

# *Zygon and the Future of Religion-and-Science*

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## JAMES B. ASHBROOK AND HIS HOLISTIC WORLD: TOWARD A "UNIFIED FIELD THEORY" OF MIND, BRAIN, SELF, WORLD, AND GOD

by Carol Rausch Albright

*Abstract.* James B. Ashbrook's "new natural theology in an empirical mode" pursued an integrated understanding of the spiritual, psychological, and neurological dimensions of spiritual life. Knowledge of neuroscience and personality theory was central to his quest, and his understandings were necessarily revised and amplified as scientific findings emerged. As a result, Ashbrook's legacy may serve as a case example of how to do religion-and-science in a milieu of scientific change. The constant in the quest was Ashbrook's core belief in the basic holism of brain, mind, personality, the nature of reality, and the underlying reality of God.

*Keywords:* James B. Ashbrook; brain; Philip Hefner; holism; natural theology; neuroscience; neurotheology; panentheism; D. W. Winnicott.

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[*Zygon*, vol. 45, no. 2 (June 2010)]

© 2010 by the Joint Publication Board of Zygon. ISSN 0591-2385

[www.zygonjournal.org](http://www.zygonjournal.org)

*Zygon's* pages have fostered the development and maturation of various lines of thinking regarding the relationship between religion and science. One that has attracted a good deal of interest has emerged in response to a recent and ongoing increase in knowledge of neuroscience, as new research equipment has been developed, findings have proliferated, and rival theories have emerged to organize the findings.

Those who work in the field of religion-and-science, for their part, have integrated the findings into new theories regarding the nature of religious experience and its manifestations. Two of the most creative pioneers in the field, James B. Ashbrook and Eugene G. d'Aquili, made a number of important appearances in these pages. D'Aquili, a psychiatrist, broke new ground in correlating neuroimaging technology and meditative states. Ashbrook, by contrast, sought holistic understanding of the spiritual, psychological, and neurological dimensions of personal and spiritual life, which he believed were, fundamentally, expressions of the same reality. The development of his thinking over time may serve as a case example of the ongoing interaction of scientific advancement and theological understanding.

#### ASHBROOK AS PASTORAL COUNSELOR

Ashbrook, a minister ordained in the American Baptist church, initially made his name in contributions to pastoral counseling. In a 1996 *Zygon* article, "Making Sense of God: How I Got to the Brain," he identified the foundation for his vocation as a counselor within his early family life. His father, he said, was a "structured, orderly executive," whereas his mother was an "imaginative, seemingly chaotic maverick" (although both parents shared an interest in issues of social justice) (Ashbrook 1996b, 402). The person who felt responsible for mediating between these two personalities, from an early age, was young James.

Immediately after his ordination, in 1950, he became pastor of a parish in Granville, Ohio. His work there involved pastoral counseling, and he felt called to gain a deeper understanding of this work. In response, he pursued graduate studies in psychology at Ohio State University. In 1960, he joined the faculty of Colgate-Rochester Divinity School and finished a doctorate in psychology during his early years there. He developed a special interest in the physical substrate of personality, and in Rochester he enrolled in a medical school course in neuroanatomy, during which he actually dissected a human brain.

The concern for realism, creativity, and spirituality that Ashbrook developed in childhood may be seen not only in this work but also in the mark that he has left in the field of pastoral counseling. The American Association of Pastoral Counselors still honors an approach called the "Ashbrook Method." Briefly summarized, it includes three steps: (1) disclosing

what is, (2) amplifying meaning and crystallizing values, and (3) discerning appropriate action. Steps 1 and 3 deal with the realistic, step 2 with the creative and spiritual.

Obviously, his understandings of counseling were effective. An extraordinary number of Ashbrook's former students and counselees have spontaneously attested to his memorable influence upon their lives. Ten years after his death,<sup>1</sup> I continue to encounter such conversations almost by accident.

Besides actually counseling people and teaching others how to do so, Ashbrook theorized about changes within individuals during the process of successful counseling. He was aware of the psychological theories of the day and especially agreed with those of D. W. Winnicott and his object-relations theory.<sup>2</sup> In addition to learning to understand psychological processes of personal and spiritual growth, he took the extraordinary step of attempting to anchor such processes within changes in the brain itself—for Ashbrook had a basic conviction that the physical, the psychological, and the spiritual are one at root. During the 1980s, neuroscience had begun to gain some major new insights into the organization of brain processes, and Ashbrook kept up with them.

There are, of course, several ways to think about God and the brain. One is simply to assume that religious experiences have no real referent but stem from brain disease, wish fulfillment, or fantasy. Some religious experiences do in fact seem to result from brain malfunction, as in certain cases of temporal lobe epilepsy notably described by V. S. Ramachandran and Sandra Blakeslee in *Phantoms in the Brain* (1998). These authors theorized that all religious experience is similarly malfunctional. Various other ways of thinking of God and the brain involve some form of dualism: mind/brain, mind/body, human/divine, for example.

Ashbrook, however, often remarked that he was doing “a new natural theology in an empirical mold” (1996, 407). His theology, he said, was “natural” because it took mind as indicative of the nature of ultimately purposeful reality. It was “empirical” because it took biochemical processes as indicative of the nature of ultimate reality. Philip Hefner summed up this quest in his discussion of Ashbrook's book *The Human Mind and the Mind of God: Theological Promise in Brain Research*. “At stake here,” wrote Hefner, “is a basic assertion that our ways of knowing (epistemology) are consonant with the way things really are (ontology)” (1985, 348).

Ashbrook's explorations gained immediacy because of his own problems of health. From 1986 until his death in 1999 he battled non-Hodgkins lymphoma, a form of blood cancer, continually gaining new purchases on life until his doctors finally ran out of options. The battle is reflected in his writing, as we shall see.

## RIGHT AND LEFT BRAIN

In 1984 *Zygon* published the first of its articles by Ashbrook: "Neurotheology: The Working Brain and the Work of Theology." This article illustrates two continuing qualities of his work. First, Ashbrook's neurotheology developed along with the science and, to some extent, it also developed with the times. These qualities are probably characteristic of good work in religion-and-science of any variety. As a result, it may serve as a case example of doing religion-and-science within a developing intellectual landscape. More specifically, Ashbrook was already on a quest to (a) integrate brain science with (b) both intuitive and theoretical understanding of personality and (c) larger understandings of the nature of reality, all of which were (d) grounded in the persona of God. In this early article, we also see the tensions between relationality and analytical detachment that characterized Ashbrook's work and probably lay behind much of his creativity.

At about this time, the differences in the function of the left and right cerebral hemispheres were becoming understood. The generalizations being made then are now regarded as mainly accurate, but there have been revisions and clarifications of the findings. There is still general agreement that, in most people, the left brain handles language, arithmetic, and step-by-step reasoning, whereas the right brain deals with spatial arrangements and all-at-once perception. But the left brain is no longer called the dominant or the right brain the nondominant hemisphere. The assignment of gender identity—left brain male, right brain female—has also become *passé* as more has been learned about brain operations. Fundamentally, I think that Ashbrook himself was more a right-brained, all-at-once perceiver of reality than an analytical, one-step-at-a-time thinker, though he valued both types of operations. He perceived on a basic level the fundamental relationality of all reality and then proceeded to work out the details and implications of his perception. This is no insult. It is interesting to note that Paul Dirac, one of the founders of quantum physics, saw his theories initially in a right-brained, all-at-once manner and then labored to translate his insights into left-brained mathematical formulations (Albright 1980).

The contributions of other parts of the brain remained less well-understood. For example, vigilance was attributed to the left hemisphere (Ashbrook 1984, 332) when, in fact, as Joseph LeDoux (1996) and others have shown since then, vigilance begins in brain structures below the cerebral cortex. So Ashbrook was setting out to understand the mind/brain/world/God interaction with some inadequate scientific information on which to draw. Twenty-five years from now, people will doubtless say the same about the neuroscience-and-religion work that is being done today.

Ashbrook's larger vision and goals, however, were laid out in the 1984 article. He had an abiding belief in the holism of brain, mind, personality,

the nature of reality, and the mystery of God. While acknowledging distinctions among them, he felt that they are, at root, manifestations of the same reality. One could say that he was looking for a “unified field theory” of mind, brain, self, world, and God. Working out the details of this—a task that remains unfinished—occupied his theological efforts for the remainder of his career.

In seeking to work out the implications of the 1984 article, Ashbrook drew upon right-brain, left-brain categories to reflect upon the large puzzle. The left brain, he said, names and analyzes, which is basically correct. The right brain “draws on the relational responsiveness of numinous presences and natural symbolism” (Ashbrook 1984, 346)—which is not entirely correct, because much of mystical experience resides elsewhere in the brain; nonetheless, these categories are important pieces of the puzzle. Ashbrook did succeed in laying out his central tenet: that the dual processing of rational purposes and deeply felt meaning is necessary in pursuit of religious understanding and in integrating what is ultimately real. Although mind depends upon brain, he asserted, it is something more than brain, with greater implications. “Just as mind is the human significance of the brain, so I propose that God is the theological significance of the mind” (Ashbrook 1984, 331).

#### THE TRIPARTITE BRAIN

By the time that Ashbrook published his next *Zygon* article, “The Human Brain and Human Destiny: A Pattern for Old Brain Empathy with the Emergence of Mind” (1989a), he had become familiar with the work of neuroscientist Paul MacLean, Senior Scientist in Brain Evolution and Behavior at the National Institutes of Mental Health. He found MacLean’s concept of the tripartite brain a useful heuristic based on solid science. Today, MacLean’s schema is found to be overgeneralized, as brain functions have become known in much more detail. However, Ashbrook used it to advance some of his own thinking about mind and God.

MacLean’s studies of brain evolution showed that innovations in brain structure and organization emerged over eons. Important new brain structures appeared as new types of animals emerged.

Reptiles are an ancient life form; they include snakes, lizards, turtles, and crocodiles. Reptiles differ from mammals in an important way: They do not care for their young and will eat them if given a chance. They compensate for such bad parenting by laying thousands of eggs. A few species of reptiles guard eggs, but they are the exception.

Reptiles’ brains are relatively simple, and so are their behaviors. They establish territories, hunt for food, court mates, establish dominance hierarchies, and fend off attackers, most of which they accomplish through ritualized behaviors called displays. A male lizard wishing to retain its

territory may puff out a large ruby throat. An encroaching lizard, to avoid trouble, may adopt a ritualized posture denoting submission. Such behaviors are very conservative and may not change for millennia.

The main structures of the reptilian brain survive in mammals and are thought to play a role in behaviors such as territoriality, courtship rituals, dominance hierarchies, and responses to attackers, even in humans. However, these behaviors are never quite so simple or invariant in humans because other parts of the brain also have their say. Nevertheless, our version of these ancient brain structures seems to be associated not only with our rituals (think of the ceremonies before a major sporting event) but also with our quick response to threat and our need for our own space. We derive satisfaction from rituals, and they often bind us in solidarity with others who are participating, whether cheering a team or saluting a flag. Rituals in religious practice point to a knowing beyond knowing—to abstractions experienced by means of the tangible.

But mammals are also equipped with newer brain structures, notably those that support emotion and attachment. Mammals give birth to live young, a few at a time, and they need to help these young survive. In all mammalian species there is emotional attachment between mother and child; if connection is lost, both of them express their unease with a cry of separation. Mammals become attached to their companions as well and dislike separation from them, too. Yet, it is in such transitional space of separations that human selfhood and creativity arise, in the view of object-relations theory. Many people are helped through transitional spaces through reliance upon the Ground of Being that supports the universe.

Primates have significantly more cerebral cortex than other mammals, and this is true in particular of human beings. Terrence Deacon (1997) has dubbed human beings “the symbolic species”—because of human use of language, of course, but also because of our reliance upon mathematics and other kinds of symbols. Unlike other species, humans have brains that provide the ability to anticipate the future, including the fact of death. Knowledge of death is closely related to the search for meaning in life.

Ashbrook used some of MacLean’s insights in “The Human Brain and Human Destiny.” Here he located faith primarily within the “old” brain, below the conscious level of the two cerebral hemispheres, in a deep sense of what matters most in life (Ashbrook 1989a, 342). “The cognitive revolution is carrying us into a wider realm of mental representation than Enlightenment Reason expected to exist,” he continued (p. 348). We are inheritors of the dualism of Descartes and the mechanism of Newton, but now we are going beyond both to a new paradigm, for “Our three-pound universe [the brain] reveals an integrated and integrating reality” (p. 348). Thus, all that the brain provides to us on a human level—bodily perception, imagination, culture, values, belief, destiny—leads to what matters ultimately, what we take God to be: the alpha and omega of our destiny.

THE WHOLE BRAIN

Increasing neuroscientific insight provided Ashbrook with new ways to explore his belief that the nature of God, the structure of “all that is,” and the shape of the human psyche are, not coincidentally, analogous and parallel—and, furthermore, that the world of matter and spirit is truly one. In “The Whole Brain as the Basis for the Analogical Expression of God” (1989b) he speculated that the dimensions along which a person’s mind creates a reality also express the basic structure of the universe; this is a natural development, he said, because these properties are “the pervasive organizing principles of the universe, which includes the brain.” Perhaps, he proposed, such organizing principles, such order, are “the Word” (1989a, 341).

Our brain actually embodies, and not only reflects, a universe characterized by the creation of meaning (1989a, 338). There is no way we can talk about “the whole”—which to him is a perspective on God—except through and with our brain, even though the brain is not the whole. We put together understandings of order because

over time we see nothing but order in nature: parts relating to other parts, each to another to make a whole. This idea of order is so stupendous we develop symbols to describe it . . . to express and articulate the inexplicable. . . . But that abstract unity is turning out to be a concrete unity—a oneness with the whole created order through every level of organization, from dust to breath to belief to dust—brain is being and being is brain. (1989a, 353)

The mid-nineteenth-century American poet and visionary Emily Dickinson ([1890] 1982, 41) wrote something similar:

The brain – is wider than the Sky –  
 For – put them side by side –  
 The one the other will contain  
 With ease – and You – beside  
 .....  
 The Brain is just the weight of God –  
 For – Heft them –Pound for Pound –  
 And they will differ – if they do –  
 As Syllable from Sound –

SOUL

More neuroscientific findings were arriving quickly as the nineties—designated the Decade of the Brain—got under way. In 1992, Ashbrook published “Making Sense of Soul and Sabbath,” in which he sought to understand the processes by which we make meaning. And he began to think more about soul. He was six years into his battle with non-Hodgkins lymphoma. “If soul is not a ‘thing,’” he wrote, “—a specific entity with definite features and distinct boundaries—then we can only think of soul

as a process or an experience” (1992, 33). What is most immediate to each of us is our own expression of ourselves and our life in this universe and of its meaning.

Ashbrook applied some counseling theory to the creation of religious meaning in “The Cry for the Other: The Biocultural Womb of Human Development” (1994). In this article, perhaps thinking of the ultimate separation soon to come, he addressed separation, anxiety, and stress as described in object-relations theory. According to Winnicott and other proponents of this theory, all human young inevitably suffer separation from their mother and/or other significant persons as they grow up. We may find comforting objects (like Linus’s blanket in the comic strip *Peanuts*) to ease ourselves over these episodes as we begin to construct more independent identities. But as we grow older, blankets do not do the job; we need to rely on memories, beliefs, and anticipations when comfort and satisfaction are not at hand. For many, religious meaning making or a sense of God’s presence can be an important part of this process.

In 1996, most of the September issue of *Zygon* was devoted to Ashbrook’s work. He contributed two articles, which were followed by several commentaries and Ashbrook’s comments on the commentaries. In the first of his articles, “Toward a New Creation of Being” (1996d), he returned to consideration of the interactivity of the parts of the brain, about which more was being learned at that time. We must intend or choose to be what we are, he observed—but our interpretations must fit with intuition and instinct. We can make logical interpretations relying mainly on the left cerebral cortex. However, memory, subtle observations, emotional responses, and other abilities also play a role, and none of these resides primarily in the cerebral cortex. (In fact, as Antonio Damasio [1994] has shown, persons who rely entirely on the logic of the left brain tend to make unsound decisions.)

“Making Sense of God: How I Got to the Brain” in the September 1996 issue was followed by “Interfacing Religion and the Neurosciences: A Review of Twenty-Five Years of Exploration and Reflection” in the subsequent issue (1996a). The articles together form an intellectual autobiography of Ashbrook’s work in neurotheology. Underlying the account is his core belief in the essential wholeness of the nature of reality and the superficial nature of all dichotomies. Because he clearly was comprehending this holism using right-brained processes of his own, the reader may find parts of the articles difficult to follow using the sort of left-brained processes customarily brought to study. One needs to suspend these from time to time and allow comprehension through a right-brained holistic mode of thought.

In fact, the neuroscientific evidence available then was hardly enough to support the rich insights that Ashbrook derived from it, even though most of them have held up well as more findings have come in. His unique



contribution was, to an important degree, attributable to the reach of his wide and deep intuitive understanding of human beings together with his enormous respect for the worth and unique calling of each.

That human beings can learn large amounts of new information, new skills, and new insights was then attributed mostly to the large amount of “uncommitted cortex” in the human brain (Ashbrook 1997, 313). Brain areas not needed to operate respiration, sensory perception, motion, and the like were seen as blank slates of neurons waiting for content. Not enough was known at the time about the uses of these areas and especially neuroplasticity, the ability of the brain to physically “rewire” itself in response to learning and experience. Yet, Ashbrook was describing such reconfiguration, because he had seen the results. For example, he noted that types of consciousness can be classified along a continuum from constricted to creative and expanded. Expanded consciousness “combines sub-symbolic and symbolic processing in a differentiated, integrated, and synergistic way” (1996d, 392). An individual of constricted consciousness can become a broadly perceptive, creative being as he or she enriches the resources of various parts of the brain and then gets these brain functions to work together in a powerful way.

Often stress and anxiety are associated with this kind of growth, as Ashbrook was not the first to point out. However, he framed the observation in a context of neuroscience. Stress and anxiety disrupt the brain’s usual patterns of connectivity, and better patterns may have an opportunity to form. Persons who are too identified with others, he explained, may become more differentiated, and those who are isolated may develop more community. A person may achieve a better balance between anxiety and relaxation. Such times of transition may issue in a personality knitted together in a condition of greater wholeness. Although Ashbrook probably did not know much about neuroplasticity at the time this article was written, he was describing its manifestations.

Each of us must find and design our order in a specific way, he continued. Decisions require a context, and persons must discern and create their own unique contexts. These reflect our destiny as we imagine it to be. We construct our belief patterns while organizing our understanding of the world. “When the brain is working optimally,” he remarked, “it is constructing phenomena across time and space” (Ashbrook 1989a, 347).

From such perceptions, he concluded that the completeness and multidimensionality and integration and creativity of God may be seen in our own experience of reality: At best, we too are multidimensional, integrated, and creative. As God created a world that creates itself through emergence, so too are we creative beings who invent and build developed versions of ourselves and emergent ways of working in the world.

## THEOLOGY

Far beyond neuroscience, Ashbrook was really doing theology—of a sort that could be called panentheism with a touch of the mystical. His concern for the wholeness of all increasingly became his focus, as he observed in his article “A Rippling Relatableness in Reality” (1996c). “In these later years,” he wrote, “I find myself wandering in and wondering about the *whole* of reality. Domains of discourse are entry points of curiosity and exploration, not permanent dwelling places” (p. 470).

Although the new kinds of brain imaging were providing detailed images of brain processes, he sounded a caveat: Life is always more than the sum of its parts. In addition, the parts always function together in novel, unpredictable, and often emergent ways.

During this period, increasing emphasis upon the role of emergent phenomena characterized the science-and-religion dialogue, and some of these insights found their way into Ashbrook’s work, particularly in his last *Zygon* article, “The Humanizing Brain: An Introduction,” which I coauthored (Ashbrook and Albright 1999). Personal and spiritual growth could be seen as forms of emergence, in which interactions of personal experience and insight yield new and unpredictable elements of the persona. These processes, too, echo those of the cosmos.

Ashbrook cited the holism voiced by physicist Paul Davies: “Our mental processes have evolved as they have because they reflect something of the nature of the physical world we inhabit”—an emergent world created so as to continue to create itself (Ashbrook 1997, 302). Ultimately, both mind *and* matter are mysterious, as Davies, too, is well aware. And yet, for Ashbrook, the deep relationship of mind and matter is an absolutely fundamental feature of reality, and reality rests in God. Ashbrook summed up his insights by citing a Pygmy hymn (Ashbrook 1996d, 397):

In the beginning was God.  
 Today is God  
 Tomorrow will be God  
 Who can make an image of God?  
 He has no body.  
 He is as a word which comes out of your mouth.  
 That word! It is no more,  
 It is past, and still it lives!  
 So is God.

## NOTES

This article is based on a paper presented at the Advanced Seminar in Religion and Science, Zygon Center for Religion and Science, Lutheran School of Theology at Chicago, 30 March 2009. The semester-long series explored important themes discussed in *Zygon* during the twenty years of Philip Hefner's editorship of the journal.

1. Ashbrook died on January 2, 1999. Since his death, others have carried forward his quest into neurotheology—a term he was apparently the first to use. More remains to be done to further and clarify Ashbrook's conviction that mind is “indicative of the nature of ultimately purposeful reality, or God” and “the dynamic integrity of reality” (Ashbrook 1996b, 407, 404).

2. For example, see Winnicott's “Transitional Objects and Transitional Phenomena” ([1951] 1953), in which he describes the “transitional space”—the emotional space between people where intimate relationships and creativity appear. Ashbrook extended this theory to apply to the space between people and God.

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