Transformational Potential: The Changing Face of God and of Self in the Realm of Science and Spirit

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TRANSFORMATIONAL POTENTIAL: THE CHANGING FACE OF GOD AND OF SELF IN THE REALM OF SCIENCE AND SPIRIT

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In this paper, the author examines the function and process of defining God, the Divine, or Ultimate Reality as a developmental process that begins in early childhood and continues throughout life. She draws from psychological object relations theories to describe transformational and transformational phenomena as creative processes that combine the objective and subjective dimensions of reality and to illustrate that defining God and meaning-making are relational processes. She draws from neuroscience and technology to support and illustrate the transformational process as a means of constantly defining, relating to, and making-meaning of oneself, God, and the Universe.

We have been scraping away at physical reality all these centuries, and now the layer of the remaining little that we don’t understand is so thin that God’s face is staring at us.

Introduction

The science-and-spirit dialogue explores the relationship, divorce, and possible reunification, or marriage, of sense and soul. Central to the dialogue is the question of ultimate reality, whether and how it can be known. In The Marriage of Sense and Soul, Wilber condenses ultimate reality to truth, beauty, and goodness, which, he states, are “the faces of your deepest self, freely shown to you.”

Humankind’s sense of self and of God develop along parallel lines, each informing and influencing the other, each containing the capacity to transform.

Due to their grounding in both disciplines, Ian Barbour and John Polkinghorne, in particular, bring a rich perspective to the science-and-spirit discussion, each arriving at similar conclusions. Both agree that God is beyond one’s capacity to fully know or understand, that all scientific and theological models are partial and limited, and that none provides a complete or accurate picture of reality. “Every image of God, in the end, will be found to be an inadequate idol.” writes Polkinghorne who, nevertheless, emphasizes the importance of faith, not as an uncritical acceptance of dictated doctrines or propositions, but a faith that involves a commitment to a tradition.

Insight is gained only through participation [i.e., relationship and involvement] and yet also one must understand in order to believe.

He also advocates for embracing the transformation of life in one’s search for metaphysical understanding. Barbour settles for a process model that emphasizes becoming rather than being, an ecological view of reality that sees the interconnection of events, and the self-creation of every entity, the experiencing subject or observer. Barbour also emphasizes the importance of participation, or worship:

Only in worship can we acknowledge the mystery of God and the pretensions of any system of thought claiming to have mapped out God’s ways.

He finds meaning in the concept of the Holy Spirit as that which indwells, renews, and empowers.
I propose to examine the function and process of defining God, the divine, or ultimate reality with a particular emphasis on the process of transformation. As a psychologist grounded in religious and theological studies, I am drawn to the lenses of relationship and process. I believe that psychology has a contribution to make to this dialogue and to the process of facilitating a rapprochement between science and spirit and a transformation on the individual level that, in turn, affects systems. Further, I believe with Livingston that there is no lens-free system of viewing the universe.  

From transitional phenomenon to transformational process  

For all his positive contributions toward advancing medicine, particularly neurology, in the direction of psychiatry and, eventually, psychology, Freud also influenced the schism between science and spirit by treating religion as illusion or neurosis based on infantile wishes, and by declaring any religious belief pathological. Challenging his theory of drives and instincts as motivational factors in human development, a school of Object Relations theorists introduced the idea of relationship as the primary motivating force in infant development. This same group of theorists, beginning with D. W. Winnicott (1896-1971), have helped bring religion into the psychological dialogue to examine it as a valid, and perhaps necessary, aspect of a person’s development and adaptation.

In his work on pre-oedipal development, Winnicott saw several lines of development converging at about two years of age. If, prior to age two, there has been “good enough” mirroring and a “good-enough holding environment” in which the mothering parent has been attentive, available, but not intrusive, then the relational stage is set for the infant to grow beyond the symbiotic stage and to begin the development of her or his own internal life in distinction from the mother. In order to manage the anxiety of rejection which is stirred up by one’s growing differentiation from the mother, the toddler uses what she or he has received in the previous stages to create representations of mirroring, constancy, and support as she or he ventures into the unknown. Winnicott calls this the transitional space which is characterized by the creative process of illusion and play. He writes:

The third part of the life of a human being, a part that we cannot ignore, is an intermediate area of experiencing, to which inner reality and external life both contribute. It is an area that is not challenged because no claim is made on its behalf, except that it shall exist as a resting-place for the individual engaged in the perpetual human task of keeping inner and outer reality separate yet inter-related. I am therefore studying the substance of illusion, that which is allowed the infant, and which in adult life is inherent in art and religion.

 Transitional space refers, therefore, to an intermediate area of experiencing which contains both the subjective and what is objectively perceived, somewhere between reality and illusion. For Winnicott, this transitional space is the domain of culture, whether in art, religion, imaginative living, or scientific work. It is in this transitional space that God and religion are represented, based on a child’s experiences of primary objects, i.e., mother, father, and other caretakers. Like a child’s primary objects, this God is neither real nor illusory, but “inside, outside, and on the border.” In this sense, along with blankets, teddy bears, and imaginary friends, God is considered a transitional object. God, like other transitional objects, becomes a private companion on the child’s journey toward cohesion and integration. This capacity to form good transitional objects and their future evolution, either in the direction of a healthy capacity for symbolization or of a fetishistic or hostile approach to symbolization, depends upon the quality of the parent-child interaction and the extent to which these caretakers are available to the child in her or his formative years. This use of a transitional object represents a child’s first creative act. It is a process that continues throughout one’s lifetime.
Transitional objects are never discarded. They may be stored away in memory and retrieved during significant moments or transitions in a person's life.

Transitional space is, therefore, play space, potential space, creative space, the place where human beings create and make meaning in order to define themselves and the world they inhabit. It is a place, a process actually, where the subjective and the objective interpenetrate, in order to promote self-definition and adaptation. Play and learning go together. This tie between creativity and play is called "flow" by Csikszentmihalyi. Play, for Ashbrook and Albright, may even evoke "the transcendent recognition of the exactly right—the Aha!" This creative process draws on higher cerebral centers and engages the limbic system, as well. Ashbrook and Albright speculate that the process of memory and meaning-making that takes place in the limbic structures of the brain may be the most obvious core structure of self-world interaction—that it is in the limbic system, that the finite and the infinite interpenetrate, and that human beings become at one with their own essence. These findings appear to support Winnicott's transitional space as a place for meaning-making.

Many psychiatrists and psychologists have built on the work of Winnicott to explore the God representation as a form of object representation that is also formed in the transitional space. Ana-Maria Rizzuto conducted research with twenty adults in order to understand how God representations are formed and how they evolve over a person's lifetime. She concluded that the God representation is a complex image, not just an idea, but a dynamic, affective representation with conscious and unconscious elements, including visual, perceptual, emotional, and conceptual components. Rizzuto also found that the God representation is not derived exclusively from the oedipal father, as Freud had suggested, nor is it forever limited to its childhood origins once it has been formed. Rather, Rizzuto suggests that the mother often makes a more primary contribution to the God-representation and that grandparents, siblings, and other significant adults may also contribute to the nature of the God-representation.

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This God representation is more than the cornerstone on which it was built. It is a new, original representation which, because it is new, may have the varied components that serve to soothe and comfort, provide inspiration and courage—or terror and dread—far beyond that inspired by the actual parents. In the same way in which other internal objects take on a virtual reality for the individual, so it is with the God representation, providing a basic relational context out of which a sense of self emerges and relationships with others are established. The God representation, drawn from a variety of sources, is a major element in the fabric of one's view of self, others, and the world.

Rizzuto's findings challenge Freud's notion of illusion, declaring that reality and illusion are not contradictory and that psychic reality cannot exist without the transitional space for play and illusion. She says, in fact:

To ask a man to renounce a God he believes in may be as cruel and as meaningless as wrenching a child from his teddy bear so that he can grow up... Each developmental stage has transitional objects appropriate for the age and level of maturity of the
individual. After the oedipal resolution God is a potentially suitable object, and if updated during each crisis of development, may remain so through maturity and the rest of life. Asking a mature functioning individual to renounce his God would be like asking Freud to renounce his own creation, psychoanalysis, and the “illusory” promise of what scientific knowledge can do. This is in fact the point. Men cannot be men without illusions. The type of illusion we select—science, religion, or something else—reveals our personal history and the transitional space each of us has created between his objects and himself to find “a resting place” to live in.\(^{14}\)

Just like other childhood representations, God representations undergo various changes over the course of a lifetime: distortions that may be either defensive or destructive, or changes that reflect one’s growing maturity of relationship and capacity for intimacy. Rizzuto writes:

> People’s dealings with their Gods are no more, and no less, complex than their dealings with other people—either in early childhood or at any other age; that is, they are imperfect, ambiguous, dynamic, and, by their very nature, have potential for both integrating and fragmenting their overall psychic experience.\(^{15}\)

These God representations, therefore, can be reshaped and retouched throughout life. In fact, Rizzuto’s central thesis is that God as a transformational object. Bollas examines the infant’s experience of her or his first object, the mother, whom he refers to as a transformational object because she is less known as a discrete object with particular qualities, than as a process linked in the infant’s being and alteration of her or his being. According to Bollas, the adult’s search for transformation constitutes, in some respects, a memory of this early experience when a person feels “uncannily embraced by an object.”\(^{16}\)

The development of the transformational object moves through a process from existential knowing to representation. The infant internalizes not an object, but a relationship—that is, a process derived from a relationship that includes affects, feelings, and moods. Through a process of internalization, the child stores experiences of objects, i.e., relationships, and conserves self-states that eventually become permanent features of her or his character. Generally, the mother serves as the first transformational object, followed by the father and other caretakers. As the infant’s “other self,” the mother transforms the baby’s internal and external environment. Bollas suggests that the mother is less significant as an object than as a process that is identified with cumulative internal and external transformations. A transformational object is experientially identified by the infant with a process that alters self-experiences. This process of transformation, as an experience, lives on in certain forms of object-seeking in adult life, where the object is sought for its function as signifier of transformation. Thus, in adult life, the quest is not to possess the object; rather, the object is pursued as a medium that alters the self, where the subject as supplicant becomes the recipient of envirom-somatic caring identified with the metamorphosis of self.

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transitional representation needs to be recreated in each developmental crisis if it is to be found relevant for lasting belief.

Expanding on Winnicott’s description of transitional space and objects, Christopher Bollas considered the concept of God as a
Transformational objects are found in music, art, religion, culture, and science, as in Winnicott’s idea of transitional phenomena. Bolas considers encounters with the sacred experiences of transformation, where both the self and the God-object are constantly transformed. In adult life, there continues the phenomenon of a wide-ranging search for an object identified with the metamorphosis of the self. For many, God represents that object. Humans need and seek transformational objects “to reach a symmetry with the environment or to recreate a traumatic gap in that symmetry.”17 For Bolas, the transformational object is never put aside. It may itself be transformed, from maternal matrix, into person, place, event, or ideology; but it is not outgrown.

Both transitional objects and transformational objects point to the creative capacity lying at the heart of art and science. The process of human transformation, according to Hart, is activated by the force of creativity—or creation—and by an expansion of awareness.

In human development, it is the process by which we become more uniquely who we are and through which we recognize how much we have in common with the universe, and even recognize that, in a sense, we are the universe.18

**Wired for God?**

One might ask if the capacity to think in God concepts, i.e., to know God, is innate. Are humans “hard-wired” for God, or do they have a “soul gene”?19 The experience of God, the sense of the absolute, the sense of mystery and beauty in the universe—all of these, may have their basis in neuroanatomy, neurophysiology, and the flux of neurotransmitters. Neuroscience is just beginning to explore the role of the brain in knowing God and religious experience. Neurotheology, a term first used by Ashbrook to refer to the study of theology from a neuropsychological perspective, has joined a dialogue that will have important implications for psychology, as well as for religion and theology.

Andrew Newberg and the late Eugene d’Aquili, in *The Mystical Mind*, have examined how the mind/brain functions in terms of humankind’s relation to God or ultimate reality to conclude that the human brain has been genetically wired to encourage religious beliefs. “As long as our brain is wired as it is,” says Newberg, “God will not go away.”20 Therefore, one cannot understand religion without understanding the mind/brain and one cannot understand the mind/brain without understanding religion.

David Hay presents evidence for a hard-wired spirituality in children, separate from and preceding any religious affiliation or intervention. A computer-assisted analysis of children’s spiritual talk revealed a theme of “relational consciousness,”21 referring to an intense awareness of relatedness—either to God, to other people, to the environment, or to the self. From this, Haley concluded that relational consciousness is a biologically built-in predisposition that underlies and makes possible a spiritual life. In a similar vein, Robert Coles conducted phenomenological studies with hundreds of children worldwide, to conclude that children have an innate capacity for a spiritual life, which includes their search to understand God and their relationship to this ultimate being.

Ashbrook and Albright also contribute a convincing argument for a neurobiology of meaning. They assert that the humanizing brain “reflects the trajectory of evolution and the perspective of a transcendent cosmos.”22 “Wired to want and seek ordered patterns, emotional connections, and meaning in the world,”23 human beings inevitably put a human face on the divinity they discover. According to Ashbrook and Albright, this anthropomorphic perspective is unavoidable, but it need not negate the validity of what is perceived. The God they encounter is described as complexifying, interactive, dynamic, loving, and purposeful.

Cloninger’s research24 suggests that people become more spiritual with age. The essence of that spirituality, which can also include a belief in some form of divinity and
order in the universe, involves looking inward, searching for meaning and purpose, and seeking to understand what truly matters.

Can human beings really change or transform themselves?

Since genes determine most aspects of who human beings are and how they function, it is necessary to ask if it is indeed possible for people to change, grow, or transform themselves. Hamer and Copeland address this question in Living with Our Genes, which contains the latest research in genetics, molecular biology, and neuroscience. They illustrate that many core personality traits, such as novelty seeking, worrying, addictions, and IQ are inherited at birth, and that many of the differences between individual personality styles are the result of differences in genes. Yet, Hamer and Copeland also allow for a built-in flexibility in one’s personality, called character, which allows people to grow and change at every stage of life, to learn from their environment, people and experiences both. An organism can modify itself through an active feedback loop of adaptation to the environment, a process known as learning. This process can occur on an intellectual, psychological, behavioral, emotional, or spiritual level, or any combination of these, and can lead to what I am describing as transformation. Psychology and religion have both focused on helping people change and adapt to, or transcend, their life circumstances. Koenig, for one, provides empirical evidence of the power of faith in helping people transform their worst situations into positive experiences and enjoy the psychological and physical benefits of a positive emotional outlook. Pargament, as well, has illustrated significant transformations that sometimes occur during religious conversions that combine psychological and spiritual processes. In an effort to re-create life, through this type of conversion or transformation, individuals experience an expanded sense of self and incorporate the sacred into their identity. This change does not come easily. It is usually motivated by stress, tension, conflict, doubt, or some un easiness with the status quo of one’s life.

Science and transformation

The realm of Science and Spirit invites humankind to interpenetrate the subjective and the objective, in order not only to define oneself in relationship to God or the universe, but also—and especially—to become transformed through this dialogic interpenetration. This invitation includes a process as well as a relationship, an evolutionary process that implies and involves change, growth, transcendence. A scientific discovery, like a spiritual or aesthetic experience, has the potential to move one beyond, or to transcend, self—beyond the mind or the senses to a new level of existence, constituting a transformation. Ken Wilber refers to such a process as a transpersonal experience.

Transformative spirituality, authentic spirituality, is therefore revolutionary. It does not legitimate the world; it breaks the world; it does not console the world; it shatters it. And it does not render the self content; it renders it undone.

In more scientific terms, Ashbrook and Albright write:

[The edge of chaos is the locale where complexity develops. Only where there is a balance between the predictable and the unpredictable do systems transcend themselves, self-organizing into ever more complex systems.

Call it transformation, transcendence, emergence, or evolution: humans are never static, ever-changing. The dynamic laws of science apply to evolution across all systems, human or otherwise. The emergent is born of process, and the process is emergence.

Barbara Brown Taylor and Jennifer Cobb provide excellent contemporary examples of women who have been transformed by science and technology, women for whom aspects of science and technology have functioned as transformational objects, contributing to self-emergence and an expanded understanding of divinity. In her fascinating book, Cybergrace, Cobb describes a process of interpenetrating her subjective theology with the objective science of computer technology to arrive at a creative synthesis.
Through her exploration of theories of emergence, complexity, and process philosophy, among many others, she concludes that divinity is present in the digital world and that, in order for computers, as well as humans, to realize their full sacred potential, it is imperative to include them in a conscious, sacred vision of ethical behavior and moral responsibility.

Through us, the evolutionary force of divine creativity has found self-conscious awareness. Along with this enormous power comes an awesome responsibility.

With an emphasis on the sacred and relational aspects of cyberspace communication, she suggests the following guidelines for cyberspace encounters: pursue connection, foster diversity, be understood in context, be driven by clear intention, and nurture creativity. Cyberspace has become, for Cobb, a transformational object which she calls "cyber-grace," a space where science and spirit interpenetrate, and a process that changes her, her spirituality, and, therefore, her relationship to others and to the divine.

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Similarly, Barbara Brown Taylor describes a transformational moment to which she refers as a religious experience when she writes, “I knew I had found a window on the universe that would occupy me for some time to come.” Her explorations into quantum theory, new biology, and chaos theory have led to a radical change in how she views the world—no longer a collection of autonomous parts, as Newton saw it, but existing separately while interacting. The deeper realization for her, based on Heisenberg’s uncertainty principle, was of a universe of “undivided whole-ness in which the observer is not separable from what is observed.” Or, as Heisenberg himself concluded:

The common division of the world into subject and object, inner world and outer world, body and soul is no longer adequate.

These discoveries changed Brown Taylor and Cobb not only in the way they think, but also in the manner in which they approach their lives and their work, which, of necessity, affects others who come into contact with them. This is the essence of transformation, that individuals are changed by relationship, that the change and the relationship involve not an event but a process, ever unfolding in one another and in the universe.

Conclusion

Science and theology are not mutually exclusive, nor are they simply complementary. Like the triune brain, composed of the limbic system, the neocortex, and the mammalian brain, they can work in harmony. Otherwise, God and the universe are seen through one lens only, in extremely myopic vision. Theology can be transformed by the new scientific discoveries, and science can be transformed by a theological and psychological framework, transforming individuals and groups even as they transform knowledge and humanity's understanding of ultimate reality which itself is an ever-changing process rather than an event. Thus is character developed and genetic predisposition, or innate personality, at times, transcended. In the process, humankind has the potential to become more God-like, even as we see the face or nature of
God more clearly, while still through a glass, darkly. Herein lies the paradox: evolution, emergence, becoming as processes that unfold in a never-ending cycle: science informing theology, philosophy informing science, all part of the unbroken whole, which is greater than the sum of its parts.

Both science and theology, and all of life’s experiences, have the power to break and shatter our world view, rendering us undone, and, in the process, transforming us, our imago Dei, and the way we relate to our cosmos. And relate we must, as it is in our nature to do so.

To work with things in the indescribable relationship is not too hard for us; the pattern grows more intricate and subtle, and being swept along is not enough.

Take your practiced powers and stretch them out until they span the chasm between two contradictions. For the god wants to know himself in you.

—Rainer Maria Rilke

### Works Cited


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**Endnotes:**

1. Dale Kohler, quoted in Smith, p. 177.
4. Ibid.
6. Ashbrook and Albright.
7. See Greenberg and Mitchell for an overview of Object Relations Theory.
9. The term object, in this context, refers to relationship.
11. Ashbrook and Albright, p. 80.
12. See Finn & Gartner, Jones, McDargh, Meissner, Randour.
13. Rizzuto, p. 46.
15. Ibid., p. 47.
17. Ibid., p. 36.
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