

# The Pineal Gland and the Quantum Brain: Spiritual Insights About Eternal Questions

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# Health of the *Soul*

## Quantum Psychiatry - Where Science Meets Spirit

# Editorial

Neuroscientists have studied the anatomical and functional details of this amazing network of nerve-nerve and nerve-tissue connections to explain how the brain communicates with the body and vice-versa. In the midst of these studies, a body of evidence has emerged showing that the mind, through thoughts, sentiments and emotions has a direct effect on the brain and consequently on the body. But, what and where is the mind? For those more inclined to materialism, the mind is generated by the brain, and for those who see the human being as a body-spirit complex, the mind is the expression of the soul. This topic is beautifully discussed by Dr. Andrew Powell in the article **“Quantum Psychiatry – Where Science Meets Spirit”** featured in this issue of **Health of the Soul**.

In line with the topic mind-body communication, the article **“The Pineal Gland and the Quantum Brain: Spiritual Insights About Eternal Questions”** by Dr. Jorge Daher elucidates the complex role of the pineal gland as the interface between the spirit and the brain. In addition, the author lays out the chronology of scientific discoveries versus revelations by mediumship, an unconventional source of knowledge, on the functions of this pea-size gland located in the middle of the brain.

The concept of mind as expression of Consciousness (that you can also call Spirit or Soul) and its communication with the physical body, although still in the realm of theories, have now entered the era of quantum physics. We remain hopeful that the fascinating studies that are evolving from a conjunction between Quantum Physics and Biology will soon bring scientific proofs of what we have already learned through **Spiritism**.

We hope these articles stimulate discussions and research, expanding our knowledge on the exciting theme of Spirit-Body communication.

Enjoy the reading!

Sonia Doi, MD, PhD  
President, SMA-US

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## Quantum Psychiatry – Where Science Meets Spirit

Dr. Andrew Powell, M.D.<sup>1</sup>

I'm happy to provide this paper for publication in *Health of the Soul* despite having written it a good many years ago. Having looked through it again, I am relieved to find that I still agree with what I wrote then!

Reflecting on my professional life, I can see a trail of successive conceptualisations, each of which I have found deeply interesting, from Western medicine to psychoanalysis and thence to transpersonal psychology. At just the right time, I came across quantum physics, which gave me a vocabulary to discuss the conjunction of the inner world with outer, phenomenal reality.

The universe in its wisdom has given us brains to use, and all of our conceptualisations about the mind, the world and indeed God are important and valuable. Yet, they are only conceptualisation and as the saying goes, the map is not the territory. (This, of course, is another conceptualisation - that is what words are for). But beyond words and the thoughts of which they are made, there

is consciousness, the greatest of all mysteries. Strangely, consciousness is not a thing at all, as the noun would suggest but an experience of absolute subjectivity that opens us, if we are willing, to awe, wonder and joy. The involuntary suffusion of love that arises is how we know God, not as belief or theory but as that infinite presence in which we share.

I can only speak for myself (who can ever speak for another?) but these days I see the human propensity for theorising as one might affectionately watch a child absorbed in playing with sand. Therefore I'll conclude by saying that this little paper merely indicates a direction of travel rather like a signpost. I have been encouraged to come across such signposts at various times during my own life and if this one appeals to the reader, it will have been worth retrieving and showing the light of day.

*Dr. Andrew Powell, M.D.*

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*A fish said to another fish, 'Above this sea of ours there is another sea, with creatures swimming in it – and they live there, even as we live here.'*  
*The fish replied, 'Pure fancy! When you know that everything that leaves our sea by even an inch, and stays out of it, dies. What proof have you of other lives in other seas?'*

*Kahlil Gibran – The Forerunner*

Most psychiatrists regard mental disorder as caused by a disturbance of brain chemistry, a view strongly supported over recent years by advances in the neurosciences. There is also good empirical evidence that psychological stress can initiate changes in brain chemistry. This has strengthened the development of a bio/psycho/social model of mental disorder, in which genetic and dynamic factors combine. Yet the fundamental question of what constitutes 'mind' remains unanswered, for mind has no physical substance.

The general view is that mind is epiphenomenal, meaning it is secondary to the function of the physical brain. The brain is thought somehow to generate consciousness. This is not a logical proposition, although it sounds reasonable enough. How can something non-physical be created by something entirely physical? Yet it is an everyday assumption in a world based on the idea of a mechanical, material universe, in which the five senses are held to be the only reliable source of information.

I am going to be arguing against this physicalist view of the world, which started with Rene Descartes and Isaac Newton three hundred years ago. Descartes established the golden rule for empirical science, that nothing would be held to be true unless it could be proved to be true and Newton laid the foundation of a mechanical universe, in which time is absolute and space is structured according to the laws of motion.

From this time, the split between religion and science began to widen. The Church could no longer claim to understand how the universe worked and the spiritual and physical worlds drifted

apart. During the 19th century, the new science of psychology helped redefine the mental world in secular terms. Sigmund Freud (1927) saw religion as a massive defence against neurosis and even Carl Jung, despite his own spiritual journey, limited himself to defining the soul as 'the living thing in Man, that which lives of itself and causes life' (Jung 1959:26).

Psychiatry is set on proving its bona fides as a science equal to any other, and little attention has been paid to spirituality. Yet a survey carried out by the Mental Health Foundation (1997) showed that over fifty per cent of service users hold religious or spiritual beliefs they see as important in helping them cope with mental illness. They also said they don't feel free to discuss their beliefs with the psychiatrist. I have found that psychiatrists, who privately acknowledge the importance of spirituality, often feel reluctant to embark on such talk with their patients because it is outside of their training in medicine, psychiatry and also psychotherapy (Powell 2001).

The impact of the Newtonian world-view has been immense. Our scientific model of the psyche has no place for the soul; there is nothing before birth and nothing after death. Everything has to be understood as arising from within this temporary, physical existence, with the human self the only source of consciousness. We are all separate beings, bounded by the envelopes of our skin and moving around in a fixed, impersonal, three-dimensional universe utterly indifferent to our comings and goings. Little wonder that depression is the ailment of the modern world. In the first five years of Prozac coming onto the market,

over ten million prescriptions were handed out (Kramer 1994).

### **Quantum Consciousness**

Yet Newtonian science was first knocked off its perch seventy years ago. With the birth of quantum mechanics, the view that our physical world is solid, fixed and independent of mind was shown to be untenable. For example, the famous wave-particle experiment demonstrated that when a beam of light is shone through a single, narrow slit, sub-atomic packets of light called *quanta* strike the detector screen like miniature bullets. Change the apparatus to two parallel slits and the light passing through generates a wave interference pattern, like ripples crossing when two stones are dropped side-by-side into a pond. Particles become waves and waves become particles. Both 'realities' have equal validity and cannot be divorced from the observer/participant. Behind wave-particle duality doubtless lies the realm of the *wavicle*. This is just the start, for superstring theory suggests that there are many more dimensions than our local space-time can accommodate.

Electrons are no longer conceptualised as particles spinning around the atom like a miniature solar system. Instead, the electron is smeared throughout the whole of space as a quantum wave, which only collapses as a particle into our physical space-time *when a conscious observer makes a measurement*. Nor can the velocity and position of the electron ever both be known at the same time, for when the quantum wave collapses, there is only a statistical probability that the electron will turn up where it is expected. It may just materialise hundreds, thousands or even millions of miles away. When it does so, it arrives at that place in zero time. *Both space and time are bypassed*. Here are quotes from three eminent physicists:

— *'The fundamental process of nature lies*

*outside space-time but generates events that can be located in space-time'* (Stapp 1977:202).

— *'Ultimately, the entire universe (with all its particles, including those constituting human beings, their laboratories, observing instruments, etc.) has to be understood as a single undivided whole, in which analysis into separately and independently existent parts has no fundamental status'* (Bohm 1983:174).

— *'The universe exists as formless potentia in myriad possible branches in the transcendent domain and becomes manifest only when observed by conscious beings'* (Goswami 1993:141).

The quantum realm and the physical universe, which arises out of it, is all one undivided, unitary whole. More extraordinary still, it would seem to be our conscious participation that brings the physical world into being.

When consciousness collapses the wave function into three-dimensional space-time, mind and matter arise simultaneously, like two sides of one coin. The result is what we call *reality*, in both the personal and collective sense. Each one of us is self-aware, since we are connected with the total field of consciousness, and from this individual vantage point we bring about repeated further collapse of the wave function. The process can be compared with how the individual frames of a film flow together to create movement. In this way, we are continually generating what we take to be 'reality', which we experience both as an internal mental space and all around us in the form of the external, phenomenal world.

The external world is remarkably stable, which gives the impression that it exists quite independently of us. When you return home after a day's work, your house has not gone missing. This is because the probability wave that your consciousness collapses as you turn the corner,

materialising your house for you, has been generated by all conscious beings throughout all time. Short of some unforeseen calamity, your house is still standing there much as you left it.

Yet consider for a moment those rare and unforeseen happenings we call *miracles*. Since the wave function contains (in potentium) all that exists throughout all of time, *there is in principle no limit to what is possible*. A mind of unique power can collapse the wave uniquely, in one famous instance turning water into wine.

Quantum effects show up most readily at the sub-atomic level, but research into large scale systems (Schmidt 1987) has revealed that random number generators will, over thousands of trials, show a trend towards high or low, correlating with the mental intention of the experimenter. These studies have been replicated, so we can say with certainty that *mind affects matter*. It has also been demonstrated that experimental subjects who are emotionally attuned can synchronise their brain waves at a distance from each other (Targ and Puthoff 1974). *Mind therefore influences mind at a distance, be it near or far*.

During the 1970's and 1980's, remote viewing experiments funded by the US Military at the Stanford Research Institute yielded 'hit' rates of more than a billion billion to one against chance (May 1988). The mind can 'travel' to distant target sites and report accurately what is to be found there. Precognition has now been firmly established on an empirical basis (Radin 1997). *The mind therefore operates not only beyond space but also beyond time*.

The efficacy of prayer has been researched (Byrd 1988), as have more than one hundred and fifty controlled studies on healing with humans and plant life (Benor 1992, 2001). In summary: *the remote intention of one mind at a distance can promote healing and health in another*.

But there are negative implications to be considered.

One military operative in the previously cited remote viewing programme blew the whistle on the project when he was coerced into taking part in remote influencing experiments (Morehouse 2000). It follows that sorcery and witchcraft can no longer be dismissed as working merely through the mechanism of suggestibility.

### ***Multidimensional Awareness***

The direct cognisance of other dimensional realities is, of course, clothed with the projections of the human mind, as the extensive literature on the near-death experience shows (Fenwick 1995). Yet to attribute *everything* to projection would be to make the same kind of mistake as did the pre-Copernican astronomers, who were convinced the sun must surely circle the earth.

Our problem is that we cannot see the big picture - just like the story of the fish with which I started. Many of us take it on trust that the ultimate consciousness we call *God* knows what is going on better than we do; at least we are aware of a reality greater than ourselves, unlike the ant that goes about its business oblivious of being watched by the likes of us - or so we think!

What does all this suggest for the practising psychiatrist or psychotherapist? It is not that the neurosciences are invalid, or that developmental psychology has got it wrong. We just have to take care not to mistake the part for the whole. The linear timeline that marks us out from birth to death is but one axis in a multi-axial cosmos. The limits of perception, sight, sound, touch, smell and taste do not define what is real. Let us appreciate our special senses for what they are - indispensable tools for negotiating three-dimensional space-time.

The quantum domain has its antecedent in Plato's Theory of Forms. The difference is that we now have a scientific account of the probability wave and the infinite *potentia* it enfolds. But does

### ***Consensus Reality and the Paranormal***

Out of the history of civilisation has emerged what is known as consensus reality - a framework of values and judgements in which religion, science, culture and education all contribute to a coherent world-view. We diagnose mental disorders such as schizophrenia and depression not in a vacuum but with reference to this consensus reality. Individually each person is sovereign over his or her inner world, for good or ill. But one man's truth is another man's delusion and if we participate in social reality, we have little choice but to live with the consensus truths that feed our belief systems. We absorb these belief systems unconsciously, although they deeply influence how we make sense of what we perceive.

Now I want to link the two arenas of consciousness I have mapped out. On the one hand we have the perceptual world of consensus-reality; on the other, the unlimited, beyond-time-and-space function of consciousness, which gives rise to what in the West we call the paranormal.

For many people, awareness of the eternal and the boundless remains largely out of sight and out of mind. This is probably for a good reason. Consciousness embodied in the human species is largely occupied with a continuous flux of thought and emotion taken up with the challenge of getting through life, and for most people this is more than enough!

It is as though we have around each one of us a semi-permeable membrane, providing us with a dwelling place for the ego and which delimits the world of sense perception. Without such a boundary, we would merge into unitary consciousness - a case of all waves and no particles! Because the membrane is permeable, we can leave the ego at home and journey beyond space and time. This leads to wholeness or fragmentation, depending on the degree of stability of the psyche. Release from a well-balanced ego through prayer or

meditation is one thing. It is quite another to try to hold onto one's identity in the course of a psychotic breakdown. If the membrane becomes porous, there is an uncontrolled outflow of consciousness with a terrifying loss of self. Equally disturbing is the experience of being intruded upon by other energies or entities.

In health, there is a balance to strike between the mind operating as a classical Newtonian instrument obeying the laws of cause and effect, and as a quantum instrument unfettered by space-time and which opens us to paranormal phenomena. In so-called primitive societies, this latter function is used for the therapeutic tasks of healing, divination, soul recovery and spirit release, to name but a few. The spirit world is understood to interpenetrate our own and the shaman undergoes an arduous training to enable him to enter an altered state of consciousness in which he converses with spirit, be it plant, animal or human, every bit as real as in everyday life (Castaneda 1998).

Living in industrialised nations distances people from such experiences. In the UK, for example, the spiritualist movement, which arose in the nineteenth century, was attacked on a number of counts. The phenomena ran counter to the prevailing scientific culture, there were a number of fakes who were gleefully exposed and, not least, the spiritual implications were an uncomfortable challenge to the Church. We have had to wait over a hundred years for the right research tools to be developed, aided by new scientific paradigms and daring anthropological fieldwork (Narby 1998).

Nevertheless, in our society today there are, as always, healers and mediums who are sensitive to other realities. Typically, they suppress this awareness during childhood because they learn it is risky to be known to be different to others. Later, there is considerable relief when they find they are not alone. Psychiatrists get a particular slant on people with such heightened sensitivity. They easily



get labelled 'borderline' and their sensitivities are seen as pathological. Perhaps this is not surprising, since the psychiatrist only gets involved when something has gone seriously wrong.

### ***Soul Dramas***

When a good few years ago I began working with healers, I could see that there was indeed an overlap with the borderline state, except that the healers were not ill, or in mental distress. They had learned how to tune their sensitivity to what are called subtle energies so that they could work in the service of others. Healers also initiated my experience of other times and places beyond the bounds of sense perception. I have written on this topic elsewhere (Powell 2000) but I will mention briefly how it happened to me, since such things can come as a bit of a surprise if they are not expected.

It was during a group meditation, which started with a guided fantasy. We had to imagine ourselves walking in a field in the countryside on a summer day. Then we were asked to look around until we saw something that attracted us and to go over and take a good look.

I found myself standing before a majestic and mysterious tree. It had the appearance of a giant redwood and soared up into the sky. As soon as I came close to the trunk I began ascending rapidly, as if going up in a fast lift. I shot past the top of the tree and suddenly I was scrambling up a rocky outcrop. Instantly I knew what was going on. This was Arizona, the year was eighteen forty-eight, my name was Tom McCann and I was being hunted down by a raiding party of Apache Indians. I heaved myself up onto the flat top of the rock. I could hear the Indian braves a short way below and I knew they would get to me in a couple of minutes and have my scalp. I pulled out of my pocket a worn leather wallet and gazed for the last time on the picture of my wife and two young daughters. Then I took out my gun, put the muzzle to my head and

pulled the trigger. There was no sound and no impact. I simply found myself floating peacefully up and away from the body lying on the top of the rock. There had been no sense of invention or contrivance. The scene had unfolded in real time, and all I could do was go through it as it happened.

The experience can be interpreted in several ways. Was this a soul drama woven from the archetypes of the collective unconscious? Did the theme of loss of loved ones, and of life itself arise, as with dreams, in response to a problem I had not consciously recognised? If so, then the contents are part of the Self, in Jung's meaning of the term.

I went on to explore a number of 'other lives' with the help of a Jungian colleague and there were recurring themes of loss, which I could readily identify from my life at the time. This might suggest only the projection of emotions into a number of different scenarios unconsciously selected by me for the purpose. Alternatively, these projections might comprise no less than the working out of one's karmic account, as taught by the Hindu and Buddhist faiths.

Indeed, we now have to take into consideration Professor Stevenson's work on reincarnation, including studies on birthmarks at the site of an injury such as a gunshot wound, which had ended the preceding life. The children interviewed had vivid recollections of their former lives and some could accurately identify members of the deceased's family, whom they had never previously met (Stevenson 1997).

A third and middle way might be to see the scene as summoned from the quantum domain, by means of sympathetic resonance with the person's current psyche. We collapse the wave at the very point where it most powerfully attracts us. It also has a bearing on the question of the continuity of personal identity, so dear to our hearts, beyond this earthly realm. Could it be that once we move entirely beyond space-time - perhaps 'the point of

no return' reported in the near-death experience - we re-enter the wave and remain suspended in the virtual state until the wave is collapsed by another, super-ordinate consciousness? Is this where God the creator comes in? Then we'll get actualised all over again, although we should not be surprised if other worlds await us. Our Father's house has many mansions, we are told.

Out-of-body excursions to other times and places are not advisable for people who have shaky reality testing. On the other hand, symptoms that are inexplicable, such as can be the case with phobias like fear of water, sometimes resolve with a single session. The scene of the trauma - drowning, for instance - can be re-visited and the therapist enables the client to take leave of the body with release and relief, instead of fear and pain.

### ***Influences from other Realms***

The most common mental disorder is depression and it comes in many guises. A young woman came to see me feeling unwell, 'not herself'. She was clinically depressed, with disturbed sleep and loss of energy and concentration. Anti-depressant medication had helped to some extent but she was still 'not herself'. I was struck by her use of the phrase.

Going into the background, I learned that a few months before the symptoms began, a friend of my patient had killed herself in my patient's home, having been staying there while my patient was away on holiday. By the time she got back, everything had been tidied up and the funeral had already taken place.

From a psychological perspective, this tragedy could certainly have affected my patient more than she knew. And yet, as we went on, I felt there was something unexplained here. Thinking of how she had twice said she was 'not herself', I asked her if she had the feeling of someone else when she had come back home. She replied that she hadn't

wanted to mention it in case I thought she was mad, but every time she went into the house, she had the strong feeling that her friend was right there in the room with her. She couldn't shake it off; it was almost physical.

One way to receive such information when it is offered is at face value - that in this case the earthbound spirit of her friend was still present and probably unable to leave the scene of suicide. We discussed this possibility and I asked my patient if she would like us to invite the spirit of her friend to the consulting room and see if we could get some more information. My patient was willing to try, so I asked her to close her eyes, tune in to her friend and trying letting her friend speak through her. It was easily done, and we soon had the details of the suicide.

The spirit of her friend went on to express deep regret at having taken her life. I explained that she could make no progress by staying on and that it was having a bad effect on her friend, who had been generous enough to lend her home to her. She hadn't realised this and apologised. 'If only I had known', she said, 'what I know now. I was facing the biggest challenge of my life, what my whole life had been leading up to, and I went and messed it all up. I feel even worse than I did before'. I said I was sure other opportunities would be given to her. She was very relieved to hear this and we talked for a short while about her hopes for a new life ahead. Then she said she was ready to move on. I asked her to look for the light, (which is the first step, and often all that is needed). She looked around, then exclaimed with a smile 'Yes, I can see it' and left at once. My patient immediately felt the burden lift from her and she went on to make a full recovery.

Was this a projection of my patient's inner world? I would say both yes and no, since I hold the view

that the psychological world is intimately related to the spiritual universe.

My last example summarises a case study by a colleague, Dr. Azuonye, which I was delighted to see published in the *British Medical Journal* (Azuonye 1997). In 1984, a previously healthy woman began to hear a distinct voice inside her head. It said 'don't be afraid. I know it must be shocking for you to hear me speaking to you like this, but this is the easiest way I could think of. My friend and I used to work at the children's hospital, Great Ormond Street, and we would like to help you'. The lady was very frightened by this experience and ended up seeing the psychiatrist, who diagnosed a hallucinatory psychosis and put her on Thioridazine. She went off on holiday but while abroad, the voices returned, telling her there was something wrong with her and she needed immediate treatment. They gave her an address in London, which she didn't recognise. When she got back, she went to this address and found herself outside the CT scan department of a teaching hospital. The voices told her she had a brain tumour and must have a scan.

The patient was most upset and went back to see her psychiatrist. He examined her thoroughly and there was no sign of any physical abnormality but, to reassure her, a brain scan was arranged. It showed a mass, which the neurosurgeon said should be removed. The voices told her they were fully in agreement. At surgery, a sizeable tumour, a meningioma, was dissected out. When she recovered consciousness, the voices told her, 'We are pleased to have helped you. Goodbye'. Twelve years later, the patient remains well. The voices never returned.

Dr. Azuonye reports that professional colleagues were divided between those that thought the patient already knew the diagnosis and was making the story up; those who thought the tumour must have produced physical sensations which

prompted the patient unconsciously to gather information about the treatment options at certain hospitals; and others who wondered if two well-meaning people, endowed with telepathic gifts, had discovered the tumour and were offering assistance.

Some of us would entertain a further possibility: that these unwelcome voices, which turned out to be an inspiration, came from the realm of spirit. It would not be the first time. A notable instance, one that changed the course of history, took place some time ago. It happened on the road to Damascus.

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# ANNOUNCEMENTS

## Announcements



*Save the Date*

*Don't miss the*

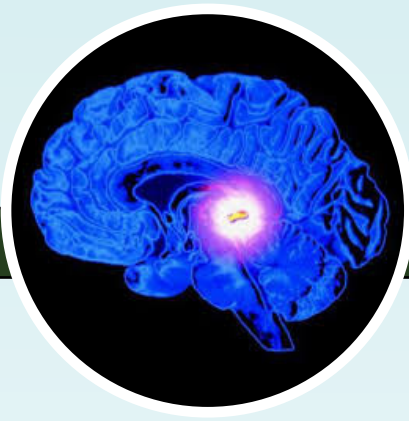


**5<sup>th</sup> U.S. Spiritist  
Medical Congress**  
*September 20-21, 2014*

at the *Jack Morton Auditorium*  
**Washington, DC**

*Speakers already confirmed:*  
Dr. Gary Schwartz (USA),  
Dr. Mario Beauregard (Canada),  
Dr. Marlene Nobre (Brazil) and  
Dr. Peter Fenwick (UK)





## The Pineal Gland and the Quantum Brain: Spiritual Insights About Eternal Questions

Dr. Jorge C. Daher, M.D.<sup>1</sup>

A giant mushroom marked the year 1945. It was the year of the atomic bombardment over the Japanese cities of Hiroshima and Nagasaki, which brought shadows and uncertainties to mankind.

A two-dimensional mushroom also marked the year 1945, when the *Penicillium* fungus inhibited the growth of the *Staphylococcus aureus* bacterial cultures in Sir Alexander Fleming's Petri dish, winning him and two other doctors—Ernst Chain and Sir Howard Florey—the year's Nobel Prize in Physiology or Medicine.

That year, as the global accords ending the Second World War and the resurgence of a new world order were in full swing, medicine made therapeutic use of cobra venom to treat heart disease (1). (The discovery of bradykinin, a vasodilator substance found in the venom of some cobras was reported by the Brazilian Maurício Rocha e Silva in 1948 and heralded one of the greatest discoveries of medicine: inflammatory mediators).

In 1945, in the small and at the time poor Brazilian city of Pedro Leopoldo in the heart of

the state of Minas Gerais, a man with little formal schooling worked diligently during the day so that at night he could devote himself as an instrument for discarnate souls who, through him, had written poetry of all genre, styles and meter, as well as letters, chronicles, and stories, announcing the continuity of life beyond the grave. From this Brazilian city, which still had adobe homes and in which streets Carlos Chagas once roamed, Francisco Cândido Xavier —also known as Chico Xavier —would launch his third book through the Brazilian Spiritist Federation dictated by the Spirit André Luiz entitled *Missionaries of the Light* (2).

According to the Pubmed database, only one scientific article about the pineal gland had been published in 1945, and it reported the infusion of pineal gland extract in guinea-pigs and rats (*Action d'extraits de la glande pinéale sur l'ovaire de cobayes et de rats.*) (3). The same database, Pubmed (<http://ncbi.nlm.nih.gov/pubmed>), came up with 5212 articles using the search term "Pineal" between 01/01/2000 and 09/30/2013 (the search terms were the following ("pineal gland"[MeSH Terms] OR ("pineal"[All Fields] AND "gland"[All Fields]) OR "pineal gland"[All Fields] OR "pineal"[All Fields]) AND ("2000/01/01"[PDAT]: "2013/09/30"[PDAT])).

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The book *Missionaries of the Light* (2) is not a scientific book and can't be considered a book of scientific dissemination; nevertheless, the author dedicates a seven-page chapter to the pineal gland. In that chapter, written in plain language without academic pretensions, the spirit-author André Luiz brings explanations about the pineal gland that no scientist of the era had ever contemplated. Moreover, equivalent scientific information as that disclosed earlier through mediumistic communication was only revealed by researchers during the 1990s, forty-five years after it was brought to light by [the mediumship of] Chico Xavier.

Detailed analysis of the second chapter of *Missionaries of the Light*—The Epiphysis (the pineal gland was once known as the epiphysis, but the term is no longer in use)—allows the classification of this information to many areas of medical knowledge. See Table 1.

Lerner isolated the hormone produced by the pineal gland in 1958 (4), thirteen years after it was reported by the Spirit André Luiz. According to Wurtman, the hypothesis that the pineal gland produced hormones was raised upon experiments with bovine pineal gland extracts in 1954 (5).

Although Melatonin is primarily produced by the pineal gland, it is also produced by the retina, the brain, adrenal and intestines; however, the circulating melatonin, secreted in a circadian rhythm, *i.e.*, in greater quantities at night than during the day, is primarily produced by the pineal gland.

The relationship between the pineal gland and its hormone with psychiatry is also well documented (6). Neuroscience consolidated the relationship between biological rhythms (*i.e.* the primary circadian clock, sleep-wake, day-night) with mood and thought (7-15). There's also a relationship between melatonin and Alzheimer disease (16).

In short, the pineal gland, through its hormone, is the gland of mental life, as anticipated by the spirit André Luiz through the medium Chico Xavier in the book *Missionaries of the Light* (2).

To understand the relationship between the pineal gland and consciousness, it is important to note that André Luiz describes consciousness as the manifestation of the interaction between the Spirit and the brain, an interaction that is mediated by the perispirit (the spiritual body), as described in the book *In the Greater World*, psychographed by Francisco Candido Xavier and published in

Table 1

Mental Health	6 citations
Pineal and Physical Activity	1 citation
An Organ without Function	2 citations
Reproductive Function	4 citations
Endocrine Function	3 citations
Description of the Pineal Hormone	1 citation
Connection with the Spirit World	4 citations

1948 (17). In this book, the brain is described as the interrelationship between three distinct regions: the primitive brain, the motor brain, and the frontal lobe. Consciousness and its flow are manifested using resources from each one of these three regions.

The pineal gland as the interface between the mind and the brain, playing a role of an interactive intermediary, was first proposed by Eccles (18), which considers that the brain is endowed with structures capable of connecting with the conscious mind.

In another book by the same spiritual author Andre Luiz, *Evolution in Two Worlds* (19), published in 1958, the author describes the relationship between the pineal gland and the conscience as one of “translation and selection of diverse mental states, mechanisms of reflection and thought, meditation and discernment.”

Temporal ordering is a fundamental characteristic of the consciousness needed to express memory and learning. Cognitive maps are ordered and synchronized on the temporal axis, primarily on the hippocampus (20). This action is regulated by melatonin (21).

In *Missionaries of the Light*, André Luiz provides an insight —not yet confirmed through scientific methodology— stating that the pineal gland acts as a mediator between behavior learned in childhood and behavior learned in past lives.

Mediumship as an unconventional source of knowledge should be highlighted. The spirit André Luiz, through the medium Chico Xavier, described the role and function of the pineal gland and its hormone in 1945, while this function was only

hypothesized by science a decade later and only confirmed through scientific methods after 1980.

In summary, the pineal gland, which interacts with the brain as a prominent structure in the flow of thoughts and expression of consciousness, can be considered an organ that transduces the interface represented by the perispirit in learning, temporal ordering of events and recall of behaviors, as well as habits and skills learned in previous lives.

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