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## **Spirituality and the Infant Brain: Implications for Attachment Theory and Therapeutic Process across the Life Span**

Caitlin Eliasson<sup>1</sup>

Imagine being a newborn in the first days, weeks, and months of life. Every sight, sound, and inner sensation is new and undefined. There is no planning for the future or remembering the past (Hay & Nye, 2006, p. 66). Experience is all present and all possible. Feelings—contentment, fear, joy, sadness—are entirely felt. Imagine this complete absorption and then let your imagination, too, drop away. “Without acquired habits of ego and thought” (Surr, 2011, p. 134), an infant embodies this “innate spiritual gift of being here and now” (Surr, 2011, p. 134). It is, as Surr (2011) goes on to say, a state “revered by meditators everywhere” (p. 134). This most undeveloped period of the life span is, in a certain regard, at its ripest and most spacious. To what extent and through what approaches has developmental research and psychotherapy practice been attentive to and integrative with the arguably profound spiritual capacity of the infant state? How is development theory and practice expanded, and perhaps challenged, by the implications of an infant brain as a “spiritual brain” (Beauregard & O’Leary, 2007, p. 35)?

Firstly with an exploration of spirituality and its connections with “implicit memory” (Siegel, 2012, p. 52), this paper considers how conceptualizing the infant brain as a spiritual rather than undeveloped state widens the focus of attachment theory and re-contextualizes the capacity for change in and beyond the therapeutic process, with a special note about the adolescent stage. Particularly for those who have experienced infant trauma in the form of compromised attachments, it is important to think and talk not only about what happened to attachment quality but *on what* these experiences have had an impact. To consider that the *on what* is the spiritual brain, an original spaciousness and receptivity of mind—as fields of neurobiology are already demonstrating, there is possibility to renew dimension and responsiveness in how we understand early attachment trauma and pathways for transformation throughout the life span.

### **Spirituality and the Brain**

Spirituality is an integral yet understudied area in human development (Benson, Roehlkepartain, & Rude, 2003, p. 206). Researchers who have engaged spiritual development, notably Fowler (1991) in his stages of faith model, often attempt to fit spirituality into stage theory, but it can also be regarded as a continuous unfolding that lacks a generic pattern across persons (Benson, Roehlkepartain, & Rude, 2003, p. 210). As Harris (2007) details, spirituality has been defined in a multitude of ways, including: “the living out of the organizing story of one’s life” (p. 264); “the ability to experience connections and to create meaning in one’s life” (p. 264); “based in consciousness . . . a mystic unfolding that manifests itself as an inner peace” (p. 264). Most prominent definitions represent a scientific shift that occurred in 1965 when zoologist Alister Hardy explicitly proposed that humans

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possess a “natural spiritual awareness” (Hay & Nye, 2006, p. 23), which may be in relationship with but is ultimately distinct from religiosity. More and more, spirituality has been embraced as an “expression of a bodily predisposition or process” (Hay & Nye, 2006, p. 23). Some even suggest we have a “God spot” (Beauregard & O’Leary, 2007, p. xiv) in our brains.

Nonmaterialist neuroscientists like Beauregard and O’Leary (2007) view these materialist approaches, which see spirituality as a characteristic of our physiology and a state of the brain, as limiting to the idiosyncratic and transcendent possibilities of our human beingness. Neurobiologists study the brain as part of a triangle of “energy and information flow” (Siegel, 2012, p. 3) between the brain itself, the mind, and relationships; all interact, making and re-making the other, to shape and layer the human experience. In these paradigms, spirituality is not placed statically in the human skull but understood as an awareness of the brain to use itself to transcend its limits, a flow of communication with “the inner and the outer, the subjective and the objective, the first person perspective and the third person perspective” (Beauregard and O’Leary, 2007, p. 294). Spirituality is not seen as a quality or even an inevitability but as a capacity for “the direct intuitive experience of the ‘organic’ unity and interconnectedness of everything in the universe” (Beauregard and O’Leary, 2007, p. 294).

Many live unaware of this capacity while others live to realize it through various forms of meditative and contemplative, sometimes religious, practice. Intriguingly, infants may literally be living and growing in this state of spiritual presence: “because her brain has not yet had a chance to build walls within . . . the newborn must perceive all that she experiences as whole . . . The Universe beyond her immediate experience is not yet identified, but her inborn attitude of wonder is the best human tool to explore that Universe” (Surr, 2014, p. 126). The possibility of this infant receptivity lends revised thought as to how spirituality may exist outside of the traditional rhetoric and timelines of development. How to support cognitive development while preserving the spiritual possibility of the newly born brain? Perhaps this question in itself is a definition of spirituality offered by the infant stage, the delicate, sacred process of developing into our human capabilities while remembering the space in which our beings, and our brains, begin. Infancy is an extraordinary period for its preciousness and newness and for its central role in absorbing and molding human experience. The sensitivity of the infant state may be its greatest gift, one from which we unknowingly benefit throughout the life cycle.

## **The Workings of a Spiritual Brain**

The brain’s right hemisphere processes nonverbal, social, and emotional information, “the raw material for ‘mindsight’ – the capacity to perceive the mind of others and of the self” (Siegel & Hartzell, 2003, p. 55). During the first two years of life, the right hemisphere develops far more rapidly than the logical left brain (Surr, 2011, p. 134), which means that the infant experience is concentrated in an area of the brain, the right orbitofrontal cortex, which “embodies the interpenetration of the finite and the infinite” (Surr, 2011, p. 134). An infant lacks cognitive ability, yet this cognitive freedom allows for a kind “flow experience” (Surr, 2011, p. 134) and receptivity to every moment and sensation: “The separate parts may seem to lose their boundaries so that energy and information flow more freely and the self is both fully present and lost within the connection. The individuals becomes part of a

process larger than the self” (Surr, 2011, p. 134). In order for an infant to develop, the left brain, in a general sense, stays out of the way of the right.

For the first eighteen months of life, experiences are integrated as implicit memory (Siegel, 2012, p. 55). These memories are not consciously encoded or recalled (Siegel, 2012, p. 52). They are unrememberable memories that shape the foundations of our “mental models” (Siegel, 2012, p. 52), filtering our experiences and the narratives we tell about ourselves throughout the life span (Siegel & Hartzell, 2003, p. 51). Oftentimes, implicit memory is of concern when considering early trauma and how insecure attachments effect various forms of struggle throughout one’s life. Attachment bonds are a huge contributor to our implicit memory and the mental models we make (Siegel & Hartzell, 2003, p. 148). Equally so, though, is attention given to how early spiritual capacity is also a mental model or maybe is *the* model, the spaciousness, on which experience is layered and filtered? Is implicit memory a formation or a storehouse of infant spirituality? Further, may we even conceptualize implicit memory as the spiritual function of our human systems? Perhaps our original model is not mental but spiritual. If this is so, especially for those with early trauma, we can re-frame and work differently with implicit memory models as not only sources of suffering and limitation but of resilience and even transcendence. With this perspective is the prospect of re-writing, or at least adding chapters, to the script of how we study and apply attachment theory. Neurobiology offers invaluable insight in this area.

### Attachment Theory and Neurobiology

Formulated by Bowlby and Ainsworth, the main tenet of attachment theory is that early attachments, especially to the primary caregiver, have a major influence on the quality of one's wellbeing and attachment bonds throughout the life span (Bretherton, 1992, p. 761). This includes the attachment to one's sense of spirituality (Surr, 2011, p. 132). Just as Ainsworth's Adult Attachment Interview (AAI) suggests a correlation between childhood and adult attachment qualities (Bretherton, 1992, p. 769), some link attachment security to degrees of spiritual engagement throughout life: “the preservation of an infant’s faith depends significantly on whether the infant’s early attachment experiences provide the child with an emotional basis to trust that her needs will be met” (Surr, 2011, p. 132). According to Surr's (2011) research, even though those with difficult childhoods tend to be more religious (p. 133), those with early secure attachments are more likely to have higher levels of “existential well-being” (p. 132).

If both our intimate and existential relationships are largely determined by early attachment, where does this place and what hope does this give for a high percentage of people, one third of babies according to Surr (2014, p. 127), who have less than secure early attachments? What about those who experience trauma and loss in early life? Surr’s (2011) studies show that adults with more insecure attachment are more likely to seek a “rediscovery of faith” (p. 132) in adulthood, which he attributes to attempts to compensate for less available caregiving. There are countless individuals who, despite early adversity, and perhaps in part because of it, live flourishing and flexible, sometimes very spiritually attuned, existences. As part of understanding this ability and desire to shift attachment quality, and to give hope to those who feel defined by early trauma, we can resituate the causality between attachment, spirituality, and well-being. This proposition of the infant brain as a spiritual one can support this re-theorization. While it may be impacted, spirituality is not necessarily in a linear causal relationship with attachment experience.

Alternatively, spiritual capacity may foreground, or at least be in a parallel and dialectical processing, with attachment. Not only is the inner life impacted by childhood attachment quality but this inner life can also be the space for repairing and transforming difficult attachments and changing generational patterns. Attachments with caregivers has significant and lasting influence on a person – indeed these bonds integrate with our implicit memory to form our first mental models (Siegel & Hartzell, 2003, p. 148) – and yet this does not have to be the whole story of our lives.

As Siegel (2003; 2010; 2012) is at the forefront of studying, attachment does not solely happen from the outside-in but from the inside-out as well. The focus is not only on what quality of parenting one received but equally or more so on what kind of parent one wants to be, whether to one's own children or to one's self. The inner child and the inner parent can be tended through "mindsight . . . [the] focused attention that allows us to see the inner workings of our minds" (Siegel, 2010, p. xi). This is how neurobiology invites us to think more expansively and more compassionately about attachment theory, both in regards to parent and child roles. In this paradigm, attachment theory as a development lens operates not as a theory of explanation or categorization but as one of repair and transformation. Integrating this concept of a spiritual brain, we might think about it as a theory that is fundamentally spiritual as it is scientific.

### **Widening the narrative and the mind space of attachment**

Siegel and Hartzell (2003) beautifully describe that "all relationships, especially parent-child . . . are built on attuned, collaborative communication that gives respect to the dignity and sovereignty of the music of each individual's mind" (p. 70). A parent's struggle to nurture a secure attachment with an infant links to a lack of inner attunement with her or his own inner music (Siegel & Hartzell, 2003, p. 103). Siegel and Hartzell's (2003) entire work is an emphasis on how "coherent self knowledge and interpersonal joining go hand in hand" (p. 70) and, following, "the adult state of mind with respect to attachment is the most robust predictor of a child's attachment" (p. 120). Attachment quality begins before the parent and child come into direct relationship. This is such an important remembrance in how we narrate attachment, especially as individuals often become overwhelmed by blame, anger, or shame for the developmental outcomes of early attachment trauma. There is an entire life story, actually generations of life stories, that precedes the beginnings of a parent-child bond.

This recognition does not lessen the immediate impacts of attachment insecurity on a child but it can increase empathy and inspiration for change as that child, and the parent, matures through the life span; to recognize this pre-existence of the attachment narrative can add space, perspective, and compassion in our minds. As Siegel and Hartzell (2003) recommend, when reflecting on life, "start with the assumption that you, and your parents, have done the best that you can under the circumstances of your life. Instead of placing blame, be gentle with yourself" (p. 164) and with your parent. Just as attachment quality precedes a parent-child bond, attachment security can come after and even be the legacy of that relationship, however insecure or absent it may have been. As much as it is interpersonal and inter-generational, attachment is inner mind work that both begins and determines the overall and ongoing attachment circle.

Insecure attachment often means a child's inner world is not seen or validated and so exploration of that world is not felt as safe or good. Siegel (2010) describes this inner world

as the “sea inside” (p. xvii), which can become partial and dim in one’s awareness but is never lost in its wholeness. Inner attachment work is, in large part, the work of uncovering and bringing new awareness and trust to the spaciousness of our inner seas, which is why having knowledge and appreciation of the original infant openness can be so valuable in this dialogue between attachment theory and neurobiology. Even if we cannot consciously recall our beginning space, how does having trust and faith in spaciousness as a foundational mental model inspire the work of swimming in our inner seas?

Rather than fixing or completely understanding an attachment injury, a neurobiological lens welcomes us to think about healing as the realization of space to hold early trauma, and the pain it may always trigger, with other experiences and waves of our beings: “healthy development involves coming to acknowledge, accept, and then to integrate one’s various states to discover how disparate states can link and even collaborate as a unified whole composed of many parts” (Siegel, 2010, p. 198). We resolve attachment trauma not by shrinking it through analytical sense-making but by re-establishing our spaciousness and safety to swim in and resurface from the truths and learning it created in our mental models. Beginning to swim in the mind, even just the awareness that we can, changes the mind.

To attachment theory, neurobiology extends attachment security to include the re-wiring of our brains at any point in our life span: “most people come into the world with the brain potential to develop mindsight, but the neural circuits that underlie it need experiences to develop properly . . . it is never too late to stimulate the growth of the neural fibers” (Siegel, 2010, pp. xvi-xvii). The narratives about our lives to which we pay attention lay down pathways in our brains, which correspond to behaviors, emotions, and future qualities of attachment (Siegel, 2010, pp. 198-199). Attachment injury is explored by concentrating not only on the injury but by looking to other narratives and perspectives that make that injury a less overpowering pathway of thought and impact.

Well-being, and healthy development, is not defined by attachment trauma but how we “make sense of [our] experiences” (Siegel & Hartzell, 2003, p. 107). Resolution is not solely in understanding what happened but being able to hold what happened in wider space and the compassion that that wider space makes possible. It is a remembering, really, that the *on what* of our attachment experiences is the spacious, spiritual brain. We hold two hands of past and projected attachment quality and these two hands can make very different creations. In this way, we can find greater equilibrium and possibility for change in our minds.

Essentially, our brains are shaped and oftentimes limited by early attachment but we do not have to continue to shape and limit our brains by beginning traumas. We have a beginning spaciousness, too, which is what the articulation of a spiritual brain and a highlighting of our infant stage emphasizes in the development conversation. The miraculousness of re-wiring and ultimately re-attaching is not actually a miracle but an indication of being born into a capacity for space and flow. So intricate, so deeply scientific, it enters the spiritual. How do we talk about and pay attention to this mental *spiritual* model of which we may not have conscious recall? What are the implications of a spiritual brain in therapeutic process?

## Beholding the Spiritual Brain in Therapeutic Process

Perhaps it is nowhere more crucial that someone be held in her or his original spaciousness than in the therapeutic context because this is where people often come when feeling defined by woundedness and disconnected from the wholeness of being. Of course, parenting is the central path for nurturing wholeness. Siegel and Payne Bryson's (2010) *The Whole Brain Child* is an excellent resource for supporting children to access and grow with and into their whole brain; they provide particularly useful advice for helping children integrate implicit and explicit memories by strengthening the hippocampus through memory exploration and replay (p. 78). Another level of challenge comes, though, for the many individuals who have grown up with less than whole brain parenting and feel stalled in their development.

Such a source of hopelessness arises when we feel as though we are or ought to be finished developing and yet we are not living in the completeness of our humanity. For people of any age, a therapeutic space can be one for uncovering and embracing the fluidity, timelessness, and choice in the developmental journey. Therapeutic process can support one to become her or his own whole brain child and her or his own whole brain parent, all in one. This is the possibility of adding secure chapters to our attachment narrative. As witnesses and guides, therapists' work is ideally to be "attuned to . . . [the] internal world" (Siegel, 2010, p. 138) of those with whom we sit and to remember the whole brain, even and especially when its presence seems only partial. In validating the whole brain, a conscious consideration that this wholeness encompasses a spacious and spiritual beginning can be so valuable. The idea of a spiritual brain, which we can think about as the original spaciousness and poignancy of presence with which infants are born, adds another dimension of understanding and being with another's suffering and capacity for healing. We may not have to name or discuss the spiritual brain in therapy; the work and the change is in the beholding.

In beholding another as an expression of a spiritual brain *and* all of the experiences imprinted upon that system, we look all the way back to even before the beginning, before the parenting. This is a theoretical and therapeutic standpoint at the heart of which is the recognition, based in science of the early brain, that we do not begin undeveloped, at least not spiritually so. We begin from a mind space profoundly available to the human experience, so much so that this experience becomes the implicit lens with which we walk through the world. The parent-child attachment quality, and the legacy of inter-generational patterns it carries, may be among the first imprints on a brain but, essentially, it is an imprint. It is not the radical space. These imprints, no matter how good or painful, a mix of the two, are held in and constantly interacting with a beginning spaciousness, which we might conceptualize as our inborn resilience. When we hold this wider knowing while exploring one's attachment narrative, we can potentially see and inspire development outside its traditional beginnings and endings, gentling boundaries for how one can tell the story of her or his life.

This all presents a wonderful possibility. Yet therapeutic process cannot truly honour the spaciousness for transformation without acknowledging the spaciousness of pain, especially when that pain touches a person in early life. Bone (2007) importantly reminds of the misconceptions of childhood as an innocent, idyllic state of being: "childhood is a time when a range of experiences are available . . . with its mixture of joy and sorrow, young children are active participants in life" (p. 265). Most infants and children experience at least small traumas. If the infant is "wholly absorbed in the here and now" (Surr, 2011, p. 135),

imagine the intensity if the here and now becomes saturated with fear, grief, and helplessness. The depths of spaciousness that plausibly makes the infant brain a uniquely resourced one also makes it most vulnerable to great depths and intensities of pain, suffering unnameable in categorized pathology. This also infiltrates mental models. That the pain often cannot be consciously recalled makes it all the more painful, a spiritual struggle, really, in its unidentifiable and yet poignant presence.

As we open to the spaciousness of our fundamental resilience, we also become more aware of our painfulness. This is the challenging, messy work—and the hope—of beholding ourselves and others from the very beginnings. The careful conversation between our pain and our capacity to hold it can all lead to more space making, especially if a therapeutic alliance can become one of “spiritual witness” (Bone, 2008, p. 274). Bone (2008) describes this as a “space of empathetic awareness” (p. 274) in which the therapist moves beyond analysis to attunement and shared humanity. The sincere beholding of another’s fundamental spaciousness asks that the beholder look from this spaciousness within themselves, or at least have a trust that it is there and possible. As someone works through pain in a therapeutic setting, she or he may also be opening to a basic and sometimes startling nobility of mind. The value of “feel[ing] felt” (Siegel, 2010, p. 138) in one’s struggle is made all the more exquisite and true when a person looks to another and sees a reflection and resonance of this nobility, too. When we think beyond connecting minds to connecting spiritual brains, a shared human beginningness, the sacredness of therapeutic process can be so alive.

### A Brief Note on Adolescence

Pandya (2015) draws special attention to spiritual attunement in therapeutic process with adolescents. It is possible to reclaim degrees of beginning spaciousness throughout the entire life span yet adolescence is a developmental stage of particularly generous conditions. Through a “natural and extensive process of pruning” (Siegel & Hartzell, 2003, p. 115), adolescence is a key period of brain re-organization and development. It is the period in which abstract thought expands (Pandya, 2015, p. 31). It is also a time when many adolescents form conscious and pressing spiritual questions, which Pandya (2015) names as a “spiritual awakening” (p. 30) unique to this age. We might think of adolescence as a meeting point between cognitive ability and spiritual accessibility, ripe with potential for a cognitive awakening to a spiritual nature awakened in infancy. Beholding a spiritual brain at this period of development can support a shift in the trajectory of a whole lifetime.

### Conclusions

Building on Bowlby’s work, neurobiology expands attachment theory beyond and before the parent-child relationship; attachment happens from the inside-out and the outside-in, a weaving of inner and relational, even generational, dynamics. So complex, development is as wide as all of our generations and as intimate as the unique rhythms of our innermost minds. What neurobiology brings is the invitation that a measure of development, and specifically secure attachment, is our capacity to swim in the “sea inside” (Siegel, 2010, p. xvii) without getting swept by one wave, one narrative, one neural pattern of our developmental tapestry. And when we do get swept, the knowing that we can lift, re-route, and re-write again.



Development can be understood as the realization of space to hold the pain and the beauty of one's life and all the lives that made it possible. This space, though, is not easy to access and oftentimes we struggle to trust and lean in to its possibility. To perhaps add a little more hope to the journey, this paper integrates the emphasis of original spaciousness in the infant brain. What if the very space we are seeking already lives within as the implicit resilience to be seekers?

Beneath all these self-states . . . is a core self that has receptivity at its heart . . . it is the essential 'you' beneath narrative and memory, emotional reactivity and habit. It is from this place that we may suspend the flow of top-down influences and come close to what has been called the 'beginner's mind' (Siegel, 2010, p. 208).

What if we think of this beginner's mind as a primal reality of human experience, a mental model that operates alongside, and even precedes, our first attachment imprints? How might we develop and support others' development differently if we embrace the earliest life within our beings not as an emptiness but an amazing receptivity to goodness and to suffering? Can we behold this as so amazing that it fits the designation of a spiritual brain? How does this give more breath for telling the stories of who you are and who I am? These are the questions which this paper is thinking through in the light of attachment theory and neurobiology. When we ask these kinds of questions, it seems our language about development changes and so does the space inside from which we can do this work, both for ourselves and others.

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