

**Atheist Perspectives: – Belief**

**A Theory of 'Belief'**

By A. Shaw

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## Foreword

In 2000 I had an article published on a theory of how and why intelligent, educated and otherwise rational people can, at the beginning of the 21<sup>st</sup> century, still believe in the supernatural despite there being no evidence for it, and with the accumulation of evidence of the malign effects past and present of superstition and sectarianism. Since then I have tried to promote this rational explanation of how and why people do still believe.

Over the last 30 years at least, there has been a considerable amount of research into understanding the brain and the links between ‘mind’ and body. At the beginning of 2005 it was announced that Oxford University is to carry out research, bringing together philosophers and scientists, to investigate the links between pain relief and ‘belief’.

This research is to be funded by the American *Templeton foundation* whose stated purpose is to “seek to focus the methods and resources of scientific inquiry on topical areas which have spiritual and theological significance”

**I reject notions of the supernatural, superstitious explanations of human behaviour and ‘mumbo jumbo’, including the ‘rituals’ of the ‘alternative therapies’. But I think that the way these work, when they do, is the key to understanding other forms of supernatural belief.** I fully expect that eventually scientists - neurologists, neurophysiologists and neuropsychologists etc. will confirm that belief in superstition including belief in God is a product of brain physiology, social conditioning and cultural indoctrination, and that far from confirming its mystical origins, it will debunk supernatural belief.

Gradually the work of increasing numbers of prominent scientists is being reported, often skirting carefully round the issues of impact of their discoveries on superstition and concepts of ‘mind’ and ‘soul’ and the nature of ‘belief’. Like scientists throughout history whose discoveries have conflicted with religious doctrine and belief, some of them appear to be trying very hard to avoid direct conflict with religious ideas despite what some of us see as obvious contradictions

In 1987 Michael Persinger, Professor of Neuroscience at Canada’s Laurentian University, wrote a book in which he outlined his theory of ‘Neuropsychological Bases of God Beliefs’ [1]. In the preface he wrote

*"An objective explanation for why people believe in God is not very popular, scientists may encounter resistance, ranging from quiet but cordial avoidance to outright physical violence. During the development of the explanation in this text I have experienced both."*

## **Introduction**

There are of course many pressures that keep people from rejecting traditional beliefs, not least the domination of social and community institutions that have been built up over centuries, often by force. The deep seated superstitions that are still backed by the state have been too useful for social control in the past for them to be given up easily, even though they no longer command the deference they once did.

On a personal level, fear of isolation and rejection by family, friends and colleagues, can cause personal difficulties for believers, that they see no reason to risk. And the suppression of criticism and opposition to atheism has meant that the values of rational, evidence-based thinking have not been presented objectively, as an alternative to belief in schools or in the media.

For many people, no amount of evidence of the malign effects of religion or a scientific explanation of how belief is inculcated and maintained, will persuade them away from their beliefs however absurd, harmful or illogical they may be. That is the nature of 'belief'. But for those who *do* see the value of countering the distorted thinking of superstition and sectarianism, an understanding of belief, can I think be useful.

I arrived at what I think is an explanation of 'belief' from my particular perspective as a 'lateral thinker' - a health professional with a basic understanding of human anatomy and physiology and the importance of 'patient confidence' in health care - a study of and training in hypnosis - and my own rational ideological position as an atheist.

I had noticed that the techniques used in hypnosis were exactly the same as those used to indoctrinate people into cults, and in political and religious 'brainwashing'. I then realised that this probably explained other *apparently* 'inexplicable' phenomena and human behaviours, and that it was particularly relevant in creating and sustaining belief in 'alternative therapies'.

What struck me most forcibly was the similarity between the psychological techniques that are used in many therapeutic situations, and the same techniques that are used to instil and maintain superstitious beliefs, and especially the rites and rituals of the religions.

In my view this theory is a plausible explanation of how and why, normal, intelligent, educated, and otherwise rational adults, even scientists, can still believe in the supernatural and 'spiritual' despite the lack of evidence. It even allows them to ignore or dismiss clear evidence that from both a historical and current perspective superstitious practices have been and still are harmful to human beings and human society – fooling the sick; causing, driving and exacerbating the violent conflicts, that have caused so much suffering and death throughout history; promoting prejudice and discrimination; hindering scientific progress; and excluding women from public life and decision making.

It is difficult to explain because of the complexity of the subject, but I believe the answer is to be found in the workings of normal human physiology - the prime purpose of which is to maintain health and well-being. It is the effects of these systems on the brain that people have interpreted as 'supernatural'.

This theory explains for me, not only the widespread belief in alternative therapies, but also several other phenomena that are considered 'mystical' or 'mysterious': The Placebo Effect, hypnosis, brainwashing and indoctrination by cults and sects; mass hysteria and the 'power' of charismatic leaders or entertainers - 'worship' of 'pop' idols, crowd behaviour and superstitions including religious beliefs.

Phenomena such as 'out of body experiences' (OBEs), 'near death experiences', seeing visions and feelings of 'presence' & other such 'perceptions' are being understood as originating in the brain. These rational explanations should also help towards a greater understanding by the public of many of the bizarre symptoms of mental illness and neuroses, visual and auditory hallucinations, obsessive/compulsive disorders and phobias.

Other phenomena that demonstrate the same features are those in other older 'primitive' cultures, such as witchcraft and voodoo by priests, witch doctors and shamans – the magic of spirits.

Such phenomena have been studied and researched to a greater or lesser degree by many scientists including physiologists, psychologists, and sociologists, psychiatrists and neuroscientists. But they have not been looked at as processes that use similar methods, a series of manifestations, linked, either by direct cause and effect, or indirectly because they use the same techniques, though they call them different names. The relationships between them have not been fully studied, missing what I think are important insights. One reason for this is the weight of religion and the reluctance to question its traditional position and tenets. This may be for reasons of personal beliefs and/or the pressure to conform and not offend family, friends, colleagues or employers who may be convinced believers.

The traditional concentration of academic research along narrow channels of specialisation, while it has advanced knowledge in each speciality, has perhaps not been so good at picking up ideas that cross the boundaries of different disciplines and how they may relate to each other. Academic elitism has also prevented consideration of ideas that have occurred to those without academic status.

So the study of religion has been left to theologians; the medical sciences have developed into ever more specialist areas such as psychiatry, pharmacology, endocrinology, neurology and neuroscience; separate in many respects from the behavioural and social sciences, sociology and psychology.

## **What are these Psychological Techniques?**

There are two distinct aspects to this theory, but it is the fact that they are linked in different ways that makes it so difficult to explain. The first aspect is that that Alternative therapies can be explained, not by looking at the rituals they use - the 'magic of massage', the 'mystery of faith' or the scented oils of aromatherapy, or for any intrinsic 'spiritual' values claimed for them but at the psychological techniques they use.

These therapists mostly with the best of intentions, and perhaps unknowingly, use psychological techniques that are now known to promote health. They may do this without realising that that is what they are doing. Others may realise that it is the psychological effects that are

‘working’ but think that by maintaining the ‘magic’ they will make them more effective.

The second aspect is that other supernatural ‘beliefs’ can also be explained by considering how they are instilled and maintained — by using the same hypnotic techniques but in different guises with different names.

They are a range of techniques by which a willing individual submits him or her self to, or interacts with another person, to exchange thoughts and ideas with the purpose of instilling, directing or changing behaviour consequent upon those thoughts and ideas. At a basic level they are used all the time in human interactions, in any situation in which people wish to influence each other. But they can also be used, for good or ill, with the deliberate intention of instilling or changing ideas.

Therapeutically they are used to alter ideas and perceptions that may have been causing psychological problems, that have resulted in an inability to cope with situations, or that produce stress, anxiety, depression and disruptive behaviours such as those seen in neuroses.

The best way of explaining them, is I think, to look at the ways in which they are used, and the clearest picture of the techniques is the ‘up front’ way they are used in hypnosis for pain relief, and hypnotherapy. Here they are used openly with a full understanding of the purpose, to change ideas or control symptoms or behaviours, with both practitioner and ‘patient’ fully understanding the process.

## Hypnosis

There are many theories of how hypnosis works at a deep psychological level, but I am only interested here in describing in the simplest possible way *how* it works, in order to explain why and how it is used in practice, specifically in alternative therapies and religion.

Hypnosis has been called ‘mind over matter’ and this has been taken to mean the mind of the *practitioner* over the mind of the person being hypnotised, which may be true if it is being used to deliberately and unduly influence and dominate, without informed consent. But in therapy, hypnosis is a tool to facilitate concentration and introspection, to help self-understanding, and locate areas of psychological difficulty that

may explain unwanted behaviours. In hypnotherapy it is mind over matter meaning self-control – over body and behaviour.

Hypnosis in its widest sense is neither the popular idea of a patient with eyes closed apparently ‘asleep’, induced into a hypnotic trance by one or other of the induction techniques, such as using a ‘pendulum’ or ‘eye-fixation’ - nor the exaggerated stage performance as demonstration or entertainment, though both use hypnotic techniques.

In hypnosis, psychological techniques are used deliberately to bring about an altered state of consciousness in which individuals allow themselves to become more than usually open to suggestions made to them. This state of suggestibility is created by the partnership between a therapist, and the individual who voluntarily submits to the influence of the therapist who is accepted as an *authoritarian figure*. This may be ‘played’ as a caring and supportive figure whose chosen approach is to lull the ‘patient’ into a state of trusting relaxation; or as a dominant figure who inspires awe, both create a relationship of dependence and vulnerability – these role may be figures such as a parent figure, nurse, doctor, counsellor, teacher or priest.

The environment in which these interactions take place is also important and should match the role of the strategy being used in inducing the hypnotic state. For the ‘caring and supportive’ approach, the ambience needs to be warm, comfortable and friendly to create a safe and relaxing environment, whereas the awe-inspiring approach will demand a ‘grandeur’ or more austere environment. In the therapeutic model it will be the traditional brightly lit hospital, white coated ‘experts’, strange medical equipment and medical jargon. In the ‘religious’ model it will be the impressively robed priest in a large and impressive stone building with wooden pews and strange rite and ritual. Even the scents associated with these places can become part of the hypnotic, and post hypnotic experience.

This is the basic technique of ‘*induction*’ in which an altered ‘state of consciousness’ a state of submission or suggestibility is created

Once an idea has been ‘instilled’ it has to be strengthened by using techniques such as ‘*visualisation*’, ‘*positive thinking*’, ‘*association*’ and ‘*confidence building*’. This is the ‘conditioning’ process that ensures that the ideas are firmly implanted.



The ideas thus implanted then have to be regularly sustained by '*reinforcement*', otherwise they may gradually be forgotten and the effect will weaken, but in the case of its use in the therapeutic field, this cannot be continued by a therapist indefinitely. So it is done by using 'associations' or 'reminders' in every day life, these are called '*triggers*' and '*post hypnotic suggestion*' which regularly recall the work done in the therapy sessions and the ideas or coping strategies they have agreed upon.

In this way the ideas are maintained and integrated over time, long after the hypnotic induction. Whenever they experience one of these *triggers* or *post hypnotic suggestions* the ideas with which they are associated are remembered and thus *reinforced*. One of the most useful and effective ways of ensuring that the effects of hypnosis are sustained is by using self-hypnosis as a form of daily meditation.

In the case of religion the paraphernalia of religion itself provides the *induction, conditioning* and *reinforcement*, as I will explain.

(*Hypnotic techniques are psychological techniques and the words are used synonymously in this text.*)

## **How they are Used**

These techniques are used in many ways:

**In Everyday Life** – in the manipulation of behaviour between people - in relationships of all kinds, parents and children, family, friends and enemies. Also to be seen in personal relationships and group dynamics.

**In Health Care** - to relieve stress and anxiety, to create confidence and to treat the symptoms of some psychological disorders.

**In Politics** - in personal and public persuasive relationships, in the wider community to encourage mass support and political action.

**In Teaching** – Every good teacher uses these techniques to instil habits of learning and memory training. In teaching religion is it used to inculcate and reinforce religious ideas.

**In Religion** - to inculcate – induce, confirm, reaffirm and maintain superstitious 'beliefs' in mainstream religions, sects and cults of all kinds.

## In Health

### In Conventional Medicine

When these psychological techniques are used in conventional health care they are called ‘good patient skills’, empathy - instilling patient confidence in the practitioner and the care, treatment or medication they give – their purpose being to make patients feel less stressed and anxious. In doctors the techniques are called having ‘a good bedside manner’, being a ‘good listener’.

Good nurses use psychological techniques instinctively in caring for sick people, making them feel calm and ‘in good hands’. Patients who are relaxed and confident are not only likely to feel happier, but cope with their illness and treatments much better than those who are afraid, anxious and stressed.

The psychological (hypnotic) techniques are used to great effect in all therapeutic situations, by health professionals and carers, whatever their role, nurses therapists and doctors, because our gut feeling is that making people *feel better*, helps to *make* them better. It is commonly believed, and increasingly confirmed by scientific research, that shock, stress, depression and anxiety has a deleterious effect on health, and hinders treatment and recuperation from illness. It also makes people more susceptible to become ill, and there is plenty of evidence from observation and folklore that stressful or distressing life events, appear to trigger illness.

The fact that patients *want* to respond positively to therapy is also said to have an effect upon its efficacy.

It has long been recognised and partly understood, that one’s ability to ‘throw off’ or succumb to illness is affected by one’s state of mind; and research has shown that immune response is related to and affected by a person’s state of mind and personality. It has often been noted that illness often follows sudden life crises, states of shock, or stress. A study presented to the British Psychological Society, by Leslie Walker of Hull University’s Institute of Rehabilitation and Oncology Health, showed that the use of relaxation techniques produced demonstrable changes in

the body's own natural defence system, the immune cells. This effect that has been confirmed since by other researchers.

These techniques are also used by alternative therapists, for whom the longer personal one-to-one consultations and the personal care that they can offer - at a price - are an added advantage. They are essential to the 'hands on' therapies such as massage, manipulation, and reflexology and aromatherapy.

Of course a proportion of conditions will resolve naturally anyway given time and a comforting shoulder to lean on, be it a relative, friend, doctor, nurse or therapist. There are too some cases where unscrupulous therapists take advantage of natural remission and spontaneous recovery to enhance their reputations. But *any* therapy that reduces stress and anxiety and increases confidence will make people feel better, and affect their physical well-being.

The diagnosis and treatment of any serious illness is a stressful experience, and there is convincing evidence that distress suppresses the immune system. To quote from one paper "We have shown in healthy volunteers, as well as in patients with benign lung disease, lung cancer, mastalgia and early breast cancer, that psychological factors are correlated with natural killer cell activity (Black *et al.*, 1999)" and "We have also reported that three weeks' training in relaxation and hypnosis in healthy volunteers not only alters host defences, but also modulates the immune response to an experimental stressor (Johnson *et al.*, 1996)."

When these researchers tested all the women, they found that those practicing the relaxation techniques had higher numbers of important immune system cells. "Even in patients with large tumours receiving immunosuppressive treatment (chemotherapy, surgery, radiotherapy), relaxation therapy and guided imagery can produce immunological changes."

And there is ample evidence to be found from other sources, on the Internet that relaxation techniques affect a person's immunological status as well as their mental well-being.

The confidence factor, and the way in which stress and anxiety affect health, may explain why, in countries where there *are* well developed health care services and the most up to date scientific diagnosis and treatments are available, the population may not appear to benefit as

much as would be expected. The reason could be that patient confidence is undermined when shortage of staff means that they do not have time for this personal interaction; if the personal psychological skills of the staff are not valued; and not enough care is taken over this aspect of care. Patient confidence is further subverted when there is constant media attack on the services, highlighting their shortcomings at every opportunity, and in an unbalanced way. Patients become anxious and staff confidence is undermined to the detriment of the care and treatment they are able to give.

### In The Placebo Effect

One way in which all therapies are thought to work - like chalk pills may 'work' when they do - is on the same principle as the placebo effect. It is known that dummy pills, and even imitation surgery, are said to 'work' in a proportion of cases. Big colourful chalk pills work better than small white ones! They have even been reported as reversing the effects of powerful pharmaceuticals and patients have reported experiencing the same side effects that they would expect from the non-placebo medication! These and the findings of other researchers are regularly reported in the press by reporters such as Peter Silverton in *Mind over Matter* in the Observer Magazine in 2002, as well as up to date information in the medical press and on the Internet,

Researchers accept that they have to take this into consideration when designing their research methods in testing products or treatments. These psychological processes, regardless of the fact that we do not understand them, would explain a proportion of the 'successes' of any therapy, whatever its nature, even doing nothing. It also applies to the efficacy of conventional treatments, produced by conventional doctors and health professionals whose manner inspires confidence, and thus reduces stress and anxiety.

It is interesting that the range of conditions which are most likely to respond to placebo are the same ones that are susceptible to hypnosis, and other forms of stress and anxiety relief. So it may be, that while therapies 'work' as the result of the placebo effect, the placebo effect may *work* as a result of psychological techniques!

It is not clear to what extent this effect can still be demonstrated if the patients know that is what is happening, thus undermining it.

## In Alternative Therapies

A key area of irrational belief that contributed to my thinking on this strange phenomenon of 'belief' was the persistent and increasing belief in 'alternative therapies'. My interest was increased at the millennium when there was an upsurge of 'searching for the spiritual', heightened by the media, at what was thought to be not just the start of another year, and a date on the calendar, but that it had some special 'spiritual' significance.

As I have already said, the relief of stress and anxiety and the calming effect of relaxation and self confidence of the 'patient' *does* have a health promoting effect that is already accepted by scientists and practitioners alike - as is the creation of confidence in the therapist or practitioner, whether it is the 'good bedside manner' and confidence in a 'conventional' health care practitioner, treatment or medication, or a strange or expensive 'alternative' therapy. It will enhance the body's self-healing, and 'coping' mechanisms - its response to treatment - and aid recovery - and is likely to be most effective in conditions in which there are strong psychological factors. These therapists use the techniques of '*induction*', '*conditioning*' & '*reinforcement*' that are used in hypnosis and hypnotherapy - with great attention being paid to approach and ambience.

Also I am including here hypnotherapy, because, though I believe, as I have explained, that its role in health promotion and treatment is based on its use of psychological techniques that *are* based on fact, it is seen by the general public as one of the alternative therapies. I believe that it is through the use of hypnotic techniques that other one-to-one therapies work when they do so.

### Hypnotherapy

Hypnotherapists use these psychological techniques to induce hypnosis and heighten the receptiveness of their patients to their help. They can help individuals to change their perception and understanding of themselves and their responses to outside influences.

It is known to be effective in pain relief, and research into the role played by stress and anxiety on the brain associated with its production of endorphins is confirming the interaction between brain chemistry and behaviour, as does research into other aspects of human physiology. The conditions in which it is effective are those in which there are significant

psychosomatic elements and in which stress and anxiety play a part - due to the physiological changes that they produce.

Like any other therapy a proportion of the successes of hypnotherapy are the result of the placebo effect, but research shows that hypnotic techniques such as 'positive thinking', 'relaxation' and 'visualisations' produce the cell changes that indicate an improvement of an individual's immunological status.

Such therapy can be used to counter the debilitating effect of mild depression\* and anxiety etc., and some physical conditions in which stress and anxiety are significant factors such as skin conditions and high blood pressure, and is useful in pain relief and helping to overcome cigarette addiction. It can also help to alleviate or modify the distressing and disruptive symptoms of neuroses such as compulsive obsessive disorder, panic attacks and phobias.

We know that in willing subjects, thinking and behaviour can be manipulated using hypnosis. Hypnosis can be used therapeutically to treat many conditions, but it is not a cure unless the ill health or neurotic symptoms are caused by excessive stress and anxiety or psychological causes such as relics of past experience. It can however still play an important role in treatment.

Another phenomenon that may also be explained by 'protective' effects of self hypnosis are post traumatic amnesia and paralysis, or the neuroses suffered by people after excessively traumatic experiences; the phenomenon of Shell Shock suffered by many traumatised soldiers after the horrors of the First World War might be a case in point. In many such cases the psychiatrists have used hypnotherapy in treatment to expose the roots of such symptoms and attempt a therapeutic outcome.

Hypnosis has traditionally been used by doctors, psychiatrists and psychologists as one of the range of useful tools by which they can help patients deal with and understand mental and psychological illness.

### Other Alternative therapies

When the other alternative therapies work, I believe they do so, not through the rituals they use, but through their use of the psychological techniques in the way I have already described for hypnotherapy.

When these techniques are used by 'alternative therapists' they are not usually recognised as such, because any success they have is usually attributed to the particular rituals they favour. They are often explained by some pseudo-scientific 'mumbo jumbo', such as the 'memory of water' for homeopathy, or the mystical properties of herbs or aromas.

Some therapists may, but most do not, I think, realise that that is what they are doing, nor do their patients who respond to the one-to-one attention. The rituals they use are the '*distraction*' techniques of hypnosis. During therapy they associate *triggers* and *post hypnotic suggestions*, and the relaxation and stress and anxiety relief they experience during therapy undoubtedly makes them feel better. It is, I believe, a form of hypnosis and self-hypnosis, and any effect these therapies have on patients is due to the effects they have on their state of mind, enabling their own defences and coping mechanisms to work, unhindered by undue stress etc.

The chemical interactions and changes brought about through the endocrine system and the complex interactions of the hormones that these glands produce have many effects on mental states and behaviour. It is well known and researched that stress and anxiety stimulate the production of hormones, which affect the circulatory system, resulting in increased probability of heart disease. It is also known that the body has its own analgesics, 'pain killers' - endorphins, which may be blocked by fear or stress. In addition there are many people for whom psychological aspects of illness - the emotional reactions - can exacerbate the illness, or complicate diagnosis and their response to treatment. None of this will come as new to doctors or psychologists or even to the layperson who is interested in the rationale of human health and well-being.

### Stress and Anxiety Reduction

Many illnesses and conditions from which people suffer are self-limiting. The human body has a wide range of protective mechanisms that counter disease such as attack by pathogenic bacteria, viruses and allergens. It can rectify abnormal functions and provide pain relief and has its own healing and coping mechanisms.

We have a complex interrelated range of systems that control each other and keep a balance that maintains human health and well-being. They provide natural antidotes, painkillers - endorphins, anti-inflammatories and 'health boosters' such as cortisone and adrenaline. Their functions influence physical and mental health, feelings and behaviour.

Given time and adequate care and nutrition the human body has a great capacity to recover from the many threats to health that it may encounter. These healing mechanisms however, can be hindered by undue stress, anxiety and depression – because 'state of mind' not only reflects the body's immunological status, but also directly influences these systems by stimulating some chemicals and blocking others.

If it is true that one can be 'worried sick' and we know that sickness causes worry, reducing worry will promote health i.e. if, as there is, increasing evidence to show that depression, stress and anxiety, can cause or exacerbate ill health, and that illness can cause depression, stress and anxiety - then anything that that reduce stress and anxiety and boosts self confidence that counters depression will have an impact on health – turning a vicious circle into a virtuous one!

The effects of the psychological techniques on health can be more fully understood by briefly examining the role of the systems by which the body regulates and maintains itself. I will describe these as briefly as I can in the next chapter.

\*In using the word 'depression', I mean the mild depression that is a part of the normal range of human emotion and NOT serious clinical depression. I do not think that hypnotherapy has any place in the treatment of mental illness – psychosis.

## **In Politics**

I use this word in its widest sense and include personal politics of everyday life, as well as wider political and sociological behaviour.

Hypnotic techniques are psychological techniques that are used all the time by everyone in everyday life, in relationships where people are trying to influence each other, or manipulate other people's behaviour. Wherever people interact these techniques are being employed as part of our natural range of social behaviours – in raising children persuading them to behave in a particular way, between partners, in families, in



schools and colleges, in doctors surgeries and clinics, at home, in the workplace, in politics and in religion.

This heightened emotional state, in which people act in a way that they would not do as individuals, can also be seen in demonstrations, rallies and mass meetings, and less dangerously at football matches or pop concerts when fanatical followers, scream and cry, faint and mob their idols. Tyrants and charismatics have used these techniques to enflame religious or political passions. Audiences are roused with rhetoric, loud music, flashing lights, colour, and 'pomp and glory' to produce 'trance like' behaviours, arousing emotions that may be inspiring, ethereal, exciting or anger provoking

Military conquest and international and civil wars have retained their followers with parades and rhetoric and powerful psychological appeals to their loyalty.

Political and sectarian brainwashing is another example, as is the debriefing that is carried out to reverse or extract information in such situations as prisons and military detention centres.

Psychology plays a large part in political manipulation. It is used to instil fear and insecurity and it inspires, inculcates and reinforces prejudice, discrimination and scapegoat tactics.

### **In Teaching**

Every good teacher uses psychology in dealing with a class of students, children or adults - to maintain concentration, to instil habits of learning, for memory training and manipulating behaviour. In dealing with disruptive behaviour they have to use various tactics just as parents do in trying to inculcate good behaviour.

As well as teaching factual information, and practical skills, teachers are also in a position to inculcate *ideas*. As the Jesuits pointed out the younger they are when subjected to religious instruction, the more effective it is, certainly before the age of seven. The philosopher Schopenhauer wrote some 200 years ago in one of his essays, about the susceptibility of the young to indoctrination into religious belief.

Persistent, forceful and cunning teaching is used to inculcate and reinforce religious ideas into young children. Parents, teachers and clerics

combine to indoctrinate children in their religions. And efforts are made to prevent their children from hearing alternative views by sending them to 'faith' schools in which the dominant influence is that of their religion. It takes advantage of their immaturity and trust in authority figures, before the age at which a child can understand the nature of superstition and the methods being used.

### **In Religion**

As they grow up, children gradually grow out of believing in fantasy. Belief in 'imaginary' friends, tooth fairies, bogeymen and Santa Claus is left behind. This happens because adults do not try to stop them from losing these beliefs. In fact they are eager to encourage their children as they grow to understand the difference between what is 'pretend' and what is real. Make believe and wishful thinking – as truth, only persists, if they continue to be strongly reinforced, as in the case of religions, when parents, family, community and the state continue to endorse and reinforce them.

Pressures to conform and fear of disapproval or exclusion from their social or family circle make it very difficult for many people to reject such beliefs. Once ideas become entrenched, as the science of belief is beginning to show, neural pathways in the brain are strengthened. Questioning becomes irrelevant once religion is so firmly established in the community that it appears that not to believe is 'out of the question'

The techniques of *induction*, *conditioning* and *reinforcement* are used to instil religion from very early childhood, by parents and family. Or later by 'conversion', often during periods of personal stress, loneliness or grief, when vulnerable adults or teenagers who are going through difficult or confusing times will be susceptible to the security of a ready made set of beliefs or the 'embrace' support network or 'family' of believers and particularly from proselytising cult communities.

**'Rite and Ritual' are the hypnotic, psychological techniques used to 'Instil Condition and Reinforce' religion. They are exactly the same techniques that are used in hypnosis.**

All the religions have regular patterns of reinforcement behaviour, some are *constant* such as dress and dietary codes – from the hijab to the burka,

and not eating pork to not combining certain foods; the wearing of symbolic ‘badges’ that remind followers of their religion at a subconscious level. Some of them work on a *regular* basis such as ritual washing, prostration and prayer; others are *weekly* - attending worship, classes or clubs.

These are added to at regular intervals throughout the year with a calendar of *annual* ‘celebrations’ that are used to give a bigger boost to belief – Easter, Christmas, saints days, parades and pilgrimages during which they use the repetition of highly emotive stories, myths and legends.

*Life ceremonies*, funerals, weddings and Christenings, confirmations & initiations as religious events, also provide opportunities for the reinforcement of religion. Baptism is a traditional ceremony of induction. Only in recent years has this religious monopoly been broken by the provision of non-religious, secular or humanist ceremonies.

Churches also use their historically dominant place in every community, with imposing premises in every locality and paid activists to ensure that religion has a dominant place in all community activities and public life. Attending events in church halls secular users are surrounded by religious iconography, they often include some religious ritual even when the activities themselves are not religious – such as saying grace before meals in lunch clubs.

Play schemes and playgroups are often held in church halls and run by religious people as a useful opportunity to include Sunday school type children’s activities, using bible stories, colouring biblical pictures & saying little prayers before the morning milk and biscuits! Scout and Guide groups have traditionally had a requirement to have some religious affiliation, and the Scouting movement still bars atheists as leaders. All small but regular conditioning for the young.

All this explains the importance to a successful religion of regular reinforcement of ‘the message’. In places of worship with communal rite and ritual, they use *constant repetition* in language, holy themes, prayers, singing of hymns & carols, chanting of mantras, responses and actions, and the veneration of priests and icons.

They use the association of ideas, visualisation and imaging techniques using scriptural stories, parables and sermons. The use of candles and

incense are particularly potent. Touching, of garments, hands or rings is a useful intimacy, as are some of the more emotive rituals such as mass and communion. **The rosary is a particularly effective example of psychological conditioning that combines memory and ritual, an easily portable all-purpose mesmerising distraction/concentration technique!**

The use of strong emotion is also a powerful attraction that is used to the full by most religions, though it is usually more restrained in mainstream religions. It often attracts the young who are looking for unconditional love and emotional experience in their early teens. The ‘happy clappy’ religions and sects led by charismatic preachers that favour spontaneous intervention, from rhythmic singing, clapping and dancing, through to hysteria, revel in this heightened emotional experience. In these conditions it is easy to see signs of hypnotic trance and in some cases this merges into full blown hysteria with some of the more bizarre features of some way out religions – ‘talking in tongues’, trance like ecstasy or falling to the ground.

In the home, as well as the role models of parents and family and private prayer, there may be signs, symbols icons - pictures or statues on display, regular reference to religion as ‘good’ on radio or television, and the paraphernalia of religious affiliation.

The extremes of this isolation from those who might challenge their beliefs, are the Plymouth Brethren, who live, work and play with only those of their own religion. They dress to a code, no ties for the men, skirts of regulation length for the women who are not allowed to cut their hair or wear make-up. Children are not allowed to go to schools other than those run and attended by the brethren, and their social lives are limited to their community. Their whole lives are run in such a way as to minimise any contact that does not reaffirm their indoctrinated beliefs. Their fear of contamination by rational human interaction seems pathetic.

In ‘faith’ schools teachers see it as part of their job to confirm the religion of the parents, teaching religion in a partisan way, conducting communal prayer and worship, reinforced with conspicuous display of signs, symbols icons - pictures or statues. Keeping children as far away from the influence of anyone who may criticise their faith for as long a possible, is likely to make them emotionally and intellectually dependent upon their religion. Even in state schools religion is not questioned and

there is a considerable amount of pro-religious conditioning with state sponsored prayer and worship.

In the community there are many ways in which religion is reinforced with its offer of a social or support network based on church membership. This prevented non-sectarian, inclusive secular provision in the past. And it is only with the rise of secular, political action that public services have grown in a way that does not rely on the church – in this way education, health and welfare, counselling and legal advice are equally available to all, regardless of religious affiliation.

In the media criticism of religion is largely absent, and government seeks to validate religion through schools and the law. The state, the monarchy and courts use religious ritual, oaths, prayers and services to celebrate what should be inclusive community events and commemorative ceremonies.

When children are not ‘indoctrinated’ early in life, and the whole reinforcement process of Church-going is weak, there is a falling away of religious faith. And it certainly explains the weakness of the C of E, compared with other Christian sects and religions such as Islam. The more vigorously the reinforcement techniques are carried out, the stronger is likely to be the psychological dependence of the individual on their religion.

### Satanic Possession

One of the most serious and disturbing manifestations of religion is the belief in satanic possession. The extent of violent abuse of adults and children thought to be possessed by devils and evil spirits, and the kidnapping and killing of children who are thought to have brought bad luck on their families, or caused crops to fail, or to satisfy a market in body parts used in religious or other superstitious ritual is being exposed by international aid and rights organisations in some parts of West and Central Africa.

The modern combination of traditional superstitions with the main monotheistic religions is throwing up cults in which the phenomenon of possession and exorcisms is causing concern in parts of Africa and is now showing up in some parts of Britain and some London Boroughs

where there are large communities of African immigrants who support Christian sects originating in sub-Saharan Africa. In a BBC Newsnight investigation by Angus Stickler in February 2005, it was reported that there are now “scores of churches” that hold regular ‘deliverance services’ in which ‘Devils’ are being ‘exorcised’ and vulnerable or sick people reduced to hysteria.

He also showed parents who believe that children as young as two years old can be ‘possessed’ by the Devil and seek exorcism, and individuals offering to exorcise evil spirits from children when requested to do so by family members, even without parental consent! To this observer it seems the Metropolitan Police Child Protection Division, Local Authorities, Social Services Departments and Government are like rabbits mesmerised by the dazzle of headlights, paralysed into inaction by the ‘sensitivity’ of dealing with ‘people’s beliefs’ – religion it seems cannot be challenged even in the face of such extremes of cruel and absurd superstitious practices.

There are too disturbing cases of torture and deaths of children thought by members of Evangelical Sects, to be involved in witchcraft. The horrific case of Victoria Climbié was a case in point, she was submitted to the United Church of the Kingdom of God for the exorcism of the evil spirits said to be possessing her, by the devout people who were charged with her care. More recently there is anxiety about several hundred black children, sent to England to be cared for by devout relatives, who have ‘gone missing’. Such is the nature of the extremes of irrational belief.

## **How they work**

### **How the Body Works to Protect Itself**

As a rationalist who does not believe in the supernatural, I know that the origin of all human experience, perception and interpretation, belief and behaviour etc. is to be found within the human brain. The physical basis of superstitious beliefs also emanates from, and through, human physiology as it affects the brain - mood and emotion, perception and self-perception and memory. This makes people susceptible to ‘irrational beliefs’ and is responsible for the consequent behaviours.

The systems, processes, through which it does this, are several,

- The Autonomic Nervous System  
(also called the Sympathetic Nervous System)
- The Immune system
- The Endocrine (Hormone) System
- Brain and body Chemistry
- The Central Nervous System

Physical, mental and emotional aspects of human life are linked; they are all part of the same balanced ‘physical’ human being.

The chemical and electrical processes of these systems affect not only bodily health and well-being, but influence many aspects of feeling, perception and behaviour. They do this directly through the effects they have on the structures of the brain – brain experiences - and indirectly through the interpretations that are put upon the experiences through nurture and culture. The effect is the ability to believe in the irrational, imaginary and supernatural as if it were true, almost regardless of intellect, intelligence or education and cognitive thought. Though rational cognitive thought must give some ability to overcome irrational belief, or given the level of historical suppression of opposition to religion, there would be few if any non-believers!

I will describe as simply as I can the systems of the body that affect both mind and body, but it has to be remembered that they are linked, and the actions of one affects the others, in a complex balancing process.

### The Autonomic Nervous System

The *Autonomic Nervous System*, also called the *Sympathetic Nervous System*, is different from the *Central Nervous System*. The latter works on muscles that involve conscious movement. These nerves carry information (by cell to cell chemical and electrical action) to the brain from the senses and messages to the muscles to stimulate them to relax and contract to produce purposeful movement.

The *Autonomic Nervous System* works on ‘plain’ or *unstriated* muscle, that keeps the body’s vital organs functioning throughout life, without conscious effort, the heart, lungs, blood vessels and digestion. Nerve cells

are stimulated by electrical impulses. If the nerves that regulate the beating of the heart for instance do not work correctly, the heart beats irregularly, which makes its blood pumping action inefficient. This affects the heart itself, the blood pressure and the oxygenation of the blood and the rest of the body tissues, *including the brain*. Such malfunctioning can have direct and indirect effects on body and brain that cause a variety of symptoms. These conditions are often those that are exacerbated by, and which are accompanied by, stress and anxiety, panic attacks, headaches, breathlessness and palpitations that cause anxiety – a vicious circle that explains its relevance to this topic. The cures for heart disease are medical and surgical, but psychological techniques can help to reduce the stress factors.

### The Immune System

The Auto Immune System protects the body from invasion, by recognising and rejecting ‘foreign’ material such as bacteria, virus’s, toxins, allergens such as in asthma and some skin conditions; and in more recent times surgical grafts and organ transplants. Relatively little is understood about this system other than by specialists in the field. It is the centre of intense research because, not only are its effects on ‘invaders’ but there are theories that suggest that it may have a role in conditions - *auto-immune diseases* - where the auto-immune system is thought to attack the body ‘s own tissues, such as rheumatoid arthritis. It has been found that this system can be boosted by using psychological techniques.

### The Endocrine (Hormone) System

These are the many glands of the body that produce chemicals - hormones. Not just the ovaries and testes, but others such as the pituitary, adrenal, and thyroid glands. The chemicals they produce, such as Insulin and adrenalin and thyroxin, affect the body’s digestion, metabolism and well-being in many ways and they stimulate each other to produce or suppress hormones in order to balance many aspects of body chemistry.

They also have profound effects on mental and physical well-being. The adrenal glands for instance produce adrenalin, the *fight and flight* hormone that stimulates the body to cope with sudden bursts of external physical threat. But which in modern times still produce these same



physical responses, that are counter productive to the sort of persistent low level stress of modern life, causing or exacerbating the '*diseases of stress and anxiety*', high blood pressure, heart disease and circulatory disease.

The thyroid gland produces a hormone, thyroxin that in excess causes not only goitre and physical symptoms such as palpitations but nervousness and emotional instability. Under-production causes myxoedema in which physical and mental lethargy are prominent symptoms.

One of the most important groups of hormones are the endorphins, a group of at least 20 endorphins discovered only 30 years ago. These opioids have profound and wide-ranging effect on the human body. They have so far been found to enhance the immune system, relieve pain, reduce stress, and are responsible for the 'sports high' and have an effect on the ageing process. It seems they hold the key to human happiness and its effect on health and well-being!

### Brain Chemistry and the Central Nervous System

This is another area of intense interest to modern medical science. Only with the modern technologies such as image scanning, has investigation of the brain and its functions become possible. This research adds significantly to the understanding of mental illness, as does the study of the relatively few people who have suffered very specific brain damage from injury or disease, people who display a range of extraordinary and distressing mental symptoms. Hand in hand with the research into 'mapping' the brain and understanding how nerves and brain cells function, has gone the explosion of pharmaceutical agents, mood changing drugs for the treatment of mental disorders, psychoses and neuroses. It has also become necessary to know much more about the long and short-term effects of 'recreational' drugs as they become available to more and more people.

The Central Nervous system is also central to the gathering and processing of information on which behaviour is based, but the frontal lobe is specifically associated with behaviour, emotion, and aspects of personality and interaction. There are also the areas of the brain where epilepsy is focussed, and temporal lobe epilepsy has been linked to 'divine encounters' and 'fearful visitations' from other realms (disturbances of perception, illusions etc. that may be interpreted as such) and perhaps more constructively - artistic creativity.

Then there are the all important structures located in the centre of the brain, together called the *Limbic system* - the *pituitary*, the *amygdala*, the *hypothalamus* and the *hippocampus* that are concerned with aspects of feeling, *emotion*, *mood* and *memory* and a range of ‘feelings’ and behaviours. There is an overlap here with the endocrine system, because the pituitary body and pineal gland are also in the brain.

The *amygdala* is two almond-shaped masses of neurons on either side of the thalamus at the lower end of the hippocampus. When it is stimulated electrically, animals respond with aggression. And if the *amygdala* is removed, animals get very tame and no longer respond to things that would have caused rage before. But there is more to it than just anger: when removed, animals also become indifferent to stimuli that would have otherwise have caused fear and even sexual responses.

There are now many web-sites on which anyone can find information on the properties and functions of the brain, and any of the other systems I have referred to here, much of it is simply written and fairly easy to understand at least at a superficial level.

It can be seen from this brief description, that much human experience, feeling and behaviour is the result of the physical processes of the human body – and not the result of supernatural influences.

## **Science, Religion and the Brain**

### **In the beginning**

It is not difficult to understand how primitive peoples would have sought answers to life’s problems. People who relied so much on the natural elements, with little or no knowledge or understanding of the science of nature, the universe, weather, biology, botany, and all the other fields of study we recognise today, would naturally make up explanations for the phenomena they experienced, and these explanations would most likely be in the form of stories related to the hugeness of their world. This is evident today as we observe the remaining ‘indigenous’ tribes people, their superstitions and personifications of who or what causes the events in their lives – spirits and ancestors. In the absence of knowledge they use their imagination – as children do.

Nor is it difficult to appreciate the awe that early human beings felt for the wonders of the earth and the universe. We experience all these things *because* we are human. We are emotional beings, we love, hate, fear, rage because we are emotional beings. **What was called our ‘spiritual health’ is our ‘emotional and mental health’.** We are old enough as a species, and wise and knowledgeable enough to be able to say with confidence, "we do not know". The confidence comes from centuries of experience, that we know that we cannot know everything, but that in the long run everything is possibly/probably knowable.

One of the most frequently used arguments in favour of belief in god and religion is that from the earliest times human beings have believed in god, therefore...there is a god. Anthropologist turned psychologist Pascal Boyer makes the point that the early success of religion leads to that success reinforcing further success, as once ‘everyone believes in’ something, there is a temptation for people to think that it *must* be true and that questions then seem irrelevant. He also suggested that religion was successful because its ‘group bonding’ gave humans an evolutionary advantage, but it seems just as likely that dividing into groups could have produced more conflict, between groups, than might otherwise have been the case! Who knows? But that was all a long time ago.

### Religion’s Fear of Science

An interesting example of how religion treats science is the way it treated the early scientists, who, when their discoveries challenged religious belief, were imprisoned, tortured and executed or exiled – Galileo, Copernicus, and Bruno for example. One of the earliest Roman anatomists was Galen, who wrote extensively on anatomy. He attained his knowledge from dealing with wounded soldiers as an army surgeon in the Roman legions, and from dissecting animals. His work went unchallenged for thirteen hundred years. Subsequent generations of students and surgeons who, regardless of the authenticity of their own experience and work on human anatomy from human dissection did not challenge his work, and continued to agree with his teaching. Part of this in earlier centuries may well have been because they would have incurred the death penalty for disagreeing with his teaching, but even when this was not so they continued to ignore the evidence of their own eyes and maintained his erroneous statements. Even in post-mortems when what they found on dissection was completely at odds with what Galen wrote, they still believed he was right, and in lectures or demonstrations gave his teaching in preference to their own findings.

## Electromagnetism and brain activity

As I wrote in the introduction, Michael Persinger, Professor of Neuroscience at Laurentian University, Canada wrote "*An objective explanation for why people believe in God is not very popular, Scientists may encounter resistance, ranging from quiet but cordial avoidance to outright physical violence. During the development of the explanation in this text I have experienced both.*"

Perhaps given the research into the effects of electro-magnetism on the brain by Professor Persinger, one may think that Franz Anton Mesmer might have been right after all, when he proposed his theory of 'animal magnetism' and hypnosis as an aid to healing.

It is from his name that we get the word 'mesmerism'!



Photo. By Rebecca Harley

Above is a photograph of an installation of 1,300 tubes powered solely by the electromagnetic field around power lines - set up in a field off the M4 east of Bristol by Richard Box Artist-in-residence at Bristol University's physics department

## 'Neuropsychological Bases of God Beliefs'

This is the title of professor Michael Persinger's widely referenced, work published in 1987 - An expert in his field, he has also published the results of a series of research projects, since the early 1980s, in which has been able to demonstrate that electro-magnetic stimulation of the brain produces perceptual experiences, such as 'visions' 'sense of presence' 'out of body experience', 'lights' and what he calls 'god' experiences.

The stimulus for these altered perceptions he considers is similar to those producing petit mal - mini-epileptic seizures with only transient loss of consciousness, without convulsions. His particular theory is that they are caused by fluctuations in electro magnetism on the brain in susceptible individuals.

These structures of the brain in the Temporal and Frontal areas of the brain are ones that we already know are involved in memory, mood and perception. When these specific areas of the brain are stimulated 'god' experiences as he calls them are triggered and their contents are "interpreted in line with their learning experience and cultural expectations" e.g. young Catholic girls are likely to see visions of Mary, members of other religions will 'see' their familiar icons. This also explains the 'visitations' by God and Jesus that have lead to religious conversions, and belief in 'alien abductions' in the United States, by people familiar with 'horror' and 'space' stories.

We also know that certain poisons, neuro-toxins produce altered perception, with a range of bizarre manifestations, pointing again to disturbance of brain cell function, and the associated perception of 'experience', memory and the consequent behaviour. Professor Persinger has been on TV on the continent and in Britain where he has demonstrated the techniques.

The published reports of his research can be accessed on the Internet through *Medline*.

There are of course many neuroscientists working on how the brain affects feeling, perception, consciousness, memory and behaviour. One of the foremost is VS Ramachandran of California University, San Diego who has contributed much to the sum of knowledge on this subject. His research has found also a link between temporal lobe epilepsy and 'supernatural' or religious feelings, and that "strengthening certain neural pathways connected to the amygdala' leads to enhanced religious sentiments' Which could explain how constant exercise of religion and reinforcement of ideas leads to stronger attachment to those ideas and particularly the emotional attachment that can overcome rational, intellectual considerations in some people! Presumably regular exercise of the critical faculty also enhances the use of rational thought and enquiry!

But science is a two edged sword where religion is concerned. Scientists are not immune to religious influence. As James Randy pointed out, scientists are just as easily duped by magic tricks as the rest of us. And they will undoubtedly find ways to interpret findings to sustain their long held religious beliefs, or at least integrate them into their belief system. University of Pennsylvania radiologist Andrew Newberg's research into 'the essence of spirituality' seems to go further and suggests that the idea that one could design drugs to boost spirituality would underpin a practice that has existed for hundreds of years in which witch doctors take 'substances' in order for them to enter the spirit world. (Tell *that* to the Met. next time you are picked up for using substances!)

### Electro-magnetic effects on other bodily systems

Much if not all of the activity of the body and brain is either chemical or electrical or both, so it would not be surprising that electro-magnetic waves in the world outside the body could have an effect on those structures within the body that are part of the body's own electrical system.

Below is just one example to be found on Medline - of research projects that are already under way on how external electro-magnetism can affect bodily systems that use internally generated electrical activity and could be affected by atmospheric conditions e.g. the heart and brain.

This links natural phenomena of atmospheric electro magnetism, with the artificial stimulus used by Professor Persinger to demonstrate its effects in producing 'abnormal' perceptive experiences.

"We suggest that very big 7-day variation in infarction rates is connected with the decrease of electromagnetic noise during Saturdays-Sundays. This phenomenon is responsible for the very big 7-day variation in infarction rate. The myocardial infarction rate cleaned up by meteorological and social effects show increasing by a factor 1.14 during geomagnetic storms."

Research is being done into how such factors could affect the provision of emergency services in peaks and troughs of natural climatic electromagnetism. And could also presumably open up more avenues of enquiry into the effects on the human brain and experience of other forms

of electro-magnetism in the urban environment, such as power cables and mobile 'phones!

## Conclusion

No amount of factual information will convince those who do not want to give up their beliefs that belief in God is an invention of the human brain; and there are already signs that there are those, scientists included who will interpret the evidence to confirm their beliefs. There are some who see the physiological causes of religion as being a way of artificially stimulating the effects of religious experience – making them more religious! – In the same way as some mind-bending drugs already do! Religion has made itself indispensable to many people, particularly if their family and social ties are bound up with their religion. However much evidence is produced, there will be people eager to rationalise (not to be confused with rational analysis of) their faith. But hopefully scientific evidence will reduce the dependence on religion, and reduce its political impact that causes so much conflict.

However, it is the alternative therapies that are the key, because they are show very clearly the evidence of people's susceptibility to psychological techniques and are particularly instructive as to how they work in relationship to health.

The fact that many of these therapies are reported to be effective does not of course mean that, when they are effective, they 'work' in the same way that the generally accepted physical therapies of medicine or surgery 'work', and I would certainly not suggest that they should they be used *instead* of scientifically validated treatments. They may in fact work, but it is not the mumbo rituals that they use that make them work, but the fact that they allay stress and anxiety that in turn hinders the body's own restorative mechanisms and this may be taken, mistakenly to confirm their supposedly mystical properties.

And this, I think, is the clue - because although ATs are lumped together, with other irrational beliefs, they are in fact different, and to dismiss this phenomenon and the belief in the 'spiritual' it engenders, ignores the fact that how they 'work' may explain how belief in superstitions are created and maintained and may explain the persistence of religious belief.

Ignoring it leaves rationalists and non-believers of all kinds, as much in the dark as religionists as to the 'mystery' of religion and faith. It is a key to the understanding of much religious/superstitious behaviour. It is too easy for people who have experienced the effects of alternative therapies to think that if it works, it is some *spiritual* property of the rituals they use. People are thus lead to believe that there are mystical forces at work, and many take this experience to confirm their belief in the supernatural or 'spiritual' and extend it to belief in other superstitions.

It seems that many people, find it difficult to conceive that the 'mental' processes involved in human behaviour, emotion, mood, memory, perception and realisation, are as 'physical' as any other bodily functions, and that 'state of mind' affects physical health and well-being as well as vice versa.

### Is it Harmless?

If the whole process of religion and its language can be described almost word for word as a hypnotic experience, we have to ask ourselves: - if psychological treatment and its mumbo-jumbo works to the advantage of mankind in the fields of health and well-being should we seek to explain it, and does the same apply to religion? And many apologists give this as a reason for not undermining (criticising or opposing) religion, quoting the 'comfort factor' to deter secularist challenges to superstition.

I think not, for several reasons:

Religion as a 'comfort blanket' for adults is no substitute for the understanding that comes with maturity. Human beings are robust creatures and we have many very effective coping mechanisms that help us thought dark times, learning from observing how people do cope, and knowing that we can cope when we need to is far better than learning to rely on fantasy, that can let one down, often at the worst possible time.

The other danger of relying on religion is that it stifles the building up of genuine community support networks and services that are there for everyone in time of need, and do not rely on membership of a church. Anyone may need the care and support of community, especially if they lack family and have few friends, and people will feel safe, confident and less vulnerable if they know that help will be there irrespective of religious belief.



The difference between religion and hypnosis is that while the latter, as a therapy, is employed to address human illness or neurosis — as a tool to enable individuals to overcome some disruptive or unpleasant condition by affecting their own innate responses — religion and other superstitions use the same techniques to maintain adherence to and *dependence* - upon a religion, cult or belief and its institutions.

Alternative therapies however, though they may use the same techniques, do not claim for themselves ‘ultimate truth’ on which are based vast organisations, powerful superstructures, affecting millions of people. They do not seek to dominate, insisting on superiority over all other therapies, let alone people, cultures, states. Their aim is to enable individuals to take control of their own lives, not those of others, and do not, if used responsibly, encourage people into dependency. Providing they are used rationally, and do not make false claims, or call themselves ‘cures’ or raise false hopes — like the placebo, alternative therapies may have a place in helping conventional, evidence-based therapies to be practiced more effectively.

However it works, if hypnosis does work, let us accept that one day we may understand more fully how it works. Or consider the idea postulated by Julian Jaynes in his book ‘The Origin of Consciousness...’[2] that it is a demonstration, as is schizophrenia to an earlier stage of human thinking. He suggests that thought was once more a response to internal authoritarian ‘voices’- auditory hallucinations, rather than the more independent thinking of modern humanity.

As an atheist who thinks that superstition and its consequences are a danger to individuals, societies and world peace, I think that it is important to understand how and why people still subscribe in their millions to superstitious beliefs.

If the processes by which people are ‘hooked’ and kept ‘hooked’ were more widely understood it could also help people to break free from such beliefs, knowing that they do not have a ‘god-shaped hole’ or suffer the dire effects of ‘unbelief’ – the hell fire and damnation predicted by the religions. It would also free them from the fear of death if not of the process of dying, reliance on fantasy that holds back human progress, and the curse of sectarian conflict and killing.

By providing a rational explanation for phenomena, which are not easily understood and which, because of their apparent ‘mystery’, encourage

superstition (hearing of supposed ‘miracles’ for instance, leads people to view them as proof of the ‘spiritual’, or as religious manifestations). It might also help more people to understand how organised religion works, and why its policies, such as maintaining places of worship, Church schools, the continued prejudice against same sex relationships, and equality for women, as well as their constant promotion through the media and influence at community level, are so important to the continuation of their own brand of power politics!

My message is that ‘mental’ *is* physical - emotion, ‘spirit’, feeling, perception of self, time and place *are* physical - brain, mind, soul, and consciousness are physical and there is nothing supernatural about us – and we are no less *wonderful* for that.

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### **Sources & Further Reading:**

[1] ‘Neuropsychological Bases of God Beliefs’ by Professor Michael Persinger – Praeger (NY).

[2] ‘The Origin of Consciousness in the Breakdown of the Bicameral Mind’ by Julian Jaynes – Houghton Mifflin (US)

For a wealth of independent information on any of the topics dealt with in this text – Google search the Internet.

These are a few:

<http://home.goulburn.net.au/~shack/therapies.htm>

<http://www.healingsprings.com/ENDORPHINS.htm>

<http://www.ship.edu/~cgboeree/limbicsystem.html>

[http://www.science-spirit.org/articles/Articledetail.cfm?article\\_ID=130](http://www.science-spirit.org/articles/Articledetail.cfm?article_ID=130)

For a selection of atheist, secularist and secular humanist web sites and sources of information see [www.secularsites.freeuk.com](http://www.secularsites.freeuk.com)

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