

## Neurotheology: Insights on the Relationship between the Brain and Religion Through the Life and Ministry of St. Paul the Apostle.

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### Abstract

Can we see God? No, we can't.

But can we see His presence in the brain? The answer is perplexing.

It is said that generally, anything that affects, must be there to cause this effect, and this is the main purpose of Neurotheology: finding God within the brain cells and understanding how religiosity and spirituality affect the brain.

As well as understanding what is the kind of relationship between both of them on the neurobiological and neuropsychiatric scale aided by the modern advances in neurobiological investigations and neuropsychiatric assessments.

Religions are evolutionarily selected social and cultural phenomena. It is representative of our cultural norms and traditions. Since the dawn of civilization, religion was thought to be mainly originating from a spectrum of religious experiences and mystical revelations which are generally transculturally uniform or sharing some similarities. Only these and the prayer experience have been researched in depth from the neurobiological and neuropsychiatric scale.

This paper represents a review of the available literature results on the scientific and the hypothetical approaches to explain mystical religious experiences and the prayer experience through the lens of neurobiology and neuropsychiatry.

Some of the explanatory theories regarding the relationship between science and religion are supported by neurobiological and neuropsychiatric studies, others are merely rational or philosophical explanatory theories, but all of them share in common some pitfalls owing to the novelty of this field and scarcity of the available studies.

From the evidence reviewed here, I conclude that there may be a whole new array of different neurobiological and neuropsychiatric conditions which may result in the same core religious mystical experiences or religious revelations.

### Paul the Apostle and Temporal lobe epilepsy:

#### A-The Visions:

Many TLE patients get absorbed into what they call “religious experiences”

They see visions of God, Jesus on the cross, the Virgin Mary, or the angels.

They hear God speaking with them. They can't ignore the power of God and conclude that they have a mission to fulfill on earth.

Gowers reported a patient with a complete obsession with "the idea of being caught to heaven". [1]

Williams studied 100 patients who were subjected to the same feelings of being able to visit the heavens. Nine of them reported a pleasurable experience. A 41-year-old woman described a feeling of being lifted in ecstasy with the feeling that she is going to know about the heavens. A 32-year-old man described his episode as suddenly experiencing a vast feeling accompanied by feeling that he is living in another universe. And both of them were diagnosed with generalized epilepsy [2] Earl and Trimble reported a TLE patient stating that his attacks usually started



with bitemporal flashes of lights, accompanied by an intense spiritual experience filled with ecstasy after which he felt the need to talk and debate about God. [3]

Paul wrote to Corinthians about his visit to the heavens in 2 Corinthians 12- [4]

#### Where he described:

(a) a sense of ecstasy : which Gowers, Williams, Earl, and Trimble discussed, and I did above. [1] [2] [3]

(b) a sense of depersonalization: which Williams describes as feeling no present, or out of his body, he may even see himself in a third person view, with distorted determination of reality. [5]

(c) a dreamy state with imperfectly recollected auditory hallucinations: which is suggesting an intensely esoteric rapturous state accompanied with an auditory sensation whose details cannot be perfectly recollected.[5]

Paul then goes on saying that a messenger of Satan keeps on tormenting him: It was common to think of epilepsy as an illness afflicted by Satan, The ancient Greeks contemplated that epilepsy was a form of spiritual possession, naming it “the sacred illness” [6] [7]

The author of the book of Acts, the physician Luke, records that Paul had a lot of visions, in one of them he saw a Macedonian citizen asking him to come over Macedonia to preach the gospel to them (Acts 16:9); in another one, Christ meets him speaking words of sincere support (Acts 18:9), and in another one he felt in a state of trance seeing Christ and talked with him (Acts 22:17-21).

Geschwind reported studying the personality patterns of the TLE patients and he included, obsession with philosophical ideas, moral, and spiritual issues; authoring on spiritual or philosophical ideas, writing very long letters, journals and even poetry, he also mentioned that most of them had little interest in the sexual activity.

Paul's personality seems to have some resemblance with what Geschwind described as an interictal personality pattern for TLE patients. [8] [9]

#### B-The Conversion:

The evangelist Luke describes Paul conversion in Acts 9:1-9 [4] Jesus talking with Paul here is an accurately described aura, which was affected by the thoughts and ideas of Paul in the days before his journey to Damascus. Epileptic experiences can be affected and even tinted by preexisting emotional or mental turmoils [10]. Rieu postulates that Paul's conversion was not a sudden event but actually a gradual evolution that happened through time. [11]

It's usually thought that Saul became Paul The Apostle in his journey to Damascus, but in fact, it was a very long journey with himself all before the journey to Damascus.

Dewhurst and Beard assessed the literature on “spirituality and epilepsy” They wrote about six cases who converted their religious beliefs after an ecstatic religious auras; specifically TLE. Religious Conversion was observed in two patients with paranoid delusions and in one by a schizophreniform state. One of them experienced counter-conversion after a second seizure. The other two converted lastingly and changed the way of their life and became more preoccupied with religion.

There are a lot of stories of conversions for famous saints and apostles yet the most intriguing one is the immediate unexpected conversion of Paul The Apostle ... Paul as written in the book of acts by the physician Luke, was renowned for the dedication with which he persecuted the early Christians, and suddenly he became one of the main pillars of early Christianity.

Dewhurst and Beard came into the conclusion that, patients with TLE, do not convert their religion as a straightforward outcome of the epileptic fit but it is facilitated by an consciousness level alteration and the facets of the patient's own spiritual background and any preceding stress may be an important factor. [12]

Moving along with this theoretical explanation, If what happened to Paul was a TLE fit, why did he experience a blindness after?

This takes us to the blindness that happened after the event of conversion, Ashby and Stephenson, explain that patients can experience blindness after epileptic fits, and in their report of eleven children, all of them recovered their sight within days except one child.

Miller, also described a child who reported becoming blind days after an epileptic fit and also reports an adult who also reported blindness in an adult who developed after an epileptic fit and also recovered completely.

Kosnik et al, reported three cases of hemianopia that happened after epileptic fits, and all of them recovered within a day.

Sadeh et al, also reported blindness after epileptic fits in adults stating that five of the adults experienced cortical blindness after an epileptic fit, four of them completely recovered within days and only one became permanently blind, postulating that most likely the cause of the post ictal blindness is the cerebral hypoxia. [13] [14] [15] [16] [17] [18] [19] [20]

#### Conclusion:

The conversion of Paul may have been an epileptic fit of a TLE that was tinted with weeks and months of deep thinking about the early christianity and Jesus, followed by post ictal blindness that resolved on its own within days, opening the eyes of the main pillar of the early christianity and the writer of the majority of the new testament.

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