

## THE PSYCHOLOGICAL PERSPECTIVE ON RELIGIOUS EXPERIENCE

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It might be expected that those concerned with psychology and religion would have a lot in common: both are concerned with understanding human life and finding how to live it better. However, it turns out that each side knows very little about the other, and what they think they know is often wrong. Some kinds of psychology in the past have been definitely anti-religious, as in the case of 'behaviourism', which is now extinct since all psychologists now recognise the importance of cognitive processes and even consciousness. There is also the fear that psychology will try to explain religion away in entirely human terms.

Part of the way out of this problem is to adopt a non-ontological approach – that is, to study religious experiences and beliefs as empirical phenomena regardless of whether they are true or valid. This is the approach taken in the study of political behaviour. However, it may be that religion is more closely related to human nature, and that knowledge of religious phenomena may be relevant to our decisions about their value. The “argument from religious experience” may look different in the light of detailed research on religious experience.

### SURVEYS OF RELIGIOUS EXPERIENCE

William James (1902), in one of the best-known early studies in the field, investigated intense experiences of a number of exceptional individuals “in their solitude”. Later work sampled the whole population, and was not confined to solitary experiences.

Alister Hardy adopted a non-ontological approach, in seeking to collect and classify Religious Experiences as if they were specimens of plants or animals. He advertised in papers and religious journals, and obtained several thousand replies. He reports an analysis of the first 3,000 in his book *The Spiritual Nature of Man* (1979).

Later work by the Religious Experience Research Centre took the form of national sample surveys using a single, carefully drafted question. The version used, known as the 'Alister Hardy Question', was:

Have you ever been aware of or influenced by a presence or power, whether you call it God or not, which is different from your everyday self? (Hay, 1982)

The version used by Greeley (1975) and colleagues in the USA used a similar question:

Have you ever felt as though you were very close to a powerful spiritual force that seemed to lift you out of yourself?

The results of the two surveys using this question are shown in Table 1.

**TABLE 1: Have you ever felt as though you were very close to a powerful spiritual force that seemed to lift you out of yourself?**

	Great Britain	United States
Once or Twice	17%	18%
Several Times	9%	12%
Often	5%	5%
<b>TOTAL</b>	<b>31%</b>	<b>35%</b>

**Approximately how long did the experience last?**

A few seconds/Ten minutes	51%
Up to a day	23%
Up to a month	9%
Up to a year or longer	6%
Unclassifiable	10%

*Source: Hay, 1982*

It can be seen that 31-35% of people report these experiences; about 34% is typical in Britain, the USA and Australia (Hay, 1990). This table shows that most people who report Religious Experiences have had them once or twice but some more often; and that some are of short duration but that some last much longer.

**IS THERE A CORE RELIGIOUS EXPERIENCE?**

As William James (1902) recognised, there are quite a number of “varieties of religious experience”. On the other hand, they may have a common core. A number of authorities have listed the features of Religious Experiences from different religions, cultures and historical periods; the most widely recognised list is that of Stace (1960) which is shown in Table 2.

**TABLE 2: Features of Religious Experiences**

1	Unifying vision, all things are one, part of a whole
2	Timeless and spaceless
3	Sense of reality, not subjective but a valid source of knowledge
4	Blessedness, joy, peace and happiness
5	Feeling of the holy, sacred, divine
6	Paradoxical, defies logic
7	Ineffable, can't be described in words
8	Loss of sense of self

*Source: Stace, 1960*

An important division is often recognised between two aspects of Religious Experiences; perhaps there are two types of them. One variety is of contact with a transcendent being, outside oneself, of awe and dependence, the numinous experience described by Otto (1917). The other, sometimes described as mystical, is of the impersonal unity of all things. Stace's list appears to be biased towards the immanent (eg: items 1 and 8) as opposed to the transcendent (eg: item 5) type of Religious Experience (see Hood, 1995).

Hood (1975) had used these categories to construct a 32-item scale for measuring mystical experience, with factor analysis showing two factors, though these were correlated with each other at .47. The first factor was of **General Mysticism** and contained most of the items; the second he called **Religious Interpretation** and contained his religious, noetic and positive affect items. The religious and noetic items are the closest to Transcendence in this list.

But major religious writings have often described Religious Experiences as feelings of unity with God; fear, awe and reverence; dependence; a journey inwards or upwards; love and marriage; the goal of union with the Divine (Smith & Ghose, 1989). Here is an example:

At this time, if I'm lucky [*during yoga exercises*], I seem to latch on to something akin to a pure emotional state, a sense of happiness. There is definitely some sort of power there which seems to greet me, to embrace.

(Hay, 1982, p.134)

Concepts like these do not appear on Stace's list.

There is a second area of possible omission from Stace's list, suggested by the anthropological research into the **liminal** state described by Victor Turner (1969). In traditional or primitive rites of passage, those involved experience a fusion with the others, a feeling of love, equality and *communitas*. This is also found in modern Religious Experiences when people feel a heightened unity with others, enhanced feelings of love and concern. One of Hardy's subjects said:

I was overtaken by an intense feeling of affection for and unity with everyone around as they ran to catch buses, took children shopping or joyfully met their friends ... This sense of oneness is basic to what I understand of religions ... The effect of the Experience has been, I think, a permanent increase in my awareness that we are 'members of one another, a consequent greater openness towards all and a widening of my concern for others.

(Hardy, 1979, p.58)

The Stace list and the Hood scale do not mention imagery or visual aspects of Religious Experiences. In the Alister Hardy collection, 8.8% mentioned light, 4.5% being bathed in a glowing light, and 18.3% visions; while others mentioned sensations such as music, voices and warmth. A great variety of images have been reported in Religious Experiences, at least partly the result of different religious education or other social influences. Here is an example from Hardy's collection:

On the first night that I knelt to say my prayers, which I had now made a constant practice, I was aware of a glowing light which seemed to envelop me and which was accompanied by a sense of warmth all round me.

(Hardy, 1979, p.34)

The Alister Hardy files also contain a number of references to experiences of Jesus and the Virgin Mary, either seeing them, hearing them or simply being aware of their presence. I am grateful to Professor Laurie Brown and Mrs Polly Whewey for analysing the first thousand cases in the Alister Hardy files for me.

We conclude that the core Religious Experience exists but needs to be amplified to include more transcendent components, more of the heightened concern for others, and sensory images. These are reflected better in the list obtained by Greeley (1975) in his national US sample of 1,467 people (see Table 3).

**TABLE 3: Greeley's descriptors of Religious Experience**

A feeling of deep and profound peace	55%
A certainty that all things would work out for the good	48%
Sense of my own need to contribute to others	43%
A conviction that love is the center of everything	43%
Sense of joy and laughter	43%
An experience of great emotional intensity	38%
A great increase in my understanding and knowledge	32%
A sense of the unity of everything and my own part in it	29%
A sense of a new life and living in a new world	27%
A confidence in my own personal survival	27%
A feeling that I couldn't possibly describe what was happening to me	26%
The sense that all the universe is alive	25%
The sense that my personality has been taken over by something much more powerful than I am	24%
A sensation of warmth or fire	22%
A sense of being alone	19%
A loss of concern about worldly problems	19%
A sense that I am being bathed in light	14%
A sense of desolation	8%

*Source: Greeley, 1975*

### **THE VARIETIES OF RELIGIOUS EXPERIENCE**

Evidently there are a number of varieties of Religious Experience but as yet there is no agreed way of categorising them. While there may be a common core as described above, there are variations within it and other experiences which fall outside it. We have seen that there may be a distinction between immanent and transcendent Religious Experiences, but Hood found a correlation between his two types which to some extent correspond to these. There may be another important distinction between Religious Experiences in solitude and those which are experienced in a group — for example in a charismatic service. For a time it was assumed (perhaps following William James) that Religious Experiences occurred when those concerned were alone. In Hay's survey 61% were indeed alone, and only 7% in a communal setting. Perhaps those carefully drafted questions for some reason suggested solitary rather than communal events.

It may be that all of these varieties are elaborations of the common core. It is widely accepted that all experiences, including religious ones, are mediated by conditioning, and that within all faiths there has been a historical development of the content and character of experiences. Religious experience is, in part at least, the product of historical development and of the religious training and education of individuals in each tradition. However, it has been argued that the social constructions involved are based on a central core experience (Proudfoot, 1985), as described above.

One variety of Religious Experience which Alister Hardy recognised is psychic experiences. These take several forms — precognition, out of the body experiences, contact with the dead, telepathy, *déjà vu*, coincidences, near-death experiences, miracles, etc. Here is an example:

In 1952 when out at work on a polio patient — my mind entirely taken up with work in hand — suddenly my mind seemed to go blank and I then saw 'in my mind' my son lying in the road run over — it was quite impossible to remove this from my mind so I excused myself ... I insisted on going directly, very quickly, my husband being very annoyed but realising something was upsetting me — we arrived home in 25 minutes, but on arrival I said 'No, not here, take me to the market place' — as we drew up — the school bus drove into the market place and my young son (who was standing by the door) opened the door and fell out of the bus, it hitting him and he lay **exactly** as I had seen him — How did I see something before it happened?

(Hardy, 1979, p.45)

In the Hay & Heald survey (1987) in Britain, shown in Table 4, it was found that, of the 29% who reported experience of **synchronicity**, only 32% regarded this as religious; and, of the 18% who reported contact with the dead, 38% thought this was religious. That a substantial minority regard these psychic experiences as religious is a significant finding.

Again we are not concerned with whether or not such things really happen. The main point of interest to us is that some people give a religious interpretation to them. The origins and effects of **psychic** experiences were found by Wuthnow (1978) to be different from those of Religious Experiences proper. He found that experiences of *déjà vu*, ESP (extra sensory perception) and clairvoyance occurred to the young and black among the males; to people from unhappy homes or with unhappy marriages; and that there was no correlation with life satisfaction. Mystical experiences, on the other hand, were reported by older, more educated, religious believers from happy homes, and this was strongly correlated with positive effect and life satisfaction, as will be shown later. Those who reported talking to the dead were mostly widowed, and many were female and black.

This suggests that psychic experiences are a lower order than Religious Experiences proper and should perhaps not be included as a variety of Religious Experience.

Another variation is peak experiences which are aesthetic: for example, brought on by music or the beauty of nature. These are often experienced as religious (as we shall see) but they may also be experienced purely as aesthetic. This may again reflect differences in background and education. In Wuthnow's California survey (1978), subjects were asked: "Have you experienced the beauty of nature in a deeply moving way?" Forty-nine per cent said that they had, and that this had a lasting effect on their life; and another 33% had but without such lasting effects. In Hay & Heald's British survey (reported below in Table 4), 16% reported awareness of a sacred presence in nature, and 61% of them interpreted this in a religious way.

These different kinds of Religious Experience can be seen in a British Gallup Poll reported by Hay & Heald (1987) (see Table 4)

**TABLE 4: Religious Experiences in Britain**

Type of Experience	(1) % reporting this	(2) % interpreting religiously	% religious experience (1×2)
Awareness of the presence of God	27	80	21.6
Awareness of receiving help in answer to prayer	25	79	19.8
Awareness of a guiding presence not called God	22	58	12.8
Awareness of a sacred presence in nature	16	61	9.8
Awareness of patterning in synchronicity	29	32	9.3
Awareness of the presence of someone who has died	18	35	6.3
Awareness of an evil presence	12	38	4.6
Experiencing that all things are one	5	55	2.75

*Source: Hay & Heald, 1987*

The first three categories, which are the most common, all reflect transcendent experiences. The last one on the list is the most clearly mystical or immanent, and is quite rare; the fourth could also be interpreted in this way. There was no analysis of aesthetic experiences here, though the sacred presence in nature could be interpreted in this way. Reported awareness of synchronicity and of the presence of the dead were also quite common. The remaining one — awareness of evil — has not been widely reported in other studies, but could be important as the basis of belief in evil and the devil.

What seems to be missing so far from these lists are any specifically Christian experiences, and we have seen that experiences of Jesus and of the Virgin Mary were mentioned in a number of Alister Hardy reports.

Returning to the question of whether there is a common core to these different kinds of experience, it may be suggested that it is of experiences which are unusual and arousing, and which seem to provide evidence of a non-material world.

#### **TRADITIONAL METHODS OF AROUSING RELIGIOUS EXPERIENCES**

There are several ways of inducing Religious Experiences which have been used in most religions for a long time. We shall consider later other methods, such as drugs and sensory deprivation, which have also been used to induce Religious Experiences. A variety of situations seem to act as triggers for Religious Experiences. The frequencies found by Greeley are shown in Table 5.

**TABLE 5: Triggers of Religious Experiences (percentages of those reporting an experience**

Listening to music	49%	Being alone in church	30%
Prayer	48%	Reading a poem or novel	21%
Beauties of nature such as sunset	45%	Childbirth	20%
Moments of quiet reflection	42%	Sexual activity	18%
Attending services	41%	Your own creative work	17%
Listening to sermon	40%	Looking at a painting	15%
Watching little children	34%	Physical exercise	1%
Reading the Bible	31%	Drugs	0%

*Source: Greeley, 1975*

This is a very interesting list, with one or two surprising items, like childbirth and lovemaking. But we will look first at some of the familiar and traditional sources of Religious Experiences.

### **Music**

There is a long history of the use of music in religion, from the use of frenzied drumming in Voodoo, celestial harmony in Greece, the creation of elevated religious feelings in classical masses and requiems, and emotional hymns in charismatic and evangelical churches today. Music was at the top of the Greeley list. It seems likely that there is quite a close connection between Religious Experiences and some states induced by music; they are similar mental states — both depend on right hemispheric activity, both are non-verbal and non-rational. Another important similarity is that both are commonly performed, with tight synchrony, in a group, leading to a special kind of communal experience, a special kind of social cohesion (Spickard, 1993).

### **Prayer and Meditation**

There are several kinds of prayer; Poloma and Pendleton (1991) carried out a factor analysis and found four kinds. These were: (1) colloquial prayer, 'conversations with God'; (2) meditative prayer; (3) petitionary prayer, regarded by some as the most basic; and (4) ritual or set prayers. The percentages of respondents in the Poloma & Pendleton (1991) sample who reported engaging "often" in these kinds of prayer were: colloquial 30.9%, meditative 4.6%, petitionary 5.3% and ritual 6.9%. Heiler (1932) regarded contemplative and mystical prayers as leading most often to Religious Experiences; Poloma & Pendleton found that meditative prayer led most often to Religious Experiences. The meditative prayer factor consisted of items such as "spending time just 'feeling' or 'being' in the presence of God", "spending time worshipping and adoring God", or "asking God to speak and then try to listen for his answer".

Prayers are often said while adopting certain postures, such as kneeling, standing with head bowed, or prostrating; members of charismatic groups raise one hand or both. As with other non-verbal signals, these postures may be able to arouse religious feelings: "those who deliberately kneel are rewarded by an increase in worshipping love" (Underhill, 1911/ 1930). These postures have a universal connotation of humility and supplication, a search for union

— but they also reflect historical traditions of practice within particular groups, and have an added meaning of signifying group membership. More individuals pray every day (or claim to do so) than claim to go to church weekly. In Britain over 40% claim to pray daily, and they are more likely to come from the working class. In the US over 60% say they pray daily; 76% say that prayer is an important part of their daily lives; and 19% say that they pray three times a day or more (Poloma & Gallup, 1991).

The main goal of meditation in most traditions is to obtain some kind of Religious Experience, though different kinds are sought in Buddhist, Hindu or Christian traditions. Buddhists seek the loss of self, while Christians seek union with God. Prayer came second in the Greeley list, and there are other related items lower down. We have seen that the contents of Religious Experiences depend on religious training and tradition, but that secular meditation can bring about quite similar experiences. Deikman (1963) asked eight subjects to meditate on a blue vase for a series of 15-minute sessions. These subjects all experienced (a) more vivid perception of the vase such as increased colour saturation, (b) personal attachment to the vase, (c) increased ability to keep out distracting stimuli and (d) time shortening. Some saw the vase radiating or transfigured, or saw a merging of self and object. They all felt that the experience was pleasant and valuable. This has several similarities to the core Religious Experience.

There has been much research into the practices known under the names of Yoga and Zen, which comprise really hundreds of techniques. These are primarily aimed at an immanent, mystical state of trance and loss of self, but Yoga aims for transcendence and union with God (Puhakka, 1995). There has been research into the physiological effects of these practices, which seem to be reduction of heart rate and blood pressure, and anxiety and some changes in brain rhythms. However, the same can also be claimed for entirely secular forms of relaxation. Some of the effects of meditation may be due to breath-holding with deep breathing, and in some other traditions there is very rapid breathing. The effect of this is hyperventilation with increased concentration of CO<sub>2</sub>. Experiments on breathing CO<sub>2</sub> find that there can be cosmic experiences, ecstasy and sometimes horrifying hallucinations (Wulff, 1991). On the other hand, Transcendental Meditation seems to be directed at producing a low level of arousal.

### **Group Worship**

Attending services and listening to sermons came high on the Greeley list. It is familiar that emotional Religious Experiences are very common in religious services; these may be quite mild, but they can also be extreme, as in charismatic groups. These services seem designed to generate emotions. At charismatic services the aim seems to be to create a high level of excitement by the music and the verbal message. The intensity of emotional arousal is shown by people collapsing on the floor, or speaking in tongues at some charismatic and Pentecostal churches.

Part of the experience of high arousal worship is an enhanced feeling of union with the others, which Turner described as *communitas* and which is much the same as the **ego loss** of the classic Religious Experience. Turner uses the model of rites of passage (such as for adolescent initiation) in African societies. In the second, or liminal, phase of these, the candidates are separated from society by the priest, remove their previous clothes, may receive bodily scars and are told the secrets of the tribe. There is play and joking, deviance and status inversion, in which future leaders are humiliated and novices humbled. This brings about the ritual creation of an ideal state of *communitas* where all are equal and in social harmony: and this is experienced as a religious condition. Feeling close to God is

apparently related to feeling close to other worshippers. This is recognised in accounts of the Jewish experience of worship:

**Davening** (praying together). It is also a social experience as well as a religious experience. It makes me feel very connected, very close towards Jews, and gives me a warm feeling.

(Davidman & Greil, 1993)

### **Experience of Nature**

Experiencing the beauty of nature is a common source of Religious Experiences. This came third in the Greeley list (as we showed earlier), and was also very common in Wuthnow's survey. Traditional writing on mysticism has often mentioned mountains and deserts as sources of Religious Experiences — for example, the experiences of the Desert Fathers. Their effect could be due to the obvious grandeur of these features of the environment “proclaiming the glory of God”. However, environmental psychology finds that the most pleasing environments are those which have water, greenness, depth of vision and probably sun (Altman & Wohlwill, 1983), and which are important for survival, suggesting an evolutionary explanation. Rosegrant (1976) and others have studied the effects of wilderness experiences, such as climbing mountains and going for night walks. Religious Experiences were commonly reported, but more under low stress conditions.

### **Distress**

Some have maintained that Religious Experiences are precipitated by states of distress, low self-esteem or “existential crisis” (eg: Batson et al, 1993). Some support for this theory was provided by Brown, Spilka & Cassidy (1978, cited by Batson et al). They studied 192 Christians who reported having had one or more Religious Experience. These subjects rated what their state of self-dissatisfaction had been before the experience, and this was found to correlate .18 with “enlightenment and new knowledge”, .22 with “unity-completeness”, and .31 with “sensory stimulation” — which are, however, low correlations. Hay (1982), with a sample of 172 British adults of whom 100 reported having had a Religious Experience, found that as many as 50% had been “distressed and ill at ease” and another 6% “confused” before their experiences. What they had mostly been worried about was the possibly impending death of self or a close relative, damage to the body, or loss of job. However, for 34% there was “nothing special” about their state of mind at the time of the Religious Experience. Alister Hardy (1979) found a smaller rate among his 3,000 cases: 18.4% had been in a state of depression or despair, 8% were ill, 3.7% had crises in personal relations, and a few were worried about death.

## **EXPERIMENTAL INDUCTION OF RELIGIOUS EXPERIENCES**

### **Drugs**

There is a long history of the effects of drugs on Religious Experiences. Mescaline (found in the cactus peyote) was used by the Aztecs in 300 BC, and is still used today by members of the Native American Church. Psilocybin has been used for centuries in Siberia and is used today in Mexico. Marihuana is used in parts of India (and by Rastafarians) for religious purposes, and LSD was claimed as a sacrament in the US in the 1960s. Alcohol is not a psychedelic drug but it too has been used for religious purposes (Aaronsen & Osmond, 1971).

The best-known study of the effects of drugs on Religious Experiences was carried out by Pahnke (1966) with 20 theological students taking part in a 2½-hour Good Friday meditation in their chapel. Half were given a psilocybin pill, half were given a placebo. The subjects were given a 147-item questionnaire afterwards and an interview; on the basis of these, they were given scores on dimensions mainly derived from Stace.

**TABLE 6: The Marsh Chapel Miracle**

Category		Percentage of Maximum Possible Score for 10 Ss		
		Exp.	Control	p*
1	Unity	62	7	0.001
	(a) Internal	70	8	0.001
	(b) External	38	2	0.008
2	Transcendence of Time and Space	84	6	0.001
3	Deeply Felt Positive Mood	57	23	0.020
	(a) Joy, Blessedness and Peace	51	13	0.020
	(b) Love	57	33	0.055
4	Sacredness	53	28	0.020
5	Objectivity and Reality	63	18	0.011
6	Paradoxicality	61	13	0.001
7	Alleged Ineffability	66	18	0.001
8	Transiency	79	8	0.001
9	Persisting Positive Changes in Attitude & Behaviour	51	8	0.001
	(a) Towards Self	57	3	0.001
	(b) Towards Others	40	20	0.002
	(c) Towards Life	54	6	0.011
	(d) Towards the Experience	51	31	0.055

\*Probability that the difference between experimental and control scores was due to chance.

Source: Pahnke, 1996

This shows high scores for members of the experimental group on the classic dimensions of religious experience. No measures of imagery were obtained. This study was later replicated by Pahnke (1967) with 40 older professionals, this time not in a religious setting, and the control group were given a drug with a lower dose of psilocybin. This time seven out of 20 of the experimental group, and one out of 20 of the control group, reported mystical experiences (taken as over 60% of the maximum score). Masters & Houston (1966) found a high level of religious imagery in their 206 subjects, who were given LSD (as shown in Table 7).

From accounts of the effect of psychedelic drugs, the majority of them not said to be religious, it is clear that these have a number of clear similarities with the classic Religious Experience — for example, timelessness, de-personalisation, being in touch with basic

reality, and vivid sensations. There are also some differences: Religious Experiences do not include the horrors and terrors sometimes reported with these drugs; there is no distortion of objects — indeed, visual effects are less common; and it is often hard to say which sense is involved.

There are more Religious Experiences after taking drugs when those involved are in a religious setting, as were the subjects in Pahnke's first study but not in his second. Masters & Houston (1966) also found that this made a great difference (see Table 7).

**TABLE 7: Religious Experiences under LSD**

	Non-Religious Setting (N=74)	Some Religious Stimuli (N=96)
Felt it [ <i>LSD</i> ] was the greatest thing that ever happened to me	49%	85%
A great religious experience	32%	83%
A greater awareness of God or a Higher Power, or an Ultimate Reality	40%	90%

*Masters & Houston, 1966*

Those who have a strong religious background are also more likely to give a religious interpretation to their drug experiences. Religious background and training also affect the contents of the experience. The effects of peyote (containing mescaline) on Mexican and American Indians depend on whether they belong to the Native American Church (in which case they have theistic experiences) or if they are Catholics — in which case they may have visions of the Virgin Mary (La Barre, 1938).

Schachter's experiment and theory of emotion (1967) provide us with a model for how drugs produce a variety of experiences. He found that the same drug (in this case adrenaline) could produce either euphoria or aggression, depending on the behaviour of an experimental confederate who acted as if in one of these emotional states. In the same way, the basic physiological state produced by psychedelic drugs can be interpreted in different ways, depending on the environmental setting and the past religious training of those taking the drug. From a non-religious point of view, the drug produces a vivid set of stimuli needing interpretation. From a religious point of view, the drug can be said "to open the doors of perception of the spiritual world"; what is seen depends in part on tradition and training, but there is a central core of shared experience.

### **Isolation and Sensory Deprivation**

The explanation of the effect of wilderness experiences on Religious Experiences may not be the beauty of nature but the isolation. There has been a long history of holy men living in the desert, up trees, on pillars or shut up in small cells. Psychologists devised the sensory deprivation tank for other research purposes. The subject floats in a solution which is at skin temperature; the tank is circular, 7½ft across, 4ft high, and has water 10in deep; there is no light and no sound. Hood & Morris (1981) put subjects in one of these tanks and asked them to try to imagine either religious figures or cartoon figures. They later reported frequency of

religious imagery. Subjects selected as very high in intrinsic religiosity reported more religious imagery than those very high in extrinsic, for the religious instructions only. Neither reported much for the cartoon set. Neither the religious nor the cartoon set produced much religious imagery when the experiment was repeated out of the tank. In a second study Hood et al (1990) asked subjects while in the tank to attain “as total silence as possible of heart and mind. Having attained it you will expose yourself to whatever **religious revelation/insight** it brings”. There were two alternative wordings here. While in the tank subjects were interviewed with a short form of the Hood mysticism scale. The high intrinsics had higher scores on Hood's second (transcendent) factor, not on the first (general) mysticism factor; there was no such effect for the extrinsics. The conclusion is that sensory isolation, combined with a religious set or suggestions, produces Religious Experiences in those who are high in intrinsic religiosity. The reason that sensory deprivation works in this way is probably that the left brain hemisphere is quietened so that messages from or mediated by the right hemisphere are more dominant.

## **PERSONALITY FACTORS**

### **Religious Activity**

The first and least surprising finding is that Religious Experiences are more common among those who are religious in other ways. Hay & Heald (1987) found that 56% of those in their British sample who attended church at least occasionally reported Religious Experiences, compared with 26% of those who never went. Perhaps it is more surprising that so many non-attenders reported them. Hood (1976) found a correlation between attendance and both of his mysticism scales, but non-attenders also had high scores. Hood (1995), in his isolation tank experiments, found that the intrinsically religious had Religious Experiences in the tank, on his transcendent factor 2 — while extrinsics did not.

### **Cognitive Structures**

Hood (1975) found that subjects with high scores on his mysticism scale had high scores on Taft's scale of Ego Permissiveness, which is intended to measure openness to experience, including unconscious and illogical aspects of experience. Hoffelt & Batson (1971, cited by Batson et al, 1993) found that subjects who reported Religious Experiences had higher scores on the Repression-Sensitization scale, which is intended to measure openness to unusual, reality-threatening aspects of experience. We shall see later that there is a relation between Religious Experiences and schizotypy, which is also about openness to non-logical aspects of experience. Hood (1974) found that those who report Religious Experiences had higher ego-strength as measured by Stark's Index of Personal Inadequacy; he argued that, while those who have Religious Experiences may experience loss of self, this is as part of a larger whole, and they are in fact psychologically healthy and have psychological strength.

There is an interesting pattern of attribution in connection with Religious Experiences. We saw above (p.13) that individuals are often in a state of stress or despair before their experiences. This gives a feeling of loss of personal mastery, which has been found to be inversely correlated with attributing control to God, which relieves them of their burden and opens the way to conversion or other Religious Experiences. Identifying or co-operating with God in “religious coping” enables them to feel in control (Spilka & McIntosh, 1995). We shall consider Attribution Theory later as a way of interpreting Religious Experiences — of understanding religious thinking in this area.

## Schizotypy

Claridge (1985) proposed that there is a personality dimension that he called 'schizotypy', which is a latent form or disposition to have schizophrenia. It is quite different from schizophrenia itself, which is partly due to high levels of this trait, but also involves a breakdown — in the same way that high blood pressure predisposes to strokes. The trait consists of a tendency to hallucinate and have other anomalous perceptual or cognitive experiences, but also enables those who have it to be creative in art or literature, and to be religious.

Jackson (1991) used a schizotypy scale with 208 subjects from a twins subject panel, 28% of whom reported Religious Experiences, and found that this scale correlated with a measure of numinous experience and also with the Hardy question, accounting for about 25% of the variance. There were smaller correlations with two other measures of Religious Experiences, a mysticism scale, and one for negative Religious Experiences. The schizotypy items with the strongest correlations were: "Do things sometimes feel as though they were not real?" (.43); "Do you believe in telepathy?" (.40); and "Do you believe that dreams can come true?" (.30). These 208 subjects were compared with 44 schizophrenic out-patients who belonged to a self-help 'voices' group. The patients had much higher Religious Experience scores, especially on the mysticism and negative experience scales. The greatest differences from the twins sample were on the schizotypy items "Hearing something unusual" (twins 12.3%, voices sample 57.1%;  $p=.44$ ), "Being aware of tremendous peril or threat" (.40), and "A feeling of being controlled by something outside of yourself" (.35).

McCreery (1993) carried out a related study on the personalities of people who report out-of-the-body experiences (OBEs). The schizotypy scale discriminated between the OBE subjects and controls, especially for part of the scale dealing with dreams, hallucinations and delusions; they were also somewhat hypomanic and low on anxiety, and he called them 'happy schizophrenics'. He then carried out an experiment using the *ganzfeld* technique, where subjects wear goggles made with half-ping-pong balls (a form of sensory deprivation) and were asked to relax and imagine themselves out of their bodies. The OBE subjects had more visual images, and there was more EEG [electroencephalograph] activity in their right hemispheres while they were in the experiment.

## Quest

Batson et al (1993) proposed that there is an attitudinal dimension, perhaps a personality trait, which they called **Quest**, and they developed the scale shown in Table 8 to measure it. Those who score high on this dimension are not religious in the usual sense, in that they have not committed themselves to belief or a way of life; they have glimpsed religion from a distance and, despite difficulties and doubts, are trying to find out about it. This is a part of the experience of religion. These authors obtained evidence that Quest people are more altruistic and less prejudiced than most religious people. On the other hand, it has been argued that they are not really very religious at all, and that a leap of faith and commitment are central to religion.

**TABLE 8: Quest Scale**

1. As I grow and change, I expect my religion also to grow and change.	(3)
2. I am constantly questioning my religious beliefs.	(5)
3. It might be said that I value my religious doubts and uncertainties.	(6)
4. I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.	(8)
5. For me, doubting is an important part of what it means to be religious.	(11)
6. (—) I do not expect my religious convictions to change in the next few years.	(16)
7. (—) I find religious doubts upsetting.	(17)
8. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.	(20)
9. My life experiences have led me to rethink my religious convictions.	(25)
10. There are many religious issues on which my views are still changing.	(27)
11. God wasn't very important for me until I began to ask questions about the meaning of my own life.	(30)
12. Questions are far more central to my religious experience than are answers	(33)

## **THE EFFECTS OF RELIGIOUS EXPERIENCES**

In several of these studies it was found that the effects lasted for six months, or were described as “long-lasting” effects.

### **Happiness**

Happiness, or subjective well-being, has often been found to be associated with Religious Experiences. Pahnke (see Table 6) found that, six months after the experiment, the experimental group reported “persisting and positive changes” in their attitudes to life, compared with the control group. Hay (1982) found that 61% of his Nottingham sample said that they were “At peace or restored, happy/elated, or uplifted/awestruck”. Greeley (1975) modelled the prediction of scores on the Bradburn affect balance scales, and found that these were predicted by classic mystical experience — eg: being “bathed in light” at .60. Regular Religious Experiences predicted at .39, and psychic experiences had no effect at all. Poloma & Pendleton (1991) found that, while Religious Experiences had strong positive correlations with subjective well-being, occult experiences had small negative correlations.

Prayer produces a number of benefits, according to self-reports. In a survey of 627 adults in Dayton, Ohio, Poloma & Pendleton (1991) found that prayer was reported as having greater benefits than other aspects of religiosity. The greatest benefits were reported by those who had Religious Experiences during prayer, which occurred during meditative prayer of those who prayed most often. Religious Experiences during prayer were the strongest correlates of happiness and existential well-being. In another study, Poloma & Gallup (1991) found that prayer was the strongest factor in explaining forgiveness. Prayer was rated as an effective way of dealing with the diagnosis of cancer, bereavement and danger in battle — events over which there is no control (Brown, 1994).

### **Moral Values, Attitudes to Other People**

Pahnke (Table 6) found that his experimental group had another “persistent and positive change”, of more positive attitudes to others, six months later. Hardy (1979) found that 18.4% of his 3,000 cases reported a sense of purpose or new meaning to life, and 7.7% reported changes in attitudes to others. In Wuthnow's survey (1978), those who had a number of peak experiences (religious and otherwise) valued having a highly paid job, job security or a beautiful house less (11%) than those who had not had peak experiences (49%). More of the peak experience group (79%) valued working for social change, social problems or people in need, than the others (52%). The peak experience group also claimed to be less concerned with social status, fame or having a lot of friends.

### **Religious Life**

It is not surprising that Religious Experiences result in more religious activity. Poloma (1989) modelled the predictors of evangelistic activities in the Assemblies of God movement and found that ecstatic charismatic experiences were one of the predictors. Spilka, Brown & Cassidy (1992) studied 192 people who had Christian Religious Experiences and found that afterwards they had a greater sense of unification with God. Hay (1982) found that 24% said the experience had “confirmed or intensified [their] beliefs”, and Downing & Wygard (1964) found that the effect was to deepen commitment.

### **Attitudes to the Self**

Sometimes people are in a state of low self-esteem before they have a Religious Experience. Pahnke found that 57% of his experimental group, but almost none of the control group, had more positive attitudes towards themselves. And Spilka et al (1992) found that after their Religious Experiences his subjects felt more at one with themselves

## **EXPLANATIONS OF RELIGIOUS EXPERIENCE**

### **Physiological Theories**

We have seen that several physiological states have been found to be connected with Religious Experiences. Intense arousal produced by ecstatic dancing and singing is one trigger for Religious Experiences, though equally high arousal from sport or exercise has no such effect. Very low arousal produced by meditation is another, though it can also send people to sleep. Drugs can produce Religious Experiences in some individuals, though they need to be believers. Childbirth and sex have been reported as triggers for Religious Experiences, for some. But what is the common physiological final path here? Activation of the right brain hemisphere may be one, as found by McCreery and others, and it is known to be associated with certain relevant psychological processes. It is well established that the left hemisphere is the main locus of language, number and logic, though this lateralisation is less for women and for left-handed men. The right hemisphere is weaker on these but stronger on vision and space, music, emotions and holistic perceptions. It seems likely that this is where religion belongs. Clearly these physiological states cannot produce Religious Experiences by themselves, and they need the right religious context and the training which enable people to interpret these experiences in a religious way.

One theory is that a variety of events, physiological and others, produce unusual experiences, which go beyond the limits of normal understanding and may be given a transcendental interpretation (Spilka et al, 1985; Hood 1995). This could explain why apparently psychic phenomena are sometimes given a religious explanation. However,

physiological states can do more than this: they can produce visions, as experiments with drugs have shown. So is there a biology of mysticism? The main contribution of religion to survival, we shall suggest later, is in the creation of group cohesion and social support. And Religious Experiences have a strong pro-social component. Religious Experiences are also very rewarding: distress is relieved and personal problems are often solved; the good mood produced lasts for months. There may be physiological mechanisms for bringing about these effects, and they may reside in the right hemisphere.

### **Reaction to Distress**

We have seen that a proportion of Religious Experiences occur to individuals who were in a state of distress of some kind, though many other Religious Experiences took place (as far as we know) without such distress. One of the general psychological theories of religion is that deprivation leads to a projective religious solution, and there is evidence that religious conversion often takes place when people are in a state of conflict or anxiety. The same is true of glossolalia. Stress in general does not seem to produce Religious Experiences; with his stressful Outward Bound experiments Hood found that there was more mysticism under low stress. The kinds of stress which have been reported to produce Religious Experiences are different — a sense of sin, depression and sadness, fear and dread, and crises of meaning (Spilka & McIntosh, 1995). The Religious Experience may take the form of a conversion experience and new way of looking at things, such as feeling forgiven or that God is in charge. We have seen that the usual outcome of Religious Experiences is increased happiness, suggesting that a problem has been solved, but also more positive attitudes to other people.

We looked at individual differences in the propensity to have Religious Experiences, and this suggests that there is a certain kind of person who can deal with distress in a religious way. Religious Experiences are more common in those with an open kind of cognitive structure, which is open in particular to images and intuitions of a non-rational nature, perhaps emanating from the right hemisphere. Those high on **schizotypy** are also prone to Religious Experiences; these are individuals with a tendency to hallucinate but who are also creative and who have been called 'happy schizophrenics'.

### **Two-Factor Theories**

A number of psychologists have favoured two-factor theories, in the tradition of Schachter's (1967) theory of emotion. Here an emotion is produced by the combination of a physiological state of arousal and cognitions, suggesting how this should be interpreted. We saw how certain drugs can produce Religious Experiences in some individuals and in some settings. We have just seen, however, that several rather different physiological states and a variety of other triggers can also produce Religious Experiences, so perhaps the first factor can be extended to include all of these.

The second factor can be seen as **attribution**, the way in which people interpret events. It is now emphasised by psychologists that the perceiver brings a lot to the situation being perceived: his or her language and ideas contribute to what is perceived, and cognitive structures such as beliefs and ideologies contribute to the perception and understanding of what is going on (L.B. Brown, personal communication).

We can extend the second factor too. (1) Religious people, as we have seen, are more likely to have Religious Experiences in exactly the same situations, especially those high in intrinsic religiosity. (2) Religious interpretations are more likely when there is a religious setting to

suggest it. The first Pahnke experiment (1966), when there was a high percentage of Religious Experiences, took place in a chapel and the subjects were theological students. Religious stimuli include such non-verbal signals as bells, chanting, incense, stained glass windows and dim illumination, candles, pointed Gothic windows and tall steeples pointing to heaven, sacred areas kept apart, altars, crosses and other religious symbols, even the characteristic smell of many places of worship. (3) People may be asked or encouraged to think about religious images, as they are during worship; this made a difference in Hood's isolation tank experiments. (4) People are brought up in a culture which has a tradition of religious thinking, and they will be exposed to this in greater or lesser degree. We noted earlier how the use of Peyote by Mexican Indians produced different Religious Experiences depending on their faith. This applies to all religions. Thus in Hinduism there is a quest for transcendence by contemplation of God and spiritual disciplines like Yoga (Puhakka, 1995), while in Buddhism on the other hand there is a mystical search for Nirvana through a state of emptiness and loss of self (Hong, 1995).

### SOCIAL ASPECTS OF RELIGIOUS EXPERIENCES

The theories which we have discussed so far do not do justice to the social aspects of Religious Experiences which we have encountered. Religious Experiences often have a social content, of a feeling of unity with other people and a determination to behave more kindly and altruistically towards them. How do groups help in the generation of Religious Experiences? We have just looked at the build-up of religious traditions, whereby there is a gradual growth of cognitions which enable religious attributions to be made. Groups are a source of heightened emotions in more or less ecstatic services. There is the group performance of ritual (that is: the acting out of beliefs in more or less dramatic group situations) where the actions are tightly shared and co-ordinated. Turner's doctrine of *communitas* suggests that religious groups will be very close and supportive. I have found recently that more people say that their best friends belong to their church than is the case with any other kind of leisure group, as is shown in Table 9.

**TABLE 9: How Close are Your Main Relationships With Other Members?**

Closer than other friendships	Religious	37%
	Voluntary Work	29%
	<b>Total</b>	<b>11%</b>
Very Similar	Musical	78%
	Social	54%
	Sport	41%
	Dancing	40%
	<b>Total</b>	<b>40%</b>
Different	Political	60%
	Voluntary Work	43%
	Evening Classes	43%
	<b>Total</b>	<b>22%</b>
Less Close	Sport	40%
	Evening Classes	37%
	Hobbies	33%
	<b>Total</b>	<b>27%</b>

Source: Argyle, 1996

## CONCLUSIONS

Religious experiences convey, to those who have them, that they have been in contact with a very powerful being or force, “whether they call this God or not”. They feel that there is a unity in the whole of creation; they feel united and have love towards other people; they feel more integrated, perhaps **forgiven**; they are happier, they have had experience of timelessness, perhaps eternity; and they believe that they have been in contact with some kind of reality. Experiences of God and of timelessness lead at once to belief in God and the after-life.

We have seen that there is more than one **door of perception**. There is the traditional door, of solitary experiences under low arousal, which can be generated experimentally by sensory deprivation. There is another way, via high arousal in ecstatic group meetings, such as in charismatic churches. And there may be a third way, also a social one, through taking part in shared ritual.

But are these expressions valid? They certainly are to those who have them, and we can now add that there is the further evidence of **fruits of the spirit**: that is, that they lead to more altruistic behaviour, more caring for others. At least there is for Religious Experiences, but not for psychic ones. Perhaps there is a world of reality beyond psychology — there is in the case of mathematics: Penrose (1990) has pointed out how maths may be all in the mind, but what is found is universally true and works in the world too. There is a valid subjective world in the case of music too: physics may be able to explain part of how music is produced and how it is heard, but can say nothing about the subjective experience.

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