

# Neurology, Psychology, and Extraordinary Religious Experiences

DANIEL A. HELMINIAK

**ABSTRACT:** Temporal lobe epilepsy and certain personality disorders often result in experiences described as "religious." TLE research suggests a possible neurological basis for such experiences. Immediately the question arises about the authenticity of these experiences as religious. An experience is authentic if it furthers the authentic growth of the subject, regardless of what triggered it. So pathology may occasion authentic religious experiences, even as history exemplifies. For practical purposes, the further question about God in religious experience is secondary. The exception, miraculous occurrences, should not be granted without sufficient reason. This approach dissolves all conflict between science and faith.

William James's classic, *The Varieties of Religious Experience*,<sup>1</sup> pioneered a psychological approach to religious issues and gave impetus to research that remains perennially challenging. Throughout this century, with lesser or, now again, with greater intensity, the psychological study of religious phenomena has continued.<sup>2</sup> This paper follows in that growing tradition.

First, I will review some research on the extraordinary experiences that may accompany temporal lobe epilepsy (TLE) and that are sometimes related as "religious experiences." Such a beginning allows the hypothetical projection of a neurological basis of some extraordinary religious experiences. Then I will consider supposed religious experiences sometimes accompanying certain personality disorders and so seek a psychological account for these. Since few firm conclusions can be drawn, this material will serve to exemplify the kinds of questions that can be asked and answered on the neurological and psychological level. I will also urge the further question, more critical to religious than to scientific concerns, about the possibility of human growth from such experiences, which varying degrees of physiological or psychological pathology often explain. Only at this level can the question about authenticity of a supposed religious experience be answered. Finally, from a theist position, I will consider the still further question about the role of God in these experiences. The overall intent is to situate in one integrated context both the scientific and the religious approaches to religious experiences. The presupposition is that neither, correctly conceived, is a threat to the other but that both are needed for an adequate treatment of the issue.

The concern here is so-called "extraordinary religious experiences." By "extraordinary," I intend phenomena like seeing visions, hearing voices, sensing an overwhelming presence, perceiving realities with uncommon and "transcendent" vividness, experiencing ecstasy, and the like. Subjects of such phenomena often describe their experiences as "religious" and so introduce a

term that is more difficult to define. Assuming traditional Western usage, I take "religious" simply to imply some relationship with God.<sup>3</sup> Accordingly, as a beginning point, I accept as religious experience whatever a particular subject describes as such. Subsequent considerations will allow a more objective definition of this term. Then the issue will be not simply whether someone attributes an experience to God but whether God is actually behind the experience.

*The positivist viewpoint: The neurological and psychological bases*

Extensive research confirms that occurrence of such extraordinary phenomena as noted above is a characteristic symptom of epilepsy, especially of TLE.<sup>4</sup> "Temporal lobe seizures may share some features in common with other types of focal and/or generalized seizures. In the main, however, they tend to be characterized by complex sensory, motor and autonomic disturbances, superimposed on a background of altered consciousness."<sup>5</sup> Slater and Beard suggest that disturbance of the limbic system related with the temporal lobe plays a part in many TLE symptoms.

The limbic lobe system is closely connected with the emotional life of the individual, and when it is disturbed he is liable, in a state of clear consciousness, to experience affects not connected with external reality, of a compelling and disquieting kind: *déjà vu*, depersonalization, fear, etc. There is also a liability to abnormal perceptual experiences, derealization, hallucination, etc., also occurring without detectable clouding of consciousness.<sup>6</sup>

Serafetinides administered LSD-25 to twenty-three epileptic patients before and after temporal lobectomies and noted postoperatively a significant decrease in LSD symptomatology.<sup>7</sup> The conclusion was that the perceptual effects of LSD-25, which phenomenologically resemble those reported as mystical experiences,<sup>8</sup> depend on the temporal lobe. These studies suggest that the temporal lobe and its associated systems play a key role in the phenomena in question.

Beyond this, other studies try to distinguish the symptoms of right (R) from those of left temporal lobe epilepsy (LTLE). In studying the psychotic symptoms associated with TLE, Flor-Henry found that dominant-hemisphere (left) TLE relates significantly with schizophrenic symptoms in epileptic patients.<sup>9</sup> That is, LTLE involves the kind of extraordinary phenomena that are in question here. On the other hand, RTLE shows a significant correlation with affective psychoses. In studying the behavior patterns of epileptics, Bear arrived at similar conclusions.<sup>10</sup> These studies suggest that the supposed key actor in these cases is the *dominant* temporal lobe.

That conclusion may be premature and all too easy. Flor-Henry's research has been criticized on many scores. Moreover, Stone, for example, argues that the subordinate hemisphere is responsible for the vivid, bizarre imagery of dreams.<sup>11</sup> Would not visual hallucinations be more reasonably associated with

the right-brain functioning? Perhaps what happens in LTLE is that the impaired left hemisphere can no longer adequately perform its normal role of inhibiting the activity of the right brain, so visual hallucinations result from exaggerated right-brain activity. In such a case, which hemisphere is the key actor? Is either a *key* actor? Obviously, it is extremely difficult, if not impossible, to map complex experiences on the cerebral terrain. The valid conclusion must be more modest: apparently, one important factor for explaining visions, voices, trances, and the like is malfunctioning in the dominant temporal lobe, in contrast to malfunctioning in other parts of the brain.

Speculating on these findings, Taylor suggests that the phenomena of epileptic seizures "reveal the existence of a cerebral state which transforms the perception of external reality" and imbues it "with such transcendence that great significance must become attached to that moment."<sup>12</sup> Evidently, the abnormal neural associations of a seizure actuate this "state" for a time; to be caught permanently in one of these "states" is to be insane. But such states apparently presuppose "programs" in the brain. These represent another way of construing the neurological basis for the extraordinary epileptic phenomena that concern us.

Because TLE is a distinctive pathology, has extraordinary phenomena as a common symptom, and entails a verified anatomical base, it is possible in this case to project a neurological basis for the phenomena in question: malfunctioning in the dominant temporal lobe. Of course, this conclusion remains tentative. The research on which it is based is controverted and incomplete. Still, it provides a convenient example of the kind of conclusion continued neurological research could achieve.

That conclusion is relevant to the explanation of religious experiences. Numerous epileptic patients relate incidents of what they call religious experiences.<sup>13</sup> They see visions of God, Christ on the cross, the Virgin, or the holy angels. They hear God speak to them. They are overcome by the power of God and realize that they have a mission. Some make important life decisions on the basis of these experiences. By definition, these are religious experiences.

Granted, these same patients also relate some obviously bizarre experiences. Besides having a vision of an angel, one man also "rambled continually on religion, sex and black magic. He stripped himself naked, crying out that he was ready to be cleansed."<sup>14</sup> Another man claimed, "All life comes from radioactivity in space. All this goes into one vast electronic brain, which gives God the power to give you life and individuality. I am the Ark of God."<sup>15</sup> Yet Gannon and Traub relate similar absurdities about recognized saints:

St. Vincent Ferrer, who died more than five hundred years ago, declared on the authority of his visions that the end of the world was imminent and believed that he had worked miracles to authenticate his prediction. The details of our Lord's life and death in the visions of St. Elizabeth of Schönau (1129-1164) and St. Bridget of Sweden (1302-1373) clearly contradict each other as well as history. . . . Bl. Henry Suso tells how all the red and warm blood of the five wounds flowed through his mouth and down into his heart. Alan de la Roche (1428-1475) believed he drank milk from Mary's breast. And finally—although this chronicle could easily be prolonged—Bl. Margaret Ebner (1291-1351) was instructed by

the child Jesus 'how his holy circumcision was performed' and thought she heard God telling her to nurse the wooden statue of the child Jesus which she kept in a crib.<sup>16</sup>

At this stage in the discussion, the strangeness of these experiences does not allow us to discredit any of them as religious experiences, since their subjects describe them as such.

However, the more pertinent point here is this. The extraordinary phenomena central to those religious experiences—like the phenomena experienced by other patients who do not, however, interpret them religiously—can *ex hypothesi* be related to a specific neurological basis. At least on the neurological level, this basis provides an explanation for the extraordinary religious experiences in question.

That conclusion is highly speculative. A similar conclusion, also highly speculative, might be projected from a study of neurochemistry and psychedelic drugs.<sup>17</sup> Then, not an anatomical basis but a neurochemical one would be suggested as a partial explanation for religious experiences. I cite these instances not to argue the final validity of the conclusions but primarily to exemplify the kind of contribution that neurological research offers. Indeed, every human experience must have some physiological basis; that religious experiences would as well is not surprising. Physiological research can provide some valid explanation for the phenomena associated with some religious experiences.

Christensen offers a psychoanalytic explanation for some other religious experiences in which there was no question of physical pathology.<sup>18</sup> He studied twenty-two men, professionally involved in religion, who reported adolescent religious conversions during later psychotherapy. These experiences included visual transformations, "voices," a sense of overwhelming presence, and intense emotional impact, and resulted in life-altering decisions. Christensen asserts, "A conversion experience does not just happen. It is the result of a complex psychological process, which, over a period of time culminates in the acute reaction."<sup>19</sup> The conversion experience provides a possible reintegration of the personality in the face of increasing anxiety caused by an unconscious conflict. This conflict commonly entails distorted identifications, a depreciated self-concept, and psychosexual pathology. In general, the conversion experiences studied appeared to be a specific type of resolution of an acute confusional state, as delineated by Helen Carlson.<sup>20</sup> Christensen notes four possible resolutions of the unconscious conflict by means of the conversion experience. In the optimum outcome the subject experiences a maturing process: the conscious and unconscious conflicts are united, and the unconscious conflict is acknowledged and so introduced into the integrating process of the ego. In the other outcomes, the conflictual issues are rejected as ego-alien and are suppressed, though some degree of reintegration may result under the impact of religious sentiment and symbol.

It seems that Christensen provides a valid psychological explanation for that kind of experience. His explanation differs from those offered for epileptic experiences in that it appeals not to neurological causes but to psychological

ones. In so doing, it raises a difficult question about the determination of pathology. The psychological explanation does not rule out relevant physiological correlates. Indeed, I presume that the "psychophysiological principle" is always operative: to every psychological phenomenon there corresponds an appropriate physiological phenomenon, and vice versa.<sup>21</sup> Well known are the facts that emotional stress can provoke an organically based epileptic seizure<sup>22</sup> and that meditative practice can alter the patterns of neuronal firing as recorded on the EEG.<sup>23</sup> But acceptance of a psychological explanation alone presumes that one does not implicate any anatomical or neurological pathology. Thus, no physical determinations, and so no easy criteria, of pathology are available here. On the contrary, the mechanism operative in the conversion experiences that Christensen analyzed—a sudden and compelling breakthrough out of the increasing tension of a confusional state into a possible new integration—is in ways similar to the mechanism operative in the normal creative process: in the face of a problem, the unconscious, creative mind spontaneously works toward an integrative insight and at an appropriate moment achieves and casts up the possible solution into consciousness, where appropriate action can be taken. Kekule's dramatic dream of the Ourobours, which suggested the structure of the benzene molecule after long and engrossing engagement with the problem,<sup>24</sup> is not far removed from the visual hallucinations that might accompany the religious experiences described by Christensen. Indeed, according to Christensen's analysis, a wholly healthy resolution of the conversion experience is possible. Therefore, neither is the mechanism itself pathological, nor is the outcome always healthy. This state of affairs highlights an important issue: above and beyond the psychological (or even neurological) explanation of a supposed religious experience, there is the question about the authenticity of the experience as religious. This further question moves us from the positivist viewpoint to the philosophic viewpoint.<sup>25</sup> It moves us into the realm of the philosopher, the "lover of wisdom," who is willing to make judgments of value. To this further question I now turn.

*The philosophic viewpoint: The authenticity of the experience*

I use the terms "authenticity" and "authentic" in the sense delineated by Lonergan and further applied to psychological issues by Doran.<sup>26</sup> Besides the physical and the psychic, there is in the human also the spiritual factor. Here "spiritual" does not refer to God, faith, or religion; it does not refer to the uncreated, divine Holy Spirit of Christianity. Rather, it refers to the created, *human* spirit, to that by which humans have awareness, intelligence, reason, and responsibility.<sup>27</sup> The spiritual in the human has its own inherent structure and unfolds according to inherent principles, which become precepts for us: "Be attentive, Be intelligent, Be reasonable, Be responsible."<sup>28</sup> To the extent that one follows and embodies these precepts, one is an authentic subject.

The authentic subject seeks the truth and pursues real value, the good. But for humans truth and value are not givens to be uncovered; they represent,

rather, achievements to be attained. They are not found apart from the subject who knows and chooses. Thus, only the one who is honest increasingly knows the true, and the one who is conscientious increasingly attains the good. In themselves truth and value are heuristic notions: truth is what will be known when all the relevant questions on a particular issue are answered correctly; value is what the conscientious person would choose in any concrete situation. Like the notions "truth" and "value," so the correlate on the subjective side, "authenticity," is also a heuristic notion. "Authentic" describes the one who honestly seeks the true and conscientiously chooses the good. The only accurate way of defining these notions—"truth," "value," and "authenticity"—is in relation to one another. This situation does not constitute a vicious circle; actual instances of people arriving at correct answers and making right decisions bear witness here. Rather, this situation highlights the sometimes disconcerting fact that for us "genuine objectivity is the fruit of authentic subjectivity."<sup>29</sup>

The authenticity of an experience is a function of the authenticity of the experiencing subject. Accordingly, to call an experience authentic is to judge that that experience results from an authentic subject and moves that subject further along a path of growth congruent with the inherent norms of the human spiritual nature. Presupposed is a holistic conception of development: the resources of body and spirit and psyche can be marshalled along the lines set by the dynamism of the human spirit, and the result is an integrated organism wherein all systems flow openly and work harmoniously toward the unfolding of the highest potential of the individual.<sup>30</sup>

Though, in the abstract, the issue of authenticity can be formulated only heuristically, criteria that govern sound judgment in concrete cases are commonly known and employed. Rules for the "discernment of spirits," though often couched in what today appears as excessively religious and mythical symbolism, offer one rich source.<sup>31</sup> Christensen's analysis also implicitly acknowledges a valid criterion: a maturing process occurs in those experiences where conflictual issues are not denied or suppressed but, rather, introduced into reflexive consciousness and integrated.<sup>32</sup> Human authenticity demands openness to all the issues—"Be attentive!"—and so, among other things, authenticity fosters psychological wholeness.

Heimann exemplifies this criterion of wholeness in his analysis of Augustine's conversion.<sup>33</sup> This conversion makes sense only in the overall context of Augustine's life. "Augustine converts because he wants to find God. He finds Him in a single moment because he can surrender himself to faith in divine providence."<sup>34</sup> The experience is deemed authentic because it exhibits an integrative step in Augustine's life. "All the particulars of the experience are directed toward the overriding spiritual context, and the key is not in some isolated experience but in the dynamic direction of the whole."<sup>35</sup> The difference between Augustine's experience and other, obviously psychotic, experiences is that Augustine's integrates the psychological elements into the spiritual; the others allow for no integration of the elements into a whole.

The main point here is this: the authenticity of any experience is assessed

only by submitting it to a thoroughgoing judgment of value above and beyond the acknowledgment of any easily-achieved resolution of conflict. Christensen's cases stand out as telling examples.<sup>36</sup> Of course, one easily understands more about a case with hindsight. Yet, with the insight of a trained therapist as well as the counsel of their ministers, might not those individuals have evaluated their experiences differently and chosen different life paths? Still, the cases came to the attention of the psychotherapist precisely because the reintegration effected by the "religious" experience eventually gave way. *Insofar* as this is true, one must judge that those "religious" experiences were not authentic and were only mistakenly taken for a revelation from God.

That "insofar" suggests that a religious experience may be partially authentic and partially inauthentic. For no one, it seems—except the wholly senseless—is *fully* authentic, fully oriented to value, and free from bias or petty, self-serving interest. No one is likely, then, to make an occasion of extraordinary experience also an occasion for only authentic growth. Almost inevitably a supposed religious experience will be basely self-serving to some extent and so will to that extent be inauthentic. Moreover, human life is a process. It does not happen in one fell swoop. Though an outstanding experience may determine the general and long-standing lines of one's life, no experience will determine all the details of one's life yet to come. And in the face of the newly arrived present, the past needs to be reconsidered and reevaluated. What was sufficient for yesterday may not as such be adequate for today. But what was truly authentic yesterday always remains adequate at least in this, that it led one to the further step needed today rather than obscuring the need for, or delaying the possibility of, that further step. From this point of view and considering the recent doubt about the adequacy of the sexual morality that Augustine bequeathed to the Christian churches,<sup>37</sup> one might wonder whether Augustine's own experience was fully authentic. None should be scandalized by such a thought about so great a saint. Every human inspiration must be subjected to judgment of value to determine whether above and beyond its seeming rightness it really is right. Even supposed experiences of God do not free one from responsibility for one's decisions and actions. The material summarized in the first part of this paper highlights the urgency of this norm.

The authenticity of an experience lies not so much in the mere fact that the experience occurred as in the part one plays in what occurred. Every human experience is more than an external happening. Human experience not only proceeds in part from the subject but also includes the subsequent reception, interpretation, and assessment of the happening by the subject. The authenticity of the experience is a function of the authenticity of the subject. It is possible, then, that experiences resulting from anatomical and neurological pathology could be the occasion for authentic growth. Weitbrecht notes four cases with such positive outcomes.<sup>38</sup> This anomaly is not without explanation. The idiosyncratic nature of epileptic psychotic episodes suggests that the abnormal associations are formed in areas of acquired information and so can be psychopathologically relevant.<sup>39</sup> Thus, epilepsy and even psychoses *may*

present occasions for the release of psychodynamic material that otherwise might not become available and whose processing could facilitate healthful ego integration.<sup>40</sup> Moreover, the disruption of normal consciousness associated with these pathologies breaks down habitual patterns of perception and cognition. Given that this same effect, though in a less dramatic and more controlled way, is one useful result of consistent meditation practice,<sup>41</sup> pathologically caused disruptions could act similarly to open the subject to new and valid perceptions and insights and so facilitate authentic growth.

Thus, it should not be surprising that numerous important historical figures were known, or thought, to have suffered epileptic seizures and to have found a source of their religious inspiration in these experiences. Analyzing the strange spells of Muhammad, the Prophet of Islam, Freeman concludes "that if one were forced to make a medical diagnosis, psycho-motor seizures or temporal lobe epilepsy would be the most tenable explanation."<sup>42</sup> Paul the Apostle's dramatic conversion on the road to Damascus (Acts 9:3-12; 22:6-13; 26:12-15), his being "caught up . . . into the third heaven" and hearing "things which must not and cannot be put into human language" (2 Cor. 12:2-4), his burdensome disease (Gal. 4:13), and his enigmatic "thorn in the flesh" (2 Cor. 12:7) have led many to speculate that also he was epileptic.<sup>43</sup> However, a disease as well known in Paul's time as epilepsy would certainly have been recognized and recorded by name for history.<sup>44</sup> Some experiences of St. Theresa of Avila also appear to be epileptic in origin.

When 24 years old she was given up for dead: she was comatose for four days. On recovery it was found that she had bitten her tongue: her bones seemed to be out of joint, and she was badly bruised. Later she suffered intense headaches and experienced chronic noises in the head . . . : "while in other parts, drowned by the noise of the waters, are the voices of birds singing and whistling."<sup>45</sup>

The same must be said about St. Therese of Lisieux: "These curious experiences began when she was about nine years old. She was seized with 'strange and violent tremblings all over her body' . . . Later, she was assailed by terrifying visual hallucinations which gradually changed to celestial visions."<sup>46</sup> And similar assessments can be made for other notables like Joseph Smith, Francis Libermann, Hieronymus Jaegen, St. Catherine dei Ricci, St. Catherine of Genoa, Mme. Guyon, and St. Marguerite Marie. Dewhurst and Beard conclude, "Unfortunately, the biographical details of several of these saints and mystics are too meagre to allow an accurate assessment of their experiences. There is, however, little doubt that some suffered from temporal lobe epilepsy causing states of altered awareness which brought about their sudden conversion."<sup>47</sup>

Presuming the holistic interpretation of authentic experiences presented above, I would say these great religious leaders were able to use their extraordinary experiences, even though perhaps pathologically caused, to further their own authentic growth. This would be possible precisely because they were people "of good heart," people dedicated to the pursuit of truth and value. Their experiences were integrated into the broader context of their lives,



much as was Augustine's.<sup>48</sup> They knew how to discern what was valid in the experiences and to use it, while disregarding the rest. They were saints to some extent despite their "visions" and "revelations" and only in a qualified sense because of them.

Such an explanation resonates with Eliade's explanation of shamanism: "To obtain the gift of shamanizing presupposes the solution of the psychic crisis . . . a crisis so deep that it sometimes borders on madness."<sup>49</sup> More importantly, that interpretation squares well with Paul's teaching about the highest goal of Christian life. Referring to extraordinary gifts like healing, prophecy, miracles, and speaking in tongues, he asserts, "I will show you a still more excellent way," (1 Cor. 12:31) and goes on to speak eloquently of the primacy of love. For Paul mysticism means living fully in this world, open to and embracing hardships as well as joys. It means living a life of service and love, reproducing in oneself the kind of life Jesus led.<sup>50</sup> Likewise, the goal of non-theist Tibetan Buddhism is a this-worldly life of presence and compassion. During meditation practice one avoids hallucinations and seeks to attain a state of full presence to the here and now.<sup>51</sup> The Bodhisattva vows not to attain personal enlightenment until he or she has helped all sentient beings attain the awakened state of mind.<sup>52</sup> Such insistence on the down-to-earth character of spiritual perfection is not to deny the existence or legitimacy of the extraordinary spiritual and psychic powers that seem sometimes to accompany states of profound spiritual development.<sup>53</sup> However, this is to say that the great religious traditions teach such experiences are not the goal of religious life nor are they to be sought as such. Further, many extraordinary "religious" experiences may be pathological in origin, though some people may be capable of using them to further their authentic development.

#### *The theist viewpoint: The role of God in the experience*

Thus far I have been considering "religious" experiences apart from any explicit theist presuppositions. If I have made reference to God or appealed to religious traditions, I did this only to explicate other issues. In fact, I was able to gather within the same argument both non-theist Tibetan Buddhism and theist Christianity. The operative concept in my philosophical analysis was authenticity, defined in terms of the dynamism of the *human* spirit. The judgment of value that that analysis urges could be proper even to psychology, conceived within an *authentic* humanistic context, as, for example, perhaps in Assagioli or Progoff.<sup>54</sup>

Now the further question arises: What is the role of God in these extraordinary experiences? And only now, though still in accord with the definition adopted at the start of this study, might we begin properly to call these experiences, if they so qualify, "religious experiences." For now they must be judged with explicit reference to God's part in them.

The very context in which I have presented this question makes it clear that the question of God is of an order different from that of the prior questions.

Nonbelievers might wonder why the question need even arise, for all the significant human issues seem already to have been treated. Indeed, in bringing up the question of God, even the believer does not usually expect to add to the data on religious experiences or to contribute some factor for a more adequate account of the intrinsic nature of the experiences themselves. The issue of God arises from a different kind of questioning. Whereas scientific questioning wants to *understand what* a thing is and *how* it is what it is, the issue of God arises from questioning about *the very existence* of whatever there is to be understood. Accepting fully the intrinsic value of questioning, dedicated to the eventual discovery of answers,<sup>55</sup> and motivated by some experience of "being in love in an unrestricted fashion,"<sup>56</sup> the believer expects that there is also an answer to the question about existence and calls that answer "God." Conceived in this manner, however, God is not one more object alongside many other objects—even as the Judeo-Christian tradition has always insisted. Rather, God is the condition for the possibility of all other objects. One does not expect to find God among other objects and so turn one's attention to the study of God. Rather, God is known as working in and through the existence and natural operations of all other objects. God is not one more factor alongside other factors of the same order. Rather, God is the creator and sustainer of all the other factors; God is a factor of a whole other order.

Thus, the believer need not invoke God as a separate or additional explanation for a religious experience. A religious experience is attributable to God insofar as God is in some way the ultimate explanation of every occurrence and insofar as God gives people the intelligence, reason, and responsibility, authentically to discern and act on the true meaning of any experience. Of course, the kind of faith I am presupposing here would see every action as related to God and so would see every moment of life as a moment of religious experience. But is this not enough? As a lived realization, it is nothing less than mysticism.<sup>57</sup>

I would summarize my overall conception of extraordinary religious experience in this way: extraordinary human experience, whether triggered by neurological, psychological, or any other mechanism, may occur in the authentic or in the inauthentic subject. If in the authentic, it will be an authentic experience. That is, it will result from and further authentic human growth. Moreover, if the subject relates the experience to God, he or she may rightly call it an extraordinary *religious* experience.

Of the two requisite factors for a valid religious experience—authenticity and reference to God—the first is the harder to come by and the harder to determine. Accordingly, it is the critical factor. And, in fact, authenticity is our only indicator of true divine involvement. What is not authentically human could hardly be attributed to God. Conversely, what is authentically human and so leads one toward the true and the good must certainly be attributed to God, conceived as the fullness of Truth and Goodness. What is authentic is of God. So, while in theory reference to God is what determines a religious experience, the ultimate practical criterion of religious experience is

not reference to God but the authenticity of the experience and the subject. This practical criterion is valid even where reference to God may be irrelevant to religion. It gives the present analysis some applicability beyond the confines of traditional Western culture and theist religion.

That criterion is true of all religious experience, ordinary and extraordinary. The extraordinariness of a religious experience depends not on an extraordinary intervention of God but simply on the extraordinary character of the occurrence that occasions the experience. This is not to deny that God could intervene and become the direct cause of some particular occurrence or other. It is only to insist that appeal to miraculous intervention is superfluous when other simpler and adequate explanations are possible. It is also to suggest that easy and unqualified appeal to God as the source of some experience is no threat to God, correctly conceived; rather, science presupposes the value of reasonable and responsible behavior that religion at its best has always fostered. Nor is God a threat to science.

To go beyond theism and consider Christianity adds still further complications. Besides believing in God, Christianity affirms a triune God; insists that the Father did make an initial extraordinary intervention in human history by sending the Son; believes that the work of the Son in this world transformed the ultimate meaning of human life; acknowledges a second extraordinary intervention in the sending of the Holy Spirit; and holds that through the Holy Spirit, the everyday activity of humankind becomes a growing share in the divine life that the Son introduced into history. I have dealt with this issue in detail elsewhere.<sup>58</sup> Here let it suffice to note two things. First, the Christian viewpoint provides a coherent and complete account of the statement that a religious experience is literally an experience *of God*. It is of God not only in the sense that God is in some way the creative source of the experience but also in the sense that God is the object of the experience. Christians believe that beyond the created human spirit humans possess, and so can experience, also the uncreated, divine Holy Spirit, which God has also poured into human hearts (cf. Rom. 5:5). Second, the interventions of the Son and of the Holy Spirit in history did not destroy the natural order but opened it to a higher fulfillment. Accordingly, nothing said hitherto can be lost when one would want to explain religious experiences also from a Christian viewpoint. As in the case of the theist viewpoint, so the Christian viewpoint adds a new dimension of understanding to any issue under consideration. But it does not invalidate or cancel other legitimate understandings.

### *Conclusion*

In this paper I have reviewed research on extraordinary experiences that accompany temporal lobe epilepsy and certain personality disorders and have thus projected possible neurological and psychological explanations for these experiences. Since these same experiences are sometimes described by their subjects as "religious experiences," these explanations likewise indicate the

neurological and psychological bases for some religious experiences. However, this very conclusion raised the further question about the authenticity of these experiences as religious. I argued that authenticity of an experience is a function of the authenticity of the experiencing subject. An experience is authentic if it furthers the authentic growth of the subject, regardless of what triggered the experience. The further question about the role of God in religious experiences appeared secondary, in the final analysis. Except in truly miraculous occurrences, which should not be granted without sufficient reason, God is not another factor alongside the others needed to complete the explanation of any human experience whatever. If by definition an experience is called "religious" by its reference to God; in practice the ultimate criterion of a religious experience is the authenticity of the experience and the subject.

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59. Daniel A. Helminiak, Ph.D., is Assistant Professor of Systematic Theology and Spirituality at Oblate School of Theology, 285 Oblate Drive, San Antonio, Texas, 78216. Reprints may be requested at the same address.