV  |   |                 | -.265<br>(.085) | -.279<br>(.090) | .408<br>(.088)  |
| 3. LC  |   |                 |                 | .081<br>(.096)  | .102<br>(.099)  |
| 4. DA  |   |                 |                 |                 | -.079<br>(.105) |
| 5. FMF |   |                 |                 |                 |                 |

Following the modifications described above the scales resulting from both phases of the analysis now displayed good model fit on the basis of individual parameter estimates (significant factor loadings,  $p < .0001$ ) and indices of global model fit. The items representing each of the proposed dimensions showed good discriminability evidenced by the absence of significant loadings upon non-intended factors. The scales also possess good discriminative validity. The final scales for each of the proposed dimensions, indices of global model fit and individual parameter estimates

are detailed in table 9, overleaf. The modified scales also displayed good reliability and internal consistency reflected by coefficients of Cronbach's alpha. The descriptive statistics and alpha reliability for each of the modified scales is presented in table 10 below.

Table 10: Scale Means, standard deviations and Cronbach's alpha coefficients

|     | Mean  | S.d. | $\alpha$ | Skewness |
|-----|-------|------|----------|----------|
| LP  | 18.22 | 4.90 | .71      | -.314    |
| EV  | 14.32 | 5.64 | .77      | .239     |
| LC  | 20.53 | 4.62 | .71      | -.499    |
| DA  | 17.34 | 5.48 | .67      | -.594    |
| FMF | 20.02 | 4.83 | .70      | -.479    |

Note: The minimum scale score for each dimension is 7 and the maximum 28

The modification described above resulted in the loss of two of the original dimensions proposed for life attitude as measured by the Life Attitude Profile. The five modified dimensional scales (table 9) display good model fit on the basis of individual parameter estimates and indices of global model fit. Each of the scales demonstrated good discriminative validity and acceptable levels of internal consistency.

Table 9: Fit indices and item loadings following item elimination at phases 1 and 2

| Scale/Items  | Loading | $\chi^2$ | d.f. | $\rho(\chi^2)$ | SRMR  | CFI  |
|--|---------|----------|------|----------------|-------|------|
| <b>Life Purpose (LP)</b>   |         | 3.47     | 2    | .186           | .0578 | .934 |
| 1. My life is running over with exciting good things                         | .842    |          |      |                |       |      |
| 8. Life to me seems very exciting  | .668    |          |      |                |       |      |
| 15. I have discovered a satisfying life purpose                              | .600    |          |      |                |       |      |
| 22. In thinking of my life I see a reason for being here                     | .588    |          |      |                |       |      |
| <b>Existential Vacuum (EV)</b>   |         | 2.86     | 2    | .239           | .0217 | .996 |
| 9. I feel the lack of and need to find a real meaning and purpose in my life | .774    |          |      |                |       |      |
| 16. I feel that some element I can't quite define is missing from my life    | .741    |          |      |                |       |      |
| 20. I am restless  | .614    |          |      |                |       |      |
| 23. I day-dream of finding a new place for my life and a new identity        | .616    |          |      |                |       |      |
| <b>Life Control (LC)</b>   |         | 6.57     | 2    | .100           | .0355 | .969 |
| 3. My life is in my hands and I am in control of it                          | .657    |          |      |                |       |      |
| 10. I determine what happens in my life                                      | .816    |          |      |                |       |      |
| 17. I believe I am free to make all life choices                             | .554    |          |      |                |       |      |
| 24. My accomplishments in life are determined by my own efforts              | .457    |          |      |                |       |      |
| <b>Death Acceptance (DA)</b>   |         | 2.78     | 2    | .249           | .0246 | .993 |
| 4. Some people are afraid of death but I am not                              | .653    |          |      |                |       |      |
| 11. I am generally much less concerned about death than those around me      | .609    |          |      |                |       |      |
| 18. Death makes little difference to me one way or another                   | .456    |          |      |                |       |      |
| 25. I am more afraid of death than of old age                                | .636    |          |      |                |       |      |
| <b>Future-Meaning-to-Fulfil (FMF)</b>  |         | 1.23     | 2    | .540           | .0180 | 1.0  |
| 7. I feel that the greatest fulfilment of my life lies yet in the future     | .632    |          |      |                |       |      |
| 14. I expect the future to hold more promise for me than the past has        | .618    |          |      |                |       |      |
| 21. I look forward to the future with great anticipation                     | .505    |          |      |                |       |      |
| 28. I am determined to make my future meaningful                             | .456    |          |      |                |       |      |

## Discussion

The confirmatory factor analysis proceeded from the assumption of seven dimensions existing within existential life attitude as operationalised by the Life Attitude Profile. Testing with confirmatory methods failed to support the existence of seven dimensions. Theory driven inspection of both statistical parameters and individual item content allowed the acceptance of four dimensions as originally formulated. These dimensions were those of Life Purpose, Life Control, Death Acceptance and Future-Meaning-to-Fulfil. The three remaining dimensional constructs of Existential Vacuum, Goal Seeking and Will to Meaning displayed a lack of discriminative validity which reflects an absence of clear distinction between these proposed dimensions for the present sample data. These dimensions were collapsed to form a combined dimensional construct. A total of four items loaded significantly upon the newly combined dimension. Three items (9, 16, 23) originally belonged to the dimension of Existential Vacuum. A single item originally intended to represent the dimension of Goal Seeking (item 20) also loaded significantly upon the combined dimension. No items from the originally proposed Will-to-Meaning dimension loaded significantly upon the combined factor and this resulted in the loss of this dimension from the Life Attitude Profile. The other three items from the Goal Seeking dimension also failed to load significantly upon the new factor and so the dimension of Goal Seeking was also excluded from the present formulation of the Life Attitude Profile. Close inspection of the individual items representing the newly combined dimension showed that the most reliable item-indicators reflected personal feelings of meaninglessness and lack of a clear life goal in the present. This meaning most closely approximates the original conception of Existential Vacuum and so the

new dimension retained this descriptive label. All other dimensional factors retained their original labels as previously formulated (Reker & Peacock 1981).

The present analysis resulted in a five dimension measurement model of existential life attitude. This is contrary to previous findings (Reker & Peacock 1981; 1984; 1987) which have confirmed seven dimension solutions but similar to more recent investigations (Priem 1995) which have isolated only five of the seven dimensions originally proposed. Two major differences exist between those analyses resulting in successful confirmations of the seven dimensions and those that have not. Both studies which have failed to confirm the seven factor model have employed smaller sample sizes than those that have. The present study employed a shortened 28-item version of the Life Attitude Profile and although the specific effect this may have had is difficult to isolate, it cannot be eliminated as a potentially salient variable in the different outcomes observed.

The five dimensions confirmed are consistent with the theory (Frankl 1963; 1978) upon which construction of the Life Attitude Profile is based. However, central to the theory is the construct of Will-to-Meaning or the individuals' willingness to strive and find a satisfying meaning in and purpose for their life. The failure of the present analysis to validate this construct within the dimensions of the LAP suggests that this theoretical construct is not independently represented by the 28 items of the LAP employed. Some items from the other dimensions seem to reflect the notion of a Will-to-Meaning, e.g.; "I am determined to make my future meaningful" (item no.28, FMF), and; "I feel the lack of and *need to find* a real meaning and purpose in life" (item no.9, EV). Similarly the theoretical construct of Goal Seeking, which also failed

to be confirmed by the present analysis, seems to be reflected by those items described above and additionally item 23 (EV), "I day-dream of finding a new place for my life and a new identity". These items displayed no significant cross loadings with the dimensions of Will-to-Meaning or Goal Seeking suggesting that this construct is not independent but inherent to the other aspects of life attitude as represented by the items presently employed. Should attempts be made to enhance the independence of these dimensional constructs in future versions of the LAP, it will be necessary to generate new items that are *more specific* to the willingness to seek meaning and the need to identify new life goals.

The analysis allowed an examination of the statistical independence of dimensions that may be considered uni-dimensional from a conceptual perspective. Specifically, the dimensions of Existential Vacuum and Life Purpose (as discussed in the introduction) displayed good independence as evidenced by their discriminative validity. Such a finding is consistent with the theory upon which development of the Life Attitude Profile is based (Frankl 1963; 1978).

Examination of the patterning of correlations between each of the dimensional factors (see table 1) also supports the theory upon which the instrument is based. Life Purpose is negatively associated with Existential Vacuum and positively associated with the dimensions of Life Control, Death Acceptance and Future-Meaning-to-Fulfil.

The dimension of Existential Vacuum is negatively associated with Life Control and Death Acceptance but positively associated with Future-Meaning-to-Fulfil. This latter association probably reflects the earlier suggestions regarding the Will-to-

Meaning dimension, in that feelings of meaninglessness and lack of clear life goals in the present (EV) may inherently represent a willingness to seek more meaning and purpose for the future (FMF).

Life Control is only weakly associated with Death Acceptance and Future-Meaning-to-Fulfil but more strongly associated with both Life Purpose and Existential Vacuum. In the case of Life Purpose the association is positive, reflecting a greater sense of purpose felt by those who also feel in control of their life choices. In the case of Existential Vacuum the association is negative suggesting that feelings of meaninglessness and a lack of present goals are often accompanied by feelings of a lack of control concerning life choices.

Death Acceptance is positively associated with Life Purpose and negatively associated with both Existential Vacuum and Future-Meaning-to-Fulfil. The negative association with Existential Vacuum supports the notions of existential philosophy (Camus 1942; Sartre 1953; Frankl 1963) which suggest that the inevitability of personal annihilation is a major factor in the aetiology of the individuals' need for a meaning and purpose in life. The negative association between Death Acceptance and Future-Meaning-to-Fulfil is a curious one and without being able to infer causal direction (due to the correlational design) it is difficult to suggest what this relationship implies.

Future-Meaning-to-Fulfil (FMF) is only weakly associated with Life Control but more strongly and positively associated with Life Purpose and Existential Vacuum. In the context of these relationships it seems that the dimension of FMF not only reflects



hopes for the future but also a relative existential frustration in the present. Examination of the items that best reflect this dimension (table 9) support this notion.

Discussion of the meaning of each of the dimensions in the context of the other dimensions reveals the multi-faceted and complex nature of the dimensions underlying life attitude. Of particular importance is the implication that many of these scales, and especially those of Death Acceptance and Future-Meaning-to-Fulfil, can simultaneously reflect positive and negative aspects of life attitude. The modified form of the Life Attitude Profile under discussion is different from previous formulations of this instrument. Given the relatively unknown effects such modifications may have had upon the latent variables of life attitude, and the resulting semantic complexity, it is difficult to recommend employment of the present version of the Life Attitude Profile as a shortened version. Future research would benefit from beginning with the full version of the LAP as originally formulated, large samples and the possible incorporation of higher order factor analytic techniques. In this way the underlying dimensions of life attitude may be further elucidated.

### Study 1c: A Confirmatory factor Analysis of the Dissociative Experiences Scale

Issues regarding the conceptualisation and development of the Dissociative Experiences Scale (DES; Bernstein and Putnam 1986) have been fully reviewed in the preceding chapter. The present study will employ a sample drawn from the general population regardless of clinical status and should thus represent a largely non-clinical sample. Employing the method of confirmatory factor analysis (CFA) will allow a test of the uni-dimensional model of dissociation represented by the items of the DES. Examination of residual data will allow an assessment of the likelihood and structure of separable dimensions of dissociation, should they be inferred to exist within the data. The method of CFA will also allow the DES-item model of dissociation to be modified and the items / scales most representative of dissociation to be isolated. In this way a valid scale for the quantification of dissociative experiences may be constructed.

### Results of the Confirmatory factor Analysis

The 28-item uni-dimensional measurement model of dissociation, represented by the DES, was subjected to a maximum likelihood estimation procedure. The results show that this model is significantly different to that represented by this data sample, ( $\chi^2 = 1241$ ,  $df = 350$ ,  $p < 0.001$ ). The data distribution was highly non-normal. A Mardia's test of multivariate kurtosis = 596.1 (where 1-10 represents moderate non-normality and figures exceeding 100 represent extreme non-normality). Due to the extreme multivariate non-normality a Bollen-Stine boot strapping procedure was employed. This procedure generates a significance estimate to accompany the value of  $\chi^2$  in

cases where multivariate non-normality is likely to affect estimation of significance values. In such instances the Bollen-Stine value of  $p$ , (B-Sp) is a more reliable indicator of the significance of  $\chi^2$ . In this instance B-Sp= 0.0049, reflecting a significant departure of the specified model from that represented by the sample data. This misspecification was further reflected by the SRMR= 0.0875 which exceeded the accepted threshold of 0.06, and the CFI= 0.653 which fell below the accepted threshold of 0.95. Considered together, these statistics reflect a poor global model fit and suggest that, in one or more respects, the model has been misspecified.

Many of the observed variables (questionnaire items) loaded poorly upon the single underlying dimension of dissociation. This was reflected in multiple factor loadings below 0.40.

Examination of the standardised residual covariance matrix displayed clusters of items that were more strongly inter-related. Such clusters of items can represent sub-dimensions underlying those specified for the model. Such patterns within the residual data suggest a misspecification (an under-estimation) of the number of dimensions/ factors (latent phenomena) underlying the observed phenomena (questionnaire item responses).

### Model Modification

In order that a valid and reliable factor based scale representing dissociation be generated the initial 28-item model was modified. Examination of the standardised residual covariances suggested that sub-dimensions may underlie the single dimension (of dissociation) specified in the initial model. The sub-dimensions implied were examined and a multi-dimensional model was rejected. The reasons for this decision were twofold. First, the implied sub-dimensions did not reflect those previously suggested by previous factor analytic studies, (Carlson, Putnam, Ross, Torem et al 1991; Ross, Joshie & Currie 1993; Schwartz & Frischholz 1991). Second, when the content of the items of each of the proposed sub-dimensions was examined it became clear that items measuring ostensibly different experiences were clustered together (e.g. amnestic experiences vs. derealisation experiences). Thus there is a lack of conceptual coherence with previous multi-dimensional models of the DES and within each of the sub-dimensions implied by this data sample.

For these reasons modification proceeded with a uni-dimensional model of dissociative experiences represented by the DES. Items were eliminated from the model on the basis of both statistical and theoretical criteria. Following elimination of an item the fit was re-assessed. This process continued until the resulting uni-dimensional model of the DES comprised a range of items theoretically consistent with previous formulations of the phenomenon of dissociation. The resulting formulation was also assessed on the basis of measures of global model fit and

individual parameter estimates. Table 11: below, shows the items and factor loadings of the final modified model of dissociation.

Table 11: Items and factor loadings for the Dissociative Experiences Scale following modification

|  |      |
|--|------|
| 8. Some people are told that they do not recognise friends or family members.  | 0.58 |
| 9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation).  | 0.64 |
| 10. Some people have the experience of being accused of lying when they do not think that they have lied.  | 0.65 |
| 11. Some people have the experience of looking in a mirror and not recognising themselves.   | 0.60 |
| 16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar.  | 0.67 |
| 17. Some people find that when they are watching television or a film they become so absorbed in the story that they are unaware of other events happening around them.  | 0.62 |
| 20. Some people find that they sit staring off into space, thinking of nothing, and are not aware of the passage of time.  | 0.79 |
| 21. Some people sometimes find that when they are alone they talk out loud to themselves.  | 0.63 |
| 24. Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). | 0.61 |

The modified model of the DES displayed good global model fit ( $\chi^2 = 54.25$ ,  $df = 27$ ,  $p = 0.13$ ). Due to the marked multivariate non-normality of the data distribution (Mardias test of multivariate kurtosis = 99.1), a Bollen-Stine boot-strapping procedure was once again employed, ( $B-Sp = 0.25$ ), and shows that there is no discrepancy between the re-specified model and that represented by the sample data. This concordance of model and data is further reflected by the SRMR = 0.0483 and the CFI = 0.947. The modified DES scale showed good internal consistency and reliability, (Cronbach's  $\alpha = .814$ ). Comparison between the mean modified scale score for dissociation (mean = 15.43, s.d. = 11.6) and original 28-item formulation of the DES (Mean = 14.27), s.d. = 11.54) showed that there was no significant difference, (effect size = 0.10,  $t = 1.17$ ,  $df = 223$ ,  $p = 0.246$ ).

## Discussion

The confirmatory factor analysis allowed the isolation of a 9-item scale most representative of dissociation reported by the present participant sample. This scale is statistically reliable and displays good comparability with previous samples that have likewise not been selected on the basis of clinical status. For these reasons it can be suggested that the 9 DES items comprising the confirmed model are representative of dissociation in a general (normal) population.

The item which loads highest on this scale (item 20) seems generic of dissociation in its purest form and describes a contentless attentional absence. If during such an experience the individual attends to mental imagery, this experience could be described as day-dreaming. Three items (8;11;16) describe experiences of the

unfamiliarity of familiar objects and might have previously been labelled de-realisation / de-personalisation. Three items (17;21;24) describe experiences of attention limited to a circumscribed aspect of mental reality. In the case of items 21 and 24 this reality is limited to the persons internal dialogue or thoughts, whilst for item 17 this reality is limited to that dictated by an external fiction. These items describe experiences which might previously have been labelled imaginative involvement / absorption. A single item (item 9) describes an experience of forgetting something which others might consider personally meaningful and thereby memorable. Such an experience might previously been labelled amnestic. Item 10 describes the experience of being accused of lying when the person does not believe they have lied. It is difficult to decide what label might reasonably have been suggested for this item as the content of the lie and the context of the experience are not specified. If the lie was about their self this experience may be attributed to the domain of identity whilst a lie about some aspect of the recent past may lead to this experience being attributed to the domain of memory and amnestic experiences. categorising this, or any other of the DES items neither necessary nor desirable.

All of the experiences described by the 9 items comprising the confirmed model of dissociation belong to a uni-dimensional model of dissociation. The division and labelling, employed above, is useful for the purposes of description only. To assume any greater validity of such categories is to pursue a multi-dimensional formulation of dissociation which can not be reliably inferred from factor analytic studies including that described here.

The 9-item scale resulting from the present study shares one item (item 8) with the DES-T. The single item overlap between the DES-T and the confirmed scale of the present study suggests that the dissociative experiences described by the present sample are of a predominantly non-pathological type. Such a result is not surprising given that the data employed was generated by a general / normal population. If we accept that the nature of dissociation as described by the confirmed scale is symptomatic of the non-pathological sample employed we may indirectly endorse the validity of the taxonometric perspective and thus the DES-T. Such an inference must be made with caution as no direct taxonometric analyses were undertaken during the present study. It may be more parsimonious to view the confirmed scale (and items therein) as representative of dissociation as a dimensional trait experienced by persons with no dissociative pathology. Even though this debate remains unresolved by the present findings the scale confirmed by the present study could allow development of an instrument for the quantification of dissociative experiences in non-pathological samples. For this possibility to be pursued it will be necessary to validate the scale (measurement model) by testing with large independent samples.



## Study 1d: A Confirmatory factor Analysis of the Oxford-Liverpool Inventory of Feelings and Experiences

Issues concerning the conceptualisation of Schizotypy and the development of the Oxford-Liverpool Inventory of Feelings and Experiences (OLIFE: Mason 1995) have been reviewed fully in the preceding chapter. The present study will examine the dimensions of Unusual Experiences, Introvertive Anhedonia and Cognitive Disorganisation and where it is indicated as necessary, modify each of the dimensions so that for each a valid and reliable scale can be isolated. Subsequently it will be possible to examine the modified scales so that the nature of the underlying dimensions of schizotypy may be further clarified.

### Results of the Confirmatory Factor Analysis

#### Phase 1

Initial examination of each scale as originally specified (Mason, Claridge & Jackson 1995) indicated sub-optimal model fit. Inspection of individual parameter estimates suggested that poor model fit could be due in part to multiple items with low loadings upon the given dimensional scale. Low factor loadings indicate that a particular item represents an observed variable with poor validity in terms of its representation of an underlying dimension. Items loading lowest were deleted from the model and the fit re-assessed.

Examination of the standardised residuals and modification indices indicated that the scale for COGDIS might contain 2 separable dimensions rather than a single factor. When the dimensions suggested were examined it was evident that they comprised separate dimensions of Cognitive Disorganisation and another dimension containing items describing experiences of Social Anxiety. When each of the separate dimensions were examined individually they displayed significantly better model fit on the basis of statistical indices. Further, the individual scales display good conceptual coherence as each contains items related to specific and conceptually distinct types of experience. Although original formulations of the OLIFE have described social anxiety as a component of cognitive disorganisation it was decided to proceed with separate dimensions for each.

## Phase 2

During phase two of the analysis each scale was compared in a pair-wise fashion with every other scale. Examination of the residual co-variances revealed that a number of items loaded significantly upon non-intended dimensions. When such cross-loadings are identified it suggests that a particular item, or pair of items, are unreliable indicators of the dimension for which they were originally intended. Items displaying such ambiguity were deleted and the model fit re-assessed.

Phase 2 of the analysis also included an examination of the discriminate validity of the scales. Table 12 shows the factor correlations from the pairings, together with their standard errors. Confidence intervals failed to include 1.0 in all cases allowing the conclusion that all scales showed good discriminant validity. This finding was

particularly pertinent for the dimension of social anxiety (SOCANX) as this scale was not included as a distinct scale in original formulations of the OLIFE. The good discriminant validity displayed by the new dimension of SOCANX provides further support for proceeding with this scale as distinct from its original position as a component of COGDIS.

Table 12: Factor correlations and standard errors

|           | 1              | 2              | 3              |
|-----------|----------------|----------------|----------------|
| 1. UNEX   |                |                |                |
| 2. COGDIS | .669<br>(.048) |                |                |
| 3. INTANH | .043<br>(.071) | .051<br>(.072) |                |
| 4. SOCANX | .464<br>(.060) | .625<br>(.050) | .266<br>(.067) |

The scales resulting from both phases of the analysis now displayed good model fit on the basis of individual parameter estimates (significant factor loadings,  $p < .0001$ ) and indices of global model fit. The items representing each of the proposed dimensions showed good discriminability evidenced by the absence of significant loadings upon non-intended factors. The scales also possess good discriminative validity. The final scales for each of the proposed dimensions, indices of global model fit and individual

parameter estimates are detailed in table 13, overleaf. The modified scales also displayed good reliability and internal consistency reflected in elevated coefficients of Cronbach's alpha. The descriptive statistics and alpha reliability for each of the modified scales are presented in table 14, below.

Table 14: Scale Means, standard deviations and Cronbach's alpha coefficients

|           | Mean | S d  | $\alpha$ |
|-----------|------|------|----------|
| 1. UNEX   | 1.93 | 1.62 | .75      |
| 2. COGDIS | 2.77 | 2.00 | .73      |
| 3. INTANH | 1.30 | 1.57 | .69      |
| 4. SOCANX | 2.64 | 1.86 | .71      |

### Discussion

The present analysis tested a 3 factor model comprising 3 of the most consistently validated scales of the Oxford-Liverpool Inventory of Feelings and Experiences (Mason, Claridge and Jackson, 1995). Each scale represents a dimension of Schizotypy as this construct is presently understood (Mason 1995).

Table 13: Fit Indices and item loadings following item elimination during phases 1 and 2

| Scale/Items   | Loading | FLL(c)   | nP | SRMR | GFI  |
|---|---------|----------|----|------|------|
| <b>Unusual Experiences (UNEX)</b>   |         | 1176.614 | 12 | .054 | .953 |
| Can some people make you aware of them just by thinking about you?                              | .553    |          |    |      |      |
| Do you sometimes think that your accidents are caused by mysterious forces?                     | .595    |          |    |      |      |
| Have you ever felt that you might cause something to happen just by thinking about it too much? | .557    |          |    |      |      |
| When you look in the mirror does your face sometimes look different to usual?                   | .603    |          |    |      |      |
| Do you ever feel distracted by distant sounds that you are not normally aware of?               | .829    |          |    |      |      |
| When in the dark do you often see shapes and forms even though there is nothing there?          | .617    |          |    |      |      |
| <b>Cognitive Disorganisation (COGDIS)</b>   |         | 1001.651 | 12 | .042 | .951 |
| No matter how hard you try and concentrate do unrelated thoughts always creep into your mind?   | .759    |          |    |      |      |
| Do you find it difficult to keep interested in the same thing for a long time?                  | .665    |          |    |      |      |
| Do you often have difficulties in controlling your own thoughts?                                | .666    |          |    |      |      |
| Are you easily distracted from work by day-dreams?  | .814    |          |    |      |      |
| Is it hard for you to make decisions  | .596    |          |    |      |      |
| Are you easily distracted when you read or talk to someone?                                     | .672    |          |    |      |      |

Table 13; Continued: Fit Indices and item loadings following item elimination during phases 1 and 2

| Scale/Items   | Loading | FLL(c)   | nP | SRMR  | GFI  |
|---|---------|----------|----|-------|------|
| <b>Social Anxiety (SOCANX)</b>  |         | 1003.267 | 12 | .053  | .936 |
| Do you often hesitate when you are<br>Going to say something to a group of<br>People who you more or less know? | .541    |          |    |       |      |
| Do you often worry about things that<br>You should not have said or done  | .744    |          |    |       |      |
| Are you sometimes so nervous that<br>You are 'blocked'?   | .739    |          |    |       |      |
| Do you dread going into a room by<br>yourself where other people have already<br>Gathered and are talking?      | .612    |          |    |       |      |
| Do you worry too long after an<br>embarrassing experience   | .646    |          |    |       |      |
| Would you call yourself a<br>nervous person   | .844    |          |    |       |      |
| <b>Introvertive Anhedonia (INTANH)</b>  |         | 1054.31  | 12 | .0581 | .927 |
| Are you much too independent to get<br>really involved with other people?                                       | .736    |          |    |       |      |
| Do you think that having close<br>friends is not as important as some<br>people say?                            | .596    |          |    |       |      |
| Do you like mixing with people?   | .543    |          |    |       |      |
| Do you have many friends?   | .716    |          |    |       |      |
| Can you usually let yourself go and<br>enjoy yourself at a lively party?  | .656    |          |    |       |      |
| Do you feel very close to your friends  | .801    |          |    |       |      |

The scales in the original form displayed sub-optimal model fit and it was necessary to modify these scales so that the most valid and reliable scales could be isolated.

The number of items for each scale was reduced considerably. For each dimension the a priori minimum of six items per scale was reached. This reduction in items was due to items loading poorly upon the common underlying dimension and loading significantly upon a non-intended dimension. In both such cases the individual item displays poor reliability and validity as an indicator of the underlying dimension. The scales resulting from the modification are more representative of the underlying dimensions of schizotypal traits. By examining the content of the modified scales and the items within, it may be possible to specify which types of experiences are most indicative of the underlying dimensions of schizotypy.

The modified scale representing the dimension of unusual experiences (UNEX) was reduced from 30 to 6 items. Three of these items were originally included in the STA scale of the Schizotypal Trait Questionnaire (STQ: Jackson & Claridge 1991), two items from the Magical Ideation Scale (MGI: Chapman, Chapman & Miller 1982) and one item from the Perceptual Aberration Scale (Pab: Chapman, Chapman & Miller 1982). The items relate experiences of the power of conscious thought to influence the consciousness of others and material reality; mysterious forces behind causality; distraction caused by and sensitivity to distant sounds; and distorted visual perception. Together these items

represent the schizotypal dimension of unusual experiences as formerly conceived and relate strongly to the positive symptoms of psychotic phenomenology.

The modified scale representing the dimension of Introvertive Anhedonia (INTANH) was reduced from 27 to 6 items. Three of these items were originally included in the Social Anhedonia Scale (SoA: Chapman, Chapman & Miller 1982) and the other three from Eysenck's Extraversion Scale (E: Eysenck & Eysenck 1976). The items relate attitudes concerning the value of friendships and socialising; capacity for social enjoyment; numbers of friends; emotional closeness with friends and conceiving of self as independent. The original conception and formulation of scales representing the dimension of Introvertive Anhedonia included items concerning extraversion/introversion, social and physical anhedonia. The modified scales, confirmed by the present analysis, suggest that the dimension of Introvertive Anhedonia, is best represented by, items concerning social anhedonia and tendencies towards introversion. It is possible that samples that have not been selected on the basis of clinical status may fail to represent the complete variation of this schizotypic dimension. This could explain the absence of items concerning physical anhedonia which may constitute more pathological expressions of the anhedonic trait.

The dimension of Cognitive Disorganisation was originally formulated to include social anxiety as an integral component. The present analysis found that social anxiety and



cognitive disorganisation were best represented by 2 distinct dimensions. These two dimensions have been attributed the labels cognitive disorganisation and social anxiety. The modified scale representing cognitive disorganisation was reduced from 24 to 6 items. Four of these items originally belonged to Nielsen and Petersen's Schizophrenism Scale (NP: Nielsen & Petersen 1976), one item from the Schizotypal Trait Questionnaire (STQ: Jackson & Claridge 1991) and one item from the Launay-Slade Hallucination Scale (LSHS: Launay & Slade 1981). The items concern experiences of distractibility caused by other thoughts or day-dreams; difficulty in maintaining interests and difficulty in making decisions. The modified scale representing the dimension of cognitive disorganisation is characterised by attentional difficulties and suggests that this aspect of schizotypy may be central to executive control of cognitive resources.

The scale containing items representing a schizotypal dimension of social anxiety was not considered to be a separable dimension before the present analysis. The items comprising this scale all belonged to the scale representing the dimension of cognitive disorganisation in previous formulations. Of the six items, three of these items originally belonged to Eysenck's Neuroticism Scale (N: Eysenck & Eysenck 1976), two items from Nielsen and Petersen's Schizophrenism Scale (NP: Nielsen & Petersen 1976) and one item from Schizotypal Trait Questionnaire (STQ: Jackson & Claridge 1991). The items of this scale relate worries of speaking amongst social peers; anxiety in reflecting upon previous social encounters; social inhibition and conceiving self as generally anxious.

The items are sufficiently specific to represent a dimension of social anxiety rather than a more general anxiousness.

The character of items from the scales of cognitive disorganisation and social anxiety are sufficiently distinct to suggest the presence of distinct schizotypal dimensions for each. While the dimension of cognitive disorganisation concerns executive function within the sphere of cognition the dimension of social anxiety concerns social cognition and self-schema. The latter may include constructs such as self-concept and self esteem.

This finding suggests that predisposition to experiences of social anxiety and cognitive disorganisation should be considered as distinct aspects of personality and of schizotypy. It may be that each of these aspects of schizotypy may be inherited differentially in that an individual may have a predisposition to one but not the other. It may be further suggested that each of these predispositions may contribute independently to the total schizotypic disposition and aetiology of psychopathology. The distinct nature of these dimensions allow greater flexibility when considering the contribution of each dimension of schizotypy to the aetiology of heterogeneous categories of psychopathology. For example it might be suggested that a predisposition to social anxiety may contribute more to the development of psycho-affective disorders, while cognitive disorganisation may contribute most to other forms of psychotic disorder.

The present study attempted to test and clarify the characteristics of three (from four) scales of the Oxford-Liverpool Inventory of Feelings and Experiences. The modified scale representing unusual experiences is characterised by magical ideation and perceptual aberration. This finding is consistent with previous formulations of this scale. The scale representing the dimension of Introvertive Anhedonia is characterised most by social anhedonia and does not include physical anhedonia characteristic of previous formulations. This may be due to sampling characteristics. The dimension of cognitive disorganisation was originally conceived to include social anxiety as an integral component. The present analysis suggests that social anxiety be considered as a separate dimension, distinct from Cognitive Disorganisation. This finding has implications for future studies concerning the nature of schizotypal traits, and consideration of the contribution made by each to heterogeneous categories of psychopathology.

One scale representing the dimension of Impulsive Non-conformity (Mason 1995; Mason, Claridge & Jackson 1995) was not examined in the present analysis. This scale was excluded as it has not been consistently validated in empirical research. It may be of interest to conduct a similar study and include this fourth dimension as originally formulated.

The findings of the present study require replication if the modified scales representing the dimensions of schizotypy are to be accepted as valid indicators and instruments for the quantification of such traits. If such a replication can be conducted with a sufficiently

large sample it may be possible to further clarify the character of schizotypal dimensions and provide a short form of the OLIFE for measurement.

#### Summary: Confirmatory factor Analytic Studies 1a – 1d

The studies described above have employed Confirmatory Factor Analytic (CFA) techniques to examine the dimensional structure hypothesised for each of the SEQ, LAP, DES and OLIFE. In every instance the initial assessment of model fit has displayed discrepancies between the assumed structure and the sample data employed. This resulted in the modification of each of the dimensions within each measurement model (instrument). In the case of the DES and SEQ this modification was characterised by a reduction of the number of items representing each dimension. However, in the case of the OLIFE and LAP the number of dimensions reliably confirmed differed from the number proposed for each. While the OLIFE began with a hypothesised three dimension structure and the LAP with seven dimensions, the OLIFE gained a dimension and the LAP was reduced to five.

The rationale for each modification is described above and the result is a series of factor dimensions, and encompassing measurement models, which validly and reliably represent each aspect of the psychological phenomena examined. In the following study (study 2, Chapter 3) these variables (dimensions) will be employed in examinations of the inter-relationships that may exist between them. By conducting analyses of carefully

selected models the study that follows will allow a test of some aspects of the Cognitive Problem-Solving Hypothesis as a model for spiritual experiences.

### Chapter 3

#### A Quantitative Examination of the Cognitive Problem Solving Hypothesis Employing the Variables of Life Attitude, Schizotypy, Dissociation, Depression and Spiritual Experiences.

A complete description of the Cognitive Problem Solving Hypothesis (Jackson 1991; Jackson and Fulford 1997) has been provided in the first chapter. This section will focus upon those aspects of the CPSH that will be examined in the present study. The Cognitive Problem Solving Hypothesis (CPSH) is a four-stage descriptive model of spiritual experiences. At the centre of the CPSH is the assumption that spiritual experiences provide a cognitive solution, by means of a paradigm shift, that aids the resolution of antecedent stresses. The present study will examine three main features of the CPSH and a description of each of these follows.

Predisposition to the experience of altered states of has previously been regarded as predominantly schizotypal in nature (Jackson 1991; 1997). The present study will examine the hypothesised relationship between schizotypy and spiritual experience. Further, the present study will also examine the possibility of a relationship between dissociative trait and spiritual experiences. The CPSH suggests that elevated levels of dimensional schizotypy will be associated with elevated scores upon dimensional scales of spiritual experience. Further, the present study hypothesises that elevated levels of

dissociative trait may also be associated with elevated scale scores for the dimensions of spiritual experience.

The second stage of the CPSH model of spiritual experiences proposes that psychological stress culminates in an 'existential impasse' characterised by feelings of despair, an inability to cope and hopelessness. The present study will examine the salience of existential issues and existential life attitude, in associated reports of spiritual experience. The CPSH suggests that elevated dimensional scores for spiritual experience will be associated with a profile, amongst the dimensions of existential life attitude, suggestive of a positive life attitude and psychological well-being.

Similarly, the CPSH proposes that through providing cognitive resolution for antecedent stress, those individuals reporting elevated numbers of proto-typical features of spiritual experience, will display an absence of current depression. The present study will examine relationships between reported spiritual experience and current levels of depression. The CPSH suggests that elevated scale scores upon dimensions of spiritual experience will be associated with a relative lack of symptoms of current depression.

The description of the method that follows will begin by describing the measures chosen to operationalise each variable required for examination of the hypotheses described above. A number of path models will then be constructed to approximate the relationships suggested by each hypothesis and these shall then be described.

## Variables

A number of salient variables have been quantified in a cross-sectional manner and have been validated, and in some cases modified, through the employment of confirmatory factor analysis (See previous chapter). The variables are the four dimensions of schizotypy measured using the Oxford-Liverpool Inventory of Feelings and Experiences (OLIFE: Mason 1995); Unusual experiences (UNEX), Cognitive Disorganisation (COGDIS), Introvertive Anhedonia (INTANH), and Social Anxiety (SOCANX); Dissociation (DES) Measured using the Dissociative Experiences Scale (DES: Bernstein & Putnam 1986); Depression (DEP) measured using the 13 items, pertinent to depression, of the Symptom Check List 90 revised version (SCL-R-90: Derogatis and Cleary 1977); the five dimensions of existential life attitude measured by the Life Attitude Profile (LAP: Reker & Peacock 1981); Life Purpose (LP), Existential Vacuum (EV), Life Control (LC), Death Acceptance (DA) and Future Meaning-to-Fulfil (FMF), and three dimensions of spiritual experience measured using section c of the Spiritual Experiences Questionnaire (SEQ: Jackson 1991); Mystical Experience (MYSX); Numinous Experience (NUMX) and Evil /panic Experience (EVIL/ panic).

To test different aspects of the Cognitive problem Solving Hypothesis it is necessary to construct models of each aspect using the variables that have been measured. In this way a number of individual hypotheses, reflected by different models, will be forwarded. Each model will reflect the hypothesised relationships between variables, as predicted by the CPSH. A further issue concerning methodology, specific to the path analyses, must



now be considered. The path and structural modelling methods have recently been defended against criticisms concerning the extent to which causal inferences can be drawn from them (Pearls 2001). However, specific methodological conditions must exist before causal inferences (about the action of y variables upon x variables) can be made. Most notably causal models must accurately reflect the temporal nature of any relationship being modelled. To enable this, variable data must reflect the state of the process (and be collected) at time intervals before and after interaction. Satisfaction of this criterion is ultimately that which separates experimental from quasi-experimental methodologies. Where findings are based upon quasi-experimental designs it is not accurate to describe the relationship between two variables as causation. The design of the present analysis is quasi-experimental due to the employment of cross-sectional data that was collected at a single point in time. For this reason when discussing the results and findings of path analyses terms such as “predictive” and “causal” shall be replaced with “significant regressive /associative relationship”. This latter term accurately describes the numerical nature of the relationship, observed between variables, to which we are limited. On the basis of such findings it might then be possible to construct future models that, through the implementation of experimental (most probably longitudinal) methodologies, allow examination of the extent to which such relationships are causal.

## Hypothesis Derived Models

### Models 1-3

The first hypothesis to be tested is that which proposes an associative relationship between trait schizotypy and the occurrence of spiritual experiences. Three models will be constructed, one for each of the three dimensions of spiritual experience. The models constructed will represent each of the dimensions of spiritual experience (MYSX, NUMX and EVIL /panic) as caused by the four dimensions of schizotypy (UNEX, COGDIS, INTANH and SOCANX). The variable of Dissociation (DES) will also be included in these models as having a potential association with the occurrence of spiritual experience. The inclusion of the DES variable will also allow examination of the relationship between dimensions of schizotypy and dissociation. It has always been assumed that dissociation and schizotypal traits and manifestations are phenomenologically distinct and have different origins. Recent research (Startup 1999) suggests that there is a considerable correlative relationship between these dimensions and that the strength of this association is due, in part, to item content overlap between the items used to measure each.

### Model 4

Model 4 will reflect the hypothesised relationship between the occurrence of spiritual experience and depression. The variable measure of depression is one of present state

and so this variable (DEP), is taken to be the individual's present level of depressive symptoms. The Cognitive Problem Solving Hypothesis predicts that spiritual experiences are benign and tend towards the resolution of psychological stress. Such resolution should result in the absence of depressive symptoms in the present, and so an inverse relationship between the occurrence of positive forms of spiritual experience (MYSX and NUMX) and present level of depression (DEP) is predicted. The negative form of spiritual experience (EVIL/ panic) shall also be included in this model and examined as a potential contributor to present level of depression (DEP).

#### Models 5-7

Models 5-7 will reflect the hypothesised relationship between the occurrence of spiritual experience and existential life attitude. The models constructed will test the predictive contribution of spiritual experience (MYSX, NUMX and EVIL/ panic) to measures of the five dimensions of existential life attitude (LP, EV, LC, DA and FMF). As in the case of the depression variable the life attitude variables are here regarded as present state measures. The Cognitive Problem Solving Hypothesis predicts that due to the benign nature and tendency of spiritual experiences to provide resolution for psychological stress, a positive relationship will be displayed between spiritual experience and Life Purpose, Death Acceptance, Life Control and Future Meaning-to-Fulfil. An inverse relationship is predicted between the occurrence of positive forms of spiritual experience and feelings of Existential Vacuum. Employing variables derived from instruments designed to measure *existential* life attitude will not only permit examination of the

benignity of spiritual experiences upon this aspect of psychological well-being, but will also allow an assessment of the extent to which existential issues are pertinent to the phenomenon of spiritual experiences more generally. An assessment of the salience of existential issues is important due to the suggestion of the Cognitive Problem Solving Hypothesis that an “*existential* impasse” is a significant feature in the occurrence of spiritual experiences. Three separate models will be constructed to individually test the predictive contribution of the three dimensions of spiritual experience (MYSX, NUMX and EVIL) to the five dimensions of existential life attitude.

### Method

The participants and survey method by which the data for the present analyses was collected is previously described during the chapters regarding the confirmatory factor analyses.

### Variable Data

On the basis of the preceding confirmatory factor analyses the resultant measurement models for each of the variables employed (described above) were employed for the construction of additive scales. These scale scores were then employed as representative of each of the variables salient to the hypothesis derived models. The advantage of this approach is that each of the variables have previously been subject to rigorous assessments of validity and reliability and are thus considered as robust representations.

### The Path Analyses: Model testing strategy and assessment of fit

Path analyses were employed to test the hypotheses derived models using AMOS version 4.0 (Arbuckle and Smallwaters co. 2000). Each scale comprised an ordinal measure for each variable allowing the path analyses to employ covariance matrices for the generation of individual parameter estimates and indices of global model fit. Individual parameter estimates generated are regression coefficients, residuals and modification indices. Regression coefficients allow an estimation of the strength of the relationship between the variances of predictor and dependent variable while the modification indices and residuals permit a detailed examination of where, if any, model misspecification might be located. In addition multiple squared correlation estimates ( $R^2_{adj}$ ) are generated. This value always ranges between 0 and 1 and estimates the variance in the predicted variable accounted for directly by the variance of the predictor variables. Unlike the use of the  $R^2$  statistic in standard regression procedures the  $R^2_{adj}$  value does not share the same tendency to increase automatically as more variables are entered into the equation (Wonnacott and Wonnacott 1979).  $R^2_{adj}$  is a relatively conservative measure of effect size and it is anticipated that the effect sizes will be smaller than those that might be generated using the less robust  $R^2$  statistic. In addition to the individual parameter estimates and  $R^2_{adj}$  statistic a number of indices of global model fit, intended solely for this purpose will be generated.

Indices of global model fit will be generated using the maximum likelihood estimation procedure. In this regard the path analysis method is advantageous as such indices permit

an estimation of the overall fit of the model under examination. Global model fit will be assessed by means of a dual index testing strategy (Hu & Bentler 1999). Due to the well documented problems with employing the Chi-squared statistic, (e.g. Bentler & Bonnet 1980; Joreskog 1993; Marsh, Balla & McDonald 1988), Chi-squared was not employed as sole indicator of global model fit. In addition to the Chi-squared statistic further indices with accepted cut-off criteria were chosen on the basis of appropriateness for the data employed, sample size and the ability of each statistic (used in conjunction) to reduce the chance of type I and type II error. For analysis of the path models presently being tested it was decided that use of Chi-square would be supplemented by the Standardised Root Mean Square Residual ( $SRMR < 0.06$ ) and the Comparative Fit Index ( $CFI > 0.95$ ).

## Results

### Descriptive Statistics

Table 15, overleaf, contains the descriptive statistics for each of the variable scales and includes estimates of skewness and kurtosis.

Table 15: Descriptive statistics for all variable scales to be employed in the path analyses.

|        | Min  | Max    | Mean     | S.d.     | Skew  | Std. Error | Kurtosis | Std. Error |
|--------|------|--------|----------|----------|-------|------------|----------|------------|
| DES    | .00  | 650.00 | 138.9222 | 116.3554 | 1.636 | .188       | 3.396    | .374       |
| NUMX   | .00  | 8.00   | 2.2275   | 2.2885   | .867  | .188       | -.190    | .374       |
| EVIL   | .00  | 8.00   | 1.3413   | 2.0083   | 1.830 | .188       | 2.873    | .374       |
| MYSX   | .00  | 16.00  | 7.4970   | 4.7969   | -.050 | .188       | -1.223   | .374       |
| SOCANX | .00  | 6.00   | 2.6407   | 1.8667   | .170  | .188       | -1.134   | .374       |
| INTANH | .00  | 6.00   | 1.3054   | 1.5781   | 1.141 | .188       | .298     | .374       |
| COGDIS | .00  | 6.00   | 2.7784   | 2.0042   | .082  | .188       | -1.337   | .374       |
| UNEX   | .00  | 6.00   | 1.9341   | 1.6212   | .580  | .188       | -.696    | .374       |
| FMF    | 5.00 | 28.00  | 20.0299  | 4.8314   | -.479 | .188       | -.100    | .374       |
| DA     | .00  | 28.00  | 17.3473  | 5.4881   | -.594 | .188       | .526     | .374       |
| LC     | 7.00 | 28.00  | 20.3533  | 4.6259   | -.499 | .188       | -.237    | .374       |
| EV     | 4.00 | 27.00  | 14.3234  | 5.6401   | .239  | .188       | -.624    | .374       |
| LP     | 4.00 | 28.00  | 18.2216  | 4.9019   | -.314 | .188       | -.156    | .374       |
| DEP    | 0    | 47     | 14.07    | 10.19    | .943  | .188       | .574     | .374       |

Examination of estimates of skew and kurtosis and employment of Mardia's (1970) criteria, showed that the variables of EVIL /panic, DES and INTANH displayed significant departures from normality. These variables were transformed using the square root transformation procedure before any further analyses were conducted.

Tables 16a. and 16b., below display the zero order correlations between all variables to be employed in the path analyses. This table has been divided into two separate tables for easier viewing. The variables have been divided between the two tables on the basis of the hypothesis derived models to be tested during the path analysis. The correlation coefficients employed are Kendalls' Tau-B as these offer more robust estimates of association between variables possessing many cases of tied rank. Due to the robust nature of Kendalls' Tau-B and the larger number of tied ranks within the data for some

variables, smaller correlation coefficients are expected than might be obtained by the inappropriate use of Pearsons' R or Spearmans' Rho.

Table 16a. Correlation coefficients for relationships between dimensions of life attitude, depression and spiritual experience.

|   | 1<br>DEP | 2<br>LP | 3<br>EV | 4<br>DA | 5<br>LC | 6<br>FMF | 7<br>MYSX | 8<br>NUMX | 9<br>EVIL |
|---|----------|---------|---------|---------|---------|----------|-----------|-----------|-----------|
| 1 |          | -.169*  | .369*   | -.066   | -.170*  | .109*    | .094*     | .075      | .126*     |
| 2 |          |         | -.230*  | .081    | .250*   | .222*    | .168*     | .181*     | -.062     |
| 3 |          |         |         | -.107*  | -.153*  | .190*    | .030      | .036      | .157*     |
| 4 |          |         |         |         | .050    | -.058    | -.014     | -.038     | -.098*    |
| 5 |          |         |         |         |         | .127*    | .089*     | .042      | -.130*    |
| 6 |          |         |         |         |         |          | .207*     | .174*     | .109*     |
| 7 |          |         |         |         |         |          |           | .518*     | -.171*    |
| 8 |          |         |         |         |         |          |           |           | .030      |

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\* significant at  $p < .05$



Table 16b. Correlation coefficients for relationships between dimensions of schizotypy, dissociation and spiritual experience.

|   | 1    | 2      | 3      | 4      | 5     | 6     | 7     | 8      |
|---|------|--------|--------|--------|-------|-------|-------|--------|
|   | UNEX | COGDIS | SOCANX | INTANH | DES   | MYSX  | NUMX  | EVIL   |
| 1 |      | .314*  | .223*  | -.019  | .255* | .259* | .340* | .120*  |
| 2 |      |        | .355*  | .055   | .291* | .118* | .113* | .203*  |
| 3 |      |        |        | .200*  | .191* | .086  | .046  | .160*  |
| 4 |      |        |        |        | .029  | -.022 | .017  | -.017  |
| 5 |      |        |        |        |       | .156* | .157* | .179*  |
| 6 |      |        |        |        |       |       | .518* | -.171* |
| 7 |      |        |        |        |       |       |       | .030   |

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\* significant at  $p < .05$

Inspection of the intercorrelations displayed in tables 16a and 16b permits an initial inspection of the strength and direction of relationships between the measured variables. The intercorrelations between dimensions within each individual construct have been discussed in the context of the confirmatory factor analyses. The focus of the present inspection are the relationships between schizotypy dimensions and dissociation (Table 2b: UNEX, COGDIS, INTANH, SOCANX and DES) and life attitude dimensions and depression (Table 2a: LP, EV, LC, DA, FMF and DEP).

Previous research (Startup 1999) using the same data used for the current study, employed the scales for the measurement of UNEX, COGDIS, INTANH and DES in

their original form (OLIFE: Mason et al. 1995; DES Bernstein and Putnam 1986). A substantial correlative association was shown to exist between DES and UNEX; DES and COGDIS. No such relationship was shown to exist between INTANH and DES. The present analysis has employed dimensional scales modified through the use of confirmatory factor analysis. Although the modifications have slightly changed the emphasis of each of the dimensions each scale remains representative of the schizotypy dimensions as originally conceived (with the exception of the SOCANX scale which was originally considered integral to the dimension of COGDIS). Inspection of the inter-correlations observed by the present analysis show the same pattern of association between DES and UNEX, COGDIS, INTANH as those previously described (Startup 1999). The correlation between DES and SOCANX is significant but weak. This finding is consistent with those of recent research (Startup 1999) and in the case of the correlation between DES and SOCANX the present results are more specific than those results from studies employing the original O-LIFE scales, in which social anxiety and cognitive disorganisation were considered aspects of a single dimension.

The dimensions of existential life attitude are associated with each other in a way consistent with the theory from which it was derived (see previous chapter concerning the confirmatory factor analysis of the LAP). The theory from which the Life Attitude Profile is derived (Frankl 1963; 1978) also suggests that life attitude and psychological health or well-being are associated. The present analysis obtained both measures of existential life attitude and depression. Correlations between the variable of depression (DEP) and LP, DA, LC and FMF are weak but statistically significant with all

dimensions of life attitude except Death Acceptance (DA). Importantly the direction of the correlations between DEPRESSION and the dimensions of life attitude are consistent with the theory from which it is derived (Frankl 1963; 1978). The life attitude dimension of Future Meaning to Fulfil (FMF) correlates positively with Depression suggesting that this dimension reflects a negative psychological quality. The items of this dimension (and the meaning of this dimension as a whole) reflect a hope for future meaning due to the lack of present fulfilment. This is not the interpretation given to this dimension that was originally conceived (Reker and Peacock 1981) as reflecting a positive quality of looking forward to the future due to ample fulfilment in the present.

#### The Path Analyses

A full Structural Equation Modelling approach, which examines the structural relationships between latent variables (factors) and the validity of the measurement model representing each variable, will not be employed for the present analyses. Such an analysis would require the simultaneous estimation of many parameters and thus require a much larger sample than that obtained for the present analysis. Instead a path analytic method will be utilised and shall employ observed variable scale scores, in the place of latent variable measurement models and the subsequent factor scores.

All variables to be employed in the path analyses acceptably approximate multivariate normality. For the dimensional scales of EVIL/panic, INTANH and DES this normality was achieved through employment of the square root transformation procedure.

Multivariate normality is a necessary consideration due to the adverse impact, of non-homogenous distributions, upon the accuracy of parameter estimation. Another necessary consideration is the issue of multi-collinearity of variables employed in path analyses. Should the variables employed for a path analysis (essentially a regression procedure) possess combinatory correlative associations, exceeding acceptable thresholds, it can be suggested that the variables comprise an imparsimonious linear combination. The software employed for the path analyses (AMOS 4.0.1) provides explicit warnings of the presence of multi-collinearity (resulting in non-positive definite covariance matrices) amongst the variables employed and so this precaution is automatic.

### Models 1-3

The first three models constructed, intended to assess the strength of association between the four dimensions of schizotypy (UNEX, COGDIS, INTANH, SOCANX) and the dimension of dissociation (DES) to the three separable dimensions of spiritual experience (MYSX, NUMX and EVIL/panic). Initially all predictor (Y) variables were constrained, assuming that the relationship between the dimensions of schizotypy and dissociation was negligible. Examination of the modification indices, residuals data and indices of global model fit would thus permit an examination of the extent to which these dimensions were truly orthogonal, and allow estimation of the most salient relationships that may exist between them.

Examination of global model fit and modification indices suggested a misspecification in the model. The assumption of no association between the Y variables of schizotypic dimensions and the dissociation dimension displayed little concordance with the sample derived covariance matrix. Specifically, it was indicated that allowing covariances between dissociation (DES) and social anxiety (SOCANX)( $r = .254$ ), DES and cognitive disorganisation (COGDIS)( $r = .401$ ), COGDIS and SOCANX ( $r = .431$ ), unusual experiences (UNEX) and DES( $r = .390$ ), introverted anhedonia (INTANH) and SOCANX( $r = .158$ ), UNEX and SOCANX( $r = .295$ ) and UNEX and COGDIS( $r = .412$ ) would significantly improve the fit of the model. The discrepancy between these significant correlation estimates and the relatively weaker inter-correlations previously observed (table 2b) could be due to the altered estimation method. The correlations previously described were estimated using Kendalls' Tau-B while those estimates integral to the path analysis procedure were generated using Pearson coefficients. The Pearson method has greater statistical power but may give rise, for the present sample data, to a type two error due to the large number of tied ranks observed for scale scores of the variables in question. This issue will be discussed in some detail during the discussion section which follows.

The relationship observed between the (Y variables of) dimensions of schizotypy and dissociation will remain consistent for each of the three models (models 1-3) presently under examination and so will not be discussed further here.

## Results

### Model 1

Model 1 was constructed to examine the strength of association between schizotypy and dissociation variables in the occurrence of mystical experiences (MYSX). Following the model modification, in respect of the Y variables described above, the individual parameter estimates were obtained. The regression coefficients employed are the standardised regression or beta weights ( $\beta$ ) and for simplicity critical ratios are employed in the place of  $t'$ . These are presented in table 17, below.

Table 17: Individual parameter estimates generated in examining the contribution of schizotypy and dissociation to the occurrence of mystical experience.

| <u>Y variable</u> | <u><math>\beta</math></u> | <u>c.r.</u>  | <u>P</u>     |
|-------------------|---------------------------|--------------|--------------|
| UNEX              | <b>.282</b>               | <b>4.240</b> | <b>.0001</b> |
| COGDIS            | .008                      | .107         | .915         |
| SOCANX            | .029                      | .436         | .663         |
| INTANH            | -.071                     | -1.207       | .228         |
| DES               | .075                      | 1.139        | .255         |

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... significant contributions to the occurrence of mystical experience in bold face

As displayed in table 17, only the variable UNEX (Unusual Experiences) has a significant associative relationship with the measure of mystical experiences (MYSX). Indices of global model fit were also obtained and following the modification of the inter-relationships between the Y variables, described above, suggest that the model was well specified (CFI= 1.0, SRMR= .017). However this good model fit was also reflected by the chi-squares statistic ( $\chi^2=2.664$ ,  $df= 3$ ,  $p=.446$ ). The value of  $R^2_{adj}$  (.116) reflected the fact that only 11.6% of the variance of MYSX was accounted for by the variance of schizotypy and dissociation variables.

## Model 2

Model 2 was constructed to examine the strength of association between schizotypy and dissociation variables in the occurrence of numinous experiences (NUMX). Individual parameter estimates are presented in table 18, below.

Table 18: Individual parameter estimates generated in examining the contribution of schizotypy and dissociation to the occurrence of numinous experience.

| <u>Y variable</u> | <u><math>\beta</math></u> | <u>c.r.</u>  | <u>P</u>     |
|-------------------|---------------------------|--------------|--------------|
| UNEX              | <b>.444</b>               | <b>6.880</b> | <b>.0001</b> |
| COGDIS            | -.040                     | - .588       | .557         |
| SOCANX            | -.085                     | -1.323       | .186         |
| INTANH            | .023                      | .410         | .682         |
| DES               | .001                      | .008         | .993         |

As displayed in table 18, only the variable of unusual experiences (UNEX) has a significant associative relationship with the measure of numinous experiences (NUMX). Indices of global model fit reflected good model specification (CFI=1.0, SRMR= .018) and also by the Chi-Squares statistic ( $\chi^2=2.664$ , df= 3, P= .446). As in the previous model the value of  $R^2_{adi}$  (.172) reflects the fact that only 17.2% of the variance of NUMX is accounted for by the variance of the Y variables.

### Model 3

Model 3 was constructed to examine the strength of association between schizotypy and dissociation variables and the occurrence of evil /panic experiences (EVIL /panic). Individual parameter estimates are presented in table 19, below.

Table 19: Individual parameter estimates generated in examining the contribution of schizotypy and dissociation to the occurrence of evil /panic experience.

| <u>Yvariable</u> | <u><math>\beta</math></u> | <u>c.r.</u>  | <u>P</u>    |
|------------------|---------------------------|--------------|-------------|
| UNEX             | .052                      | .778         | .437        |
| COGDIS           | .113                      | 1.591        | .112        |
| SOCANX           | .084                      | 1.261        | .207        |
| INTANH           | -.027                     | -.449        | .654        |
| DES              | <b>.178</b>               | <b>2.684</b> | <b>.007</b> |

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Inspection of table 19 shows that only the measure of dissociation (DES) has a significant associative relationship with the measure of evil experiences (EVIL /panic). Indices of global model fit reflected good model specification (CFI=1.0, SRMR= .017) as did the Chi-Squares statistic ( $\chi^2 = 2.664$ , df= 3, P= .446). As in both previous models the value of  $R^2_{adj}$  (.101) reflects the fact that only 10.1% of the variance of EVIL is accounted for by the variance of the Y variables.

#### Model 4

Model 4 was constructed to examine the predictive contribution made by the three separable dimensions of spiritual experience (MYSX, NUMX and EVIL/ panic) to the scale measure of present depression (DEP). ). Initially all predictor (Y) variables were constrained, assuming that the relationship between the three dimensions of spiritual experience was negligible. Examination of the modification indices, residuals data and indices of global model fit would thus permit an examination of the extent to which these dimensions were truly orthogonal, and allow estimation of the most salient relationships that may exist between them.

Examination of global model fit and modification indices suggested a misspecification in the model. The assumption of no association between the Y variables of spiritual experience dimensions displayed little concordance with the sample derived covariance matrix. Specifically, it was indicated that allowing covariances between mystical experience (MYSX) and numinous experience (NUMX)( $r = .641$ ) and MYSX and evil

experiences (EVIL /panic)( $r = -.267$ ) would significantly improve the fit of the model. These correlations reflect those observed in the correlational analyses described above.

Model 4 was constructed to examine the associative relationship between measures of spiritual experience and present depression (DEP). Individual parameter estimates are presented in table 6., below.

Table 20: Individual parameter estimates generated in examining the contribution of spiritual experiences to measures of present depression.

| Y variable | $\beta$     | c.r.         | P            |
|------------|-------------|--------------|--------------|
| MYSX       | <b>.289</b> | <b>3.515</b> | <b>.0001</b> |
| NUMX       | -.107       | -1.354       | .176         |
| EVIL       | <b>.255</b> | <b>4.038</b> | <b>.0001</b> |

Inspection of table 20 shows that both the mystical experiences (MYSX) and evil experiences (EVIL /panic) dimensions of spiritual experience have a significant associative relationship with the measure of present depression (DEP). This relationship is in a positive direction indicating that as measures of mystical and evil experiences increase so present depression increases. Indices of global model fit reflected good model specification (CFI=1.0, SRMR= .008) and was also suggested by the Chi-Squares statistic ( $\chi^2 = .132$ ,  $df = 1$ ,  $P = .716$ ). The value of  $R^2_{adj}$  (.081) reflects the fact that only 8.1% of the variance of DEP is accounted for by the variance of the Y variables.

### Models 5-7

Models 5-7 were constructed to examine the associative relationship between the three separable dimensions of spiritual experience (MYSX, NUMX and EVIL panic) the five dimensions of existential life attitude (LP, EV, LC, DA and FMF). The variables of existential life attitude are theoretically related to psychological well-being and for the purposes of the present study are employed as an outcome variable in the same manner as measures of present depression were previously considered (model 4). The five dimensions of life attitude occupy a separate series of models that do not include the variable of present depression. We cannot assume that present depression (DEP) is a dimension common to life attitude and united by a single higher order factor and so these variables occupy separate models.

Initially it was assumed that the relationship between the residual data (sources of unique variance) for all five dimensions of life attitude was zero. Examination of the modification indices, residuals data and indices of global model fit would thus permit an examination of the extent to which these dimensions were truly orthogonal, and allow estimation of the most salient relationships that may exist between them.

Examination of global model fit and modification indices suggested a misspecification in the model. The assumption of no association between the residuals of the five dimensions of life attitude displayed little concordance with the sample derived covariance matrix. Specifically, it was indicated that allowing co-variances between the

residual data of the life attitude dimensions of existential Vacuum (EV) and death acceptance (DA)( $r=-.107$ ), EV and future-meaning-to-fulfil (FMF)( $r=.283$ ), EV and life control (LC)( $r=-.162$ ), EV and life purpose (LP)( $r=-.347$ ), DA and LP( $r=.163$ ), LP and FMF( $r=.320$ ), LC and FMF( $r=.162$ ) and LC and LP( $r=.335$ ) would significantly improve estimations of model fit.

#### Model 5

Model 5 was constructed to examine the associative relationship between mystical experiences (MYSX) and the five dimensions of existential life attitude (LP, EV, LC, DA and FMF). Individual parameter estimates are presented in table 21, below.

Table 21: Individual parameter estimates generated in examining the contribution of mystical experience to existential life attitude.

| <u>Y variable</u> | <u><math>\beta</math></u> | <u>c.r.</u>  | <u>P</u>     |
|-------------------|---------------------------|--------------|--------------|
| LP                | <b>.228</b>               | <b>3.794</b> | <b>.0001</b> |
| EV                | .051                      | .833         | .405         |
| LC                | .104                      | 1.689        | .091         |
| DA                | -.025                     | -.406        | .685         |
| FMF               | <b>.294</b>               | <b>4.997</b> | <b>.0001</b> |

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As displayed by the regression coefficients in table 21, mystical experiences (MYSX) have a significant associative relationship with life purpose (LP) and future-meaning-to-fulfil (FMF) dimensional variables of existential life attitude. Indices of global model fit indicated that the model was well specified (CFI= .99, SRMR= .021,  $\chi^2= 2.76$ , df= 2, p= .251). The values of  $R^2_{adj}$  (DA=.001, FMF=.087, LC=.011, EV=.003 LP=.052) indicate that only .1%, 8.7%, 1.1%, .3% and 5.2% of the variance of the five life attitude dimensions was accounted for by variance in the variable (and occurrence) of mystical experiences (MYSX).

#### Model 6

Model 6 was constructed to assess the associative relationship between the numinous dimension of spiritual experience and the five dimensions of existential life attitude. Individual parameter estimates for this path analysis are presented in table 22, below.

Table 22: Individual parameter estimates generated in examining the contribution of numinous experience to five dimensions of existential life attitude.

| <u>Yvariable</u> | <u><math>\beta</math></u> | <u>c.r.</u>  | <u>P</u>     |
|------------------|---------------------------|--------------|--------------|
| LP               | <b>.243</b>               | <b>4.058</b> | <b>.0001</b> |
| EV               | .010                      | .162         | .871         |
| LC               | .030                      | .489         | .625         |
| DA               | -.005                     | -.084        | .933         |
| FMF              | <b>.193</b>               | <b>3.196</b> | <b>.0001</b> |

The regression coefficients above indicate that numinous experiences (NUMX) have a significant significant associative relationship with the life attitude variables of life purpose (LP) and future-meaning-to-fulfil (FMF). Indices of global model fit indicated that the model was very well specified (CFI= .99, SRMR= .022,  $\chi^2= 2.906$ , df= 2, p= .234). The values of  $R^2_{adj}$  (DA=.000, FMF=.037, LC=.001, EV=.000 LP=.059) indicate that only 0 %, 3.7%, 0.1%, 0% and 5.9% of the variance of the five life attitude dimensions was accounted for by variance in the variable (and occurrence) of numinous experiences (NUMX).

#### Model 7

Model 7 was constructed to examine the associative relationship between the measure of evil/ panic experiences (EVIL/ panic) and the five dimensions of life attitude. Individual parameter estimates for this path analysis are presented in table 23, below.

Table 23: Individual parameter estimates generated in examining the contribution of evil/panic experience to five dimensions of existential life attitude.

| <u>Yvariable</u> | <u><math>\beta</math></u> | <u>c.r.</u> | <u>P</u> |
|------------------|---------------------------|-------------|----------|
| LP               | -.131                     | -2.145      | .032     |
| EV               | .187                      | 3.092       | .002     |
| LC               | -.176                     | -2.893      | .004     |
| DA               | .138                      | -2.259      | .024     |
| FMF              | .131                      | 2.145       | .032     |

The regression coefficients displayed in table 23, indicate that the evil dimension of spiritual experience (EVIL/ panic) has a significant associative relationship with all five dimensions of existential life attitude. Indices of global model fit indicated that the model was well specified (CFI=1.0, SRMR= .015,  $\chi^2=1.456$ , df= 2, p= .483). The values of  $R^2_{adj}$  (DA=.019, FMF=.017, LC=.031, EV=.035, LP=.017) indicate that only 1.9%, 1.7%, 3.1%, 3.5% and 1.7% of the variance of the five life attitude dimensions was accounted for by variance in the variable (and occurrence) of evil experiences (EVIL/ panic).

### Summary

The correlations produced as an aspect of the path analyses display a complex relationship existing between the four dimensions of schizotypy and the dimension of dissociation. The strength of the correlation coefficients was stronger for those integral to the path analyses than those discussed previously (tables 16a and 16b). This is probably due to the employment of Kendall's Tau-B in the former case, which generates more reliable estimates in the presence of tied ranks, than the Pearson's product moment estimates employed for the same analysis integral to the path analyses.

The schizotypic dimension of unusual experiences (UNEX) has a significant associative relationship with the measures of mystical and numinous dimensional qualities of spiritual experience. Only the dimension of dissociation makes a significant predictive contribution to the evil dimension of spiritual experience.

In examining the associative relationships between spiritual experiences it has been found that both the mystical and evil dimensions of spiritual experience have a significant relationship with measures of present depression. This association is positive in direction, suggesting that as measures of mystical experience increase, measures of present depression also increase.

Examination of the impact of measures of spiritual experience upon dimensions of existential life attitude found a differential pattern between the different dimensions of spiritual experience and the dimensions of existential life attitude. Both the numinous and mystical dimensions of spiritual experience have a significant positive associative relationship with the life attitude dimensions of life purpose and future-meaning-to-fulfil. The positive direction of this association suggests that as measures of numinous and mystical experience increase so do both perceived life purpose and hope for future meaning. The evil/panic dimension of spiritual experience displays a significant association with each of the five dimensions of existential life attitude. The correlative relationship is positive with the life attitude dimensions of existential vacuum, death acceptance and future-meaning-to-fulfil. The correlative relationship with the dimensions of life purpose and life control has an inverse character suggesting that as measures of evil/panic experience increase, the perception of a personal control over life events and a purpose in life decrease.



### Examination of Effects of Methodology

For each path analysis conducted, the variance accounted for ( $R^2_{\text{adj}}$ ) in the predicted (x) variable by the predictor (y) variables was low. This may be due to the presence, in each model, of y variables, which made no significant contribution to the prediction of the x variables (Wonnacott & Wonnacott 1979). However, low values of  $R^2_{\text{adj}}$  also reflect the low regression weights ( $\beta$ ) and low correlation values (Kendalls' Tau-b) between the variables on an individual basis. Low correlation coefficients make clear interpretation of inter-relationships difficult. This difficulty is particularly salient when considering the implication of such relationships for the hypotheses and ultimately the CPSH presently under consideration. The previous research which provided the empirical basis for the CPSH found a number of more substantial correlation coefficients. For these reasons special attention will be paid to this issue and a detailed examination of the current results in comparison to those found by previous research (Jackson 1991) will be described, below. The examination of the variable inter-relationships, conducted in both previous (Jackson 1991) and present studies, differ in several respects. The sample was drawn from independent populations. The measurement instruments employed did not only differ but for the present study were also modified through the process of confirmatory factor analysis. Finally the methods of correlative estimation also differed. While previous research employed Spearman's Rho, the present study employed Kendall's Tau-b as the method of estimation. Any discrepancies between the magnitude and direction of correlative relationships of the previous and present studies may be due to any of the above methodological differences and so the relative impact of each shall be discussed in

turn. Comparisons between the results of previous and present studies may only be made for analyses involving substantially similar variables and as a result the following section of the present examination will focus upon the relationship between the dimensions of spiritual experience and schizotypy.

### The Effects of Different Sampling Methods

The sample data employed for the present and previous (Jackson 1991) studies was obtained via a different sampling method. The previous study employed data contributed by individuals, who were so struck by their spiritual experiences, that they submitted a written account to the Hardy Centre for the Study of Religious Experience. In this way the sample employed for the previous study (Jackson 1991) was partially self-selected upon a dimension of the personal impact of individuals' spiritual experience. By contrast the present study employed data obtained from a more variable (or, general) population sample. It remains possible that a similar self-selection may have occurred, in the present sample, by those most impressed upon by their experiences, responding to the invitation to take part and returning their completed questionnaires. However, it seems probable that the sample employed for the previous study was more influenced by the self-selection described. This difference in sampling may have contributed to a difference in the qualitative nature of, or the quantitative ratings of features, associated with the samples spiritual experiences. This difference may in turn have affected the results of subsequent analyses/findings, with regard the dimensional structure and dimensional inter-relations of the instruments employed for those constructs measured.

### Effect of Confirmatory Factor Analysis and the Use of Modified Measurement Models

The present analyses were preceded by confirmatory factor analysis of each variable measurement model, resulting in substantial modifications of each. It could be suggested that the low correlative associations and regression weights may be due to the modifications of each variable and thus a result of the confirmatory factor analyses. For this reason an inspection was made of inter-correlations between all relevant variables measured using the same scales before any modification occurred through the process of confirmatory factor analysis. These are presented in tables 24a and 24b, overleaf.

Table 24a: Table showing Kendall's Tau-b coefficients between schizotypy, dissociation and spiritual experience variables represented by unmodified instruments

|   | 1<br>UNEX | 2<br>COGDIS | 3<br>INTANH | 4<br>DES | 5<br>MYSX | 6<br>NUMX | 7<br>EVIL |
|---|-----------|-------------|-------------|----------|-----------|-----------|-----------|
| 1 |           | .405*       | .009        | .449*    | .297*     | .432*     | .309*     |
| 2 |           |             | .133*       | .342*    | .113*     | .168*     | .288*     |
| 3 |           |             |             | .091*    | -.001     | .005      | .036      |
| 4 |           |             |             |          | .201*     | .255*     | .245*     |
| 5 |           |             |             |          |           | .493*     | -.067     |
| 6 |           |             |             |          |           |           | .183*     |

\* significant at  $p < .05$

Table 24b: Kendall's Tau-b coefficients for relationships between dimensions of life attitude, depression and spiritual experience.

|   | 1<br>DEP | 2<br>LP | 3<br>EV | 4<br>DA | 5<br>LC | 6<br>FMF | 7<br>MYSX | 8<br>NUMX | 9<br>EVIL |
|---|----------|---------|---------|---------|---------|----------|-----------|-----------|-----------|
| 1 |          | -.169*  | .340*   | -.066   | -.170*  | .109*    | .098*     | .136      | .182*     |
| 2 |          |         | -.228*  | .081    | .250*   | .222*    | .140*     | .125*     | -.066     |
| 3 |          |         |         | -.115*  | -.151*  | .188*    | .043      | .088      | .175*     |
| 4 |          |         |         |         | .050    | -.058    | .003      | -.046     | -.109*    |
| 5 |          |         |         |         |         | .127*    | .067      | .004      | -.085*    |
| 6 |          |         |         |         |         |          | .153*     | .175*     | .101*     |
| 7 |          |         |         |         |         |          |           | .493*     | -.067     |
| 8 |          |         |         |         |         |          |           |           | .183*     |

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\* significant at  $p < .05$

The confirmatory factor analyses resulted in little modification to the measurement models of the Life Attitude Profile (LAP: Reker and Peacock 1981) or depression subscale. When the inter-correlations between these variables both pre- and post confirmatory factor analysis are compared, there is very little difference. For this reason it seems unlikely that the modification made to the measurement models through confirmatory analysis has led to the generally low magnitude of association between

these variables. Likewise such modification will not have substantially effected the estimation of regression coefficients for path analysis models 4-7.

Substantial modifications were made to the measurement models for dissociation, the schizotypy variables of Cognitive Disorganisation, unusual experiences, Introvertive Anhedonia and the spiritual experience dimensions of Numinous, Mystical and Evil experiences. For each of these dimensions the size of the scale was reduced substantially. This was particularly the case for the dimensions of Dissociation (DES) and schizotypy. The schizotypic dimension of Cognitive Disorganisation (COGDIS) was divided, as the component of Social Anxiety (SOCANX) was better represented by a separate dimension.

When the inter-correlations, both pre and post confirmatory analysis, are compared it is observed that correlation coefficients are greater where the original measurement models are employed. This is particularly for the correlations between dimensions of schizotypy, dissociation and spiritual experience. The increases are generally very small ( $< 0.07$ ). The increase in magnitude is not bigger than 0.1 except for the correlation between Unusual Experiences (UNEX) and Dissociation (DES). The modifications to each of the dimensional scales may have reduced the magnitude of the correlations but not by so much to suggest that the resulting scales were significantly less valid or conceptually unrelated to those prior to the confirmatory analysis.

The precise nature of the items comprising each scale may have (when combined with the reduction in the number of items per scale) resulted in a slight change in the specific focus of each dimensional variable. For instance the modified Unusual Experiences dimension of schizotypy, became focussed upon low level sensory disturbance / confabulation and magical ideation, and specifically cognitions of mysterious causation. The unmodified scale had contained many more elements of unusual experiences than these. However the confirmatory analysis had shown these elements to be less than central to the dimension for the present sample and they were removed. So although the specific focus may have changed, the dimension remained a valid measurement model for this dimension of schizotypy. This slight change in specific focus is also in evidence for the other schizotypic dimensions, those of Dissociation and spiritual experience. The most obvious result of this process is for the dimensions of Cognitive Disorganisation and social anxiety which were originally considered integral. However the confirmatory analysis suggested that these dimensions were best represented by two independent dimensional scales. The validity of this distinction is concurrently supported by the significant (though small) correlations between the dimensions of Social Anxiety with Introverted Anhedonia, Dissociation and the Evil dimension of spiritual experience.

The effect of the use of modified measurement models (and by implication the process of confirmatory factor analysis) upon the inter-correlations has, on balance, been small. This small effect is probably due to the specificity of each scale and the slight change of focus of each of the represented dimensions. It is possible to suggest that use of smaller, more specific scales should result in stronger inter-correlations when compared to

previous analyses (i.e. Jackson 1991) rather than the weaker coefficients observed here. This suggestion implies that the strength of inter-correlations observed by previous research may have been partly due to the over-lapping content of items within individual measurement instruments. Where such overlap occurs the independent nature of the measurement instruments and the constructs upon which they are based can be disputed. Potential overlap was minimised through the present study's employment of confirmatory factor analyses, which generated robust scales containing fewer, more specific items for each variable measured. The scales resulting from this process of modification are smaller and may comprise more efficacious and user-friendly methods for quantifying those dimensions, measured by the present study, and employed by future research.

#### The Effect of Employing Different Measurement Instruments

The previous research upon which the present studies are based employed the Schizotypal Trait Questionnaire (STQ: Jackson and Claridge 1991), comprising scales for the measurement of Schizotypal Personality (STA) and Borderline Personality (STB). In addition measurements of Neuroticism, Extraversion and Psychoticism were obtained using the Eysenck Personality Questionnaire (EPQ: Eysenck and Eysenck 1976). For the measurement of the dimensions of spiritual experience the Scales from the SEQ (section C) were employed in their original form. Where possible these measurement models were constructed using the present sample data. It was not possible to construct a scale for the measurement of Psychoticism as no items belonging to this dimension, as originally operationalised, were employed amongst those for the measurement of schizotypy using the Oxford Liverpool Inventory of Feelings and Experiences (OLIFE:



Mason, Claridge and Jackson 1995). Although direct parallels between those scales employed for the previous and present studies are difficult to make, there are some similarities. The STA scale contains items that fall primarily into the unusual experiences scale of the OLIFE. Further substantial similarity exists between Eysenck's neuroticism (N) scale and the Social Anxiety (SOCANX) scale, Eysenck's extraversion (E) scale and that measuring Introverted Anhedonia (INTANH). The STB items employed in the present reconstruction show greatest similarity with the scale for the measurement of Cognitive Disorganisation (COGDIS).

Table 25: Table showing Kendall's Tau-b coefficients for associations between variables measured using those scales employed by Jackson (1991)

|   | 1<br>TA | 2<br>STB | 3<br>N | 4<br>EXT | 5<br>MYSX | 6<br>NUMX | 7<br>EVIL |
|---|---------|----------|--------|----------|-----------|-----------|-----------|
| 1 |         | .361*    | .413*  | .054     | .247*     | .354*     | .279*     |
| 2 |         |          | .450*  | .106*    | -.002     | .047      | .309*     |
| 3 |         |          |        | .105*    | .101*     | .145*     | .232*     |
| 4 |         |          |        |          | -.011     | .047      | -.019     |
| 5 |         |          |        |          |           | .493*     | -.067     |
| 6 |         |          |        |          |           |           | .183*     |

\* significant at  $p < .05$

The inter-correlations above show that using those instruments employed by previous research (Jackson 1991) produces a greater number of significant associations. However,

any increases in the magnitude of the correlation coefficients are small. By comparing the direction and relative magnitude of the coefficients between this analysis (table 25) and that described above (table 16b) it can be observed that the *pattern* of association between the variables of schizotypy and spiritual experience is essentially the same. The inter-correlation coefficients may be slightly higher when using those instruments employed by previous research. This slight increase enhances the comparability between the results of the present and previous studies and shows that when these two elements of methodology are held relatively constant the effect of the different sample is small. However, the present study employed measurement instruments that have been developed and refined to a higher degree than those employed by previous research. Further, these modern instruments (E.g. OLIFE: Mason et al 1995) have been further examined through the process of confirmatory factor analysis. An element of this process (phase 2) enhances the construct validity of the measurement scale by ensuring the discriminant validity of each related dimension. This procedure serves to increase the independence of each dimension within the overall construct and reduce the within instrument inter-dimension correlation (Between UNEX, COGDIS, SOCANX and INTANH). Comparing the coefficients of the present study with those generated using instruments employed by previous research, it can be seen that in the latter case the dimensions of schizotypy are more highly inter-related (I.e. between STA, STB, E and N). Although this is true for all such inter-correlations it is most evident between those variables from the Eysenck Personality Questionnaire (EPQ: Eysenck and Eysenck 1976) and those of the Schizotypy Trait Questionnaire (STQ: Jackson and Claridge 1991). At the time that these instruments were employed (Jackson 1991) these measurement models

had evolved from separate analytical procedures and had therefore never been subjected to examinations of discriminant validity. The present study, through the process of confirmatory factor analysis generated dimensional scales that, as described above, are comparable to those employed in previous research. However, for the present study the discriminant validity was examined and enhanced. The relatively enhanced discriminant validity of the instruments presently employed can account for the difference between the two series of inter-correlation coefficients. The findings of the present study consolidates the findings by previous research by partly replicating some of the previous findings while employing more robust measures for each of the operationalised variables.

There is a further issue of discriminant validity that should be mentioned. The discriminant validity of two dimensions can be examined statistically. However, such examinations are conducted for dimensional constructs chosen on the basis of theoretical reasoning. For the present and previous research (Jackson 1991) it has been assumed that those experiences comprising measures of trait schizotypy and the qualities of spiritual experience (SEQ section C) are evidence for (or indicative of) independent latent structures or objects within reality. This assumption must be tested empirically by conducting a higher (also known as second) order factor analysis. Such an analysis is important, as the discussion above has shown how a relative lack of discriminability, between dimensions that are assumed to be dimensionally independent, can lead to the assumption of substantive relationships where there may only be aspects of a singular underlying entity.

Issues of methodology aside, those results generated using instruments employed by previous research are slightly more comparable to the pattern of relationships observed in similar analyses conducted for previous research. This is particularly the case for the correlations between unusual experiences (and formerly STA), cognitive disorganisation (and formerly STB) with the three dimensions of spiritual experience. Previous research (Jackson 1991) found that the STA dimension of schizotypy was significantly correlated with all three dimensions of spiritual experience while the STB dimension was significantly correlated with only the evil dimension of spiritual experience. This result is replicated using the present sample and (as closely as possible) those instruments employed for the previous research.

Of the two methodological components so far discussed it appears that the instruments (measurement models) employed to represent schizotypy and spiritual experience make the greatest difference to the inter-correlation coefficients and the comparability between the previous and present studies.

#### The Effect of Statistical Estimation Upon Degree of Association: Kendalls Tau-b vs Spearmans Rho.

The final methodological component to be considered in this section of the discussion is the effect of method of statistical estimation upon the results generated. As the present study has the previous research (Jackson 1991) as its closest parallel and the source of the present hypotheses, the present discussion has attempted to compare the results of the two

studies and estimate the impact of the different methodologies employed. This element of the discussion will examine the effect of using Kendall's Tau-b or Spearman's Rho upon the inter-correlation coefficients. As comparisons between the present and previous studies are being made, the present discussion will employ the measurement scales as previously employed (STA, STB, N, E and the spiritual experience dimensions as previously operationalised) so that the discussion can build towards a close comparison, with the only major element left to vary being the independence of the samples.

Table 26: Table showing Spearman's Rho coefficients for associations between variables measured using the present sample data and those scales employed by Jackson (1991)

|   | 1<br>STA | 2<br>STB | 3<br>N | 4<br>EXT | 5<br>MYSX | 6<br>NUMX | 7<br>EV1 |
|---|----------|----------|--------|----------|-----------|-----------|----------|
| 1 |          | .449*    | .537*  | .069     | .346*     | .477*     | .368*    |
| 2 |          |          | .545*  | .126*    | -.003     | .061      | .378*    |
| 3 |          |          |        | .127*    | .139*     | .199*     | .308*    |
| 4 |          |          |        |          | -.014     | .062      | -.024    |
| 5 |          |          |        |          |           | .642*     | -.104    |
| 6 |          |          |        |          |           |           | .251*    |

\* significant at  $p < .05$

The use of Spearman's Rho as the method of correlative estimation causes the greatest increase in the correlation coefficients of any other methodological component discussed

so far. The comparison between the results of previous analyses (Jackson 1991) and the current analysis (table 26, above) is more valid as both the method of correlative estimation and the measurement scales employed are the same as those previously employed. When the coefficients of the former and present analyses are compared the similarity in pattern and magnitude of association is striking. Previous analyses (Jackson 1991) found that STA was significantly associated with all three dimensions of spiritual experience (MYSX .24; EVIL .39; NUMX .50) while STB was significantly associated with only the EVIL dimension of spiritual experience (.43). Previous analyses found that N was moderately correlated with NUMX ( $Rho=.24$ ) and EVIL ( $Rho=.34$ ), while EXT was moderately correlated with only MYSX ( $Rho=.25$ ). The present analysis has found N moderately correlated with EVIL but only low association with MYSX and NUMX, while EXT is not significantly correlated with any of the spiritual experience dimensions.

### Summary

When close methodological comparisons are made the current and previous analyses show a high degree of similarity. The comparison is not entirely complete as not all items employed within these scales were included in the scales employed by the present analysis. However, a good enough degree of concordance allowed this comparison to provide evidence of the comparability between the findings of previous and present studies when significant methodological differences are held constant.

The use of different, more refined instruments and the process of confirmatory factor analysis, in the present study, generated rigorously defined and statistically valid dimensional scales for use in subsequent correlative and path analyses. When the results (where possible) of correlative analyses of the two studies are compared it is shown that these methodological aspects led to less statistically significant and lower correlation coefficients (in number and magnitude) and less evidence for relationships between variables.

However, the methodological component appearing to have greatest effect on the number and magnitude of correlation coefficients is the method of statistical estimation. When close comparisons between the methodology and results of the present and previous studies are made, (including the use of Spearman's Rho as in Jackson 1991), the two studies generate results that appear strikingly similar in a number of significant ways.

Kendall's Tau-b, which was employed as the correlation method for the present study, produces more exact estimates of correlative association in situations where there may be multiple tied ranks (Lehman 1991). This method of estimation includes within its formula a method for taking account of the number of tied ranks within the data set. The formula for the estimation of Spearman's Rho contains no such safeguard and is not recommended for use under such conditions. Situations involving many tied ranks have a higher probability of occurring when the variables involved have a small range. Many of the scales representing the variables of the present study are small (4-6 items). In

combination with a large data set (effective  $N=217-264$ ), such qualities will produce a large number of tied ranks.

The confirmatory factor analysis dramatically reduced the number of items (by 60 –70%) in nearly all scales that began with more than 5 items. The process of CFA may have contributed to a large number of tied ranks by reducing the number of items per scale and thus the numerical range of each variable. Ultimately it is these conditions that produce the large difference in correlation estimates depending upon the method employed.

The process of confirmatory factor analysis produced dimensional scales to represent variables in subsequent correlative and path analyses. The scales that were produced as a result of this process may have been smaller than previous scales employed to measure similar latent constructs, but were both statistically valid and conceptually coherent.

The reduced size and range of the resultant scale variables in combination with a large data set, necessitated the use of Kendall's Tau-b as the method of correlative estimation due to the increased number of tied ranks. Each of these methodological aspects act to enhance the validity of the results observed for the present analysis.

A strong effort has been made to reduce the possibility of artefactually inflated estimates of association (correlation coefficients) and estimates of the statistical significance of each. The methodological rigour embodied in those components discussed above, and the



relatively robust findings that result, allow the discussion to centre upon the pattern of relationships amongst the variables as signified by the  $p$  statistic.

## Discussion

### Dissociation and Schizotypy

Recent research (Startup 1999) employed the scales for the measurement of schizotypy and dissociation in their original form (OLIFE: Mason et al. 1995; DES Bernstein and Putnam 1986). A substantial correlative association was shown to exist between dissociation and Unusual Experiences, dissociation and Cognitive Disorganisation. The present analysis has employed dimensional scales modified through the use of confirmatory factor analysis. Although the modifications have slightly changed the emphasis of each of the dimensions each scale remains representative of the schizotypy dimensions as originally conceived (with the exception of the Social Anxiety dimension which was originally considered integral to the dimension of Cognitive Disorganisation). Inspection of the intercorrelations (table 16b), shows moderate and statistically significant associations between dissociation and Unusual Experiences (UNEX), Cognitive Disorganisation (COGDIS) and Social Anxiety (SOCANX). There was no correlation between dissociation and Introvertive Anhedonia (INTANH). Previous research (Startup 1999) suggested that the correlative association was due (in part) to a common causal factor (history of abuse) and an overlap in item content of the two independent measures. When 6 dissociation (DES) items and 8 schizotypy (COGDIS

and UNEX) items deemed to overlap, were removed the inter-correlations were reduced slightly. However, both of the factors considered (and tested) left a significant proportion of covariance unexplained. The correlations observed by previous research were replicated by the present study. This finding is irrespective of several significant methodological differences (method of correlative estimation and the employment of confirmatory factor analysis) between the two studies, although the sample data was the same. During the present analysis no items were removed from any of the scales to reduce suspected overlap, as the items of each scale had proven validity due to the employment of confirmatory factor analysis. Following confirmatory factor analysis the scales employed for the present study included 1 schizotypy item and 2 dissociation items previously considered to overlap. These items have displayed a greater representative validity for each of the variables than those items deleted from each scale. This methodological element, by ensuring an optimum degree of validity for each scale and the composite items, suggests that the observed correlations are due to a significant relationship between these two processes beyond their measurement. This association may be due to common causal relationships with as yet unknown variables as previously suggested (Startup 1999), or due to too strong a distinction between aspects of a singular process (i.e. a false dichotomy).

Further examination of the relationship between dimensions of schizotypy and that of dissociation could now proceed through employment of higher / second order factor analytic techniques. To facilitate this analysis, particularly where the original

measurement models are employed, a very large sample ( $N < 500$ ) should be drawn from a further independent sample.

#### Personality Trait As Predisposition to Spiritual Experience

Previous research (Jackson 1991; 1997) found that trait schizotypy was significantly associated with Numinous dimensions of spiritual experience and with Evil/panic dimensions of spiritual experience in a sample of psychotic individuals. Such a finding suggests that trait schizotypy is a significant predisposing factor in the aetiology of spiritual experiences. The present study employed the most recently developed scales for the measurement of schizotypal traits and these were subsequently modified through the employment of confirmatory factor analysis. The enhanced specificity of the schizotypy variables employed in the present study allowed for a sensitive analysis of the relationships between trait schizotypy and the dimensions of spiritual experience. The Unusual Experiences dimension of schizotypy displays a significant regressive relationship with scale scores for Mystical and Numinous experiences. None of the three remaining schizotypy variables display such a relationship with any of the dimensions of spiritual experience. The dimensional variable of dissociation displays a significant regressive relationship with scale scores for Evil/panic experiences. These findings indicate that different dimensional aspects of schizotypy and dissociation are associated with different forms of qualities within spiritual experience.

The dissociative trait is the only one that has a significant regressive relationship with the Evil dimension of spiritual experience. The present study has conceptualised the measurement model of dissociation as representing a dissociative trait that underlies non-pathological varieties of dissociative experience. These experiences include amnesia, imaginative involvement / absorption and milder experiences of de-realisation / de-personalisation.

Pathological dissociation is commonly conceptualized as a maladaptive defence against a threatening response to conflict or trauma (Putnam 1985; Spiegel and Cardena 1991; Koopman, Classen and Spiegel 1994). Not only affective detachment can result from such dissociations. It has been observed that the affective state of patients diagnosed as suffering with PTSD may oscillate between numbing or unresponsiveness and hyper-arousal, suggesting that dissociative mechanisms are operating intermittently or with only partial effectiveness (Horowitz 1986). In particular, 'flash-backs' (commonly associated with PTSD) can be considered instances in which the dissociated state operates in a maladaptive way, resulting in the re-emergence into conscious awareness of previously repressed, preconscious material. In such instances it seems probable that a correlation would exist between concurrent measures of dissociative tendency and experiences with qualities like those of the Evil /panic dimension of spiritual experience. In the context of the literature concerning dissociation, (described briefly above), the Evil/ panic dimension of spiritual experience could be conceived as a failure in the normally preconscious processing of stressful material related to self. The measurement model that represents the Evil dimension of spiritual experience is composed of items describing

*feelings* of threat, panic and peril. Accepting this measurement model as valid, it appears that the preconscious material that re-emerges is predominantly related to self and affective in character. The Evil/ panic dimension, as previously discussed, does not fall squarely within the working definition of spiritual experiences adopted for the present study. In particular experiences and sensations represented by this dimension do not seem to occur in an altered state. While it is accepted that the qualities of these experiences may occur within the context of a spiritual experience, they do not seem to constitute a dimension of spiritual experience in themselves. For this reason this dimension and the resultant scale are best described as representing a more general anxiety or panic.

The Unusual Experiences dimension of schizotypy is the only (Y) variable, of those considered, to display a significant regressive relationship with the scale scores for the Numinous and Mystical dimensions of spiritual experience. Although the Unusual Experiences dimension was represented by a modified scale, it retained its essential character relative to previous formulations. Examination of the items of this scale, indicate that the experiences most representative of the Unusual Experiences dimension are those of magical ideation and aberrant perceptions. Such experiences are most reminiscent of positive symptom aspects of psychotic form disorder, and more specifically, delusion formation and hallucinations / perceptual distortion. However, such experiences are taken to vary normally throughout the population and thus constitute healthy personality difference. It is only when such experiences, in combination with other schizotypal experiences such as Cognitive Disorganisation, Social Anxiety and Introvertive Anhedonia, produce major disruption that such experiences are deemed to be

dysfunctional (Claridge 1997). It is for these reasons that the Unusual Experiences dimension is labelled as it is rather than something more pathologising.

The unusual experiences of magical ideation and mild perceptual distortion have a significant regressive relationship with the Numinous and Mystical dimensions of spiritual experience. Such an association could be due most simply to the fact that spiritual experiences constitute an unusual experience, making such a relationship tautologous and based upon a false dichotomy between spiritual experiences and those representing unusual schizotypic experiences. The similarity between schizotypic experiences and spiritual experiences has been assumed from the outset and provides the impetus for the inclusion of schizotypy variables within the present analysis. However, only the Unusual Experiences dimension of schizotypy display a significant association with the Mystical and Numinous dimensions of spiritual experience. The present analysis finds that experiences of Cognitive Disorganisation, Introvertive Anhedonia (social withdrawal) and Social Anxiety have no relationship with dimensions of spiritual experience. If the dimensional validity of the measurement models for spiritual experience and schizotypy is assumed, the specificity of the present findings suggest that none of the more apparently dysfunctional aspects of schizotypy are associated with spiritual experiences. This is a very interesting finding due to the wealth of research and opinion that has stemmed from the debate surrounding the apparent overlap between spiritual / psychotic experiences.

The findings also suggest that there are characteristics common to both unusual schizotypal experiences and non-pathological varieties of dissociative experience that are not characterised by Cognitive Disorganisation. One possible element implicated in the genesis of spiritual experiences may be akin to a mobility of threshold between conscious awareness and preconscious processes (Underhill 1930). This threshold mobility has recently been termed 'transliminality' (Thalbourne 1991) and is defined as: "a largely involuntary susceptibility to, and awareness of, large volumes of inwardly generated psychological phenomena of an ideational and affective kind" (Thalbourne and Delin 1999 p. 45). Both the conceptualisation and measurement of transliminality involve several related concepts that have been employed for the present study. The effects of variation in individual transliminality are thought to comprise psychological characteristics common to depression, mania and manic depression, magical ideation, absorption and belief in the paranormal and mystical /spiritual experiences (Lange, Thalbourne, Houran and Storm 2000). Transliminality is also considered to relate to a person's ability to recall dreams, religiosity and death acceptance.

The inter-dimensional relationships between dissociation, schizotypy and spiritual experience requires further exploration by use of second or higher order factor analytic techniques, which would allow the dimensional character of these inter-related variables to be further elucidated. Such research would benefit from employment of measurement instruments such as those employed for the current study. By employing measurement models independent to those previously employed, in examinations of the dimension of

transliminality (e.g. Thalbourne 1991), the validity of such research and interpretation can be further enhanced.

The findings described above provide limited support for the first stage of the Cognitive Problem Solving Hypothesis (Jackson 1991; Jackson and Fulford 1997) which suggested schizotypal traits (as a component of individual personality differences) to be a significant predisposing factor in the aetiology of spiritual / psychotic experiences. The current findings have also determined a differential role for individual dimensions of schizotypy, dissociation and spiritual experiences.

Previous research (e.g. James 1902; Jackson 1991) has tended to dichotomise the dimensional qualities of spiritual experience into positive (Seraphs; Mystical and Numinous) and negative (Snakes; Evil / panic) experiences. In terms of this dichotomy it appears that the unusual experiences dimension of schizotypy is associated most with the positive dimensions and dissociation with the negative dimension of spiritual experience. Divisions of the dimensions of spiritual experience into mystical, numinous and evil or positive and negative must be made with extreme caution. Such divisions have previously and currently been made on the basis of numerical relationships. For such divisions to be validated further it is necessary to examine the occurrence of individual spiritual experiences as they occur in naturalistic settings. Such an examination will necessarily employ an individualistic methodology as opposed to the macroscopic approach of the quantitative analyses, and would be most appropriately facilitated by a qualitative examination of actual cases. This approach will be taken during the following study (study 3, chapter 4).



### Spiritual Experience and Depression.

The present analyses also examined the impact that spiritual experiences may have upon, and in relation to, measures of current depression. The Cognitive Problem Solving Hypothesis (CPSH) proposes that spiritual experiences are essentially benign altered states of consciousness and constitute a psychological mechanism for the resolution of psychological stress. Specifically the CPSH proposes that psychological stress reaches a terminus described as an “existential impasse” which comprises feelings of despair, hopelessness and an inability to cope. It is this impasse and the underlying stresses which, the CPSH proposes, are resolved by the spiritual experience. The characteristics of the impasse closely mirror those, cognitive and affective, features central to depression. On the basis of the CPSH it was predicted that an inverse relationship would be observed between the dimensions of spiritual experience and present levels of depression. However, it was observed that while no significant regressive relationship was observed between depression and the numinous dimensions of spiritual experience, a significant and positively directed relationship was observed between depression and the mystical and evil/panic dimensions of spiritual experience.

This finding indicates that, according to the model tested by the present study, that mystical and evil experiences are associated with elevated scale scores for depression. However, causality cannot be reliably inferred, due to the cross-sectional nature of the data employed. It is possible only to infer that these variables are related in a numerically regressive manner. It could further be suggested that a model describing depression as a

“cause” of increased scores for the measure of mystical experiences would be equally predicted by the CPSH. Should such a model have resulted in the observation of a similar regressive relationship the model could more easily be taken as support for the predictions of the CPSH. However, such a model would only imply that depression tends to precede the occurrence of mystical experience and would not allow a test of the benignity of such an experience. Such a model would of course also fail to allow causal inferences to be made for the same reasons, described above, regarding the cross sectional nature of the data.

The CPSH proposes that spiritual experiences are processes employed for the resolution of stress, and that the distinguishing feature is the relative degree of success, or resolution derived. On this basis it may be possible to further explore the relationship between the spiritual experience variables and measure of depression, by testing for differences in depression between the three different forms of spiritual experience. However, such an examination is not valid due to the inter-related nature of spiritual experiences. The different forms of spiritual experience are dimensionally distinct but they are not strictly orthogonal allowing an individual to achieve a high score on measures of all dimensions of spiritual experience. For this reason such a test would necessitate the creation of spurious dichotomies that would force affiliation of an individual to one form of spiritual experience or another. Findings on the basis of such an examination would provide no more validity for reliable inference than those analyses already conducted.

## Spiritual Experiences and Existential Life Attitude

The present analyses tested hypotheses derived models that proposed a relationship between forms of spiritual experience and existential life attitude. The employment of variables representing *existential* life attitude was considered salient not only as a measure of psychological well-being, but also due to links with the existential nature of the impasse described as a stage of the CPSH. As described above it is this stage of “existential impasse” which is proposed to precede the occurrence of spiritual experiences that in turn, provide resolution for the stresses that gave rise to the impasse. Models proposing relationships between spiritual experiences and existential life attitude thus allowed not only a further (more model specific) test of the benignity of spiritual experiences, but also the salience of existential variables to the phenomenon of spiritual experiences.

The findings show that scale scores for the numinous dimension of spiritual experience have significant and positively directed regressive relationship with scale scores for life purpose and future-meaning-to-fulfil (FMF). Such a finding implies that the occurrence of a numinous type experience tends to lead individuals to perceive more personal meaning in their existence and express a greater hope for a meaningful future. The meaning of the FMF dimension of life attitude has previously been described in detail and can be interpreted as much as a lack of perceived personal meaning for the present and the hope of a more meaningful future. Such an interpretation is supported by the observation that the FMF dimension correlates moderately (+.1 /+.2) with both scale

scores for depression and the dimension for feelings of existential vacuum (meaninglessness). However, the FMF dimension also correlates moderately (+.22) with scale scores for life purpose (LP) which have been interpreted as indicative of a satisfactory levels of personal meaning and purpose. The relationship between these dimensions of existential life attitude and the numinous dimension of spiritual experience suggest a personal salience of existential issues in the context of elevated scale scores for numinous experience. The results of the path analysis appear to indicate that as scale scores for numinous experience rise, so does the individuals perception of life as exciting and personally meaningful and while simultaneously hoping for yet more personal meaning to be discovered in the future.

The same pattern of significant associative relationships is also found between the life purpose and future-meaning-to-fulfil dimensions of existential life attitude with the scale scores for the mystical dimension of spiritual experience. The same interpretation can be applied and a similar salience given to issues of existential life attitude for individuals reporting elevated scale scores for the mystical dimension of spiritual experience.

The results of the current analysis indicate that the evil/ panic dimension of spiritual experience has a significant regressive relationship with all five dimensions of existential life attitude. This relationship is positively directed for the life attitude dimensions of existential vacuum, death acceptance and future-meaning-to-fulfil and inverse for the dimensions of life purpose and life control. The magnitude of these regressive relationships are weaker than those previously discussed and are only just significant

( $p=.002\dots p=.032$ ). Interpretation of these relationships is made more difficult due to the statistical nature (specifically the distribution) of the scales scores for the evil/ panic dimension of spiritual experience. This dimension was that which departed most from a normal distribution, and although attempts were made to normalise the distribution prior to the path analyses (using the square root transformation procedure), the distribution continued to display a significant departure from normality.

The pattern of regressive relationships might tentatively be interpreted as a reduction in the psychological well-being, in the context of existential life attitude, as scale scores for the evil dimension of spiritual experience increase. This interpretation is based upon the direction of the regressive relationships displayed between the dimensions of life attitude and the scale scores for the evil dimension of spiritual experience. As evil/ panic dimension scale scores increase the individual expresses / perceives less personal meaning, and control over the events of their life, greater feelings of existential vacuum (meaninglessness), acceptance of death and a greater hope for a future more meaningful than present existence.

In the context of the three dimensions of spiritual experience it appears that the numinous and mystical dimensions of spiritual experience are associated with existential life attitudes more indicative of adequate psychological well-being. Conversely, the life attitude profile associated with the evil/ panic dimension of spiritual experience indicates a lack of existential satisfaction or psychological well-being in this regard. The Numinous and Mystical dimensions of spiritual experience are associated with existential

drive and ambition with a strong focus upon issues of personal meaning while the Evil/panic dimension is associated more with psychological expression of a lack of existential fulfilment.

This interpretation is made more complicated by the significant regressive relationship between the Mystical dimension of spiritual experience and scale scores for depression. Dimensions of existential life attitude and issues of meaning and purpose are proposed (Frankl 1963; Beck 1967) to comprise features central to the experience of depression. The Mystical dimension of spiritual experience appears to have a numerical relationship with a positive existential life attitude characterised by a presence of adequate personal purpose and a strong need for a personally meaningful future. However, the Mystical dimension of spiritual experience also has a significant association with depressive symptoms indicating that while existential issues may be adequately addressed the individual may also experience some depression.

This apparent paradox suggests that simplistic interpretations of the dimensions of the Life Attitude Profile (LAP: Reker and Wong 1981) may not be adequate when discussing these sensitive inter-relationships. A greater clarity might be brought to this issue in future investigations by use of a more sensitive measure of depression, which other studies have suggested is not unidimensional as the current study has assumed. (For a review see Startup, Rees and Barkham 1992).

### The Nature and Character of Spiritual Experience

At this stage of the discussion it becomes important to summarise the findings of the quantitative analyses conducted and attempt to describe spiritual experiences within the context of those findings. For the ease of description the use of technical / statistical terms (e.g. statistically significant regressive relationship) will be kept to a minimum. The early part of this discussion was dedicated to methodological issues that arose in conducting the present study and these shall not be re-iterated here. However it is important to emphasise that due to the cross-sectional nature of the data sample the following relationships cannot be described as causal but as associative.

Spiritual experience as measured using the Spiritual Experiences Questionnaire (Jackson 1991) contains three dimensions that seem to describe experiences of, and have been labelled, Mystical, Numinous and Evil/ panic. Mystical and Numinous dimensions are positively associated indicating that these qualities of spiritual experience tend to co-occur. Mystical and Evil/ panic dimensions are inversely associated indicating that as mystical qualities dominate an individuals spiritual experience they are less likely to experience those qualities of panic and terror associated with the Evil dimension. No significant association exists between the Evil and Numinous dimensions. The experiential qualities described by the items of the mystical and numinous scales appear to be positive experiences. The scale items for the Evil/ panic dimension describe feelings of panic, threat and peril and an experience of this type appears inherently undesirable. As the correlations between mystical and Numinous, Mystical and Evil/

panic dimensions are only moderate in size it is impossible to state with certainty what combinations of experiential quality comprise naturally occurring spiritual experiences. The division of experiential qualities into positive (desirable) and negative (undesirable) is suggested by the bi-modal distribution of the Evil/ panic dimension of spiritual experience. Nearly half of all cases have scale scores of zero on this dimension, indicating that this experiential quality occurs in a dichotomous fashion. The qualities comprising the Evil/ panic dimension do not situate it within the category of spiritual experience, previously defined above, as it does not comprise an altered state of consciousness.

Further investigation of the dimensional structure of spiritual experience is required and should include taxonometric analyses, which might provide further clarity about the possible divisions within spiritual experiences. The division of the experiential qualities of spiritual experience is helpful only if such division reflects the empirical reality. Within the context of measurement through use of the spiritual experiences questionnaire, future research should attempt to examine the combinations of the three dimensions of spiritual experiential qualities. This examination should focus on cases where the co-occurrence of Mystical and Numinous, Numinous and Evil or Mystical and Evil/ panic experiential qualities appear to be indicated so that the broader empirical character of spiritual experiences can be clarified, beyond their numerical relationships.

The dimensions of spiritual experience relate differently to personality trait variables of dissociative and schizotypal tendency. The Unusual Experiences dimension of schizotypy is characterised by magical ideation and aberrant perceptions. The Unusual



Experiences dimension is the only one of the four comprising schizotypy to have a significant association with the Mystical and Numinous dimensions of spiritual experience. No schizotypic dimensions are associated with the Evil/ panic dimension of spiritual experience. Only experiences indicative of dissociative trait are associated with this dimension. The relationship between schizotypy and dissociative trait has only just begun to receive serious research attention and is still unclear. However, as previously suggested above, both the Unusual Experiences dimension of schizotypy and dissociative, along with spiritual experiences trait may belong to a single dimension similar to that described as transliminality (Thalbourne and Delin 1999). In the context of this suggestion it seems that the character of transliminality differs in respect of the dimensions of spiritual experience. The schizotypal (magical ideation and aberrant perceptions) aspect of transliminal predisposition is associated most strongly with the numinous dimension and less strongly with the mystical dimension of spiritual experience. The character of transliminality is more dissociative in character when associated with the Evil/ panic dimension of spiritual experience. This highly speculative suggestion requires further investigation, which must begin with examinations of the relationship between dissociative and schizotypal traits. Such an examination will, as previously suggested, necessarily employ higher order confirmatory factor analytic techniques.

Mystical and Evil/ panic dimensions are associated with elevated levels of depression. No association is observed between the Numinous dimension and depression. Due to the cross-sectional nature of the data it cannot be known from the present analyses whether

the occurrence of Mystical and Evil/panic experiential qualities is preceded by, or a cause of elevated depressive symptoms. In either instance it appears that the occurrence of these experiential qualities has little impact in reducing symptoms of depression.

The relationship between depression and the experiential qualities of spiritual experience requires further examination employing longitudinal data collection, which would allow greater inferences, concerning causal direction, to be made. Further investigation, as previously suggested above, may also benefit from employing a more sensitive measure of depression than that employed for the present study.

The dimensions of spiritual experience are differentially associated with the dimensions of existential life attitude. The Mystical and Numinous qualities are associated with elevated scales scores for Life Purpose and Future-Meaning-to-Fulfil suggesting that each of these experiential qualities are associated with a positive existential perspective and an absence of feelings of meaninglessness / hopelessness. However, the meaning of the dimension described as Future-Meaning-to-Fulfil is ambiguous and can be interpreted in two possible ways. This dimension describes the simultaneous perception of looking forward to the future in anticipation of it being personally meaningful while this is also motivated by feelings of a hope for a more personally meaningful future, relative to present levels of personal meaning. As previously discussed, above, this ambiguity does not allow easy classification of this dimension as indicative of existential well-being or the converse.

The Bi-modal distribution of the Evil/ panic dimension of spiritual experience suggests that spiritual experiences may be divided into those that include feelings of anxiety and panic and those that do not. This division implies that spiritual experiences may have Numinous-Mystical, Mystical-Evil, Numinous-Evil or even Numinous-Mystical-Evil characteristics. Although the extent to which this division reflects *actual* spiritual experiences is presently unknown, this division suggests the existence of two basic types of spiritual experience. Although the empirical validity of this distinction has not been directly addressed for ease of communication the following part of the discussion shall sometimes use the term *types* to reflect this possible distinction.

This dichotomous typology suggests that spiritual experiences are not benign per se, but that the effect upon / association with aspects of psychological well-being vary, according to the experiential qualities of the experience. Those experiences having the qualities of Evil / panic are more associated with elevated levels of depression, a negative existential life attitude, appear to comprise less of an altered states of consciousness and are associated with dissociative, rather than schizotypal trait. Conversely, those experiences which do not include the qualities of Evil/ panic (Numinous-Mystical) may report a more altered state of consciousness, psychotic-like phenomenology, a more positive existential life attitude, and are less consistently associated with depression.

The different relationship between the different qualities of spiritual experience with depression and existential life attitude suggests that each of the types differs in the degree to which depression and existential issues are addressed by the experience. While those

experiences with qualities of Evil / panic offer no resolution, those experiences without this quality have slightly greater, although not complete, powers of resolution.

The findings of the present study suggest the salience of issues concerning existential life attitude in the occurrence of spiritual experiences. Such evidence provides support for this aspect of the CPSH, which suggested that existential issues are central to the preceding 'impasse' and are addressed by spiritual experiences. However, the positive nature of the relationship between two of the (Mystical and Evil/ panic) dimensions of spiritual experience and depression, suggests that any resolution provided by spiritual experiences is incomplete and does not address symptoms of depression. This is particularly the case where qualities of Evil/ panic are aspects of a spiritual experience.

Such a suggestion assumes an underlying (affective) depression that is less resolved rather than intermittently masked. This suggestion reflects similarities to those recently forwarded for bi-polar affective disorder, which has recently been termed a 'manic defence' (Bentall and Thompson 1990; Lyon, Startup and Bentall 1999).

On this model the resolution provided by spiritual experiences is affective in nature, rather than cognitive as proposed by the CPSH. Spiritual experiences with pronounced qualities of Evil / panic appear to comprise expression of an underlying depression while those experiences lacking this quality may provide a limited defence against an underlying depression. In the latter case the benefit of this defence appears to be predominantly in the domain of existential life attitude.

### Conclusion: Quantitative Evaluation of the Cognitive Problem Solving Hypothesis

The present study has attempted to operationalise individual hypotheses drawn from the encompassing model of the Cognitive Problem Solving Hypothesis (CPSH: Jackson 1991). Some aspects of the findings, specific to each of the hypotheses and discussed above, offer support for the CPSH. Other aspects of the findings suggest alternative ‘manic defence’ perspectives of spiritual experience.

The CPSH suggests that spiritual experiences address psychological stress, and the ‘existential impasse’ that results, by providing a *cognitive resolution*. However, the above discussion has pointed to the possibility that spiritual experiences comprise a form of ‘manic defence’, which provides a superficial and intermittent *affective defence* against feelings associated with an underlying depression.

On the basis of this suggestion, little support is provided for the suggestion, integral to the CPSH, that spiritual experiences are benign per se. However, no overt measure of diagnostic status was taken during the data collection of the present study and so it is not possible to state whether the experiences reported by the sample have led to instances of recognisable psychopathology or significant reductions in psychological functioning.

No evidence in support of the feedback mechanisms proposed as a feature of the CPSH, was observed. This was due to the very limited data concerning frequency of spiritual experiences, made available by use of the Spiritual Experiences Questionnaire.

It is clear that the CPSH has received only limited support from the findings of the present study. However, there are many aspects of the CPSH that have not been completely addressed by the present study. Some aspects of the CPSH could not be adequately addressed due to methodological limitations and these will now be considered.

#### Limitations of the Quantitative Methodology

As previously suggested at several points throughout the present study, the use of cross-sectional data did not allow causal inferences to be made. The CPSH offers a process model of spiritual experiences and describes this process as sequential. While the hypothesis derived models employed addressed significant aspects of the CPSH, it was not possible to infer the extent to which each stage of the proposed model directly preceded the next. It was because of this that relationships between variables, chosen to represent significant aspects of the CPSH, was limited to descriptions of associative rather than causal.

The CPSH also suggests that spiritual experiences comprise a paradigm shift and that the new perspective gained directly addresses the psychological stress (or 'existential impasse') that precedes the experience. The findings of the present study support the suggestion that existential issues are significantly associated with spiritual experiences. However, the extent to which these experiences directly address antecedent stress was not facilitated by the use of the psychometric instruments employed.

The CPSH also suggests that the role of feedback (particularly social) is vital to the process of evaluation and validation of the individuals' spiritual experience, and that this process is pivotal in determining the impact such experiences may have. Examination of these issues was limited by the information concerning frequency, collected by use of the Spiritual Experiences Questionnaire, and lack of any information concerning attempts to validate a spiritual experience.

### Future Research

The present study has raised several issues that remain unresolved that should be addressed by future research. Some of these issues have been previously suggested during the broader discussion of the results and are dealt with here in a more complete manner. The confirmatory factor analyses demonstrated the validity of three dimensions of spiritual experience. However, the extent to which these dimensions reflect types of spiritual experience or, qualities that combine to determine the character of a spiritual experience remains unknown. Further investigation of this issue can proceed from an examination of actual spiritual experiences, and how such descriptions relate to profiles gained through use of the dimensional scales. The proposed investigation will require the use of both quantitative data and more focussed data from actual individual cases of spiritual experience. The collection of more personal data, are best facilitated by examination of personal narratives gained through use of a qualitative methodology.

Further exploration of the inter-relationship of dissociative and schizotypal traits and spiritual experiences processes is also required. Understanding of these relationships and the dimensional structures that may underlie their combined characteristics will provide a clearer picture about possible unitary processes such as 'transliminality' (Thalbourne and Delin 1995). Such investigations will require the use of large samples and higher order factor analytic techniques.

A similar examination of inter-relationships and dimensional structure is required for the variables of existential life attitude derived from the Life Attitude Profile (LAP: Reker & Wong 1981) and measures of depression. By employing higher order factor analyses and a more sensitive measure of depression, it becomes possible to comment more upon the dimensional inter-relationships that may exist between these two theoretically related aspects of psychological well-being. It is important to clarify such relationships and the ambiguous meaning of some of the life attitude dimensions, if similarly combined indices of well-being are to be utilised for future research.

The present study employed cross-sectional data and attempted to construct models which most closely approximated aspects of the Cognitive Problem Solving Hypothesis. Such data collected simultaneously and in the present does not allow the relationships between variables to be described as causal. Because of this the process aspects of the CPSH, and the extent to which each stage of the process precedes the next remain unknown. However, those relationships observed by the present findings suggest that it



is now important to gain longitudinal data for the variables employed so that causal relationships can be more accurately investigated.

An alternative approach to the investigation of the temporal and process aspects of the CPSH is examination of individual accounts of actual spiritual experience. By examining personal narratives of spiritual experiences, and the context in which they occurred, the temporal nature of spiritual experiences is made more amenable to observation.

The employment of qualitative methods for the exploration of spiritual experiences has already been suggested, above, in connection with two issues. The first is the issue of whether spiritual experiences occur as distinct types reflected by their tri-dimensional nature, or more as combinations of their tri-dimensional qualities. The second issue is suggested by the CPSH, which provides a temporal, process model of spiritual experiences. This aspect of the CPSH could be examined by longitudinal quantitative data or, as alternatively suggested by use of individual narratives about actual spiritual experiences. There are a number of further issues for further research that require or could be facilitated by the use of a qualitative method.

The quantitative study, described here, observed a number of significant relationships between existential issues (and life attitude), spiritual experiences and depression. While these relationships have offered support for certain aspects of the CPSH, the nature of psychological stresses that may precede spiritual experiences is unknown. Not only the extent to which such stress temporally precedes spiritual experiences, as described above,

but also the character and nature of such stress can be observed by use of personal narratives. Employment of personal narratives would also allow the presence of existential themes to be observed, should they be present, as suggested by the CPSH.

The CPSH suggests that spiritual experiences address the psychological stresses that precede their occurrence. Investigation of the extent to which spiritual experiences address, and provide resolution for, the antecedent stresses is integral to assessment of the Cognitive Problem Solving Hypothesis. The findings of the quantitative study, described above, raise the possibility that spiritual experiences may provide less of a cognitive solution and function more as an intermittent 'manic defence' against an underlying depression. This issue can be further explored by examining individual narratives of actual spiritual experience and observing which of these alternatives is most readily described.

Due to the emphasis upon quantitative variables the present study failed to allow a full investigation of the validation and subsequent feedback processes which comprise the final stage of the Cognitive Problem Solving Hypothesis. The fourth and final stage of the CPSH suggested to follow the occurrence of a spiritual experience, comprises attempts at validating the experience. It is also suggested that at this stage spiritual experiences may be described as providing a resolution to antecedent psychological stress. It is suggested (Jackson 1991) that if the experience provides resolution for psychological stress the experience is less likely to occur again and so the frequency of such is reduced by a process of negative feedback. If however the experience offers no

resolution or exacerbates psychological stress, a positive feedback mechanism may prompt the experience to occur more frequently as repeated attempts at resolution. The present study did not collect adequate data for an analysis of the relationship between frequency of spiritual experience and indices of psychological well-being. While the issue of frequency could be investigated using a quantitative methodology, the proposed inter-relationship with processes of validation suggests that a more complete investigation will require the use of more narrative data and a qualitative method.

Personal understanding of a spiritual experience and its meaning, may have an important part to play in the impact that such experiences may have and the function they might serve. An examination of the way in which people seek to understand, validate and evaluate spiritual experiences requires a deeper approach to individual experiences and the context in which they occur. A qualitative methodology is necessitated for such an examination, and this method shall be adopted for the following study.

## Chapter 4

### A Qualitative Examination of the Personal Narratives for Individuals Reporting Spiritual Experiences

The present research has adopted a broad definition, (previously employed by Jackson 1991), of spiritual experiences as; moments of profound personal meaning, occurring in an altered state of consciousness and comprising psychotic-like phenomenology, but which do not lead to psychiatric intervention. The Cognitive Problem Solving Hypothesis (CPSH: Jackson 1991; Jackson & Fulford 1997) is a four-stage descriptive model of spiritual experiences. The model attempts to explain the course of spiritual experiences.

The quantitative study examined three hypotheses derived from the CPSH. Some aspects of the model proposed by the CPSH were not, or only partially, examined. The discussion highlighted the need for the use of narrative data and a qualitative method for the examination of several aspects of the CPSH and each of these shall now be described.

The quantitative study raised issues regarding the empirical nature of spiritual experiences. Statistical evidence suggests the existence of three dimensions of spiritual experience which have been labelled Numinous, Mystical and Evil / panic. However, the issue of whether these dimensions represent distinct *types* of, or *qualities* within a more unified category of experience, remains unresolved. This issue will be further explored

by examining a selection of personal accounts of actual spiritual experiences. In this way it might become possible to assess the ways in which the dimensional qualities combine or whether distinct types of spiritual experience emerge. The selection of individuals describing actual cases of spiritual experience, on the basis of information acquired using the Spiritual Experience Questionnaire (SEQ; Jackson 1991) will provide a further test of the criterion validity of this instrument.

The quantitative study found that existential issues of meaning and purpose in life are significantly associated with scale scores for spiritual experience. This finding provided support for the proposal of the CPSH that existential issues, characteristic of an antecedent impasse, are addressed by spiritual experiences. This finding will be further explored by examining the antecedent conditions and wider personal context in which spiritual experiences occur for a sample of selected cases. Such an examination can attain greater validity by allowing individuals to describe their experiences using idioms of their own choosing. In this way the extent to which existential issues are spontaneously described as a characteristic of antecedent conditions can be more accurately assessed. This investigation necessitates the employment of a qualitative methodology.

The quantitative study found that both Mystical and Evil / panic dimensions of spiritual experience were significantly associated with elevated scale scores for the symptoms of current depression. The Numinous dimension of spiritual experience displayed no significant association with the same measure. These findings did not support the proposal of the CPSH that spiritual experiences provide resolution for antecedent

stresses. Instead, these findings suggest that spiritual experiences may serve to provide a superficial and intermittent relief from the painful feelings of an unremitting depression. This possible function is paralleled by that described for the mania, or high, phase of bipolar affective disorder which has recently been termed the 'manic defence' (Lyon et al 1999). This issue will be further explored by examining actual accounts for evidence concerning the extent to which, as the CPSH proposes, that spiritual experiences directly address antecedent stresses.

During the quantitative analyses scale scores for both current depression and dimensions of existential life attitude were employed as outcome variables. This method was employed so that the impact of previous spiritual experiences upon current psychology could be assessed. However, the CPSH is a process model that suggests that it is the antecedent stresses that are typified by existential issues. Because of this the quantitative study was unable to assess the validity of the four-stage model proposed by the CPSH. The employment of personal narratives of actual spiritual experiences will facilitate a further exploration of the proposed order of events proposed by the CPSH.

The CPSH proposes that following a spiritual experience the individual will attempt to validate their experience and test out the applicability of cognitive solutions that have been presented. It has previously been suggested (Jackson 1991; Jackson and Fulford 1997) that this process of validation is crucial in determining the outcome of a spiritual experience and effects upon psychological well-being. It is suggested that the process of validation is conducted socially and that evaluation of a spiritual experience is partly, but

crucially, determined by social feedback. Evaluation of a spiritual experience may ultimately determine the success of the experience to generate useful cognitive solutions and resolutions for antecedent stresses. The CPSH proposes that successful resolution reduces the frequency of future spiritual experiences via a process of negative feedback, while less successful resolution may prompt repeated experiences via a positive feedback mechanism. The quantitative study did not allow examination of the validation or feedback processes proposed by the CPSH and will be explored, by the present study, using personal narratives and qualitative method.

Examination of the issues described above will provide a further exploration of several aspects of the model of spiritual experiences proposed by the Cognitive Problem Solving Hypothesis. The present examination of these issues will be best facilitated by use of personal narratives and a qualitative method of analysis. Taken together, examination of these issues and employment of appropriate analytical techniques will allow a more complete assessment of the personal impact of spiritual experiences upon the life of the person.

From the issues described it is possible to construct some loose hypotheses that will be employed to inform the initial approach towards the qualitative data, and these are detailed overleaf. A further aim of the present study is to assess the validity of the information obtained through employment of the Spiritual Experiences Questionnaire (SEQ: Jackson 1991) and subsequently employed in the process of sample selection. Verification of the SEQ in this respect will allow assessment of the criterion validity of

this instrument and constitute a valuable ‘triangulation’ between the psychometrically gained data and the actual cases reported during the present study. Following a description of the methods of selection and analysis this issue will be addressed as the first aspect of the results.

The hypotheses (detailed following chapter 1, pp 50-51) have been designed to be as specific as possible. While every attempt will be made to reduce the overlap of topics and themes arising, some may still occur. For some of these hypotheses it is envisaged that fuller investigation will necessitate some overlap, as themes and experience requiring investigation will also impact on other related themes and domains of experience. This reciprocity is also a product of the sequential nature of the model of spiritual experiences offered by the Cognitive Problem Solving Hypothesis.

## Method

### Sample Selection

Requisite for the proposed qualitative study is a sample of individuals reporting spiritual experiences comprising empirical examples of spiritual experience as they occur naturally and personally. Such examples are best provided by cases where quantitative estimates upon the dimensional scales for spiritual experience are greatest. Employment of such cases will enhance the validity of an examination of the cognitive problem-



solving hypothesis, which suggests that spiritual experiences are benign and serve a stress resolving function.

The sample for the qualitative study was selected on the basis of polythetic criteria. The dimensional scales from the Spiritual Experience Questionnaire (section C) (SEQ: Jackson 1991) were employed for the individual quantification / proto-typicality of spiritual experiences. At the time of selection it was not known that the dimensional scales for the measurement of spiritual experience would become modified by the process of confirmatory factor analysis, and so for the sake of expediency the original scales were employed. Quantitative data was not exclusively employed in the selection of the sample. Section A of the SEQ also allowed individuals, in response to the Hardy question, the opportunity to describe a spiritual experience in their own words. Where such an experience was described this information was included in the selection procedure. The accounts provided by individuals were independently examined and earmarked on the basis of their falling within the broad definition of spiritual experience adopted for the present research. Where an individual achieved high scores upon quantitative indices and qualitatively described an interesting proto-typically spiritual experience they were selected for participation.

### Quantitative Selection

For each of the seven individuals selected to participate Z scores, representing the position of their scale score within the sample distribution, were calculated using the SEQ

(section C) dimensional scales in both original and modified formats. These SEQ profiles, presented below, allow for a comparison of the position within the sample distribution of each individual using each scale format. Where an individuals position within the distribution differs on the basis of scale format, the comparison available will allow these effects (any potential selection bias) to be observed.

Table 27: Z-scores for each interview participant upon the dimensional scales of spiritual experience (SEQ: Section C) as employed by previous research and selection of the interview participants of the present study, and as modified by confirmatory factor analysis.

|        | MYSXMJ | NUMXMJ | EVILMJ | MYSXPP | NUMXPP | EVIL/panic |
|--------|--------|--------|--------|--------|--------|------------|
| Graham | 1.53   | 1.54   | -.68   | 1.51   | 1.58   | -.71       |
| Olwyn  | 1.53   | 1.30   | -.68   | 1.51   | 1.58   | -.71       |
| Jenny  | -.11   | 1.07   | -.91   | -.14   | 1.20   | -.71       |
| Adam   | .92    | 1.30   | -.68   | .47    | .82    | -.71       |
| Barry  | -1.23  | 1.30   | .68    | -1.18  | .44    | 1.58       |
| Anne   | 1.33   | 1.30   | -.45   | 1.30   | .82    | -.71       |
| Vicky  | .71    | 1.54   | -.68   | .68    | 1.96   | -.25       |

Table 27, above, allows a comparison between the relative position of each participant, within the distribution of scores for scales as employed for selection for the present study (and as employed by previous research: Jackson 1991), and on the basis of the scale structure subsequently elucidated by confirmatory factor analysis. By comparing these

profiles for each individual selected for participation in this interview study, it can be observed that there is no consistent pattern of change for their relative position within the distribution of scale scores. While Anne's profile, for example, has a greater emphasis upon the Numinous aspects of her experience when measured using the original format, Adam's profile emphasises Mystical aspects. Generally it can be observed that little substantial change occurs on the basis of the different scale formats employed. However, one striking difference is the much greater emphasis given to the evil aspects of Barry's experience when the modified scale format is employed (EVILMJ vs EVIL /panic). It will be interesting to compare this finding with Barry's experiences, which will be elaborated upon throughout his interview. Such a comparison will allow an assessment of the degree to which the scales, modified by confirmatory factor analysis, *more* accurately represent the empirical reality of the individual's spiritual experience.

By observing the relative emphases of each individuals spiritual experience it is also possible to comment on an issue raised during the quantitative study, and here comprising hypothesis 0, namely whether the occurrence of quantitatively measured dimensional aspects of spiritual experiences accurately reflect their occurrence (and co-occurrence) in nature, as observed within individual cases. During the discussion of the quantitative results this issue was framed as the question of whether the dimensions of spiritual experience should be regarded as *qualities* of an encompassing "spiritual experience" or whether each dimensions should be regarded as a *type* of spiritual experience.

Hypothesis 0: Individual profiles may reflect the three dimensions of spiritual experiences (numinous, mystical, evil) as distinct types or as qualities within a broader heterogeneous category of spiritual experience.

The positively directed correlation between scales scores for the Numinous (NUMX) and Mystical (MYSX) dimensions of spiritual experience suggested their co-occurrence and this is lent support by the idiographic information provided in table 1. For those individuals scoring higher upon the scale for Mystical experience (MYSX) there is also a tendency to score higher upon the scale score for Numinous experience (NUMX). This finding suggests that the dimensions of spiritual experience are most accurately regarded as *qualities* within the more general category of spiritual experience. If these qualities are to be taken as indicative of *types* of spiritual experience it would appear that the most commonly occurring is a Mystical-Numinous type which is reflected by the co-occurrence of these two qualities of spiritual experience.

However, while the Mystical-Numinous qualities may commonly co-occur and allow for a type of spiritual experience to be classified, this tendency does not reflect all such cases that might be reported. Barry's profile suggests the emphasis of both Numinous (NUMX) and anxiety (EVIL /panic) qualities of spiritual experience, and the relative absence of Mystical (MYSX) qualities. The possibility of an individual profile such as Barry's is not suggested by the quantitative analyses, which found no correlative association between the Numinous and Evil /panic dimensions of spiritual experience.

This finding suggests the importance of taking an individualistic perspective of a persons spiritual experience profile and further supports viewing the dimensions of spiritual experience as qualities within spiritual experience, which through emphasis of different qualities, more accurately reflect the over-all quality of the individual's experience.

#### Qualitative Selection: Long Hand Responses

Individuals were selected to participate in study two on the basis of the quantitative information, described above, and the qualitative data provided in their long hand responses to question A6 of the Spiritual Experiences Questionnaire. Where an individual responded affirmatively to the Hardy Question (SEQ: A5), they were invited to provide an account of such an (spiritual) experience. Each of these accounts was independently assessed on the agreement between the experiences described and the definition of spiritual experiences employed for the present study.

On the basis of both quantitative and qualitative selection criteria a group of 11 individuals were invited to participate in the interview study. Nine of those approached attended for interview while two did not respond to the invitation. It was initially envisaged that a further study would examine / verify the personal narratives of spiritual experience by interviewing a socially significant other, nominated by the interviewee (spiritual experient). However, due to the limitations of time and space this study is not presented here. Only seven of those completing interview about their spiritual experiences were able to nominate a significant social other whom subsequently attended

for interview. For this reason the number of interviews, comprising the final sample, for whom interviews were transcribed, was seven.

### The Interview

The interview schedule employed for the present study (see appendix 8) was semi-structured. A degree of structure was required as there are a number of aspects of the case histories in which particular interest will be shown and these are in part determined by the hypotheses described above. The interview was constructed to focus upon their spiritual experience(s) and any changes that may have occurred in the individual's life or perspectives as a result. The interview can be divided into five broad areas and seeks information concerning the individual's experience of; their present circumstances; their childhood and background; the antecedents to and character of their spiritual experiences; their response to spiritual experience(s) and any changes which they feel may have occurred as a result, and; the extent to which they have communicated with other people about their spiritual experiences and the role this may have played in their understanding and interpretation of their experience.

The employment of this semi-structured interview allowed a sufficient focus upon those aspects requiring direct examination as implicated by the cognitive problem solving hypothesis, while providing enough open-endedness to facilitate exploration of other salient themes which might arise.

## Qualitative Method

There are a number of general considerations concerning qualitative methodology that have implications for the choice of specific methods of qualitative analysis. Recently a much greater interest has been taken in the standards required for reliable and valid exploration of psychological phenomena. This interest has culminated in the development of guidelines (Elliot, Fischer and Rennie 2000), which aim at the generation of qualitative research that allows the reliability and validity of findings to be openly assessed. It is however recognised that such guidelines must stop short of demanding complete uniformity of method, which would ultimately stifle creativity. These guidelines suggest the importance of:

1. owning ones perspective and stating the researcher's personal position with regard the object or event under examination;
2. situating the sample relative to the general population which serves to aid the reader in judging the range of people and situations to which the findings may be relevant;
3. the use of examples that allow appraisal of the data and the researchers interpretation;
4. providing credibility checks such as verification of an identified theme amongst the data, through checking that such a theme can be located in the data obtained from individuals across the sample, and;
5. where possible and relevant, employing a process of 'triangulation' which employs useful sources of data external to the primary data source, that may also serve to further elucidate the veracity of identified themes.

In considering the most appropriate qualitative method for the proposed study it is important to keep in mind the rationale for the study, described above. There are several qualitative methods available, which differ from each other with regards theoretical perspective and methods of collecting and analysis of data. Discourse Analysis (DA ; e.g. Potter and Wetherall 1987), as generally conceived of in contemporary psychology is sceptical of the possibility of mapping verbal reports onto underlying cognitions. Rather, it regards verbal reports as behaviours in their own right, which then become the focus of analysis. The rationale for the proposed study has as a central aim the exploration of cognitions such as perceptions, attitudes, beliefs, and personal meaning of the spiritual experience. Because of this disparity between the theoretical perspective of DA and the aims of the proposed study, with regards the status of cognition, this method of analysis is considered inappropriate.

Grounded Theory techniques of qualitative analysis (Strauss and Corbin 1990), are more appropriate with regards the status of cognition as this perspective does allow that qualitative data will express issues of personal meaning. This theoretical perspective suggests that the issues and hypotheses under examination should be allowed to rise from, and be 'grounded' in, the data as it is generated. This rationale is designed to eliminate assumption and presupposition from the analysis and is therefore the most exploratory of all qualitative methodologies. Although such an exploratory methodology has many advantages it requires that the interviews being conducted evolve, so that at each stage of the data collection the issues under examination are those that have been generated in previous stages. However, this methodology is not appropriate for the



proposed study of spiritual experiences, as we already have preconceptions expressed as hypotheses, which we aim to investigate. For these reasons a qualitative methodology must be chosen which allows that discourse and verbal utterances will aid our understanding of the underlying cognitions. Further, the chosen method must allow us to examine our preconceptions that have been formulated into hypotheses.

A qualitative methodology that satisfies both of these main requirements is Interpretative Phenomenological Analysis. (IPA: Smith 1996). IPA is a more recently developed method of conducting qualitative research. This method aims at understanding the personal perception of an event or object and is thus phenomenological. Unlike Discourse Analysis, IPA *is* concerned with cognitions and attempts to gain an understanding of what a person believes or thinks about an object or event. it is conceded (Smith 1996) that the persons thoughts and beliefs are not transparently available through interview data as access depends upon, and is complicated by, the researchers own conceptions of the topic being explored. However, unlike Grounded Theory approaches IPA does not attempt to eliminate such preconceptions but rather considers their inclusion essential for the interpretative understanding of the person's perceptions, attitudes and beliefs. For this reason Interpretative Phenomenological Analysis is employed to represent these facets of the approach.

### Conducting an Interpretative Phenomenological Analysis

IPA as a qualitative method of analysis incorporates many of the processes outlined in the general guidelines for good qualitative practice (Elliot et al 2000) described above. IPA is an iterative method, which through successive interactions between the analyst and text allows identification of themes amongst the responses of individuals forming the sample. Such a procedure will be employed and will allow credibility checks and assessment of the consistency of themes across the sample.

The data will be approached on the basis of the hypotheses and questions previously outlined. This approach will not only allow the relevance of the themes provided to be clarified, but will also provide a context and framework for the understanding of the examples employed.

Further background context will also be provided at the beginning of the analysis by the description of each individual as a brief case vignette. By reference to the overall narrative of the vignettes the reader will be able to gain a measure of the interpretative Validity made by the researcher.

The formal preconceptions held, regarding the topic of the present study, can be regarded as the hypotheses detailed above. However, both IPA (Smith 1996) and general

guidelines (Elliot et al 2000) clarify the importance of the owning of ones own perspective. It thus becomes necessary for the researcher to state their personal position regarding the phenomenon of spiritual experiences presently under investigation. For this reason the final stage of describing the method of analysis can be viewed as the first stage of describing the results of the analysis. This stage comprises a brief statement, regarding the phenomenon of spiritual experiences, by the individual common to the consideration of all other cases contained within the sample.

#### The Researcher: My Personal Position

I am a white male of 28 years. I was lead by my interests in different religious perspectives, (including Wicca and other magical traditions), to an informal study of philosophy. These interests culminated in my studying for a degree in psychology and a persistent interest in altered states of consciousness and paranormal phenomena. During the course of my studies my interests became refined and resulted in my conducting my Masters research on the topic of religiosity and psychological well-being. At that time I was particularly interested in the perspectives of existentialism and how individuals find a meaning and purpose for their lives.

During the years between my mid teens and early twenties I had several, what I would term to be, spiritual experiences. These have varied in character and impact. During this period of my life I regarded these experiences as central to my identity and valued them highly.

Since that period of my life I have not had experiences that I regard as comparable. Almost paradoxically I do not regard the relative cessation of such experiences as a loss of any kind. Although these experiences were very important to me at the time, they seem to have co-occurred with a period of significant transitional stress. However, my spiritual experiences have left an enduring belief in the inter-connectedness of all things and perspective of living as ultimately being a spiritual practice. Hindsight allows me insights, concerning the personal context in which my experiences occurred, that were not available at the time of these experiences and which have been inevitably influenced by the present academic study of such phenomena. Indeed it must also be made clear that I am approaching the present study with a model (The Cognitive Problem Solving Hypothesis) proposed for the spiritual experiences, which is a focus of the current research, and must also be regarded as an aspect of my *a priori* assumptions. I hope that my explicit and reflexive recognition of the changing process of interpreting my own spiritual experiences will allow me to approach the data with as much an open mind as possible.

#### Format of presentation

The following analysis will begin by presenting summary vignettes for each individual participating in the interviews. These vignettes are relatively complete and are presented as a part of the data. In so doing the reader will be provided with a more complete context for points rising, and statements made, by the individual. The analysis will then focus upon those domains of the individual's experience that have been detailed as

hypotheses. The vignettes comprise an overview description of the individual's narrative while the hypothesis-based analyses examine themes across the group of interview participants. By allowing the reader greater access to the data in the form of vignettes, over-reliance upon the author's interpretation of the interview participant's descriptions will be reduced. In this way the interpretative process will be more transparent, amenable to observation, and will enhance the reliability of the analytical method in line with recent guidelines for conducting qualitative research (Elliot et al 2000).

#### The Sample's Narrative Descriptions: The Case Vignettes

##### Graham

Graham is a sixty year old man. He is divorced, has a daughter and lives with a female partner and has done so for twenty years. He is retired (and self-supporting) and devotes a large part of each day to meditation. He provides spiritual healing on a voluntary basis. He spent his childhood with his mother, father and younger brother. He describes the family as "relatively close" but states that he was closest to his father. His parents are both deceased.

His father was interested in Theosophy and although Graham found some of this material stimulating he did not adopt the theosophical belief system. He had no religious beliefs in childhood. He found school very difficult to cope with and describes himself as not being very academically minded. He did however enjoy school from a social perspective

and valued the company of his peers. While growing up he describes himself as having “no direction”. It was during childhood that Graham had his first spiritual experience. He was still of an age where he was sleeping in a cot and vividly remembers being approached by a dwarf. He describes feeling very afraid in the company of this being and how he blew on this creature so as to deter it from entering the cot whereupon the dwarf slapped him in the face. His resultant distress raised the alarm and brought the attention of his mother.

After leaving school he joined the army and saw active duty. He describes this period of his life as extremely stressful due to long shifts of duty and the constant threat of death, which was a concern of everyone around him at the time. He says “we were only young guys and we did not want to die”. It was during this period in his life that he describes having had the most profound of all his spiritual experiences. While hospitalised with a potentially fatal illness, drifting in and out of consciousness he had a near death experience. He describes leaving his body and floating towards the ceiling where he was able to look down on his body. He was aware of a looming luminescence above and behind him. He describes realising that ...”God! I’m dying” and thinking that “this is terrific!”. As he attempted to turn and face the light he heard a voice say “sorry Graham it is not time yet”. He describes the whole experience as peaceful and liberating. After returning to his body he remembers regaining consciousness and the sound of a large fan above him. At first he describes the experience as being only as salient as “a very vivid dream”. It was sometime afterwards that through talking about the experience he realised he had had an NDE.

He left the army a couple of years later and took up work as an apprentice joiner. It was while working that he experienced “a complete nervous breakdown”, for which he was hospitalised. Although he is unaware of any formal diagnostic label given him, he describes the symptoms as comprising a high degree of cognitive disorganization (“I just couldn’t get my head together, it was all chaos”) and visual hallucinations. He describes his recovery as caused by his accidentally stumbling upon a ward of lobotomised patients and feeling an urgent desire “to get fucking out of here!” He describes his recovery as being rapid from this point.

In his thirties Graham joined a Buddhist order that was setting up a new centre. He was at this time going through divorce proceedings. It was through the Buddhist centre that he met his present partner, who was a meditation teacher at the centre. Graham describes his intention, in joining the Buddhist order, as “to become enlightened”. Soon after joining the Buddhist order, he went on a meditation retreat, which he describes as being very intense and concentrated, with many hours each day devoted to meditation. During this time he describes experiencing the same phenomenology as that which occurred during his breakdown. On this occasion however, he spoke to other members of the Buddhist order who told him that his experiences were normal and that the strange things he was experiencing were a normal part of reality that had become exposed through practicing meditation. The experiences soon calmed down. Since this time spiritual experiences have been a common element in Graham’s life. Graham describes one such experience as typical of many that he has had. While on a meditation retreat, he experienced a profound sense of unity with all reality. As he was walking across a frosty

field between the meditation hall and the dining hall he suddenly became aware that “I am the frost on the grass and I am the moon.”

Graham describes being less in control of the first (NDE) spiritual experience than the latter experiences. He attributes this increased control to meditation and being focused upon attaining such experiences.

In describing the effects of such experiences upon his life, he states that he has no fear of death due to his first (NDE) experience and that the latter experiences have helped him live more in the present with less “digging in the past or pre-planning and just letting things happen”. Although he says that some of the experiences have been “difficult” they have always had a “positive solution”. The experiences have not changed his beliefs. In fact he says that he has no clear-cut beliefs, but that the experiences have helped him understand how things operate. The experiences have not changed his aims or goals since he joined the Buddhist order, yet he feels that he has “100% more meaning and purpose in life”. He attributes his spiritual experience to a deep inner desire to connect with “something deep down, that I have touched before and wish to touch again”. This he feels is facilitated by his practice of meditation. He also feels that he has gained insight into his personal nature, which he never had before. He also states that he is able to be more open with people of a “like mind” and that this has improved the quality of contact that he has with others. However, simultaneously he says that the experiences have made him less tolerant of “emotionally needy” people and states that “I used to



tolerate people carrying a rucksack full of rubbish but now I say don't lay your rubbish on me!"

Graham has no fear of relating his experiences with other people who show an interest in such matters. However he says that he would never impose his experiences on anyone and that he prefers to let others raise the topic before he shares his experiences.

He says that the well-being of people around him is very important and gave his healing work as an example of this care, which is ongoing. He says that he used to be on his guard with people but that this has changed in the last two years. He explains this as being due to having made a clearer connection with cosmic energies.

### Olwyn

Olwyn is a forty nine year old woman who lives alone. She is divorced from the father of her daughter who is now grown up. Olwyn does not work and is self-supporting. She typically spends her day involved in writing about spiritual topics. She also writes short stories and is hoping to complete a number of writing projects that have been begun but forgotten. She is also quite socially active and although her home could easily be described as geographically remote she spends time helping with tasks around a local stables, and receives visitors to her home on a daily basis. She feels that "we have a community in this small area". However, she also feels no obligation to be nice to people

just for the sake of it and says, “I can just be myself really and if they don’t like it they can lump it. So I haven’t got many friends because they don’t always like it (laughter)”.

Olwyn has no affiliation with a religious group outside of the spiritual healing group with whom she meets on a weekly basis. She also points out that, although she is aware that amongst the group there are members of more orthodox religions such as Christians and Buddhists, the healing group has no specific doctrine apart from what she describes as a “vague spiritual overview”. Although she says that “the wonderful thing about my life is that I do not have to distinguish between what I regard as work or leisure”, she regards her healing work and her writing projects as work in itself. Olwyn says that since her daughter left home she experienced “a period of difficulty”. She attributes this to “all that freedom and not having to do things”. She describes her present life as difficult at times due to such feelings and the physical symptoms of menopause and is being prescribed Prozac to cope with the subsequent depression.

Olwyn was the last of four children who were brought up by her mother and father. The brother closest in age to Olwyn, died while still a child. Her parents are both dead. Her parents were independently wealthy and neither “had to earn a living”. Her father was an academic. “He was brilliant in several fields and published several books”. Her mother was highly supportive of charities. They were both politically interested. She could not describe them as a close family and says that “they were there if we ever needed them, but if things were apparently o.k., we were left very much to get on with it”.

She attended a boarding school but did not get too involved socially with her peers, “I was the one who walked off by myself, out of bounds, so that I could be away from everybody.” She says that she had one all encompassing aim while growing up which she describes as “wanting to save the world basically”. She says that it is for this reason that she first studied agriculture and then teaching. Her last job was a support worker for “maladjusted teenage boys”.

She was very specific in giving 1975 as the time when she first had a spiritual experience. She describes this as a very difficult time in her life. She was living with the father of her daughter who was becoming increasingly abusive both physically and emotionally. She says that “something in me finally flipped and I couldn’t manage to cope anymore with anything, my rational mind just fell apart”. The husband sent for a doctor who recommended a period of hospitalised care. Olwyn objected to this and instead went to stay with family. It was during this period of time that she had her first spiritual experience. She says “I went off my head. Really I went quite mad, in some senses detached from normal reality, and in that time I had experiences of unity with everything, starting with the natural world and expanding out from there. That was yeah, both mad and the most intense and real thing ever”. She describes the experience as occurring in an area of woodland in which she felt “in touch and a part of the entire ecosystem”, which was not limited to the wood but expanded “to the whole world. We are all part of this great unity and we are all so inter related, deeply inter related”. She goes on to say that “it was totally mind blowing, and no drugs involved, just a touch of insanity”. She says that this experience helped her realise that she was a part of something “so much

bigger” that she “didn’t have to put up with people like that bastard (her husband) anymore. I realised that I could just live in the world and be anything or anywhere on it”. She goes on to say that “It also took away the fear of unhappiness, as I was extremely unhappy at the time, and yet uplifted and blessed at the same time. So in later times when I have felt life difficult I have known I can cope.”

Olwyn also describes very similar experiences after the death of her parents. In particular she describes how the death of her mother allowed her to get more deeply involved with thinking about the whole area of spirituality. This, she says, had always been a large part of her mother’s life and that she had rejected it on the basis of “I didn’t want to be like her”. However, she now realises that she is like her and has been more able to reflect upon this area of her life.

When Olwyn has had experiences such as these she describes their immediate effect as “ecstatic” and “making me nicer to other people”. She says that in the long term they have affected her “general comprehension of life”. She says that she has always wondered about her life’s’ purpose and says that in the absence of a clear-cut solution, the spiritual experiences have allowed her to be more accepting of this state. “I am waiting for it but I am not looking for it. I don’t think it is something that you look for, a bit like love you know, it turns up doesn’t it”.

She does not know whether the experiences have changed her view of herself and says that she would have no way of knowing. She does say however that the experiences have

definitely changed her view of other people. She says that the experiences have made her “more forgiving and more intolerant (laughter)”. She says that she no longer feels “like a do-gooder” and that she no longer tolerates “emotionally needy people”. She says that she used to feel a duty to help such people, but feels this no more....”I refuse to go down their road”. More than any other aspect of her life, Olwyn feels that the spiritual experiences have changed her model of the universe. In particular she describes the change from having had a very mechanistic view of the universe to a model that allows a much more magical and spiritual angle.

Olwyn has shared her experiences with other people. In fact she stresses the importance of being able to do this, as it is in this way that we are able to understand the experiences more clearly and learn how to express them more cogently. She has shared them with her fellow members of the healing group with whom she is involved and beyond this with a select group of friends.....”after all it’s not something that you’d talk about with any old bod is it.”

When she has shared her experiences with others she feels that she is generally understood. The expression of such experiences she has found easier since taking a more direct interest in the subject through talking with others who have had similar experiences and reading books on and around this topic. In terms of the salience of these experiences for Olwyn, she describes them as “more important than most other things.” However, for her the most important things in life are “the beauty of nature, the beauty of life and landscape, animals, plants, rocks, mountains, the sea, people even.”

## Adam

Adam is a middle aged man who has been married to his wife for twenty-seven years. Together they have two teenage children. Of the last nineteen years Adam says “I have spent far too long unemployed”. He has had several short-term positions. He is “involved in a lot of church activities” and is involved in his local Christian community. He is also involved in the administration of local charities. In any spare time he can find, he enjoys spending time in natural surroundings. On some of these occasions he is accompanied by his wife.

Adam draws a sharp distinction between friends and contacts. Although he has many contacts he admits to having “very, very few close friends”, by which he means “someone that you can say anything to and still be accepted”. Adam says that his present level of life satisfaction at the moment is “pretty good”. However he also states that if he had been asked this question a few months ago he would have answered a lot less positively due to his on-going unemployment. The source of his sense of purpose at the moment is “without a doubt my Christian faith”.

Adam was raised in the Midlands where his family had a shop. His mother did not work after giving birth to Adam and his two brothers. He says that the family was “stable” but was “definitely not emotionally close”. He “can never remember being hugged by my father”. As Adam was sent to school out of town, he made no strong friendships apart from those established through his involvement with the scout movement. He admits that

“friendships don’t come easily”. He had no aims and goals while growing up and says that “it was in fact quite the reverse. No sense of purpose, no sense of direction”. After leaving school Adam remembers quite fancying the idea of driving with the Army for a living, as he “ wanted to copy some of the things my father did”. Although he did join the army he did not drive and instead joined the catering corps. He says that he immediately enjoyed the army life and says that he “liked the sense of purpose that comes with a structured life”. Once again he attributes this to his early home life and his fathers’ autocratic influence.

Although Adam had attended Sunday school as a child he had no spiritual experiences until he “discovered my Christian faith”. Life with the army had seen Adam drinking increasingly heavily until he came to a point where he recognised the symptoms of dependency upon alcohol. In a bid to cut down his drinking he sought solace in the camp chapel. Sitting in the chapel in near darkness one evening, he experienced “an overwhelming sense of peace which was incredible.” He says that on this first occasion, “I didn’t quite know what was going on.” and goes on to say that “it was so different to the ordinary business of living, it was marked”. Shortly after this experience, under the advice of an officer of superior rank and Christian persuasion, Adam decided “to give myself to Jesus”. Adams spiritual experiences have been frequent from that point forward. He says that “the more I became involved in Christian activity over the years, the more one becomes aware of the spiritual dimension of life”.

Adams' most recent spiritual experience involved being guided on a walk in the mountains by the "voice of the Lord". The experience lasted about two and a half hours during which time he was in contact with God. His immediate personal response was "Gob-smacked!" and "a little bit uneasy, a little bit mystified". Adam felt he was being taught under the direct tutorship of God and "treated the experience as a sermon".

He feels that the experiences serve to strengthen his relationship with God and gets very excited when relating them. Over the long term Adam has found that he "can get through the bad times, when you have little contact with God, by remembering the good times when God gets through to you when you didn't expect it". He also says that he feels "less of a distinction now, between spiritual life and the ordinary business of living".

Adam feels that he has gained "a greater understanding of myself" and has discovered "a sense of personal worth, personal Value", through his spiritual experiences. He says that his father took the attitude that no-one bar himself had any worth but feels that his "relationship with God serves to reinforce the message that as an individual I am worth something".

He says that he is more willing to share his experiences in a Christian context and may do this "many many times". He feels that "the re-iteration reinforces the worth of that experience for me." However, he is often careful with whom he shares such experiences as "when you become spiritually aware you become aware of peoples reactions" and is often gripped by the feeling that he may be "casting pearls before swine".



Adam feels that through his spiritual experiences he has become more able to relate to other people and more “aware of the global need for qualities like tolerance, love and compassion”. He says that he “would avoid causing agro unless it can not be avoided, as living at peace with others is far more important than that.”

When asked what for him constituted the most important thing in life, Adam answered by first of all saying “that I have loved my God”. He then went on to tell the parable of the prodigal son. He pointed out that for him the most salient aspect of the story was not the misdeeds of the son, nor the reaction of the brothers upon the sons’ return. But the fact that “as the son returned, the father ran towards him and cloaked him.” As Adam concluded he wept tears of “abject joy”.

### Jenny

Jenny is a woman in her early seventies. She is divorced and has two sons, from her marriage, who now live away from home. Jenny works for her local council and this keeps her very busy and involved in the local community. She has been a long-term fan of walking and has indulged fleetingly with watercolour painting. She is not a member of a religious group. Jenny describes her social life as “very good” and says that although she has a lot of friends “they are just friends....I never seem to get very involved with people, because the minute I do, I draw back again.” She attributes this to being “quite careful with myself and other people.” Jenny enjoys the odd drink but limits herself to “just the one”. She says that she feels fortunate in not needing anything to boost herself

up in that way. Although she has never felt the 'need' for recreational drug use, she says that she "wouldn't mind trying cannabis".

Jenny says that she used to have a long list of aims and goals but that now she just tries to work hard each day in her occupation and says that apart from this she has no aims at all. She feels that living without aims and goals "is more relaxing I think". She says that spending her life attempting to "sort out the problems other people have is enough of an aim" and that her present level of life satisfaction is "sometimes fantastic and sometimes rather frustrating" as some people seem to have a never ending cycle of problems which she attributes to "people not wanting to do anything for themselves".

Jenny was born to an affluent family who were members of the New Europe Group and the Atlantis Society. Her sister left home at quite an early age to attend a boarding school that focussed on the dramatic arts. The war forced the family to move from London to Wales where for a few years Jenny was educated at home by a governess. She says that she "was brought up by parents that we hardly ever saw.... so really we didn't have much love as children". She describes her father as being "really eccentric" and her mother as "a deep thinking, very remarkable person".

She attended a Steiner school for the last four or five years of her education and says that "they believed that everything in life has something spiritual about it, but they never really told us what it was. We were told that it was there but we were never allowed any of it. I never knew what I was meant to be grasping at, which possibly affected my whole

life.” She says that her time at the school was enjoyable, especially her involvement in the school sports of hockey and tennis. However, she states that she was a bit of a “loner” at this time in her life.

She describes the period of her life immediately after matriculation from the school, as “incredibly lonely”. She felt distanced from her peers by the nature of the “weird education” that she had received. She says that “ I couldn’t even open my mouth in those days”. She says that she “desperately wanted to be normal in those days”. Her loneliness lasted for about three years and was ended by her taking up caving and folk dancing which made her “feel more normal” and provided her with social contact. She says that she still “had no proper aim” at this time in her life.

Caving and her interests lead Jenny to becoming involved in the local mountaineering scene. She describes becoming “totally physical, not interested in anything spiritual” and her single ambition being to “marry a good rock climber, which I did.” She describes her marriage as very suppressive of her self and dominated by her husband. Jenny feels that she had sacrificed herself for the sake of her marriage and that when this collapsed “it just crushed my world.....crushed me absolutely” and sent her...”to the bottom of the abyss in pain”. “From there on life was a living nightmare for a while”.

Jenny describes being unable to sleep properly due to the stress she was experiencing and regularly spending the early hours of each morning sitting alone in the kitchen and “just weeping, weeping and weeping. It is all I could do”. On one such occasion “in the depths

of despair and weeping, and suddenly there was a sort of yellow light.....it wasn't in my head or in my body, and suddenly a voice said, "you are what you want to be and what you want to be is what you are"".

Although Jenny says that she did not know what to make of this experience it rekindled her interest in spirituality and life beyond her present situation. She describes feeling that on the basis of her experience she "could make something of herself from this". Indeed she goes on to say that "from then on things got better and better". She became a voracious reader of books concerned with self-help and spirituality. This period of her life she describes as "exciting". She became a member of a Buddhist order but after a few years of involvement became frustrated with them not practicing what they preached, particularly concerning compassion for others. Soon after she became involved in charity work and began, with the help of a social worker, a group for local single parents whose families had been affected by divorce. She says that her new occupations "were the beginning and the making of me" and that the experience had "been the starting point of being positive".

She says that the experience had been instrumental in changing her view of herself and "started me off being true to myself.....I was more worthwhile than I thought I was while I was married".

Jenny feels that her vocations as an aide to others experiencing distress was facilitated by her own experiences of deep emotional pain and has had several experiences of

“profound empathy” during which for example “for a split second I was this man suffering this terrible pain”. However, Jenny has little patience with those who are apathetic and might be “hooked on their aches and pains”.

Jenny has shared her experiences with a carefully selected number of other people, primarily with a close psychotherapist friend. However, she does not talk about it very often as “I don’t want to trivialise it”.

For Jenny the most important things in life at the moment are “just being me and living life from day to day being positive.”

### Barry

Barry is middle aged and lives with his wife and in close proximity to his daughter, in a large city. He works in a skilled manual profession. Barry loves music and was semi-professional for a while some years ago. His marriage brought an end to his early aspiration of “making it in the pop world” which Barry describes as a “drastic mistake”. He describes his present job as an economic necessity. He socialises only infrequently and this is usually with friends of his wife. Barry has very few friends of his own. Most of Barry’s contact with people occurs in the context of his over-riding interest in matters concerning UFOlogy and spiritualism. Indeed, Barry states that in the absence of other aims and goals in life, his desperate interest “to find out about life itself” is the sole source of purpose in his life.

Barry was brought up in the Midlands by his mother and father who had adopted him at birth. He says that he had many friends in childhood and that a few of these friendships endured into his late teens. However, he does use the curious phrase “plenty of friends.....no problems at all there”.

Barry had no religious or spiritual interests while he was growing up and says that it was “at a later stage in life I felt there was something missing and I was desperate to find out about life itself”.

Barrys first experience occurred when he was 16 / 17 years of age. He and a friend had been turned away from an overbooked snooker hall and were returning home across a recreation ground when they saw above them “there in the sky was an object about fifty or sixty foot in the sky”. He says that he and his friend “was absolutely petrified” and they ran home. Upon arrival they found that they had lost an hour of time that they could not account for. Strangely Barry says that after the event “I did not even tell my parents about it.....the following day I probably forgot all about it”.

During one of his more recent encounters while walking his dog, Barry received “prior information from some form of third party, an intelligence source of some description....that in three minutes from where I was I would see this craft”. After three minutes “I sat down on this bench and the craft appeared between the trees”. Barry says that the craft “was not easy for anybody else to see” and that he was “very taken aback”. He tried chasing the craft in his car and raced home to find that the craft had disappeared

from view. Barry was most impressed by the prior communication of the events that he witnessed and says that the communication “wasn’t actually a voice, it was more into the mind”. However, Barry states that he has regularly received information from a voice that communicates with him about “quite a few odd and funny things”. He provides an example when he was told that “white meat is o.k. but stay away from red meat because it is not too good for you”. Simultaneously Barry’s wife arrived home with some chicken sandwiches. There are many occasions where Barry describes synchronicities (meaningful coincidences) of which prior communication by voices or otherwise is an integral part.

Barry has also experienced contact with extra-terrestrial species, which he describes as occurring through the medium of clairvoyance. While in contact with such beings in their visiting craft he has been shown diagrams that he could not understand and he “couldn’t work out whether they were showing me different craft or star systems”.

Barry and his family have also, according to Barry, experienced quite extensive poltergeist phenomena during which both his wife and children had received “physical smacks” and had been “knocked about a bit”. This latter experience Barry attributes to the spirit of a young man who had committed suicide in the house. The events ceased after an exorcism conducted by people from the local spiritualist church. The involvement of the spiritualist church lead Barry to become a regular attendee at his local church, throughout which Barry reports more synchronicities and communications.

His experiences have changed Barry's view of himself. He feels "very isolated", that "it is difficult to talk to people" and that we are "sort of watched all the time". Barry finds that this "has an effect on you.....and plays on my mind".

Barry has attempted to share his experiences with quite a few different people, not all of whom display signs of having a similar interest. Barry feels that "although they are interested it is only a superficial interest." Barry feels that people without a genuine interest "are not opening themselves up to really what the hidden side of life is about". He doesn't know of "many people that have had the same experience and that's the problem" and feels that "these people are really missing out on something.....blinkerred runners on a race course".

Barry often experiences frustration with his lack of opportunity to talk about his experiences and finds it surprising "how narrow minded people will be and reject". He has become annoyed at some people who have "taken the mickey" and accused Barry of being under the influence of drugs at the time of his experiences. Barry has attended some conferences concerning UFOlogy and related topics but feels that many things discussed are too far off the topic to remain interesting.

Barry states that his experiences have made him "definitely less social". For Barry at present the most important thing in life is his continuing interest in UFOlogy and "perhaps to understand why we are here you know".



## Anne

Anne is a middle aged woman, divorced, and living with her grown up son. Her daughter is married and lives away from home. Anne works as a freelance journalist. Anne describes herself as someone who has “very high standards”.

Originally, Anne had begun training for a different profession and enjoys painting as a leisure pursuit. By far her greatest interest is in being with animals, most particularly horses. Anne describes her social life as “virtually non-existent” and attributes this to herself being “not a very sociable person and I never was”.

Anne says that “I do get depressed sometimes and always have done”. She feels that this is a part of her essential character and that this “inner dissatisfaction” is linked to her creativity and her vocation as a writer. The only time Anne feels “completely satisfied in the sense that I am no longer aware of myself, is when I am with animals or up a mountain, where your self becomes so insignificant, so unimportant that you are just perfectly happy”. She feels that these experiences act as a “safety valve, something instead of taking anti-depressants”.

Anne was brought up outside of Wales but always felt “in exile” as the Welsh heritage was emphasised strongly throughout her upbringing. She says that “we were one of those families visited by tragedy”. During the course of her fathers three marriages she experienced the sudden death of one of her half-brothers, a suicide (of her fathers second

wife), a divorce, marital separation and her own life long ill-health with arthritis which began in childhood. “In some respects it could have been a very damaging environment for us....it could be why we have grown up emotionally independent and cool”.

Anne says that family life was infused with “a very strong ethical and moral sense....you must always be aware of the implications of your actions for other people”. Such issues seemed emphasised for Anne through receiving a doll, via an aunt, from a child killed at the Belsen concentration camp and witnessing the mental decline of an uncle who had been a POW in Japan.

Anne always enjoyed more solitary pursuits as opposed to collaborative ones, but found satisfaction working with others if she took on an organisational role. “The children tell me I am a bit of a control freak and I may be actually”. The issue of control is also evident when Anne describes her reflecting upon death and feeling that she will take her own life if she becomes “too decrepit” as this would allow her to “call the shots to a certain extent”.

Anne states that she “unfortunately” had no aims or goals as she grew up. She has never “felt the need for organised religion”, but appreciated the atmosphere of churches. Anne reports no spiritual experiences from her childhood and draws a sharp distinction between spiritual and “psychic” experiences which she has experienced. These included regular experiences of a “ghost dog” and reporting seeing the ghost of a man who had committed suicide.

Anne's spiritual experiences she describes as "spooky". They are characterised by a profound appreciation of aesthetics, particularly of nature and animal life. She describes looking at a particular painting of a horse and experiencing "terrible anguish in the horses eyes". She also has an acute empathic perception of other people and says "this is unfortunate for some people because it means that they cannot hide things from you even if they wanted to". Anne feels that such abilities and experiences are potentially destructive as she finds it "virtually impossible to trust other people".

Anne feels that for such experiences to occur the person has to be "accessible and open to what is around you", which may be "more than you can see or hear". Anne speculates whether "you can generate these experiences simply by being aware of the fact that they are possible". She also feels that many other people are aware of these ways of knowing but "find it frightening, because you don't actually know where it is going to take you mentally". She adds that "I am a bit batty anyway, so it doesn't bother me".

Anne experiences this kind of awareness as more continuous rather than occurring as discrete episodes. She has never meditated in a formal sense but experiences "borderline meditation at times" and describes extreme absorption during which she may have "gone out to do my shopping and got back home without really being aware of it".

Anne describes her experiences as having made her "rather cynical and prevents me from trusting other people" as she feels she is "aware of what people are capable of". She feels

that she is “a bit weird” but her experiences have allowed her to be “more content to be a bit weird”.

Anne feels that her experiences “have certainly made me more considerate” towards other people. They have also given her a more holistic view of reality. The experiences have not changed Anne’s aims and goals in life as she “never had any anyway”, but now feels that “the very fact that one exists is a purpose in itself”.

Anne has not sought to share her experiences with anyone as she is “reluctant to talk in case people think you should be locked up”. She goes on to say also that such experiences “are so personal and transient that you can’t describe them anyway”. Anne feels that she is generally a “very private person.”.

For Anne the most important things in her life are her children and “to keep going as long as she can”.

### Vicky

Vicky is a middle aged woman and has a grown up son. Vicky is the youngest of five children and her parents are both deceased. She describes her present unemployment as a convenient rest and is employing the time to concern herself with her house, garden and catching up with old friends.

Vicky enjoys visiting sites of historical interest, museums and socialising. She is currently a member of “a Wiccan group...it is the old religion.” And goes on to explain, “We don’t use the term witchcraft very often, that is used by outsiders”. The group is structured hierarchically and Vicky’s position is one of high Priestess. Her group meets about once a week for most of the year.

Although the members of the Wiccan group have become friends, Vicky’s social life actively involves other people from outside this side of her life. Vicky Has used various recreational drugs, primarily in her youth, when she experimented with LSD, cannabis and amphetamine. However these days she “still smokes dope, but not as much”. She attributes her reduced drug use to her interest in Wicca and explains that “I stopped doing hallucinogenic drugs a couple of years into craft (Wicca) training because it did interfere”.

Vicky’s biggest aim in life, which remains stable, is to “have a job which keeps her interest is a big priority”, but which also provides her with a good level of financial security. This would allow Vicky “to give more time to Wicca”. However, in the short term her goals tend to change in accord with her circumstances and so “right at this moment it is to do up my house, that will last for another month or so.”

Vicky was raised in a small village community and says that “there weren’t many people I didn’t know”. She had friends from school and the local area. She also attended Sunday school but said that this experience “provided more questions than answers.....as

it didn't add up somehow". Vicky describes being a child and "wanting to know how the universe worked....how people worked....if there was a mystery there it needed to be penetrated". Vicky often experienced feeling that "life isn't just what you see".

While growing up Vicky describes wanting to experience other people and places and other ways of living and says that at the time "the excitement of living my life was paramount".

Talking of her earliest spiritual experiences, Vicky describes being impressed by synchronicities, and the magical quality associated with the increasing realisation of her inner life, "a realisation almost of my own power.....that you are more than your composite parts". Vicky remembers feeling "scared at some points...a sort of panic" whilst growing up, as she says "I didn't want to feel this hugeness of whatever it was". Vicky thought at times that "there must be something wrong with me because no-one else talked about experiences like this".

The spiritual experiences that Vicky describes occurred mainly within the context of her practice of Wicca. One of the most memorable occurred while she was "fairly inexperienced with rituals". She explained that Wicca is based upon polarity in nature and that while much emphasis is given to the feminine (Goddess worship), this is only possible through the inclusive recognition of the masculine character of nature. During invocations a senior member of a group will provide the spiritual space for the invoked entity to occupy. She describes a ritual that was intended to invoke the masculine

Godhead. Vicky says, “the invocation was building and building....he (the high priest) appeared as the Godhead and it completely blew my head off”. Vicky goes on to say, “it is more than just being a good actor, you do feel the force as well”.

Vicky describes this experience as beautiful and fearful and questions “why I didn’t run away I don’t know”. Vicky feels that the experience was very valuable as it consolidated her new interest in pursuing her training in Wicca and, by allowing her recognition of the masculine godhead, brought a balance to her view of nature. Vicky feels that “it is unfortunate that we have to revert to drug language to explain these things.” She goes on to say “but that is the nearest parallel that I can think of, that the shift in consciousness was like tripping, but it was real”.

During the experiences that Vicky describes she reports a distinct change in the atmosphere, shivers down the spine, peoples voices changing in character, feelings of oneness, harmony with nature, universal unity, total concentration and attributes this enhanced reality to “the force behind this manifestation of nature everywhere”. However, for Vicky “the biggest feeling is love...this tremendous feeling of love, that God has met you half way”.

Vicky has had many similar experiences while working in ritual and says that her experiences occur “mostly with other people”. At the time that her initial and highly memorable experience occurred, (described above), Vicky was living alone with her two year old son. She had left her husband but feels that “I had already gone through any

traumatic changes". She says that at that time she was using a variety of recreational drugs and was worried about their long term effects and the potential for becoming an "acid casualty". Vicky describes wanting "a philosophy to live by" and it was at this time she became involved in Wicca and says, "so in a way magic saved me as well".

Vicky also feels that her practicing Wicca has "pulled me through depression". She feels that through her practice "there has a been a wisdom gained so that when I am depressed, I feel like this now, but I won't forever."

Vicky feels that her experiences have "made me a better person" and that "the nurturing side of me has definitely increased" and attributes this to her "general way of looking behind things". She says that many people she knows involved in Wicca go on to practice healing arts or become counsellors and says that she wants "to pass on some of this compassion".

Vicky normally shares her experiences with other members of her Wiccan group but hardly ever with people outside of the group, she explains that "when things are taken out of context they are not understood you know". Vicky also describes a strong ethic of secrecy surrounding the methods employed to induce states like those she has experienced.

For Vicky the most important things in her life at the moment are "Wicca, my family and friends".



### Appropriateness of the sample and criterion validity of the selection method

The reports of naturally occurring spiritual experiences, described as cases above, display concordance with the broad definition of spiritual experiences adopted for the present research. These cases were selected on the basis of quantitative and qualitative information collected through use of the Spiritual Experiences Questionnaire (SEQ: Jackson 1991). This instrument has facilitated the selection of a representative sample of significant spiritual experiences from the contemporary population. This finding suggests that the criterion validity of this instrument is good and promotes its employment in future research concerning spiritual experiences.

### Hypothesis Based Analyses

Hypothesis 1: A period of psychological stress precedes the occurrence of spiritual experiences.

Graham describes his life, preceding his first spiritual experience (an NDE), as very stressful. Some years later he also experienced a “complete nervous breakdown” and although it is not clear what circumstances surrounded this episode, Graham describes experiencing similar phenomenology during and after intensive meditation. On this latter occasion Graham was involved in divorce proceedings with his first wife.

Olwyn was experiencing extreme stress and deterioration in ability to function due to the abusive relationship in which she was involved. As an alternative to hospitalisation, which was recommended, Olwyn elected to spend recuperative time with her family and it was during this period that her first significant spiritual experience occurred.

Jenny likewise describes the breakdown of a significant relationship as the circumstance that provided the backdrop to her first spiritual experience.

Adam describes the stress and concern about his perceived dependence upon alcohol as directly preceding his first significant spiritual experience.

Anne describes her spiritual experiences as less discrete and more a continuous awareness of other dimensions. However, she does describe the transcendent quality of being alone on a mountainside as “a safety valve, something instead of taking anti-depressants”.

Vicky describes her first significant spiritual experience occurring within the context of Wiccan ritual and although she describes the breakdown of her marriage as occurring in the same time frame, she feels that any trauma associated with these events had passed. Vicky does however describe wanting to find a “philosophy to live by” and it may be that this lack of coherence, as a property of recent and major change in life circumstances, may constitute a psychological stress.

Similarly, Barry does not describe a discrete episode or single identifiable event that he considers stressful as preceding his first UFO encounter. He does however describe an increasing sense of there being “something missing” in his life and this leading him to being “desperate to find out about life itself”. Feeling that there is “something missing” from one’s life or wanting to find “a philosophy to live by” might constitute a significant psychological stress. It was certainly significant enough to be remembered and delivered as a salient aspect of their personal histories in this context.

### Interpretation

The accounts suggest some variability in the extent to which psychological stress directly preceded the occurrence of spiritual experience. Overtly stressful circumstances preceded the spiritual experiences reported by Olwyn, Adam, Jenny and some of those reported by Graham. However, Anne, Barry and Vicky do not emphasise the significance of, or describe as overtly stressful, the circumstances antecedent to their spiritual experiences. Anne does describe the function of her spiritual experiences and moments of awareness as a “safety valve” and an alternative to “taking anti-depressants”. This attribution appears to imply that Anne’s experiences are directly involved in processes of affect regulation and in particular elevation of mood from a lower state. Although tenuous it is not impossible to suggest that lowered mood may constitute an intra-psychic stress. Alternatively, low mood might also be the result of stressful circumstances that are not perceived by Anne to be directly connected to the occurrence of her spiritual experiences. This latter suggestion seems appropriate for Vicky, who

suffered the breakdown of her marriage shortly before her first spiritual experience. Barry says that his life was “pretty good” at the time of his first UFO encounter and does not seem to recall experiencing any stressful circumstances at this time.

While overtly stressful circumstances preceded the spiritual experiences of four individuals interviewed, for the remaining three the role of stressful circumstances in the occurrence of spiritual experience is less clear.

Hypothesis 2: Antecedent psychological stresses become characterised by existential issues of meaning and purpose in personal existence.

The character of psychological stress preceding the spiritual experiences of the present sample is varied. By far the most commonly cited experience was that of a breakdown of a significant personal relationship. Jenny, Olwyn and to a lesser extent Graham and Vicky all describe significant spiritual experiences within the same time frame as stress felt due to a significant personal relationship. However, in the cases of both Vicky and Graham although the break up of a marriage and divorce proceedings are mentioned as occurring in the same time frame, neither individual describes these events as dominating their personal attention. However, it is interesting to note that Graham describes his experiences as leading to his having “one hundred percent more meaning and purpose” which he says is due to having “touched upon something deeper and wishing to touch it again”.

For Adam the stress he describes was due to his concerns about his growing dependency upon alcohol. Brian describes no specific stress beyond his “desperate” feeling that there was “something missing” from his life.

Similarly Vicky, who feels that any trauma due to the break up of her marriage had passed, still found herself “wanting to find a philosophy to live by”.

Although Anne describes her spiritual experiences as providing a “safety valve” protecting her against feelings of depression she does not directly describe any antecedent circumstances in terms of the meaning and purpose she perceives her life to have.

The break down of a significant personal relationship can be described in many ways and as affecting many domains of psychology including identity, perceived role, the neurobiology of psychological stress. It is difficult to label such stress as ‘existential’ in character, particularly as concepts of neither meaning nor purpose were described directly in relation to the feelings surrounding the events. Jenny however does describe the effect of realising that her idealised marriage was ending as “it crushed my world”. Such a statement could be more easily labelled as existential in character.

In the case of Adam, the stress he describes as leading to his first pivotal spiritual experience was that associated with a fear of his growing dependence upon alcohol. Again multiple domains are implicated when describing such events. However the fear associated with his perception of increasing dependence suggests issues of personal

control and how these may impact upon identity, self-concept and self-esteem. These issues are closer to those that might more easily be described as existential in nature.

Both Barry and Vicky describe the relatively vague notion of an inner emptiness. For Brian this is expressed as a “feeling that something was missing” which spurred a “desperate need to find out about life itself” while Vicky felt that she wanted to “find a philosophy to live by”. Such feelings are more squarely located within the existential arena. Authors of existential literature have often focussed upon such feelings (E.g. Wilson 1956; Sartre 1953) and described them in terms of the over-all coherence and sense that the individual may perceive their existence to have. Sentiments such as those described by Vicky and Barry echo those of Camus (1942) as he describes the assumed patterns of living and perceptions of personal reality as “stage sets” prone to collapse. Such feelings could also be described as a lack of obvious meaning and / or purpose for the individual.

### Interpretation

Although none of the examples given were described directly in terms of meaning and purpose, some existential themes can be discerned amongst descriptions of the stresses that preceded the samples spiritual experiences. Existential themes are most obvious in the cases of Vicky and Barry, while for the other individuals antecedent stresses (where recognised by the individual) are described more as a concrete event such as fear of dying (Graham) and the breakdown of a significant relationship (Jenny and Olwyn).

Greater clarity may be provided, concerning the antecedent phenomenology and personal issues when the effects of individual spiritual experiences are examined. Through examining that which has changed for the individual, as a result of spiritual experience, it may also be easier to gain further complete descriptions of antecedent circumstances.

Hypothesis 3: Spiritual experiences result in new perspectives on personal reality that directly address the antecedent psychological stress.

Graham describes a lack of fear associated with death and dying which followed his first spiritual experience. This effect of his experience he describes as prior to his later “realising” that his experience was a Near Death Experience and couching it in such terms. This suggests that the experiential content alone provided resolution for his antecedent fears.

Graham also describes an experience, which appears to have been facilitated by “intensive meditation practices” that resulted in cognitive “chaos” and aberrant perceptions reminiscent of psychotic phenomenology. Due to its similarity this experience was very stressful for Graham as he feared that he was entering another “complete nervous breakdown”.

Olwyn describes the initial feelings surrounding her spiritual experience as “ecstatic” and says that it was more “in the long term” that her experiences have effected her “general comprehension about life”. Olwyn says that her experiences showed her that she “was a

part of something so much bigger”, than her immediate social arrangement and abusive relationship / marriage. Olwyn describes this knowledge as liberating her from previous assumptions about her identity, role and that “I could be anywhere and anything”. Specifically, Olwyn states that the experience led her to realise that “I don’t have to put up with that bastard (her husband) anymore”. Olwyn goes on to describe how her spiritual experience “took away my fear of unhappiness”, as through drawing upon it “when times get tough, I know I can cope”.

Adam describes his initial spiritual experience as characterised by “an overwhelming sense of peace” while sat in an army chapel. He had taken to spending time in the chapel, as opposed to the soldier’s mess, due to his concerns about his growing dependency upon alcohol. This experience was provided with a Christian context, by not only the setting in which it occurred but also by conversations with a colleague with a Christian faith. Both these factors were instrumental in allowing Adam to “give myself to Jesus”. While his spiritual experiences serve to strengthen his relationship with God, it is through this relationship that Adam realises that “I am worth something as an individual”. So while his spiritual experiences consolidate his religious faith it is through the latter that his sense of his being worthwhile occurs. It appears that Adam describes an indirect or secondary gain, in terms of self-esteem, from his spiritual experiences via his religious faith. However, Adam also goes on to describe how his spiritual experiences allow him “to get through the bad times, of little contact with God, by remembering those times when God got through to you when you didn’t expect it”. The process described appears



to provide his spiritual experiences with more of a *direct* role in improving the emotional quality of his life.

Jenny admits that she did not know what to make of her spiritual experience in the time immediately following. However, she does describe it as being the “starting point of being positive” and “started me off being true to myself.....I was more worthwhile than I thought I was while I was married”. It is difficult, on the basis of the content of the experience, to assess the extent to which Jenny’s experience directly addressed her antecedent stress. Jenny also offers little in the way of describing how she interpreted her experience but does say that it raised her self-esteem, allowing her to express herself more completely through her life, and freed her from being the “suppressed” person her marriage had made her. Importantly, even in the absence of a directly observed / described process, Jenny feels that her spiritual experience did address the preceding stresses.

Barry does not describe a discrete episode of psychological stress as preceding his spiritual experiences / UFO encounters but rather a more continuous “desperate need to find out about life and why we are here”. Assuming for the moment that this “need to know” can be considered a preceding stress, Barry’s experiences seem to offer little in the way of resolution. Barry’s experiences seem to offer tantalising clues as to the true meaning of life on Earth which furthered his quest for knowledge, while also providing a context for his enquiry. However, Barry’s unusual experiences have left him feeling isolated and unable to communicate openly with people about them. Barry’s experiences

have also led him to feel that he is “sort of watched all the time”, which suggests a degree of paranoid / suspicious ideation. Beyond the purpose to continue his search for knowledge that is consolidated by his experiences, there is little in the way of obvious positive outcome.

Anne, similarly describes no specific episode of stress preceding her spiritual experiences. Likewise she describes her spiritual experiences as a more continuous sense of another dimension that she can get closer to under certain conditions. In particular Anne describes being with animals and in natural surroundings as allowing her a greater awareness of these other dimensions. She attributes this to the fact that when confronted with nature “yourself becomes so insignificant” and describes this as liberating. However, Anne does say that “I do get depressed sometimes, always have done” and feels that this is linked, at the level of personality, to her creativity as a novelist. Anne describes her spiritual experience(s) as “a safety valve, something instead of taking anti-depressants”. In this sense Anne’s spiritual experiences do seem to address the preceding stress or depression that she experiences. Interestingly, Anne’s spiritual experiences have not resulted in a changed perspective on reality or paradigm shift and she has a predominantly psychological model for understanding the meaning of her experiences.

Vicky describes her spiritual experiences as “beautiful and fearful” and occurring in the context of wiccan ritual. Although she describes wanting to find “a philosophy to live by” at the time of her early spiritual experiences she denies that the contemporaneous breakdown of her marriage was a significant feature of her life. Vicky had already

entered into a Wiccan context that facilitated her early spiritual experiences and it was this framework / ideology which provided her with her desires of a philosophy to live by and an alternative to recreational drug use. Vicky says “In a way magic saved me as well”. From that point of her life forward, Vicky has remained firmly involved in Wiccan ritual, which offers regular opportunity for similar spiritual experiences. Vicky states that her involvement in Wicca, with the associated spiritual experiences, “has pulled me through depression”. Further, she describes the knowledge she has gained from spiritual practices as providing a buffer against future depression, “so that when I am depressed, I know I feel like this now, but I won’t forever”.

### Interpretation

In nearly all cases (with the exception of Anne) a significant change in perspectives upon the nature of reality are reported. The content of these new perspectives ranges from the belief that extra-terrestrials are in communication with earthlings in the case of Barry, to a realisation of the mystical connectedness of all things in the case of Olwyn. The specific content of these new perspectives, and the way in which they are elaborated to an understanding of things beyond spiritual experiences, is very much influenced by the context in which they occur and the new social group / practices which are adopted as a result.

The analysis suggests that for the cases described, spiritual experiences addressed antecedent psychological stress. This is less clear-cut for Barry for whom experiences of

UFO and other paranormal phenomena have served to consolidate a deep desire to gain greater knowledge of the purpose of life, but little obvious resolution.

The way in which the individual's spiritual experiences address antecedent stress / personal issues often appears to be as much a product of these new elaborated perspectives, or world view, as opposed to a direct effect of the experience itself. For example, in the case of Adam it is his Christian faith and his relationship with God that elevates his self-esteem and it is this relationship that is fostered by his spiritual experiences.

In the cases of Vicky, Anne, Olwyn and to a lesser extent Adam, spiritual experiences have led to an inner conviction that in times of future stress their new perspectives and the knowledge gained will allow them to cope. These future stresses are described in terms of periods of depression for which spiritual experiences and the knowledge gained from them provide a buffer and reduce fears concerning the inability to cope.

In the cases of Jenny, Adam and Olwyn issues of self-esteem are directly addressed by their spiritual experience. Realisations that they, as individuals, are worth more than their circumstances had led them to believe, have liberated them from oppressive / suppressive situations.

Issues of self-esteem and depression appear to characterise the circumstances preceding many of the spiritual experiences examined. It is these issues that are addressed for the

majority of the sample. A further issue that appears to be linked closely to the occurrence of spiritual experiences is the need for, in the case of Vicky a “philosophy to live by” or, for Barry a “desperate need to understand why we are here”. These issues are more easily understood in terms of existential psychology as a lack of a clearly perceived meaning or purpose for the individual’s life.

The outcome, in terms of perceived or self-reported psychological well-being can be assessed within both the short and long term. In the short term the majority of cases, report an elevation in affect or a release from negative affect. This is not so for Barry who reports feeling scared and amazed by his experiences. Graham reports that some of his experiences have been “difficult” at the time and reports some cognitive “chaos” associated with his spiritual experiences.

In the longer term all cases, except Barry, report elevated psychological well-being in terms of self-esteem, reduced depression and fear of future depression / inability to cope.

As suggested above, the positive effect upon self-reported psychological well-being often appears to be a product of the new perspective adopted subsequent to spiritual experiences. In many of the cases described, the new perspectives and activities integral to them have a reciprocal relationship with the facilitation of future spiritual experiences and the individuals understanding of them. This relationship and the processes through which the individual attempts to understand their experience will be examined next.

Hypothesis 4: Individuals will attempt to validate and make sense of their spiritual experience(s) socially

Graham states that at the time of his first spiritual experience he did not consider the meaning of his experience beyond that similar to a very vivid dream. It was only through his later interest in spirituality that he learned that what he had experienced would be widely regarded as a Near Death Experience (NDE). Even without a clear interpretation for this experience he describes it as reducing his fear of death, suggesting that on the basis of the experiential content alone this experience provided a lasting resolution to his antecedent psychological stress.

Graham describes his “complete nervous breakdown” and at the time of interview was unclear whether to include this within the same category of his later spiritual experiences. His indecision on this issue appears to stem from the fact that he has experienced a similar (psychotic / spiritual) phenomenology during experiences he would describe as either spiritual or in connection with his “breakdown”. Graham describes a significant period of cognitive and sensory “chaos” during both his “complete mental breakdown” and while engaged in an intensive mediation practice. On both occasions Graham describes an immediate decline in functioning and describes, “not being able to get my head together at all”.

On the former occasion this experience ultimately led to a period of hospitalisation. On the latter occasion teachers within the meditative school reassured him that his experience

was not uncommon, as he had begun tapping into dimensions of existence previously hidden from his uncultivated mind. Graham describes this interpretation as reducing his anxiety, concerning his sanity, and facilitating a rapid “settling down” of the sensory and cognitive components of his experience.

Graham’s later spiritual experiences have been facilitated primarily through his meditative practices and their meaning is not questioned in the way that his earlier experiences were. Graham will quite openly share his spiritual experiences “with people of a like mind” but would rather that “others raise the topic first” as he would never impose his experiences on somebody.

Olwyn does not describe a specific instance in which she sought to *socially* validate her initial spiritual experience. She describes the quality of a “unity of everything” as the most significant feature of her experience and this she interpreted in terms of nature and the embedded quality of ecosystems. For Olwyn this interpretation appears to stem from knowledge she acquired earlier in life, as both her parents were involved in the study of biology and spirituality. Olwyn says that her spiritual experiences have altered her model of reality from a mechanistic to a more magical one. Her subsequent involvement with a local spiritual healing group has facilitated further spiritual experiences. Olwyn is very keen to share her experiences and feels that this is an important part of being able to understand them. She will usually share them with the other members of the healing group and a select group of friends.

Adam's first spiritual experience occurred whilst he sat in a chapel and was interpreted within the framework of a Christian theology through his sharing his experience with another Christian. Soon after these events Adam describes giving himself "to Jesus" and consequently all of his later spiritual experiences are immediately interpreted within a Christian framework. Adam does not describe any doubt as to the veridical nature of his experiences and has shared them "many, many times" within a Christian context. Adam values the opportunity to share his experiences as "the re-iteration reinforces the worth of the experience for me". It appears that, for Adam, the communication of his spiritual experiences is not limited to a potential means for validating his experience as he has little doubt about their true meaning. It seems more important for Adam to share his experiences as it allows him to re-access the meaning of, and feelings associated with the experience. Adam's ability to re-invoke such powerful feelings was evident during the interview as he wept tears of "abject joy". Adam has shared his experience with some people who have reacted indifferently and has felt that he may often be "casting pearls before swine".

At the time of her spiritual experience Jenny appears to have lacked an interpretative framework for her experience but says that it immediately rekindled her interest in spirituality, suggesting that she did regard it as a spiritual phenomenon. The day after her spiritual experience she went to the library and borrowed books on spiritual topics, which provided an interpretation of her experience as spiritual in origin. Jenny has shared her spiritual experience, soon after its occurrence, with a close psychotherapist friend who provided positive and clearly validating feedback. However, Jenny doesn't willingly



speak of her experience often as she feels that this would trivialise an experience that for her was extremely profound.

Barry shows little doubt that his experiences are veridical and interprets these as the intervention and contact of extra-terrestrial life and poltergeists. A Jehovah's Witness minister conducted an exorcism during a poltergeist disturbance and he has attended some conferences dealing with UFOlogy topics. During the course of the latter he describes receiving some limited validating feedback concerning some of his alien encounters. Barry also reads a great deal about these topics and seems to have continually sought to share his experiences and gain some validating feedback from a variety of sources. For Barry the present study and the interview was another forum for sharing his experiences and seeking validation.

Barry does not know many people who have had similar experiences and describes this as problematic. Barry has attempted to share his experiences with a number of people but is usually received with indifference. Some people have sometimes responded by "taking the micky" and questioning the state of Barry's mind, particularly his use of drugs, at the time of his encounters. These largely invalidating responses do not appear to have raised doubts or questions about the meaning of Barry's experiences but have resulted in a more isolating and slightly grandiose position concerning the opinions of others. He describes those who doubt his experiences (or their validity and significance) as "narrow minded", "blinker runners on a race course" and, "not opening themselves to what the hidden side of life is about".

Anne interprets her experiences of the deeper dimensions of human existence within a largely psychological model. Anne's experiences are more emotional and involve less sensory or cognitive phenomena than the other cases described here, and it is perhaps this difference that allows her to more readily perceive her experiences as subjective in origin. However, she also appears to be keenly aware of the uncommon nature of her experiences and is reluctant to talk about her experiences "in case people think you should be locked up". In this regard Anne displays a high degree of social insight and the way in which some peoples experience, of this type, might be taken as indicative of madness. However, insight concerning this possible social perception, and the proximity of such experiences to those commonly regarded as mad, is also evident in the other cases. However, it does seem that Anne is more disconcerted by the possibility of this comparison and feels an urge to conform, or at least not be regarded as odd. Further, Anne does not describe her reluctance to share her experiences as caused by them as she describes herself as having always been "a very private person".

Vicky was already an active member of her Wiccan group at the time of her first significant spiritual experiences. Her experiences were interpreted within the framework of her ritual practices and validated by her participation within a group, all of whom witnessed similar phenomena and interpreted the events in a like manner. Vicky will often share her experiences with other members of the group but will hardly ever do so with people outside the group as "when things are taken out of context they are not understood". It is difficult to assess how important the process and receiving of

validating feedback might be for Vicky as this feedback is provided by her belonging to a group without which her spiritual experiences might not actually occur.

### Interpretation

All members of the group have sought to validate their spiritual experience. The quality of validation sought appears to range between reassurance and understanding. Although it is difficult to separate these qualities completely, the need for reassurance type validation occurs most where the immediate qualities of the spiritual experience are those of anxiety or fear. The best example of this relationship is Graham's experience that resulted in cognitive and sensory "chaos" and fears that he may be experiencing another "breakdown". In this instance Graham seems to have benefited from a reassurance that his experience was not atypical for those engaged in spiritual pursuits. Likewise, Vicky's experience was described as both "beautiful and fearful" but the strong and immediate interpretative framework of Wiccan ritual allowed the fear to be transformed into the more general significance of the events / experience.

Other individuals describe seeking validation, from the starting point of labelling the experience as "spiritual", to help them further understand the meaning of their experience. Reassurance type validation is sought less by the individuals describing these cases. The need for validation (of either type), or the benefit that appears to be gained from it, seems to be a function of the degree to which the experience constitutes a major paradigm shift or altered perspective on reality. Where the experience constitutes a

dramatic alteration in the individual's perspective on reality, such as in the case of Graham, there is a strong need for validation. Where the experience constitutes less of major paradigm shift, such as for Anne, there appears to be far less need for any form of validation.

The extent to which the experiences constitute or require a major shift in perspective may be related to previous experience of altered states (of consciousness), even if such experience is only an abstract knowledge of the possibility of such states via the experiences of others. This factor, within the processes of validation can be seen in the case of Olwyn who, in the absence of immediate social feedback, interpreted her experience as veridical and reflecting a truth about nature's eco-systems. Olwyn had been raised by parents interested in both nature and mysticism, and so these perspectives were available to her at the time of her first spiritual experience. While Graham and Vicky initially sought validation via social sources, Jenny initially referred to books on spirituality and psychology and relatively later spoke to a close friend about her experience. The source from which the individual initially seeks to validate their experience appears to be a function of the context in which the experience occurs. For both Graham and Vicky access to sources of social feedback / validation were immediately available due to the group nature of the practices in which they were engaged. Nearly all other members of the group were alone and engaged in solitary pursuits at the time of their experience that reduced the availability of social validation and feedback.

The UFO experiences described by Barry have included a significant element of anxiety as he describes feeling “petrified” by some of his experiences. Although Barry has received some validating feedback from social sources (concerning his poltergeist experiences) these have been primarily his family and a minister who conducted an exorcism. It may be possible that the lack of social feedback concerning his UFO encounters may contribute to the anxiety that they tend to provoke. Barry has relied almost exclusively upon asocial sources to validate his UFO experiences and these have included books and video documentaries. Barry has received little social feedback that has allowed a satisfactory validation of his experiences and has also received a substantial amount of invalidating feedback from some people. The negative reactions have been received from people that Barry has shared his experiences with but who have no, or only a “superficial”, interest in such topics. The case of Barry suggests that in the absence of satisfactory validation from social sources, his attempts to gain validation have been extended to people beyond those who indicate that they may be receptive. The rejection and invalidation that Barry subsequently experienced have led to his feeling isolated. Further, they may also have contributed to his slightly paranoid and grandiose position as he describes feeling “watched all the time” and simultaneously that those who show no interest in his experiences are “narrow minded”, “blinkered” and not aware of “what the hidden side of life is about”.

Hypothesis 5: Spiritual experiences will not result in chronic negative alterations in affective psychological well-being

Graham describes feeling, during his NDE, that “this is terrific” and describes the feelings that followed in terms of peace and liberation. Some of his later spiritual experiences, particularly that which occurred as a result of his intensive meditation practice, he describes as being “scary”. This anxiety was reduced significantly by the reassuring validation he obtained from the teachers amongst the other members of the meditation school. In connection to this experience he describes some of his experiences as having initially been “difficult” but that they have always had a “positive solution”.

Olwyn describes feeling “ecstatic” immediately after her spiritual experience, and although she is currently prescribed an anti-depressant, she says she is less concerned about her current depression and has little fear about being able to cope with her low mood.

Adam describes his first significant spiritual experience as “an overwhelming sense of peace” which countered his anxieties, centred about his growing dependency upon alcohol. During some of his later spiritual experiences he describes feeling “mystified and a little bit uneasy” but that this feeling soon gives way to an understanding of the significance of his experience. The value of his spiritual experiences is very much drawn from his interpretation of them as a genuine contact with God.

Jenny does not describe any immediate affective impression left by her spiritual experience apart from wondering what she had experienced. However, her affective state in the period of life that followed she describes as “exciting”, which is in direct contrast to the preceding emotional pain. The alteration, implied by her description suggests an elevating or positive impact upon her affective state.

Barry describes feeling “petrified” during some of his UFO encounters but does not describe this affective quality as enduring. However, he does not suggest that any significantly positive affect is associated with his experiences, either during their occurrence or afterwards. He describes the ultimate effect of his experiences as leaving him feeling “isolated” and slightly bitter about the reactions that he has received from other people that he has attempted to share his experiences with. The lasting effect of his experiences upon his emotional life appears to be more a product of his lack of receiving satisfactory validating feedback.

Anne describes some of her experiences as having had a “spooky” quality and provides an example of such when she experiences the “anguish” in the lives of animals. Anne also describes having a greater insight into human nature and motive which has left her a rather “cynical person”. None of these experiences suggest an uplifted affect in the same way that her other experiences do. These experiences are in direct contrast to those experiences she describes as occurring in nature when she becomes so unaware of her “self” that she describes feeling “completely satisfied” and “perfectly happy”.

Anne also describes her spiritual experiences as providing a “safety valve” and “something instead of taking anti-depressants” and wonders whether such experiences are more accessible simply through being aware that they are possible. Anne’s perspective on her experiences suggest that for her they serve to regulate her affective state and more importantly stave off feelings typical of her depression.

During some of her early spiritual experiences, Vicky describes feeling “scared at some points, a sort of panic” and her later experiences as being “beautiful and terrifying”. However, she also describes the most salient feeling associated with successful ritual invocation as “love, this tremendous feeling of love.....that God has met you half way”.

Similar to Anne, Vicky feels that her experiences have “pulled me through depression” and continue to do so as “there has been a wisdom gained so that when I am depressed, I know I won’t feel like this forever”.

### Interpretation

Spiritual experiences reported by the group result in changes in affect which cannot easily be divided into positive and negative. Olwyn, Vicky, Jenny and Anne all describe their experiences immediately resulting in emotional changes more easily described as positive, relative to preceding affect. For Graham, Barry and Andrew their experiences have (sometimes) initially included emotional components of anxiety, fear and uneasiness.



The emotional changes, encompassed by the occurrence of their spiritual experiences, also appear to differ between early or initial spiritual experiences and those that have occurred later in their lives. While Graham describes feeling anxious and scared by some of his first spiritual experiences, he does not describe these feelings in connection to later experiences. Similarly, Barry describes feeling “petrified” during his first UFO encounters but does not describe feeling so scared during later experiences. Conversely, Adam describes his first experience as an overwhelming sense of peace but says that his later experiences of contact with God make him feel a little “mystified and uneasy”. If it was not for the fact that Anne also describes her experiences as “spooky” and involving negative emotions such as “anguish”, it would be tempting to forward explanations on the basis of gender. However, Such a suggestion would not be justified due to the absence of strongly consistent patterns between the experiences, the individual reporting them and the immediate affect experienced.

It appears that the emotional tone of their spiritual experiences is directly related to the preceding affect. Where the group report an experience that has had a positive emotional quality, this has followed from a relatively negative or distressed emotional state. This pattern suggests the possibility that anxiety, (and the associated physiological hyper-arousal), may precede the occurrence of their spiritual experiences. Alternatively, it could also be suggested that the extent to which the person is *consciously aware* that they are anxious or in a state of hyper-arousal may determine the emotional tone of their spiritual experience. Graham, for example, was engaged in divorce proceedings at the time of the spiritual experience he describes as “scary” and characterised by feelings of

anxiety. Likewise, Adam was experiencing some financial difficulties and unemployment at the time of experiences he describes making him feel “mystified and uneasy”. However, neither Graham nor Adam, describe these circumstances as a causing stress or anxiety of which they were consciously aware.

Conversely, the experiences of Olwyn, Jenny and Anne, which they describe as having a relatively positive emotional tone, have occurred at times when they have been consciously aware of their own distress, anxiety and low mood.

The finding from the quantitative study, that the variable of dissociation has a significant regressive association with the Evil/ panic dimension of spiritual experience, also supports this suggestion. Taken together these findings suggest that where the person has adopted a dissociative approach to their own psychological stress, their eventual experience may be imbued with an emotional tone that more completely expresses their psychological state, including any underlying anxiety or depression. This suggests that an individual may have underlying anxiety and / or depression of which they may not be consciously aware. This repressed (perhaps pre-conscious) material is a part of that which is expressed in consciousness during a spiritual experience.

In the longer term the spiritual experiences reported by the group do not appear to have made a lasting and negative impact upon affect. Although both Anne, Olwyn and Vicky all report periods of “depression” they do not attribute these to their spiritual experiences

and actually describe their on-going spiritual experiences as providing an antidote to, or defence against low mood.

Barry's experience appears to contrast to other members of the group in that, although he does not explicitly describe periods of depression, he does describe feeling isolated by his experiences. Barry also appears to feel embittered by the reactions of others with whom he has attempted to share his experiences, suggesting that validation processes and their outcome are important in determining the long term affective outcome. The importance of validation processes is further suggested by Graham, for whom positive and reassuring support at the time of a "difficult" and "scary" experience resulted in a more "positive solution".

Across descriptions of both immediate and longer term affect, associated with spiritual experiences, is the description of effects upon the persons self-esteem. Within the interpretative framework of his Christian faith Adam describes his experiences as allowing the realisation that "I am worth something as an individual". Jenny, describes one of the more immediate effects of her experience as allowing her a similar realisation while Vicky describes a "tremendous feeling of love.....that God has met you half way". These descriptions suggest that self-esteem issues may be central to these individuals preceding affect, the occurrence of and effects of their spiritual experience.

Hypothesis 6: Spiritual experiences will result in no relative loss of ability to function.

Graham describes his Near Death Experience as occurring at a time of physical illness that had reduced his ability to function normally in almost every domain. The experience he describes as his “complete mental breakdown” led to him absconding from his job as an AA mechanic and subsequently spending time as a psychiatric inpatient. The spiritual experience that occurred during his intensive meditation practice led to him leaving the meditation school at which he was practicing and wandering the streets for a few days while experiencing cognitive and sensory “chaos”. This experience he describes as “scary” and strongly reminiscent of his “breakdown” which only served to increase his anxiety as he thought, “it may be happening again”.

At the time of this experience he was not in employment and was not living with his family so it is difficult to assess the extent to which his experiences may have constituted a reduced ability to function within those domains. However, his absconding from the meditation school suggests that his ability to function within his immediate social environment was significantly impaired.

Graham’s later spiritual experiences have occurred through his pursuit of meditative practices and have been fully supported by his present partner who shares the same interests. Together they provide accommodation for people engaged in meditative retreats and also operate gem stone cutting workshops.

Olwyn describes her first major spiritual experience, in 1975, as occurring at a time of great distress caused by her presence in an abusive relationship. During this period she describes experiencing a significantly impaired ability to function normally and says “I could not really do much for myself....I was severely anorexic”. As an alternative to inpatient treatment, which was recommended, she spent time being looked after by close family members and it was at this time that her spiritual experiences occurred. Olwyn describes the co-occurrence of her reduced ability to function and her spiritual experience but describes the reduced functioning as having prior onset to and lasting significantly longer than her spiritual experience. While these experiences may have shared a similar time frame, and indeed be related on a variety of levels, she in no way indicates that her spiritual experiences caused her reduced ability to function.

Olwyn reports the occurrence of spiritual experiences throughout her life from that point forward. During this period of her life she has raised her daughter but has never had to work as a means of supporting herself. Olwyn has made her spirituality a primary dimension of her life and as a member of a local group provides healing on a voluntary basis.

She describes herself as having always preferred her own company and so her subsequent tendency towards having few friends cannot be reliably attributed to her spiritual experiences.

Adam's first spiritual experience occurred whilst he was serving with the armed forces and he subsequently remained in his job. Adam describes the circumstances surrounding his first spiritual experience as characterised by growing fears of his developing a dependence upon alcohol. Adam states that he now only drinks very small quantities and very occasionally. Since that time his spiritual experiences have been ongoing, and although he has experienced periods of unemployment he has remained occupied through voluntary roles with the Scout movement and as a deacon of his local church.

Adam admits that he has "very, very few close friends" and says "friendships don't come easily". Adam spends much of his time alone, particularly while unemployed. His current friends are generally fellow Christians.

Jenny describes her spiritual experience as "the start of being positive", which initially led her to set up a support group for people in a similar situation to herself as a single parent. Through her interest in spirituality, which was rekindled by her experience, she has been involved with other members of a Buddhist organisation, providing meals and support for homeless people at Christmas. Jenny now works as a full-time councillor and enjoys her ability to express compassion for others.

Barry does not describe any significant effect of his experiences upon his ability to function occupationally and has remained employed throughout his adult life. Barry does lead a very solitary existence and is occupied primarily by his interest in UFOlogy and related matters of spirituality. He states that his current purpose in life is "perhaps to

understand why we are here". Barry has almost no friends of his own and socialises only infrequently with friends of his wife. His experiences do appear to have contributed to his present social isolation as he states that he "doesn't know many people that have had similar experiences" and "that's the problem". Barry's experience suggests that his reluctance (or inability) to relate to other people about topics outside of his own interests, with which he seems preoccupied, impedes his ability to foster friendships.

Anne describes herself as "never having been very social" and her occupation as a novelist does not bring her into contact with many people. Anne much prefers to be in her own company or with animal's, particularly horses. It is while in the company of animal's or alone in natural surroundings that Anne describes being "perfectly happy". She describes most of her former relationships and friendships as being unsatisfactory and attributes to this experience, her present cynicism concerning other people and her reluctance to get involved with people. The spiritual experiences she describes do not seem to have contributed to her preference for social isolation or affected her ability to function as a parent and writer.

Vicky's spiritual experiences occurred within the context of a ritual group and have served to deepen and further her involvement with the group. Her long term involvement and experience has also provided her with the elevated status as high priestess of her coven. Vicky has never been engaged in a full-time occupation and her life-style could easily be described as bohemian. Vicky's experiences and involvement with the ritual group have led to her friendships having stemmed from this source. She has a large

group of supportive friends who are in one way or another involved in the practice of spiritual pursuits. Vicky's experiences and group involvement have served to increase the number of her social contacts and do not appear to have altered her ability to function in other domains of her life.

### Interpretation

Adam, Graham, Vicky, Olwyn and to a lesser extent Jenny have all increased their social and occupational arenas as a direct result of their spiritual experiences. For these people their spiritual experiences have led to involvement with groups of people engaged in substantially similar interests and life-styles. For Olwyn and Adam their experiences and subsequent involvement in groups of like-minded people have maintained active social participation in the otherwise absence of social networks. Although Jenny became involved with a Buddhist organisation soon after her spiritual experience she has since moved on and found that her occupations have provided a successful means of self-expression beyond her need for direct involvement with a spiritual group. This may be attributed largely to the relative infrequency of her spiritual experiences. This difference between the group membership of some and the absence of such for Jenny suggests the importance of group involvement as a continued source of validating feedback. This appears to be most important for those people who continue to have spiritual experiences and subsequently for whom their spirituality is central to their life.



Barry has continued to have both experiences of both UFO and paranormal phenomena but does not affiliate with any group of like-minded people. This aspect of his circumstances has contributed to his relative lack of positive validating feedback from social sources, which in turn appears to have contributed to his social isolation. In the absence of validating feedback Barry appears to have become increasingly preoccupied with his own idiosyncratic experiences. In turn this preoccupation may impede his ability to relate to other people in a reciprocal manner, preferring instead to express his need to talk about his experiences.

Although Barry's experiences may have contributed to a reduced ability to function socially, he has maintained a family and his gainful employment, and so does not appear to have been unduly affected in these areas of his life.

For the other members of the group occupational activity appears to have been enhanced by their spiritual experiences and subsequent involvement in groups. However, much of this occupation is voluntary and may be more valued as a continuing source of validation than as a means to generating an income or supporting a family. For some members of this latter group, their occupational histories, prior to their spiritual experiences was irregular or unnecessary as a means of obtaining essential income. For this reason it is not easy to assess the extent to which their spiritual experiences may have altered the place or meaning of an occupation within their wider circumstances.

Hypothesis 7: Spiritual Experiences that successfully provide resolution for antecedent stresses will occur with decreasing frequency.

Graham describes his Near-Death Experience as having occurred only once. While this experience did provide a resolution for his contemporaneous fears of dying he has had spiritual experiences, with different forms since that time. Graham also states that his spiritual experiences have allowed him to “touch something deep down which I wish to touch again”.

Olwyn describes her first spiritual experience as providing resolution for the stresses she was experiencing due to the abusive relationship with which she was engaged. She describes her subsequent spiritual experiences as less dramatic but just as important in maintaining hope for the future and reassuring her ability to cope in times of emotional stress.

Adam describes his on-going spiritual experiences as sometimes making him feel a “little uneasy” but that they serve to reinforce his relationship with God.

Jenny describes her spiritual experience as a singular event that constituted “the start of being positive”. Although she has had several experiences of “profound empathy” which she feels were facilitated by her initial spiritual experience, they have become a significant but less frequent aspect of her experience.

Barry describes frequent encounters with UFO and other spiritual and extrasensory phenomena. These experiences do not seem to have provided a successful resolution for an antecedent stress but have consolidated his quest to better understand “what is really going on”.

Anne does not describe her spiritual experiences as a discrete episode but rather as a more continuous awareness of other dimensions. Anne does not describe her spiritual experiences as providing resolution for any specific stressful circumstance, but feels that they provide a buffer against her tendency to depression and low mood.

Vicky describes her spiritual experiences as fostering and validating her Wiccan faith, which in turn, through participation in ritual facilitates further spiritual experiences. Vicky also describes her spiritual experiences and Wiccan faith as providing her with a philosophy to live by, reassurance of her ability to cope with future stresses and the transient nature of unhappiness.

### Interpretation

With the possible exception of Jenny, all other individuals described their spiritual experiences as an on-going and important feature of their lives. For most of the group repeated spiritual experiences served an important function for validating their perspectives on reality. Adam, for instance, described his spiritual experiences as

strengthening his relationship with God, while Vicky similarly described her pagan view of reality as fostered through her contact with spiritual entities evoked through ritual.

Barry stands apart from this group as his experiences seem to have provided little in the way of resolution for a specific stress but are regarded as a significant feature of his current experience. Barry's describes his experiences as fostering questions and quest rather than providing answers, but feels that his experiences are leading him closer to his goal of understanding their meaning.

The majority of the group describe their experiences as providing an important stress resolving function and a means of regulating their own mood and fears concerning their ability to cope with future stress. However it is through the maintained frequency of their experiences that they describe any beneficial function. This is less clearly the case for Barry who does not seem to have described similar reductions in his quest for understanding. This is also not the case for Jenny who appears to have been provided a more satisfactory resolution for a specific stress by a single experience.

## Discussion

The present study selected a sample of individuals on the basis of both quantitative scale scores and qualitative long-handed responses reported via the Spiritual Experiences Questionnaire (SEQ: Jackson 1991). The experiences this sample described during the interview procedure fell within the category of spiritual experiences as defined for the

present research. This finding suggests that the Spiritual Experiences Questionnaire has good criterion validity as it facilitates accurate selection of individuals reporting prototypical spiritual experiences. The experiences reported reflect the heterogeneous nature of this category of contemporary experiences as reported by members of the general population.

The discussion of the quantitative findings suggested that the Numinous-Mystical qualities of spiritual experiences are those that most popularly co-occur, and where these features predominate qualities of Evil / panic are less likely to be reported. The more individualistic perspective of the profiling employed during the selection of the interview sample suggested that, although less probable, Evil / panic qualities can combine with Numinous and Mystical qualities of a spiritual experience. Barry's profile suggested the contribution of Evil / panic qualities to spiritual experiences that are not suggested by ethnographically derived statistical data. This finding suggests that the issue of whether the dimensions of spiritual experience are best viewed as qualities or types is influenced by the research strategy taken. Neither quantitative nor qualitative findings provide a clear resolution of this issue when employed in isolation. However, when both are employed it is found that those experiential qualities / types shown to be statistically less probable still naturally occur within the heterogeneous category of spiritual experiences.

The Cognitive Problem-Solving Hypothesis (CPSH) proposes that spiritual experiences are preceded by psychological stress. The role of stress as an antecedent is ambiguous. While stressful circumstances are cited as a significant feature for four of the sample, the

remaining three do not describe their antecedent circumstances as stressful. It is possible that the personal retrospective recognition of stress as a feature of antecedent circumstances may be partly determined by attribution processes. It may be that those who do not report antecedent stresses feel that such an attribution detracts from what they feel to be the veridical nature of the insights gained via their spiritual experience. However, those who do report antecedent stress do not seem to differ in the extent to which they experience their spiritual experiences as veridical. However, it is possible only to state that the role of stress, as proposed by the CPSH, as an antecedent to spiritual experiences is incompletely supported.

The CPSH proposes that the antecedent stresses encountered prior to the occurrence of spiritual experiences are characterised by existential issues. This proposal is not clearly supported by the narrative data examined by the present study. The antecedent stresses and personal circumstances of the sample were rarely described explicitly as comprising existential issues, or in terms of meaning and purpose. Existential themes can be discerned for both Vicky and Barry who describe needing a philosophy to live by and an inner emptiness respectively. It is interesting to note that both of these individuals did not describe stressful antecedent circumstances. The difficulty in observing the existential nature of stresses may be partly determined by the way that such stresses are defined. Authors associated with existential philosophy (e.g. Sartre 1946; Camus 1942) define existential concerns as involving a preoccupation with issues of meaning and purpose and the discomfort of being a conscious entity in a world that is neither conscious of itself or the individual. Existential philosophy reduces all situations to their

existential essence and reduces all human concerns to the language of existential theory. Because of this existential concerns can be seen as either present in all human activity and concerns or absent and observed only when an objectless anxiety is evident. Existential concerns were most easily observed in the experiences of Barry and Vicky who described the relatively objectless anxiety associated with a need for understanding and a coherent picture of their personal realities. However, although not explicitly described in terms of meaning and purpose, all stresses described by the remainder of the sample could be described in an existential language. In these latter cases the stresses were explicitly described in terms of the components of each individual circumstance including relationships and other people. The CPSH is rather more specific in describing the culmination of existential issues as featuring feelings of despair, hopelessness and fears of an inability to cope (Jackson 1991). Even in the absence of statements concerning meaning and purpose these feelings are more readily identified amongst the stresses described by a proportion of the sample. This is a complex issue that questions the need for describing antecedent stresses as existential in character and is complicated further by the abstract nature of such feelings as described by authors of existential philosophy. The findings of the present study have provided little support for this aspect of the Cognitive Problem-Solving Hypothesis. The quantitative study found that when instruments employing language designed to directly assess the salience of these issues are used, such issues are significantly associated with the occurrence of spiritual experiences. In combination these findings suggest that it may be the abstract and relatively uncommon nature of existential concepts that results in their not being readily employed.

The present study did not directly address this aspect of the samples antecedent experiences as this would have artificially introduced an existential language, which subsequently employed, will have obscured the extent to which issues of meaning and purpose spontaneously arise.

The CPSH proposes that spiritual experiences generate new perspectives that directly address antecedent stresses. The present study found that the short term or immediate effects of the spiritual experiences described by the sample, were relative elevations in affect, self-esteem and liberation from oppressive situations and views of self. The longer-term effects of spiritual experiences appear to be closely linked to the perspectives subsequently adopted and the practices that such perspectives may lead to. In the case of Adam, his experiences lead him to adopt a Christian perspective and a way of living, which fosters his on-going spiritual experiences. Similarly Graham has adopted a broadly Buddhist perspective and his subsequent meditation practice serves to facilitate his on-going contact with spiritual realms. The sample describe their continuing spiritual experiences as alleviating feelings associated with depression and reducing fears of the individuals ability to cope with such feelings in the future. Barry is the only clear exception for whom his experiences have served only to deepen his need for answers to his questions about the nature of reality and the meaning of things. While Barry does not seem to have gained similar resolution and enhancement from his experiences it is not known to what extent he may suffer from feelings associated with depression. Barry did not complain of or spontaneously describe any such feelings himself. The findings of the present study provide support for this aspect of the CPSH and suggest that spiritual



experiences do serve to address antecedent stress and specifically, enhance self-esteem, affective well-being and reduce fears about future coping.

The CPSH proposes that following spiritual experiences the individual will attempt to understand and validate their experience. The present study found that those interviewed had attempted to validate their spiritual experiences through a variety of methods that can be broadly categorised as asocial and social. The seeking of validation via social means was most readily employed in cases where the individuals spiritual experienced had occurred amongst people involved in similar practices. Asocial means were regularly employed who reports their spiritual experience as having occurred when alone. Most of the sample reported seeking to validate their experiences using both asocial and social strategies. The social validation sought was often of a reassurance type, particularly when the experience involved feelings of fear. This was particularly the case for both Graham and Barry who describe not understanding (Some of) their experiences at the time that they occurred and feeling fearful. However, while Graham received reassurance from his peers, Barry has received little in the way of social validation. Barry continues to seek validation via asocial means and wider social contacts but finds it difficult to achieve. Rather than doubt his interpretation of his experiences he seems to have adopted a disparaging and rather grandiose attitude towards other people. The experiences described by the sample emphasise the crucial nature of this validation process for the understanding and integration of the person's experiences and how the impact of such experiences are strongly influenced by its outcome. The findings of the present study support this aspect of the CPSH.

The present study employed feelings and symptoms associated with depression as an index of psychological well-being, which the CPSH proposes would not be negatively effected by the occurrence of spiritual experiences. Previous research (Jackson 1991) has lead to the suggestion that spiritual experiences actually serve to enhance the emotional well-being of individuals reporting them. The absence of negative effects upon well-being was adopted by the present study as a minimum that should be expected and it was this expectation that was formalised as an hypothesis. The present study found that the majority of those interviewed experienced a long-term enhancement in their emotional well-being, even when some of the groups spiritual experiences included feelings of fear or being “uneasy”. In a number of cases individuals (e.g. Vicky and Olwyn) explicitly and spontaneously described the effects of their spiritual experiences as allowing them to cope with current and future depression.

In terms of wider social and occupational functioning the present study found that the individuals spiritual experiences did not lead to long-term reductions in either of these arenas. However, Barry did not describe an active social life independent to that provided through his wife. He describes this as being due to not meeting many people of a like mind or with similar interests and so it seems that his experiences have had the direct of limiting his social contacts. The issue of occupational functioning was a little obscured due to a number of the sample having private income or otherwise being self-supporting. Both Adam and Vicky have experienced periods of unemployment but it is difficult to assess the extent to which these circumstances are directly related to their spiritual experiences.

The final aspect of the CPSH to be explored was the feedback mechanisms proposed to regulate the occurrence of spiritual experiences. The CPSH proposes that where a spiritual experience generates cognitive insights that address antecedent stresses, the frequency of such experiences is reduced via a process of negative feedback. This appears to reflect the experience of only one member of the sample. Jenny describes one spiritual experience that has not been followed by experiences of the same form or intensity. For the remaining members of the group it is their repeated spiritual experiences that not only serve to consolidate their perspectives of reality (be they Buddhist Christian or otherwise), but also serve to combat feelings of depression and maintain a positive future orientation. This suggests that spiritual experiences have a positive impact upon psychological well-being by continuing to occur. This does not support the notion of a negative feedback mechanism as proposed by the CPSH.

#### Summary: Qualitative Evaluation of the Cognitive Problem-Solving Hypothesis

The lack of uniformity of the experiences described by the interview sample makes it difficult to make broad stroke evaluations of each hypothesis derived from the CPSH. The picture of spiritual experiences that emerges from the present study provides only limited support for the model proposed by the Cognitive Problem Solving Hypothesis. While there are often exceptions to the experience of the majority of the sample, some common themes do emerge from the data and it is these that shall inform the current summary and evaluation.

The picture of spiritual experiences that emerges from the qualitative exploration of the narratives suggests that such experience is rarely singular in occurrence. It is far more often the case that spiritual experience and the perspectives adopted as a result lead the individual to seek and value further such experiences. The continued occurrence of spiritual experience does not seem to lead to significant reductions in the person's ability to function in social or occupational arenas. This finding suggests that the regular occurrence of spiritual experiences is essentially benign in its effects upon the life of the individual and supports this basic assumption, which underlies the CPSH.

While for some of the sample their initial spiritual experiences occurred within a context of stressful circumstance, this is not uniformly true. The proposal of the CPSH that spiritual experiences occur as an adaptive response to stress is not completely supported.

Spiritual experiences appear to have a major elevating impact upon the emotional quality of the individuals experience in the immediate and short term. This impact appears associated with the recognition / belief that something more true or real had been revealed by the content of the experience. Often, spiritual experiences have reduced fears about coping with future stress and periods of future depression. The interpretation of the current analysis is that it is these components that are the motivation for the individuals interviewed to foster and value the continuing occurrence of spiritual experience. Indeed in the large majority of cases the individual has adopted behavioural practices, in accordance with their new perspectives, which foster the occurrence of spiritual experiences.

The Cognitive Problem-Solving Hypothesis proposes that spiritual experiences generate *cognitive* insights and new perspectives that directly address the antecedent stresses. It is proposed that by this process that spiritual experiences provide a resolution for stressful antecedent circumstances. However, not only did the current study find only limited support for the presence of antecedent stress, but also that the most immediate effects of spiritual experience could not easily be viewed as cognitive independent of affect. This finding, combined with the previous interpretation that the affective changes associated with spiritual experiences serve as a motivation for fostering future such experiences, suggest that spiritual experiences are primarily processes of affect regulation. Cognitive aspects of the changes associated with spiritual experiences are observed in the new perspectives derived from such experiences which lead to altered models of reality and new practices that tend toward the facilitation of further spiritual experiences.

Viewed in this way, spiritual experiences parallel explanatory models of bi-polar affective disorder recently termed the 'manic defence' (Lyon, Startup and Bentall 1999) more closely than the cognitive problem-solving hypothesis. On this model spiritual experiences are viewed as processes that elevate affect from the low mood and negative self-evaluation associated with an underlying and unremitting depression. This comparison is further supported by the salience of self-evaluations (esteem) for those reporting the effects of spiritual experience, which is also a significant component within the 'manic defence' model.

While the individual experiences are common to a heterogeneous category of spiritual experiences, each individual has described a unique and personal experience. For the majority of the individuals interviewed their spiritual experiences have, and continue, to enhance their emotional well-being and ability to function. This is less obviously the case for Barry whose experience(s) seem comparatively negative.

Barry's experiences have often involved feeling anxiety ("petrified") and seem to have raised more questions, about the meaning of his experiences and personal reality, than they have provided any form of resolution. While his experiences have not provided resolutions, or answers for the questions he pursues, they provide him with the purpose of continuing his quest. In this way, each of his continuing experiences serves to further validate his quest. In this way Barry's experiences may be viewed as providing limited resolution for his antecedent feeling that there was "something missing in life".

Other members of the sample have also expressed the difficulty involved in understanding the meaning of some of their experiences, most notably Adam and Graham. However, where Barry's description differs to those of other members of the sample, is in the relative absence of validating social feedback. Barry feels dismissed and sometimes openly mocked by people with whom he has attempted to share his experiences. This has resulted in feelings of isolation, suspiciousness and external attributions to the "blinkered" state of others for his continuing frustration. The comparison between the cases of Barry and the other members of the sample shows the

crucial importance of the role of socially derived feedback in the process of validating spiritual experiences.

A further distinguishing feature between Barry's experiences and those of the other interviewee's is in the domain of developmental experiences. All members of the sample, except Barry, had experienced at least some exposure to spiritual perspectives on reality as children. In the majority of cases this was due to their parent's interests in such topics, church attendance or an accepted belief in the existence of other (often unseen, rarely witnessed) realms or dimensions of reality. This developmental exposure might affect the processes in which the individual seeks to understand and validate their spiritual experiences. Through early exposure such perspectives might be more readily available for the interpretation of an unusual experience.

### Methodological Considerations

The use of narrative descriptions of personal spiritual experiences allowed the present study to explore the impact, personal significance and effects of spiritual experiences, which was not facilitated by the quantitative methods of the previous study.

The qualitative method allowed a more data rich exploration of the personal impact of spiritual experiences and found that the impact of such experiences is proportional with the extent to which such experiences are discrete and episodic. Those descriptions of spiritual experiences as significant breaks with ordinary or everyday awareness /

consciousness tended to result in the greatest personal impact, alterations of perspective upon personal reality and effects upon behaviour. Such a finding could not have been made using the quantitative methods of the previous study.

Similarly the qualitative method of the present study allowed an exploration of the circumstances surrounding the occurrence of spiritual experiences. Such an exploration (of this and the previous issue, noted above) was not possible via the quantitative methods of the previous study and displays the necessity of examining descriptions of experience, which are delivered through use of personally chosen idioms and language.

The qualitative method facilitated exploration of the methods by which individuals reporting spiritual experiences sought to understand and validate their experiences. This was not possible via the quantitative methods of the previous study.

Discussion of the quantitative findings raised issues concerning whether the dimensions of spiritual experience (Numinous, Mystical and Evil/ panic) reflect categorical types of experience or qualities within a unified but heterogeneous category of spiritual experience. The more idiographic perspective of the profiling employed for the selection of the interview sample permitted an inspection of spiritual experiences that is obscured by the perspectives and methods of the previous study and thus is considered a valuable exercise.



Finally, the previous study employed cross-sectional data, which although informative in many respects, did not allow inspection of the sequential processes underlying spiritual experiences and the causal links between the stages of this process as proposed by the Cognitive Problem-Solving Hypothesis. The qualitative method of the present study, and perhaps more importantly the use of personal narratives, allowed examination of the sequential nature of preceding circumstances, occurrence of spiritual experience and attempts to validate such experiences. Access to the sequential order of events and the impact of each allowed some exploration of the feedback processes, proposed by the CPSH, as a regulatory mechanism.

Examination of the causal links between each aspect (or stage) of the model of spiritual experiences, proposed by the CPSH, was made more accessible by employing narratives that approximate longitudinal data more closely. However, each of the narratives was a retrospective account of the personal perspectives of spiritual experience. Because of this it is difficult to assess the extent to which the individuals current understanding of their spiritual experiences has informed other aspects of their description of spiritual experiences, the circumstances that surround them, and any effects that they may have been described as having upon the life of the individual.

Specifically, the definition of a personal experience as spiritual may be attributed some time after such an experience has occurred. The process of attributing this label to an experience must occur retrospectively. The impact of this process can be observed for the description offered by Graham who describes experiences he recognised as similar to

his earlier “break-down”, but that he later realised were actually a product of meditation and thereby spiritual.

#### Future Research Directions

The present study employed a qualitative method that allowed exploration of aspects of spiritual experience, which was not facilitated by the quantitative method of the previous study. However, neither of these methods employed in isolation would allow as complete an exploration of spiritual experiences as conducted using both these methods. The present study has shown the crucial importance of being able to select a sample of individuals reporting significant spiritual experiences, in accordance with the definition of such experiences, and which reflect the range of possible experiences within this heterogeneous category of experience. The present study has allowed an assessment of the criterion validity of the Spiritual Experiences Questionnaire (SEQ: Jackson 1991) and has shown that this instrument allows selection of individuals reporting significant and proto-typical spiritual experiences. This finding supports the use of this instrument in future research of spiritual experiences and specifically, in the selection of individuals for participating in more complete analyses of their individual experience.

The present study found difficulty in observing existential issues amongst descriptions of personal circumstances that preceded spiritual experiences. This may be due to the abstract nature of existential concepts and language as conceived by authors of existential philosophy. However, the previous quantitative study found that a number of significant

associations can be observed between dimensions of spiritual experience and existential life attitude, when such issues are addressed more directly. While addressing the existential qualities of experience directly, through the use of the language of existentialism, may comprise leading questions, it may be necessary if the significance of such issues are to be more comprehensively and qualitatively explored.

The descriptions of spiritual experiences provided by the individuals interviewed emphasised the personal importance of such experience in their lives. Further, while some of the experiences described may have been challenging at the time of their occurrence, the long-term impact of spiritual experiences was described as essentially benign. The extent to which representations of individual experience are true reflections of the impact of spiritual experiences, upon well-being and functioning, require further exploration. Such an exploration could be facilitated by a second series of interviews with people who have a good personal knowledge of the individual reporting a spiritual experience. Such a method will allow an exploration of evaluations of the impact of spiritual experiences by a third party and facilitate a more comprehensive assessment of the representations provided by those reporting a spiritual experience.

By employing narrative accounts of spiritual experience and a qualitative method of analysis, the present study allowed a more complete assessment of the sequential nature of stages (and causal impact between each) as proposed by the Cognitive Problem Solving Hypothesis. However, while causal explanations may have in places been inferred, many such inferences were based upon attributions made retrospectively, by the

person describing their experience. Only the collection of longitudinal data will allow a complete and valid interpretation of causal links between sequential stages of spiritual experiences, antecedent circumstances and effects upon the life of the individual.

## Chapter 5

### Discussion, Conclusions and Future Directions

The research described throughout the body of this thesis had three main aims. The first was the examination and validation of the hypothesised dimensional structure of the measurement models employed, to represent the variables of interest. The second theme considered the role of schizotypal and dissociative traits, in the aetiology of spiritual experiences. The final theme was an examination of the ‘problem-solving’ function of spiritual experiences, choosing the Cognitive Problem-Solving Hypothesis (CPSH: Jackson 1991; Jackson and Fulford 1997) as a focus. Each of these themes is discussed in turn, bringing together material from the various results where appropriate.

#### Measurement Model Validation

A series of studies, chapter 2, began by examining the latent structures assumed to underlie the Oxford-Liverpool Inventory of Feelings and Experiences (OLIFE: Mason 1995), the Dissociative Experiences Scale (DES: Bernstein and Putnam 1986), the Spiritual Experiences Questionnaire (SEQ: Jackson 1991), and the Life Attitude Profile (Reker and Peacock 1981). Each of these instruments (measurement models) underwent an examination of its dimensional structure as representative of the psychological constructs for which they are intended. For each instrument, the examination of latent structure was accompanied by modifications. Any changes to the dimensional structures,

made during this process, attempted to isolate a structure that was theoretically coherent and statistically reliable. This method allowed the central character, of each dimension (within each instrument), to be specified.

Results from study 1c suggested that the uni-dimensional structure underlying the DES was confirmed. However, a substantial modification of this measurement model resulted in only nine of the twenty-eight original items being retained, for use in later investigations. These items appear to represent a non-pathological spectrum of dissociative experiences relative to those items displaying a lack of coherence with the latent structure. This finding suggests that the measurement model of dissociative trait and experiences, identified by the present study, may represent non-pathological varieties of, (and susceptibility to), dissociation.

The findings of study 1a suggest the tri-dimensional structure underlying the detailed items (section C) of the SEQ was confirmed. Again some modification of these dimensions was undertaken, but the resulting dimensions appeared to adequately reflect those identified by previous studies of this instrument (Jackson 1991). The most notable difference between the structures identified by the current and previous research is the change in status of that dimension which was originally conceived of as representing 'Evil' experiences. A previous formulation (Jackson 1991) had suggested this label, assuming that it belonged to the category of spiritual experiences, the present study showed that there was little empirical justification for conceiving of it in this way. Instead it appears that the items of this dimension are best described as representing a

variable of experiences characterised by 'panic'. This study (1a, p74) suggested that this dimension may best represent sensations/ experiences of 'Evil / panic'. This dual faceted label was considered to denote its developmental origins and the present studies reformulation of what this dimension appears to represent. However, that such experiences represented by this dimension are possible, within a wider category and as a quality of, spiritual experiences was supported by the more individual analysis of composite scores, conducted during selection of the interview participants, (chapter 4, p 185). This analysis suggested that one of the participants (Barry) achieved a scale score profile that reflected experiences of a combined Numinous and Evil/ panic character. This combination of experiential qualities was considered improbable by previous research (Stace 1960; Jackson 1991; Hood 1975; Hood et al 2001) but was supported by the subsequent examination of Barry's narrative description of his own experiences (chapter 4, pp 211-214).

This finding suggests that the *a priori* exclusion of items that represent relatively negative qualities of spiritual experience, from instruments designed to measure them, reflects a bias that may not be empirically justified. This suggestion is most clearly seen in the narrative data provided by Barry who reports experiences of this somewhat atypical combination. It might be suggested that such a conclusion cannot be accepted on the basis of such limited data. However, this conclusion is also supported by recent research that has begun to focus more specifically upon experiences characterised by ostensibly similar qualities (Jakobsen 1999).

It was also found that the selection of interview participants, more generally, was well facilitated through employment of the SEQ (Jackson 1991) suggesting that this instrument has good criterion validity. The SEQ appears to succeed in both identifying those individuals reporting experiences that fall within the definition of spiritual experiences as currently defined, and also by the greater inclusiveness of qualities (threat, panic, etc.) that may potentially determine the character of a spiritual experience. Such findings should promote the SEQ as an instrument ideally suited for the future study of spiritual experiences.

The three dimensions of the OLIFE (Unusual Experiences, Cognitive Disorganisation and Introvertive Anhedonia) that were employed for the quantification of schizotypal personality traits were found, (chapter 2, study 1d), to differ in structure and character to that found by previous research (Mason 1995; Mason et al 1995). The modifications to each of these dimensions substantially reduced the number of items for each. The increased specificity of each dimension allowed a series of coherent qualities to emerge as representative of schizotypal experiences and trait. For example, the Unusual Experiences dimension appears to represent low-level perceptual aberrations and magical attributions of mysterious cause. The Introvertive Anhedonia dimension appears as most robustly representing social (as opposed to both social and physical) withdrawal or anhedonia. However, the most striking difference between that structure identified by the present and previous research, lay in the dimension of Cognitive Disorganisation. Previous formulations suggested that this dimension was characterised by both limitations of the individual's organisation of cognitive contents and social anxiety



(Mason 1995). However, the present research suggests that these aspects of this dimension can be empirically distinguished and are best represented by two distinct dimensions.

Examinations of the effects of methodology (chapter 3) found some relationships between the items comprising the STB scale, (from the Schizotypal Trait Questionnaire: Claridge and Jackson 1991), and the dimensions of spiritual experience (SEQ section C items) as originally employed (Jackson 1991). This relationship shows similarities to those found during previous analyses (Jackson 1991) and was examined from the perspective of methodology. However, the STB scale bares a substantial empirical and conceptual similarity to the OLIFE dimension of Impulsive Non-Conformity. This dimension of the OLIFE was not included for the purposes of the current study. However, this dimension may be relevant to the future study of spiritual experiences due to the inclusion of items that measure a person's individual proneness to 'mood swings' (Mason, Claridge and Jackson 1995). The results of the present studies suggest that spiritual experiences may serve an affect regulatory function. For this reason it may be important for future research of spiritual experiences to further consider including items, such as those within this scale, and the relationship between these and those of the other dimensional scales employed.

Only five of the seven dimensions of the LAP suggested by previous research (Reker and Peacock 1981) were confirmed by the present research, (chapter 2, study 1b). It was found that the Goal Seeking and Will-to-Meaning dimensions of this measurement model

did not represent the structure underlying the existential life attitudes of the present study's data sample. This finding suggests that the five dimensions of Life Purpose, Existential Vacuum, Death Acceptance, Life Control and Future-Meaning-to-Fulfil most parsimoniously represent the existential life attitude of the individual. Although conclusions may be limited by the present study's use of only twenty-eight of the originally employed forty-six (Reker and Peacock 1981) items, all dimensions identified are considered reliable and valid representations of existential life attitude and are consistent with the theory from which this instrument was developed (Frankl 1963; 1978).

If there is one notable drawback in the use, made by the current research, of the Confirmatory Factor Analytic method (CFA), it is the problem of sample size. All quantitative analytical methods are limited in external validity by the sample sizes employed and CFA is no exception to this rule. The aspect of this method most limited by the sample size employed was the necessity of employing a phase-wise approach, of which the ideal final phase (for the analysis of all measurement models) was not possible. This final phase would have further tested the discriminant and convergent validity, of each dimension, by conducting a confirmatory analysis of a model in which all related dimensions were tested simultaneously. For this to have been achieved the ratio of items (representing each dimension) to the number of individual cases would have had to be more heavily in favour of the latter. Notwithstanding, the analysis did provide an elucidation of the constructs (represented by the accompanying measurement models), which would not have been achieved by any other available method.

The measurement models subsequently employed, for the substantive analysis (through use of Path Analytic techniques) of the variable inter-relationships, represent the most validated and contemporary for each variable employed. It was noted during this analysis (Chapter 3), that the coefficient sizes for the relationships between the dimensions of schizotypy and those of spiritual experience were lower than those found by previous research (Jackson 1991). A careful analysis of the effects of the different components of the analysis was made, and found that the use of CFA in combination with the methods of correlative estimation, were those methodological components that resulted in the relatively smaller coefficient sizes. However, it is argued that although the coefficients may be smaller they are actually more reliable markers of the significant associations found for the variable inter-relationships. It is these inter-relationships that shall now be discussed.

### Personality and Spiritual Experience

The second main enterprise undertaken by the present research was an examination of the associations between the dimensions of spiritual experience and personality trait variables of schizotypy and dissociation. Previous research (Jackson 1991; Jackson 1997) suggested that schizotypic personality traits served to predispose the individual to spiritual experiences. The present research employed the most contemporary measurement

instrument (the modified OLIFE, see above) available for the quantification of schizotypal traits. The relationship between the four schizotypic dimensions and the three dimensions of spiritual experience was examined using path analytic techniques. The present study found that *only* the Unusual Experiences dimension of schizotypy was significantly associated with the Numinous and Mystical dimensions of spiritual experience, as quantified using the SEQ. This finding suggests that the more apparently dysfunctional aspects of schizotypy (Cognitive Disorganisation, Introvertive Anhedonia and Social Anxiety) are not related to what has been described, by a wealth of research (Jackson 1997 and Claridge 1997 for reviews), as the benign expression of psychotic like phenomenology. Debates surrounding the differentiation of psychotic and spiritual experiences has tended to assume that the common trait of schizotypy is fully expressed in both classes of experience and that it is the outcome of such experiences that allows them to be distinguished (e.g. Jackson 1997). The finding of the current research suggests that only the Unusual Experiences dimension of schizotypy is associated with spiritual experiences. Subsequently, the conclusion suggested is that psychotic and spiritual experiences may also be distinguished by differential expression of schizotypic trait.

Dissociative trait, as quantified by the modified measurement model of the DES, has been shown to be significantly associated with only the Evil / panic dimension of spiritual experiences. While the inclusion of this dimension within the wider category of spiritual experience is of some debate, it has been suggested (see above) that this dimension reflects a quality of spiritual experiences that may contribute to the over-all quality of a spiritual experience. If this were not the case the relationship between dissociative trait

and the evil / panic dimension might be better described as similar to that proposed for (and perhaps a sub-clinical form of) Post Traumatic Stress Disorder (e.g. Horowitz 1986).

However, two further possible suggestions remain. Transliminality (Thalbourne 1991) is suggested to be characterised by the non-pathological aspects of dissociation (Imaginative Absorption and Fantasy Proneness) that feature (particularly the former) among the items of the modified DES employed for the analyses of the variable inter-relationships conducted by the present study. However, the conceptualisation of 'transliminality' (Thalbourne 1991) suggests that 'transliminality' is a rather more general capacity for the passing of cognitive material between preconscious and conscious modes of operation. This conceptualisation of 'transliminality' is also related to susceptibility to spiritual experiences and schizotypal cognitions, and it is suggested that all such phenomena might be related through belonging to a single dimension of transliminal susceptibility. On this model, spiritual, schizotypal and (non-pathological) dissociative experiences are viewed as belonging to a single dimension. It would be predicted that dissociation, as operationalised by the present research (through the DES) would be associated with all dimensions of spiritual experience. However, it was found that only the Evil / panic dimension of spiritual experience was significantly associated with the modified DES employed for the present research. This discrepancy between the finding of the present research and previous formulations of 'transliminality', suggest that the Evil / panic dimension of spiritual experiences (as conceived of by the present research) is more closely related to other aspects of 'transliminal' susceptibility, such as depression and mania, which are also thought to belong to the same dimension

(Thalbourne and Delin 1995). While the present research did not *a priori* assume that (susceptibility to) spiritual, schizotypal and dissociative experiences belonged to a single dimensional predisposition, the current findings, in the context of this conceptualisation of ‘transliminality’, further support the inclusion of the Evil / panic dimension as a potential quality of spiritual experience.

Within the context of the conceptualisation of ‘transliminality’ it would be valuable to further examine the inter-relationships that may exist between the dimensions for theoretically distinct constructs, such as schizotypy, dissociation, existential life attitude and spiritual experience. This would be achievable through the employment of relatively large sample sizes ( $N > 1000$ ), and Higher Order Factor Analytic Techniques.

#### Examination of the ‘Problem-Solving’ Function of Spiritual Experiences

The final theme of the present research was an examination of the ‘Problem-Solving’ function proposed for spiritual experiences (e.g. James 1902; Persinger 1983; Boisen 1952; Clarke 2001; Prince 1979). This aspect of the present research focussed upon the Cognitive Problem-Solving Hypothesis (CPSH: Jackson 1991; Jackson and Fulford 1997), as this model is the most explicitly stage, or process, based and thereby the most amenable to examination. This model suggests that spiritual experiences are preceded by stress that is ‘existential’ in character and that such issues are directly addressed by spiritual experiences. Partly because of the psychometric methodology employed for the examination of some aspects of the CPSH, a qualitative investigation was necessitated, in

order that the *personal* context and life circumstances at the time of spiritual experiences could be more thoroughly explored. Only in this way would it be possible to examine the extent to which stresses preceded spiritual experiences, and further, that such stresses were characterised by existential issues of meaning and purpose. The qualitative analysis of the personal narratives provided in chapter four, suggest that in all but two cases (Anne and Barry) a discrete and identifiable period of stress directly preceded their spiritual experiences. These stresses were not easily categorised as existential in character. However, as previously discussed (discussion chapter 4), this may be due to the rather abstract nature of such concepts and the subsequent, unavailability for ready use (as ideas or language forms).

In all but one case (Barry) the spiritual experiences reported were described as providing immediate relief from the affect associated with the antecedent stresses described. However, for all but one case (Jenny) the ameliorating effects of spiritual experiences were described as a product of repeated spiritual experiences. This is a theme that will be returned to in more detail below.

Due to the strong links between existential issues and the subjective experiences of depression, variables of both existential life attitude (the five dimensions of the modified LAP) and depression (the thirteen item sub test for depression from the SCL-90-R) were employed in the quantitative examination of this aspect of the CPSH. Due to the cross-sectional data employed (and subsequently the retrospective relationship between spiritual experiences and any effects) the variables of existential life attitude and

depression were employed in the manner of outcome variables in the models constructed for examination. It was found that elevations in the proto-typicality of Mystical Experiences were associated with elevations in depressive symptoms. It was also found that elevations in scores upon the Evil / panic dimensional scale were associated with elevations in depressive symptoms. This finding suggests that spiritual experiences, particularly those characterised by Mystical and / or Evil /panic qualities are associated with increased depression. This finding is the opposite that predicted by the CPSH. However, although the model examined was that most appropriate due to the cross-sectional data employed, it is not possible to state on the basis of this finding that spiritual experiences having these qualities *cause* increased depression. That said, the association between current depression (symptoms over the last two weeks) and reports of previous spiritual experiences cannot be refuted.

The five dimensions of existential life attitude were found to be differentially associated with the dimensional qualities of spiritual experience. The Evil / panic dimension of spiritual experiences was associated with elevations in feelings of meaninglessness, (EV), an absence of a purpose in life, (LP), the hope that the future might be more meaningful, (FMF), feeling that the life was not controlled by the self, (LC), and an increased acceptance of death (DA). This is a negative profile for existential life attitude and appears entirely commensurate with spiritual experiences infused with these sensations and impressions. It is not surprising that this negative life attitude profile, experiences of the Evil / panic dimension and depression all seem positively associated. The Mystical and Numinous dimensions of spiritual experience displayed strongest associations with



an enhanced life purpose and the hope that the future would be more meaningful. While there is some ambiguity as to the exact interpretation of the Future-Meaning-to-Fulfil (FMF) dimension, it is clear that the life attitude profile associated with these qualities of spiritual experience are unambiguously more positive.

These findings suggest that Numinous qualities of spiritual experience are not associated with either increased or decreased symptoms of depression, but do appear to be associated with more positive existential life attitudes. Mystical qualities of a spiritual experience are associated with elevated depression but a positive existential life attitude, while Evil / panic qualities of spiritual experiences are associated with increased depression and a negative existential life attitude.

This finding is supported by the independent observation, (using the Hood Mysticism Scale: HMS: Hood 1975; Hood, et al 2001), that when separate measures of anxiety and depression are employed they are significantly associated with 'introvertive mysticism' or experiences of a contentless unity in which self and world dissolve. The dimensions of the HMS do not map completely onto those dimensions of the SEQ, but do however show some similarity (see the discussion chapter 2a), particularly the introvertive mysticism dimension of the HMS and the Mystical Experience dimension of the SEQ.

As previously discussed, at several points throughout the current thesis, the HMS was devised on the basis of the *a priori* philosophical assumption (Stace 1960) that only the experience of unity was the true character of a mystical experience. On this assumption it

is suggested that any other interpretation of a spiritual experience (e.g. in terms of a spiritual presence or other religious interpretations), is a product of interpretative responses, independent to the spiritual experience as it *actually is*. The finding that ‘introvertive mystical experiences’ are related to separate indices of anxiety and depression, and that ‘interpreted mystical experiences’ are not, suggests that negative feelings / responses to a spiritual experience are due to the lack of an interpretative framework for the experience.

This suggestion is supported by the qualitative analysis of individual narratives of personal spiritual experiences (chapter 4). The experiences related by Graham, Adam, Olwyn, Anne and Vicky were each imbued with distinctive interpretations for their spiritual experiences. The most salient of these narratives, in this respect, was that provided by Graham. He had experienced similar phenomenology during both what he describes on one occasion as a “complete nervous breakdown” and on another as the product of intensive meditation practices. On the former occasion he admits having no personal framework or perspective that allowed him to interpret his anomalous experiences, and thus we find that he describes it in the semi-medical term of a “breakdown”. Indeed, Graham was hospitalised as a result of this episode and it appears sensible to assume that this contact (with the psychiatric model) provided the interpretative framework that he otherwise lacked. On the second occasion he describes experiencing similarly anomalous perceptions and cognitions, accompanied by a high level of anxiety and the fear that his breakdown “might be happening again”. However, on this occasion the context was one of meditative practices, and he was reassured by

those also involved, that his experiences were a frequent by-product of such enterprises. Graham describes the “settling down” of his “cognitive chaos” as rapid from the point of interpretation. While the other people interviewed offered similarly interpreted spiritual experiences, Graham’s story is fairly unique (with the possible exception of Olwyn) due to the distinct interpretation offered for the occurrence of ostensibly similar phenomenology, at different times, *for the same person*. An example such as this emphasises the potentially great consequences of having / not having a perspective or framework for the interpretation of anomalous experience.

A closely related issue is that of how such frameworks are adopted and the dependence of this process upon those of how the individual attempts to validate their spiritual experience. The CPSH proposes that following the occurrence of a spiritual experience the individual will attempt to validate their experience. Previous research (Jackson 1991; Jackson and Fulford 1997) suggests that validation, for a spiritual experience, is sought primarily, through a social medium. The people interviewed described a variety of means through which they sought to understand their experience. While some can be described as social (i.e. through contact with other people), other forms, of which the most popular was reading spirituality related literature, are more easily described as *asocial*. Most people interviewed employed both *asocial* and social mediums in attempting to understand their spiritual experiences. However, from the qualitative analysis of the personal narratives it appears that the feedback gained socially, has by far the greater impact upon the person, and the perspectives adopted for the understanding of their experience. This impact has already been described in relation to the effects of the

differing interpretations given to Graham following his anomalous experiences. More specifically in the domain of the impact of socially derived feedback, are the experiences of Barry.

Barry describes having instantaneously adopted a (since unwavering) belief that his first UFO encounter could only be explained in reference to such phenomena. He describes attempting to speak with others about some of his experiences of both alien and UFO encounters, and describes the responses he has received as ranging from dismissive to ridiculing. He has been able to have some slightly more fulfilling exchanges with those who share an established interest in similar phenomena, but has still felt dismissed, for what he describes as the uniqueness of his experiences and the perspectives he has subsequently adopted. It is not surprising therefore that as he has become increasingly frustrated with the lack of socially derived feedback and consequently increased the scope of his social arena. He has attempted to share his experiences with people from increasingly uninterested positions, such as those he works with. Simultaneously, he appears to have become reliant upon asocial means of attempting to understand his experiences. This has involved literature and video concerning the UFO phenomena in which he is interested. Barry sums up his social status as “isolated” and attributes this (quite accurately) to having difficulty meeting “people of a like mind”. He appears also to have fostered a slightly paranoid and grandiose attitude towards other people, who he feels are “blinkered” and not interested in “what’s really going on”. Barry’s perspective and interests are idiosyncratic, but it appears that it is ultimately his preoccupation with

his own perspectives and interests that divide him from his social peers, and lessen the chance of his deriving validating social feedback.

For the other people interviewed, socially derived and validating feedback was obtained by making interpretations, within religious or spiritual terms, that displays a reciprocity between adoption via a shared value system and affiliation to the social group from which such perspectives were obtained. Adam's story, for example, shows this relationship in his adoption of a religious interpretation of his first spiritual experience, via an established Christian peer, and his subsequent involvement in Christian groups. While this process can be viewed, to a greater or lesser extent, for all those interviewed, Barry's story is an obvious exception. This may be due in part to the idiosyncratic nature of his perspective and thereby the relative difficulties in meeting "like minds". Reasoning about this process in this way, is supported by recent research concerning the impact of delusional belief systems upon the life of the individual. It has been shown that delusional (non-consensual) ideas tend to have the most negative impact, upon the life and functioning of the individual, when preoccupation is high (Peters, Day, McKenna and Orbach 1999).

The final issue addressed in examining the CPSH involved the processes of feedback invoked to model the regulation of anomalous experience, and explain how similar experiences may take on a benign or more pathological character. It is suggested (Jackson 1991; Jackson and Fulford 1997) that spiritual experiences that adequately address antecedent stress are less likely to be repeated, due to the resultant attenuation of

stress. This process of negative feedback is contrasted with those experiences, deemed pathological, that are characterised by frequently repeated anomalous phenomenology. This counter process of positive feedback is suggested to result from the inefficacy of the experience (or perspectives adopted as a result) in addressing antecedent stresses. Thus it is predicted by the CPSH that spiritual experiences, which effectively address an antecedent stress, will occur less frequently as a result. All of those interviewed, with the exception of Jenny, reported that it was via the opportunity to repeatedly achieve moments of spiritual experience that such experiences enhanced their well-being and allow them to cope with periods of depression. Adam, for example, described his repeated spiritual experiences as facilitated by his Christian worship and served reinforce his faith. Similar descriptions of this process were (most explicitly) provided by Vicky, Graham, and Olwyn. Contrary to the prediction made by the CPSH, it appears that the spiritual experiences reported by the interview sample were valued for the personal benefits provided through their regular occurrence. Further, the experiences reported, and particularly those that occurred for the person more latterly, did not assume a character reminiscent of psychopathology. This is again counter to the model offered for by the CPSH for the regulation of such experiences.

The quantitative study, (chapter 4), showed that prototypically Mystical experiences were associated with elevations in the depressive symptoms experienced by individuals. Taken together with the positive feedback process implied by the personal descriptions of spiritual experience, it appears that spiritual experiences provide intermittent relief from an underlying and unremitting depression. As previously discussed, on this model

spiritual experiences appear to function in a manner similar to that recently described (e.g. Lyon, Startup and Bentall 1999) for the manic ('high') phase of bi-polar affective disorder. This process, termed the 'manic defence', is thought to be regulated and dependent upon an underlying unremitting depression that returns as the manic phase abates. However, unlike the rather more pathological interpretation as a 'manic defence', spiritual experiences do not appear to mimic this process to such an extent that attributions to categories of pathology should be assumed. In this respect, spiritual experiences appear to remain consistent with the definition adopted for the present research. Although, they might be best modelled by reference to the 'manic defence' they continue to manifest as sub-clinical (with regards diagnostic criteria) and are therefore, by definition, benign.

#### Status of The Cognitive Problem Solving Hypothesis as a Model for Spiritual Experiences

The CPSH quite correctly predicts that antecedent stress is the context in which spiritual experiences are most likely to occur. However, the suggestion that such stress is existential in character is difficult to verify. The CPSH also appears correct in the general assumption that spiritual experiences serve a 'problem-solving' function. However, whereas this model suggests that it is the new perspectives gained (via a cognitively oriented paradigm shift) that embody the solution to the antecedent 'problem', it appears that such experiences provide a more affectively focussed relief from dysphoria.

The CPSH suggests that, via a process of negative feedback, that spiritual experiences remain benign due to their 'problem-solving' efficacy and thereby a reduced frequency. However, the present study has shown that the experiences reported appear to have their 'problem-solving' function via a process of *positive* feedback, which allows the individual to avoid being overwhelmed by an unremitting dysphoria. On the basis of the present researches findings, it is arguable that it is not the 'problem-solving' efficacy and resulting reduction in frequency, that separates spiritual from pathological varieties of phenomenological similar experience. Rather, it seems that if any one element determines the ultimate character, and eventual outcome, of such experiences, it is that of the socially derived feedback obtained via attempts to share, understand and validate individual experience. That said, it must be emphasised that even in such cases where such feedback is negative (i.e. Barry), the impact is rarely enough to produce dysfunction of a diagnostically relevant magnitude.

This line of reasoning ultimately suggests that spiritual, and more pathological, outcomes for anomalous experience are not simply a matter of interpretation (e.g. Jackson and Fulford 1997) but are taxonically distinct for other reasons. These other reasons might lay in the domain of individual personality variants such as schizotypal, dissociative or transliminal trait. The quantitative study showed that only the Unusual Experiences dimension of schizotypy was associated with expression in the form of spiritual experience. It may simply be that individuals reporting spiritual experiences, who also experience the expression of other schizotypic dimensions, (i.e. Cognitive



Disorganisation, Introvertive Anhedonia and Social Anxiety) are constitutionally (and perhaps taxonically) different to those who report such experiences in the absence of the accompanying schizotypic expression.

However, for those individuals at the cusp of this possible distinction, the impact of evaluations and interpretations of their experience, upon their sense of self and functional ability, cannot be emphasised enough. Ultimately, it appears very likely that the attitudes of people who may or may not have had similar experiences to those reported as spiritual will at least partly, determine their outcome.

#### Future Directions

The research that has been undertaken and described throughout this thesis has made some novel findings that require further examination. It has already been noted, above, that the dimensional relativity of those constructs presently regarded as distinct must be further clarified. The relationship between dimensions of spiritual experience, schizotypy, dissociation, depression and existential life attitude requires further elucidation. This examination is particularly salient due to the more recent concept of ‘transliminality’ (Thalbourne 1991), the conceptualisation of which suggests that all of these dimensions may be related and represent a unidimensional construct akin to earlier suggestions akin to a ‘mobility of threshold’ (Underhill 1930). This research would necessitate the use of large sample sizes and Higher-Order Factor Analytic Techniques.

The concept of a unidimensional 'transliminality' also include the constructs of a susceptibility to depressive and manic experience (Thalbourne and Delin 1999), which have also been implicated, by the findings of the present research, as potential models for the processes underlying spiritual experiences. No direct examination of the 'manic defence' as a potential model for spiritual experiences was undertaken by the present study's. However, the findings of the current research are strongly suggestive that the relationship between 'manic defence' type processes and spiritual experiences should be explored by future investigations. Research methods have recently been employed in the direct examination of the explicit and implicit cognition associated with the processes described as a 'manic defence' (e.g. Lyon, Startup and Bentall 1999). These methods focus upon explicitly made attributions to self and discrepancies between these and interference upon Stroop-style tasks for the same range of attributions. In this way it is suggested that discordance between explicit and implicit (cognitive schemata) evaluations of self, and the underlying depressive perspective of self, can be measured. Such methods could be employed in an examination of the 'manic defence' processes, which may be related to those dynamics underlying spiritual experiences.

The findings discussed above have suggested significant associations between dimensions of depression and Mystical Experience. Due to the cross-sectional nature of the data employed it is not possible to state in which direction causal relationships, between these variables, might naturally occur. The only method that would allow a more complete examination of potential causal relationships is facilitated by employment of longitudinal data. Data collected at several intervals for each variable of interest

would allow a full Structural Equation Modelling (SEM) technique to be employed, and provide far greater elucidation of the causal relationship between depression (depressive symptoms) and the occurrence of spiritual experiences.

For such an investigation to be effective, the identification of relevant sample populations must be achieved. This could be achieved by other findings of the studies undertaken here. It was found that the variables of dissociation and the Unusual Experiences dimension of schizotypy (as employed by the current research) were significantly associated with the dimensions of spiritual experience. These measures could be employed for the identification of a sample of those individuals most likely, or susceptible to, spiritual experiences.

Any future research concerning spiritual experiences would ideally employ both quantitative and qualitative data. While some variables can be reliably estimated and represented by quantitative measures, others are best, or can only be, captured through the qualitative medium of personally chosen idioms. This is particularly the case for variables pertaining to the personal context in which a spiritual experience has occurred. It would not be accurate to attempt to represent such a complex and potentially infinitely varied 'variable' by imposing a rigid and assumption bound quantitative construct. By making a qualitative examination it might be possible to further examine the character of antecedent stresses and perhaps more directly investigate their existential nature.

Further, by obtaining (particularly) qualitative data in a longitudinal manner, it would become possible to examine more closely the ways in which experiences are understood, validation attempts made, and how these impact upon eventual interpretations.

The present research has shown the significance of validation attempts (particularly those conducted socially) for the interpretative understanding of anomalous experience. It has also shown the potentially negative consequences of receiving only partial validation and the idiosyncratic perspectives, subsequently adopted. In attempting to understand the effects of spiritual experiences the current research has relied upon descriptions from those experiencing them. However, the actual effects (or changes that the person may have undergone) that follow such experiences might be further explored by seeking the perspective of a third party. This individual would ideally be someone sufficiently acquainted with the individual reporting spiritual experiences, so that a further reliable perspective can be gained.

Spiritual experiences are a complex, personal and highly individual phenomenon. Study of these experiences is easily confounded if a one sided and emphatically rational approach is taken. As the present study has hoped to show, the use of both quantitative and, more personally focussed, qualitative methods, allow understandings that would be unachievable by using either in isolation. Further clarification of the psychological meaning of spiritual experiences is required. However, the general and robust themes, of their personal significance and life changing impact, consistently appear. These general commonalities may serve as a motivation for their future study.

It is hoped that the present study of spiritual experiences will serve as a helpful starting point in understanding this most nebulous and ephemeral of human experiences.

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## APPENDICES

## Participant Information

- Please give your name and address if you wish to be entered in the prize draw for £100

Name : \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- If you would also be interested in taking part in follow up research please tick the box: ☐

- Please indicate your age in years: \_\_\_\_\_

- Please indicate your sex :      Male                      Female

- Please indicate your marital status :

Single / Married / Co-habiting / Divorced / Separated / Widowed

- What is your preferred spoken language \_\_\_\_\_

- What is the highest qualification that you hold ? \_\_\_\_\_

(If you are studying at present please state what the qualification will be)

- What is your present occupation ? \_\_\_\_\_

(If you do not work for any reason, please state your previous occupation or the occupation of the 'bread-winner' in your family)

Appendix 2: The Life Attitude Profile (28-Item version employed)

This questionnaire will ask you about how **you** feel about **your** life. You shall be presented with a statement and asked to rate how strongly you agree or disagree with this statement. Please respond by circling a number at a point on the line which best reflects your level of agreement/disagreement with that statement.

For example:

Oranges are my favourite fruit.

|                |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|-------------------|
|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| Strongly Agree |   |   |   |   |   |   |   | Strongly Disagree |

Please try to answer all questions quite quickly without thinking about them too much. This questionnaire can be completed in about twenty minutes.

1) My life is running over with exciting good things.

|                |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|-------------------|
|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| Strongly Agree |   |   |   |   |   |   |   | Strongly Disagree |

2) I often seem to change my *main* objectives in life.

|                |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|-------------------|
|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| Strongly Agree |   |   |   |   |   |   |   | Strongly Disagree |

3) My life is in my hands and I am in control of it.

|                   |   |   |   |   |   |   |   |                |
|-------------------|---|---|---|---|---|---|---|----------------|
|                   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                |
| Strongly Disagree |   |   |   |   |   |   |   | Strongly Agree |

4) Some people are very frightened of death but I am not.

|                |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|-------------------|
|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| Strongly Agree |   |   |   |   |   |   |   | Strongly Disagree |

5) I think about the ultimate meaning of life.



1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

6) I hope for something exciting in the future.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

7) I feel that the greatest fulfilment of my life lies yet in the future.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

8) Life to me seems very exciting.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

9) I feel the lack of and need to find a real meaning and purpose in my life.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

10) I determine what happens in my life.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

11) I am generally much less concerned about death than those around me.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

12) I am seeking a meaning, purpose or mission for my life.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

13) I feel the need for adventure and 'new worlds to conquer'.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

14) I expect the future to hold more promise for me than the past has.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

15) I have discovered a satisfying life purpose.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

16) I feel that some element that I can't quite define is missing from my life.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

17) I believe that I am free to make all life choices.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

18) Death makes little difference to me one way or the other.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

19) Over my life time I have felt a strong urge to find myself.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

20) I am restless.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

21) I look forward to the future with great anticipation.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

22) In thinking of my life I see a reason for my being here.

1 2 3 4 5 6 7  
Strongly Disagree | | | | | | | Strongly Agree

23) I day dream of finding a new place for my life and a new identity.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

24) My Accomplishments in life are determined by my own efforts.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

25) I am more afraid of death than of old age.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

26) A period of personal hardship and suffering can give a person a better understanding of the real meaning of life.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

27) A new challenge in my life would appeal to me now.

1 2 3 4 5 6 7  
Strongly Agree | | | | | | | Strongly Disagree

28) I am determined to make my future meaningful.

|                |   |   |   |   |   |   |   |                   |
|----------------|---|---|---|---|---|---|---|-------------------|
|                | 1 | 2 | 3 | 4 | 5 | 6 | 7 |                   |
| Strongly Agree |   |   |   |   |   |   |   | Strongly Disagree |

Appendix 3: The 13-item sub-test for depressive symptoms from the SCL-90-R (Derogatis and Cleary 1977)

Instructions: Below is a list of problems some people sometimes have. Please read each one carefully and then circle one of the numbers to the right that best describes how much that problem has bothered or distressed you during the past two weeks, including today. Circle only one number for each problem and do not miss out any of the items. Please read the example below before beginning and make your circles clearly with a pen or dark pencil.

Example:

|                                   |               |                 |            |                |           |
|-----------------------------------|---------------|-----------------|------------|----------------|-----------|
| HOW MUCH WERE YOU<br>BOTHERED BY: | Not<br>at all | A little<br>bit | Moderately | Quite<br>a bit | Extremely |
|-----------------------------------|---------------|-----------------|------------|----------------|-----------|

|              |   |   |   |   |   |
|--------------|---|---|---|---|---|
| a. Backaches | 0 | 1 | 2 | 3 | 4 |
|--------------|---|---|---|---|---|

IN THE LAST TWO WEEKS

|                                   |               |                 |            |                |           |
|-----------------------------------|---------------|-----------------|------------|----------------|-----------|
| HOW MUCH WERE YOU<br>BOTHERED BY: | Not at<br>all | A little<br>bit | Moderately | Quite<br>a bit | Extremely |
|-----------------------------------|---------------|-----------------|------------|----------------|-----------|

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 1. Feeling low in energy<br>or slowed down | 0 | 1 | 2 | 3 | 4 |
| 2. Crying easily                           | 0 | 1 | 2 | 3 | 4 |
| 3. Feelings of being<br>trapped or caught  | 0 | 1 | 2 | 3 | 4 |
| 4. Blaming yourself<br>for things          | 0 | 1 | 2 | 3 | 4 |
| 5. Feeling lonely                          | 0 | 1 | 2 | 3 | 4 |
| 6. Feeling blue                            | 0 | 1 | 2 | 3 | 4 |
| 7. Worrying too much<br>about things       | 0 | 1 | 2 | 3 | 4 |
| 8. Feeling no interest<br>in things        | 0 | 1 | 2 | 3 | 4 |
| 9. Feeling everything is<br>an effort      | 0 | 1 | 2 | 3 | 4 |
| 10. feeling hopeless<br>about the future   | 0 | 1 | 2 | 3 | 4 |
| 11. Feelings of<br>worthlessness           | 0 | 1 | 2 | 3 | 4 |
| 12. Loss of sexual interest<br>or pleasure | 0 | 1 | 2 | 3 | 4 |
| 13. Thoughts of ending<br>your life        | 0 | 1 | 2 | 3 | 4 |

**D.E.S.**

**Directions :** This questionnaire consists of 28 questions about experiences that you may have in your daily life. Please indicate how often you have these experiences. It is important that your answers show how often these experiences happen to you when you are NOT under the influence of alcohol or drugs. To answer the questions, please circle a number to show what percentage of the time you have the experience, as shown in the example below.

0% 10 20 30 40 50 60 70 80 90 100%  
(never) (always)

0% 10 20 30 40 50 60 70 80 90 100%

0% 10 20 30 40 50 60 70 80 90 100%

0% 10 20 30 40 50 60 70 80 90 100%

0% 10 20 30 40 50 60 70 80 90 100%

0% 10 20 30 40 50 60 70 80 90 100%

0% 10 20 30 40 50 60 70 80 90 100%

0% 10 20 30 40 50 60 70 80 90 100%

8. Some people are told that they do not recognise friends or family members. Circle a number to show the percentage of time that this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

9. Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation). Circle a number to show what percentage of time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

10. Some people have the experience of being accused of lying when they do not think that they have lied. Circle a number to show the percentage of the time that this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

11. Some people have the experience of looking in a mirror and not recognising themselves. Circle a number to show the percentage of time that this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

12. Some people sometimes have the experience of feeling that other people, objects, or the world around them are not real. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

13. Some people sometimes have the experience of feeling that their body does not belong to them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

14. Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

15. Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

16. Some people have the experience of being in a familiar place but finding it strange and unfamiliar. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

17. Some people find that when they are watching television or a film they become so absorbed in the story that they are unaware of other events happening around them. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

18. Some people sometimes find that they become so involved in a fantasy or day-dream that it feels as though it were really happening to them. Circle a number to show what percentage of the time that this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

19. Some people find that they are sometimes able to ignore pain. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

20. Some people find that they sometimes sit staring off into space, thinking of nothing, and are not aware of the passage of time. Circle a number to show the percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

21. Some people sometimes find that when they are alone they talk out loud to themselves. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

22. Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

23. Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

24. Some people sometimes find that they can not remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they have just mailed a letter or have just thought about mailing it). Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

25. Some people find evidence that they have done things that they do not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

26. Some people sometimes find writings, drawings or notes among their belongings that they must have done but can not remember doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

27. Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%

28. Some people sometimes feel as if they are looking at the world through a fog so that people or objects appear far away or unclear. Circle a number to show what percentage of the time this happens to you.

0% 10 20 30 40 50 60 70 80 90 100%



## **S.E.Q.**

**All information collected in this study will be kept in the strictest confidence**

This questionnaire consists of 4 sections, each of which requires a different kind of response from you. The questions are not tests of ability or intelligence - there are no "right" or "wrong" answers - so please consider them carefully, and answer as honestly as possible. You will find it easiest to complete in a peaceful, relaxed environment, where you are able to think without too many interruptions. When filling it in, please do not discuss your answers with anyone else until you have responded to all the questions. Thank you for your co-operation, I hope you enjoy this questionnaire.

### SECTION A

1. Please indicate on the line below, a point between the two extremes which best describes your current mood.

Very Happy|\_\_\_\_\_|Very Sad  
Neutral

2. Are you a practising member of any religious community or organisation ? YES / NO

If "YES", which one?\_\_\_\_\_

3. How often do you attend a religious meeting, service or ritual?

more than once a week / once a week / once monthly / once a year / never

4. Would you describe yourself as being at all religious ? YES/ NO

5. How much literature on mysticism or the supernatural have you read ? A LOT /A LITTLE /NONE

6. Have you ever been aware of or influenced by a presence or a power, whether you call it God or not which is different from your everyday self ?

YES/NO

If your answer to question 6 was "YES", please describe an instance of such awareness or influence on the back of this page.

## SECTION B

**This section contains five genuine, unedited descriptions of various experiences. Each was written by a different person. In the questions which follow, please underline the most appropriate response.**

1. I was asleep in the night, and woke very suddenly and felt quite alert. I felt surrounded and threatened by the most terrifying and powerful presence of Evil. It seemed to be localised within the room. It seemed almost physical and in a curious way it "crackled", though not audibly. It was also extremely "black", and I felt almost overwhelmed with terror. I stayed rigid in my bed for several minutes, wondering how to combat this blackness. I felt it was a manifestation directed very personally at me, by a Power of Darkness. I was momentarily overwhelmed by despair.

Apart from the precise circumstances, have you ever had an experience in which you felt similar to the author of this account ?

- i) yes - very similar
- ii) yes - fairly similar
- iii) no - not at all

2. It starts with a general feeling of gladness to be alive. I am never aware of how long this feeling persists but after a period I am aware of an awakening of my senses. Everything becomes suddenly more clearly defined, sights, sounds and smells take on a whole new meaning. I become aware of the goodness of everything. Then as though a light were switched off, everything becomes still, and I actually feel as though I were part of the scene around me. I can identify with the trees or the rocks or the earth and, with this identification, and the tremendous stirring within me, it seems as though I am looking at the human race, and myself in particular, through the wrong end of a telescope. I feel as though I have the power to do anything, no problem is too great for me to tackle - and with this feeling comes an indescribable sense of peace and well being. Just as suddenly as it begins it ceases, and I find myself back in reality again with the exception that the feeling of peace and well being remains with me.

Apart from the precise circumstances, have you ever had an experience in which you felt similar to the author of this account ?

- i) yes - very similar
- ii) yes - fairly similar
- iii) no - not at all

3. In great despair one day I was alone in my bedroom and suddenly thought I'd try to pray, so without much hope I got on my knees. Words wouldn't come but quite suddenly I felt a presence beside and around me, it was as if I had been touched by this tremendous power and suddenly my heart was still and a wonderful sense of peace came over me.

Apart from the precise circumstances, have you ever had an experience in which you felt similar to the author of this account ?

- i) yes - very similar
- ii) yes - fairly similar
- iii) no - not at all

4. Our garden is surrounded on two sides by tall trees which at times have a menacing effect. Sometimes, standing in it towards evening, I have had the sensation of meeting an overpowering spirit, far stronger than anything that could be experienced from encountering another person, and the sight of the delicate blackness of these trees against the heavy blue of the evening sky has thrilled me to the point where I could stand the eeriness no longer and must go indoors. In the open country too, I have had a feeling that something far stronger than myself was present.

Apart from the precise circumstances, have you ever had an experience in which you felt similar to the author of this account ?

- i) yes - very similar
- ii) yes - fairly similar
- iii) no - not at all

5. Looking up at the huge expanse of sky and all those brilliant dots of white I suddenly realised the size of the universe - it was enormous. I felt overawed, almost frightened and yet at the same time I felt as if I belonged, as if I myself was at one with everything around me. Suddenly I realised just how much there was to learn about and do, I felt as though I must plunge myself into a sort of "pool of knowledge" in order to fulfil this surge of emotion. This feeling also happens when I go for a walk in the countryside and see how beautiful the earth is and marvel at the powers of nature and the unseen forces around us - you really do feel as though life is worth living.

Apart from the precise circumstances, have you ever had an experience in which you felt similar to the author of this account ?

- i) yes - very similar
- ii) yes - fairly similar
- iii) no - not at all

### SECTION C

1) Did any aspect of one or more of the accounts in section B remind you of any experience (not including dreams) which you have had? (It does not matter if your experience was not exactly the same as any of those described)

YES/ NO

2) If your answer to question 1 in this section was "YES" which account in section B was closest to your own experience?

1      2      3      4      5

**BEFORE MOVING ON TO THE NEXT PAGE**

#### **IF YOUR ANSWER TO QUESTION 1 ON THIS PAGE WAS "YES" :**

Try and remember how you felt in the course of an experience which these accounts have reminded you of. If you can think of more than one such experience, concentrate on the one which made the most impression on you while answering the following questions ...

**HOW WELL DO THE FOLLOWING STATEMENTS DESCRIBE FEELINGS OR IMPRESSIONS WHICH WERE PART OF THE EXPERIENCE WHICH YOU HAVE REMEMBERED ?**

Answer by circling the most appropriate number opposite the question, where:

**2 = VERY MUCH HOW I FELT,  
1 = ROUGHLY HOW I FELT,  
0 = NOT AT ALL HOW I FELT.**

|   |       |
|---|-------|
| 1. Feeling that something important and valuable had been revealed  | 0 1 2 |
| 2. Feeling that you understood the way in which everything is linked up with everything else.                   | 0 1 2 |
| 3. Feeling that life was so difficult that you might as well give up trying to make any progress                | 0 1 2 |
| 4. A feeling of sacredness or holiness.   | 0 1 2 |
| 5. A feeling of fear.   | 0 1 2 |
| 6. Feeling that you had had a very deep insight, or been able to understand something very profound about life. | 0 1 2 |
| 7. Having some unusual sensations.  | 0 1 2 |
| 8. Feeling that you no longer knew who you really were.   | 0 1 2 |
| 9. A feeling of belonging to, or being a significant part of, something far greater than yourself.              | 0 1 2 |
| 10. A feeling of being controlled by something outside yourself.  | 0 1 2 |
| 11. Feeling that everything was lifeless and uninspiring.   | 0 1 2 |
| 12. Feeling that you had discovered the meaning of life.  | 0 1 2 |
| 13. Feeling very isolated.  | 0 1 2 |
| 14. A feeling of awe or reverence.  | 0 1 2 |
| 15. Feeling that you had made a sharp break with the world of everyday reality.                                 | 0 1 2 |
| 16. Being aware of tremendous peril or threat.  | 0 1 2 |
| 17. Hearing something unusual.  | 0 1 2 |
| 18. Being aware of something external, without being able to see, hear, touch, or smell it.                     | 0 1 2 |
| 19. Feeling that you had entered another level or dimension of reality.   | 0 1 2 |
| 20. Finding that your surroundings appeared to be very ugly or drab.  | 0 1 2 |
| 21. Being surprised by the intensity of your emotions.  | 0 1 2 |
| 22. Feeling exceptionally panicked, or anxious.   | 0 1 2 |
| 23. Feeling that you could see things in a completely new way.  | 0 1 2 |

|  |       |
|--|-------|
| 24. Finding that, for a time, things seemed more meaningful or significant than usual.                               | 0 1 2 |
| 25. A feeling of joy or beauty.  | 0 1 2 |
| 26. Feeling that you were in the presence of a supernatural being, or source of power or energy.                     | 0 1 2 |
| 27. Feeling that what you were experiencing could not be adequately explained in words.                              | 0 1 2 |
| 28. Feeling that you were permanently stuck in a rut.  | 0 1 2 |
| 29. Having the impression that everything around you was alive and aware.  | 0 1 2 |
| 30. Thinking that you might be going mad.  | 0 1 2 |
| 31. Having the impression of leaving your body and seeing it from the outside  | 0 1 2 |
| 32. Feeling that you were in a kind of harmony with your surroundings.   | 0 1 2 |
| 33. Feeling that you had discovered who you really were.   | 0 1 2 |
| 34. Feeling that you could contact, or were in communication with, a spiritual being.                                | 0 1 2 |
| 35. Seeing a beautiful transformation in your surroundings.  | 0 1 2 |
| 36. Feeling that everyday life, with all its troubles and hurrying, was somehow irrelevant, illusory or unimportant. | 0 1 2 |
| 37. A feeling of love, or that you were loved.   | 0 1 2 |
| 38. Feeling empty inside.  | 0 1 2 |
| 39. Feeling unchanged by the experience.   | 0 1 2 |
| 40. Thinking that you were hallucinating.  | 0 1 2 |
| 41. Being in an unusually peaceful or serene state of mind.  | 0 1 2 |
| 42. Feeling that you had lost your sense of time.  | 0 1 2 |
| 43. Feeling more or less the same as usual.  | 0 1 2 |

## SECTION D

1) In your own words, briefly describe the feeling or impression which was most central in your experience in the space below.

2) How long did your experience last? (please circle the most appropriate response)

weeks          days          hours          minutes          seconds

3) How frequently have you had experiences of this sort?

Once or Twice / Up to ten times / Up to 100 times / More than 100 times

4) How recently have you had an experience of this sort?

Within the last day / month / year / 10 years / More than 10 years ago

5) Do you think that drugs of any kind (including alcohol or prescribed medicines) caused or affected your experience ?

YES/ NO

6) Were there any special circumstances relating to your experience? Please give brief details below ;

7) Has this experience had any effect on your life? If "yes", please give details below;

Appendix 6: The Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE: Mason 1995):  
the version employed for the present studies.

## **Oxford-Liverpool Inventory of Feelings and Experiences**

This questionnaire contains questions that may relate to your thoughts, feelings, experiences and preferences. There are no right or wrong answers or trick questions so please be as honest as possible. For each question place a circle around either the “YES” or “NO” answer for that question. Do not spend too much time deliberating any question but put the answer closest to your own. This questionnaire is best completed in private, without the need to hurry.

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|---|----------|
| 1. Do you often hesitate when you are going to say something in a group of people whom you more or less know?         | YES / NO |
| 2. Are you always willing to admit it when you have made a mistake?   | YES / NO |
| 3. Do you sometimes put off until tomorrow what you ought to do today?  | YES / NO |
| 4. Do you often feel that people have it in for you?  | YES / NO |
| 5. Are the sounds you hear in your day-dreams really clear and distinct?  | YES / NO |
| 6. Do you enjoy many different kinds of play and recreation?  | YES / NO |
| 7. Do your thoughts sometimes seem as real as actual events in your life?   | YES / NO |
| 8. Does it often happen that nearly every thought immediately and automatically suggests an enormous number of ideas? | YES / NO |
| 9. Do you frequently have difficulty in starting to do things?  | YES / NO |
| 10. Has dancing or the idea of it always seemed dull to you?  | YES / NO |
| 11. Is trying new foods something you have always enjoyed?  | YES / NO |
| 12. Do you always wash before a meal?   | YES / NO |
| 13. Have you ever cheated at a game?  | YES / NO |
| 14. Are there very few things that you have ever really enjoyed doing?  | YES / NO |
| 15. Do you often worry about things you should not have done or said?   | YES / NO |
| 16. Are your thoughts sometimes so strong that you can almost hear them?  | YES / NO |
| 17. Do you think you could learn to read other minds if you wanted to?  | YES / NO |
| 18. When in a crowded room, do you often have difficulty in following a conversation?                                 | YES / NO |
| 19. No matter how hard you try to concentrate do unrelated thoughts always creep into your mind?                      | YES / NO |
| 20. Are you easily hurt when people find fault with you or the work you do?   | YES / NO |



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|--|----------|
| 21. Have you ever felt that you have special, almost magical powers?   | YES / NO |
| 22. Are you much too independent to get really involved with other people?   | YES / NO |
| 23. Do you ever get nervous when someone is walking behind you?  | YES / NO |
| 24. Do ideas and insights sometimes come to you so fast that you can not express them all?                           | YES / NO |
| 25. Do you easily lose your courage when criticised or failing in something?   | YES / NO |
| 26. Can some people make you aware of them just by thinking about you?   | YES / NO |
| 27. Does a passing thought ever seem so real that it frightens you?  | YES / NO |
| 28. Do you always practice what you preach?  | YES / NO |
| 29. Would you dodge paying taxes if you were sure you could never be found out?                                      | YES / NO |
| 30. Have you ever blamed someone for doing something that you know was really your fault?                            | YES / NO |
| 31. Are you a person whose mood goes up and down easily?   | YES / NO |
| 32. Does your voice ever seem distant or far away?   | YES / NO |
| 33. Do you think that having close friends is not as important as some people say?                                   | YES / NO |
| 34. Are you rather lively?   | YES / NO |
| 35. Do you feel at times that people are talking about you?  | YES / NO |
| 36. Are you sometimes so nervous that you are 'blocked'?   | YES / NO |
| 37. Do you find it difficult to keep interested in the same thing for a long time?                                   | YES / NO |
| 38. Have you ever insisted on having your own way?   | YES / NO |
| 39. Do you dread going into a room by yourself where other people have already gathered and are talking?             | YES / NO |
| 40. Does it often feel good to massage your muscles when they are tired or sore?                                     | YES / NO |
| 41. Do you sometimes feel that your accidents are caused by mysterious forces?                                       | YES / NO |
| 42. Do you like mixing with people?  | YES / NO |
| 43. On seeing a thick soft carpet have you sometimes had the impulse to take off your shoes and walk barefoot on it? | YES / NO |
| 44. Do you often have difficulties controlling your thoughts?  | YES / NO |
| 45. Do the people in your day-dreams seem so true to life that you sometimes think they are real?                    | YES / NO |
| 46. Are people usually better off if they stay aloof from emotional involvements with people?                        | YES / NO |

47. Can just being with friends make you feel really good? YES / NO
48. Is your hearing sometimes so sensitive that ordinary sounds become uncomfortable? YES / NO
49. Have you often felt uncomfortable when your friends touch you? YES / NO
50. When things are bothering you do you like to talk to other people about it? YES / NO
51. Do you have many friends? YES / NO
52. Are all your habits good and desirable ones? YES / NO
53. Have you ever taken anything (even a pin or a button) that belonged to someone else? YES / NO
54. As a child were you ever cheeky to your parents? YES / NO
55. Do you often feel that there is no purpose to life? YES / NO
56. Do you worry about awful things that might happen? YES / NO
57. Do you prefer watching television to going out with other people? YES / NO
58. Have you felt that you might cause something to happen just by thinking too much about it? YES / NO
59. Have you had very little fun from physical activities like walking, swimming or sports? YES / NO
60. Have you ever been late for an appointment or work? YES / NO
61. Have you ever said anything bad or nasty about anyone? YES / NO
62. Do you feel so good at controlling others it sometimes scares you? YES / NO
63. Are you easily distracted from work by day-dreams? YES / NO
64. Are you easily confused if too much happens at the same time? YES / NO
65. Do you ever have a sense of vague danger or sudden dread for reasons that you do not understand? YES / NO
66. Is it true that your relationships with other people never get very intense? YES / NO
67. Do you feel that you have to be on your guard even with your friends? YES / NO
68. Have you sometimes had the feeling of gaining or losing energy when certain people look at you or touch you? YES / NO
69. Do you worry too long after an embarrassing experience? YES / NO
70. Do you love having your back massaged? YES / NO
71. Have you ever taken advantage of someone? YES / NO
72. Have you ever thought you heard people talking only to discover that

|  |          |
|--|----------|
| in fact it was some non-descript noise?  | YES / NO |
| 73. Have you occasionally felt as though your body did not exist?                                    | YES / NO |
| 74. Do you often feel lonely?  | YES / NO |
| 75. Do you often feel an overwhelming sense of emptiness?  | YES / NO |
| 76. On occasions, have you seen a person's face in front of you when in fact there was no-one there? | YES / NO |
| 77. Do you feel it is safer to trust nobody?   | YES / NO |
| 78. Is it fun to sing with other people?   | YES / NO |
| 79. Do you often have days when indoor lights seem so bright that they bother your eyes?             | YES / NO |
| 80. Have you wondered whether the spirits of the dead can influence the living?                      | YES / NO |
| 81. Do people who try to get to know you better usually give up after a while?                       | YES / NO |
| 82. Do you often feel 'fed up'?  | YES / NO |
| 83. Have you felt as though your head or limbs were somehow not your own?                            | YES / NO |
| 84. When you look in the mirror does your face sometimes look different to usual?                    | YES / NO |
| 85. Do you sometimes boast a little?   | YES / NO |
| 86. Would you call yourself a nervous person?  | YES / NO |
| 87. Can you usually let yourself go and enjoy yourself at a lively party?                            | YES / NO |
| 88. Do you ever feel that your thoughts don't belong to you?   | YES / NO |
| 89. Do you ever feel distracted by distant sounds that you are not normally aware of?                | YES / NO |
| 90. As a child, did you do what you were told immediately and without grumbling?                     | YES / NO |
| 91. Do you sometimes talk about things you know nothing about?                                       | YES / NO |
| 92. When in the dark do you often see shapes and forms even though there is nothing there?           | YES / NO |
| 93. Have you sometimes sensed an evil presence around you even though you could not see it?          | YES / NO |
| 94. Is it hard for you to make decisions?  | YES / NO |
| 95. Do you find the bright lights of a city exciting to look at?                                     | YES / NO |
| 96. Does your sense of smell sometimes become unusually strong?                                      | YES / NO |
| 97. Do you usually have very little desire to buy new kinds of food?                                 | YES / NO |
| 98. Are you often bothered by the feeling that people are watching you?                              | YES / NO |

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|---|----------|
| 99. Do you ever feel that your speech is difficult to understand because the words are all mixed up and don't make sense?             | YES/ NO  |
| 100. Do you like going out a lot?   | YES / NO |
| 101. Do you feel very close to your friends?  | YES / NO |
| 102. Are you sometimes sure that other people can tell what your thinking?  | YES / NO |
| 103. Do you ever feel sure that something is about to happen, even though there does not seem to be any reason for you to think that? | YES / NO |
| 104. Are you easily distracted when you read or talk to someone?  | YES / NO |
| 105. Were you ever greedy by helping yourself to more than your fair share of anything?   | YES / NO |
| 106. Do you feel that making new friends is not worth the energy it takes?  | YES / NO |
| 107. Have you ever taken praise for something you knew someone else had really done?  | YES / NO |

## Appendix 7: The cover letter attached to the survey questionnaire (Front Page)

Dear Participant

### **Can you spare us some of your valuable time?**

I am writing to you as a member of the “Community Research Participant Panel” of the School of Psychology here at the University to ask if you would kindly complete the questionnaires that are enclosed and return them in the stamped addressed envelope. I apologise, if your first language is Welsh, that the questionnaires are only available in English.

This research relates to several student projects that I am supervising. The projects are concerned with spiritual experiences, personality and religious commitment. Some of the questionnaires will be used in all of the projects but others will be used in only one. Some of the questions ask about experiences that are a little unusual, so you may find that some questions do not apply to you at all. There are also two questions about abuse during childhood. I hope you do not find any of the questions upsetting but, if you do, you are welcome to phone me to talk about it or about any other aspect of the research (Tel: 01248 382077). Of course, you are not obliged to answer any of these questions.

Since this research is being conducted by post, we are not able to pay you for your time. However, to thank you for the trouble you are taking on our behalf, we are offering a prize draw worth £100. To enter the draw, just include your name and address when you return the questionnaires. We would like to invite some of you to participate in additional, follow-up studies in the future. Please include your name and address if you are willing to participate in the follow up studies. However, you are welcome to remain anonymous if you wish. If you do give your name, your answers will, of course, be treated as strictly confidential.

Thank you very much for your help. I hope you find the questionnaires interesting.

Yours sincerely,

Dr Mike Startup  
Senior Lecturer in Clinical Psychology

Appendix 8: The Semi-Structured Interview Schedule employed during the qualitative study described in chapter 4.

INTERVIEW SCHEDULE 1 (SPIRITUAL EXPERIENT)

ITEMS TO BE COVERED :

In the questionnaire that I sent you some time ago you reported a spiritual experience. Do you have many of these types of experience ?

Could you describe for me, either the most recent, or the most significant experience of this type that you can remember ?

When did this experience occur ?

Did this happen while you were alone ?

Was there anything about the circumstances of your life, at that time, that strike you as being unusual or connected with the time in your life that you had the spiritual experience ?

Did the experience alter the way in which you view or feel about your life ?

From your perspective, how did the experience alter the way you view or feel about your life ?

Did the experience change you as a person ?

In what ways did the experience change you as a person ?

Did you ever tell anyone about the experience that you had ?

(If so) How did the person /s that you told respond to what you had to say ?