Neurotheology in interfaith dialogue

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ABSTRACT

In recent years, a growing interfaith movement has sought to bring together worldviews from various religious and spiritual backgrounds to investigate life's biggest questions. However, it is remarkable that such dialogue is possible given the vast differences that exist between individuals. A relatively new but burgeoning field, known as neurotheology, has sought to address the neurological processes and mechanisms of religious thought and experience. Overall, neurotheology provides insight into the common thread of religious belief across cultures and the ability of humans to participate in interfaith dialogue. In this manner, the shared overlap with the human mind and religious belief enables the ability to dialogue and face the vast unknowns of our modern world.

KEYWORDS Faith; interfaith dialogue; medicine; neurotheology

Humans have always sought answers to life's biggest questions: Who am I? What is my purpose? What happens to us when we die? Is there meaning to life? Does God exist? What is our destiny? In most cultures, beliefs in divine being(s) have brought comfort and clarity to countless generations seeking to understand and explore the vast universe. Each perspective seeks to bring humans and the divine or the universe into an intimate and personal relationship through ritual, prayer, reflection, and community. Sigmund Freud described a person's worldview or *weltanschauung* as "an intellectual construction which solves all the problems of our existence uniformly on the basis of one overriding hypothesis ... a philosophy of life that answers all of the most fundamental questions of human existence."¹ This exploration into the ultimate source and foundation of reality is easily observed in the meditation of the Buddhist monk, the prayers of the nun, the daily prayers of the Muslim, and even the quiet repose and comfort of the regular churchgoer. With such diversity might we find a common ground both to a greater "self" and a route to overcoming the defensiveness, hostility, and lack of understanding that permeates religious and cultural divides? Might this not be a route to a more universal agreement on what we have in common?

A growing interfaith movement has sought to bring worldviews together to challenge, investigate, and draw human beings from various religious and spiritual backgrounds toward a united voice to address modern social and political challenges.^{2–4} This form of dialogue, known as interfaith dialogue, describes "activities or relationships between people with different beliefs or faith identities ... which requires both an appreciative understanding of the person as a human being as well as an understanding of that person's religious or spiritual path."^{2–4} The goal of interfaith dialogue is the inclusion of all religious beliefs and nonreligious beliefs (such as secular humanism) through a five-step process of moving beyond separation and suspicion, inquiring more deeply, sharing both the easy and the difficult parts, moving beyond safe territory, and exploring spiritual practices from other traditions.^{2–4} Interfaith dialogue is an extension of the spiritual practices of one's faith, which may be defined as a description of one's relationship with God or the ultimate source of reality. This reality is often described as transcendent or being beyond physical human experience. Exploring the spiritual and transcendent realities from different cultural and religious traditions in interfaith dialogue allows for unification without objectifying any particular mindset but placing ourselves in proper subjectivity to it.

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In this manner, the shared overlap with the human mind and religious belief is an integral thread of the human experience and our ability to dialogue and come together to face the vast unknowns and problems in our modern world.⁵ As Houston Smith commented:

What a strange fellowship this is, the God seekers in every land, lifting their voices in the most disparate ways imaginable to the God of all life. How does it sound from above ... we cannot know. All we can do is to listen carefully and with full attention to each voice in turn as it addresses the divine.⁶

THE IMPORTANCE OF THE MIND IN RELIGIOUS TRADITIONS

It is remarkable that interfaith dialogue is possible given the vast religious, philosophical, and cultural differences that exist between human beings. Since the beginning of time, tribes have fought each other, and wars and crusades have raged on for centuries over religious differences. A burgeoning field, neurotheology, has pursued insight into the mechanisms of religious thought by understanding the effect of religious belief on neurological processes and functions. Several faiths have expressed the importance of our physical brains in the development of our emotional and spiritual lives with God. As Paul wrote in Romans 12:2, "Do not conform to the pattern of this world but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—his good, pleasing and perfect will." In Mark 12:28–30, Jesus Christ, quoting from the Shema, commanded his disciples to "love the Lord your God with all your heart, with all your soul, and with all your mind, and with all your strength." In the Old Testament (Tanach), Proverbs 19:8 noted, "The one who gets wisdom loves life; the one who cherishes understanding will soon prosper." In Ecclesiastes 1:18, King Solomon reflected on the mind's search for knowledge as futile: "For with much wisdom comes much sorrow; the more knowledge, the more grief." In the Qur'an, Surah 22:46 reflected on the mind in a Muslim's pilgrimage to Mecca: "So have they not traveled through the earth and have hearts by which to reason and ears by which to hear? For indeed, it is not eyes that are blinded, but blinded are the hearts which are within the breasts."

In the Buddhist faith, the Buddha said that "what we think we become."⁷ The Dalai Lama expanded on the Buddha's teaching in one of his speeches, stating, "There is only one important point you must keep in your mind and let it be your guide. No matter what people call you, you are just who you are. Keep to this truth. You must ask yourself how is it you want to live your life. We live and we die, this is the truth that we can only face alone."⁸ As Confucius wrote concerning wisdom to his disciples, "By three methods we may learn wisdom: First, by reflection, which is noblest; second, by imitation, which is easiest; and third by experience, which is the bitterest."⁹ The philosopher Lao Tsu wrote, "For him who has conquered. Empty your mind of all thoughts. Let your heart be at peace. Watch the turmoil of

beings but contemplate their return. Each separate being in the universe returns to the common source. Returning to the source is serenity. If you don't realize the source, you stumble in confusion and sorrow."⁹ In the Bhagavad Gita chapter 6, it is written concerning discipline and the mind that "for him who has conquered the mind, the mind is the best of friends; but for one who has failed to do so, his very mind will be the greatest enemy. For one who has conquered the mind, the Supersoul is already reached, for he has attained tranquility."¹⁰ Where all religions meet is the unique aspect of spirit, that which cannot be seen or touched, the identification with the mortal self. In most religions, what is real and permanent is not the physical but rather the spiritual. Therein lies the peace of God. Major religions teach that in our spiritual identity we become immortal, or one with God, and united with each other.

NEUROTHEOLOGY IN RELIGIOUS EXPERIENCE AND BEHAVIOR

The mind is inextricably linked to a person's spiritual and moral journey. As noted by Hans Küng in *Toward a Global Ethic*, the fundamental components of most religious ethics are a commitment to nonviolence and reverence for life, fairness in economic and legal matters, truthfulness and tolerance, and equality for all.¹¹ Therefore, exploring the relationship between the mind and religious belief and dialogue using modern scientific methods and medical knowledge would provide additional insight into the spiritual and moral lives of religious practitioners. With the advance of modern medicine, new neuroimaging techniques have begun to unearth how the mind both alters and contributes to the religious life and interfaith dialogue. These considerations were generally excluded from the conversation until recently, when only a materialistic conception of the mind was taken into serious, scientific consideration. However, there is a growing awareness among the religious, scientific, and medical communities of the complex and integral nature of religious experiences for individual identity.

Neurotheology bridges science and theology, creating a common framework guiding our understanding of religious experience and belief. It seeks to "understand the relationships among the different areas and functions of the brain and how they help us or restrict us in terms of engaging the spiritual side of ourselves."¹² Although some believe that religious experience emerges from a single neuroanatomical location, no study has ever found the elusive "God spot."¹³ Furthermore, recent experiments have shown that religious experience, like many neuronal processes, is located throughout the brain and communicates in intricate neural networks in the cortex and limbic regions.¹³ For example, studies examining the neural function of religious practitioners during meditation, prayer, chanting, and other religious rituals showed that the limbic systems and prefrontal cortex activity interact to modulate and silence the activity of different regions of the brain.¹³

Figure 1. A model of the mind during religious experience.

In this manner, different regions of the brain interact to reduce neuronal activity and produce a calm state whereby religious feelings of oneness and unity can occur. As Shukla et al summarized:

Various studies have been carried out to evaluate and analyze the human beliefs, responses, thoughts, and inhibitions which are linked to God and religion. The sense of a union with God or sometimes even greater experiences which are linked to enlightenment, emotions and consciousness of the body and mind are linked to the entire brain as a whole.¹³

Recent research has also showed that religious experience can modulate several physiological, holistic, and causal functions of the brain during and after a religious experience.¹³ A study conducted by Newberg examined blood flow in the brains of nuns during “centering prayer” and discovered that the act of prayer reduced blood flow to the temporal lobes, which is known to produce disorientation in epileptic conditions.¹² Therefore, it is argued that religious activities themselves may begin in specific neuroanatomical regions and spread throughout the brain and interact in complex neural networks to produce religious experiences and feelings.¹⁴ However, many reports have shown that neuronal deactivation in the hippocampus and cerebral cortex increases amygdala activity during religious chants, prayers, or other religious behavior. Together, these studies suggest that the thoughts, feelings, and behaviors of religious practitioners interact with each other to activate and deactivate different neuronal states throughout the brain to modulate religious behavior, as shown in *Figure 1*. Therefore, an intrinsic spiritual and/or religious component of human consciousness seems to be observed across all faiths and religious traditions. However, it remains a mystery how neurological processes may dictate the human mind and ultimately human behavior in religious beliefs and thoughts.

The inherent relationship between the spiritual and neurological activity of the mind provides unique insight into the shared focus of the mind in all religious traditions.

Furthermore, neurotheology provides insight into the common thread of religious belief across all cultures and the ability of humans to participate in interfaith dialogue. The fact that all humans have some intrinsic desire and understanding of religious experience and belief provides a basis through which meaningful dialogue on life’s deepest questions can occur intuitively. Perhaps within the biological, physical mind lies the capacity to understand and ultimately connect with our true spiritual nature. But it should not be forgotten that human beings are constantly exploring the physical manifestation of a spiritual or transcendental experience.

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1. Josephson A, Peteet J. *Handbook of Spirituality and Worldview in Clinical Practice*. Washington, DC: American Psychiatric Publishing; 2004.
2. Mackenzie P, Falcon R, Rahman S. *Getting to the Heart of Interfaith*. Woodstock, VT: Skylight Paths Publishing; 2011.
3. Sulmasy D. *The Healer's Calling*. Mahwah, NJ: Paulist Press; 1997.
4. Cornille C. *The Wiley-Blackwell Companion to Inter-Religious Dialogue*. Hoboken, NJ: Wiley-Blackwell; 2013.
5. Hellstrom T. *The Dalai Lama Book of Quotes: A Collection of Speeches, Quotations, Essays and Advice From His Holiness*. Long Island, NY: Hatherleigh Press; 2016.
6. Smith H. *The World's Religions*. San Francisco, CA: Harper One; 2009.
7. Satpathy D. *What We Think We Become*. Dwarka, India: New Delhi Education Publishing; 2018.
8. Confucius. *The Analects*. London, England: Penguin Classics; 2017.
9. Tzu L. *Tao Te Ching*. Indianapolis, IN: Hackett; 1993.
10. Easwaran E. *The Bhagavad Gita*. Tomales, CA: Nilgiri Press; 2007.
11. Kung H. *A Global Ethic for Global Politics and Economics*. Cary, NC: Oxford University Press; 1998.
12. Newberg AB. The neurotheology link: an intersection between spirituality and health. *Altern Complement Ther*. 2015;21:13–17. doi:10.1089/act.2015.21102.
13. Shukla S, Acharya S, Rajput D. Neurotheology—matters of the mind or matters that mind? *J Clin Diagn Res*. 2013;7:1486–1490. doi:10.7860/JCDR/2013/5409.3181.
14. Mishra SK, Togneri E, Tripathi B, et al. Spirituality and religiosity and its role in health and diseases. *J Relig Health*. 2017;56:1282–1301. doi:10.1007/s10943-015-0100-z.