

Running Head: ANCHORING OUR ATTUNEMENT

Anchoring Our Attunement:
Explorations of the Subtle Mind

In Integral Theory

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Abstract:

This paper will explore the quality of attunement as defined and used by Daniel J. Siegel (2007) in *The Mindful Brain: Reflection and Attunement in the Cultivation of Well-being*. It will introduce William Tiller's construct of subtle energy as the medium on which information travels, in our bodies and our minds, our relationships, our worlds. Bonnie Bainbridge Cohen's sensory model will be used to bring a more deeply embodied dimension to the model construct and connect the neural capacities of the body to the felt sense. The lens of Integral Theory's quadrants will be used to consider this phenomena as it arises while positioning it consistently with what Siegel cites as the holy trilogy of wellbeing (p. 208) or "...neural integration, a coherent mind, and empathic relationships. With the guiding frame of AQAL, a tour through the perspectives lines up Siegel's observations with the subtleties of mind (Conat, 2010).

Introduction

Attunement is defined by Daniel J. Siegel (2007) in *The Mindful Brain: Reflection and Attunement in the Cultivation of Well-being*, as a concept that allows us to (p. xiii- xiv) "...examine how one person ...focuses attention on the internal world of another..." And, "This focus on the mind of another person harnesses neural circuitry that enables two people to 'feel felt' by each other. " Looking to the Upper Right quadrant for a road map of our exploration we will use constructs suggested by Siegel and others to see that the biology of attunement is evident in the structure and capacities of the brain at a gross anatomical level as well as a sensory level using Cohen model, and the subtle level using constructs provided by Tiller and Ken Wilber. Once established, this road map will be used to anchor attunement in the UR to establish clarity and consistency of the conceptual construct, after which a brief orienting tour of the Upper Left and Lower Left Quadrants can be explored with, borrowing from Siegel (p. 207), a "cohesion" that allows for "coherence." Time will be taken to define problematic terms prior to their use in the body of the paper, as will important constructs that are fundamental to the view of this endeavor.

Acknowledging the Landscape and Terms of Engagement

The Tetra Arising Terrain

Part of the difficulty of working across systems of expertise as will be done in this paper such as psychology, neuroscience, philosophy, and quantum physics is the use of terms that do not translate consistently across disciplines. To alleviate as much translational confusion as possible, given the admittedly challenging landscape, terms will be defined and applied prior to but as close as possible to their use, in the general body of the paper. It is important to notice that we are actually defining each of the terms in their most associated perspective even though

the phenomena arises in each perspective dependent on 'how' or in which Integral Methodological Pluralism we choose to view it.

For example, using the simple definition of 'attunement' that we saw in the introduction, we can acknowledge the most familiar use of the word is as Siegel has described it as when two people "feel felt" by each other. The 'how' of our knowing in this instance is through our first person felt experience as the embodied embedded resonance bridging the interiors of two people, which involves a second person 'we' event, even while individually, we can see the same phenomena as a first person phenomenological arising. However, this same attunement is also the empirically assessed third person view of the anatomical neural capacity and enactment that allows for the sensory feeling experience that we identify as 'feeling felt.' We cannot with clarity define 'attunement' or other terms without the awareness of this Integral dimensionality of all term expression.

Subtle Distinctions

A word that provides a particular difficulty due to its dual valences of meaning in this discussion is *subtle*. Towards clarity I offer the constructs of William A. Tiller, Ph.D. whom, as professor emeritus of Materials Science and Engineering at Stanford University, has articulated empirically the relationship between the physicality of matter, its subtle energy aspects, and consciousness.

Tiller defines subtle energy (2007, p. 229), "All those energies existing in the universe beyond the four known to and accepted by present-day science." This seems simple enough until we place it in the framework of its domain, which takes us to "[The] Potential cognitive domains of universe beyond the domain of physical cognition by humans or present physical instruments. Some humans presently sense these domains, most do not.They are labeled etheric, astral, or

emotional, mind, spirit, divine." While, as Tiller has stated, subtle energies reside "beyond" our technical abilities to ascertain them, he does acknowledge that the sensory body, in some individuals, are capable of recognizing these energies. Here lies the crux of our difficulty in using the term 'subtle.' It is both the thing sensed and what we refer to as the sensing. Subtle energies are both the finest of frequencies, operating largely unattended by awareness, as both wave and particle in the Upper Right Quadrant, *and* the felt sense of being experienced as embodied sensory experiences in the Upper Left and Lower Left. As we see Integral Theory separates these aspects of phenomena for clarity even as they arise together. Wilber articulates this beautifully and it serves our desire for clarity to review his offerings here (2006g, p. 12):

In other words, matter is not on the bottom rung of that evolutionary spiral, but is rather the *exterior* form of an evolution whose *interiors* contain correlative levels of feelings, awareness, consciousness, and so forth. AQAL metatheory handles this by saying that every mind has a body or every state of consciousness has a corresponding signature state of matter-energy, or every interior prehension has an exterior form....

In the Upper Right we find the exterior matter-energy. In the Upper Left, we find the corresponding interior feeling and awareness experience of those infinitesimal frequencies. This paper will handle both described valences of subtle intimately and will distinguish between the two faces of the term by referring to them in their Upper Left and Upper Right Quadrant capacities as 'subtle felt sense' and 'subtle energy,' respectively. Additionally, other subtle energy designations such as *mind*, *soul*, and *self and Self*, refer to aspects of subtle energy and subtle energy felt sense, and as such, carry these same double valences of meaning.

While noting some of defining features of the landscape of subtle energy, I wish to draw the mind of the reader to consider on this journey that the subtle (UR) detail we have acknowledged in our discussion of the term 'subtle' is indeed the condition of all reality. In the process I would call for a focus throughout this paper on the eye elusive qualities of matter that

draw us into the fine matrices of atomic particles, immeasurable frequencies that feel like thoughts and perform as light so that we are able to begin to view reality's expression as embodied beings as if we could see the four quadrants of Integral Theory tetra arising in ever more subtle aspects. Each moment carries this remarkable density, even as we experience it, nested and intertwined in every increasing complexity reaching into the deepest of subtle energy body structures, even though we may be limited to the sensory experience at the most gross physical planes of that experience. The personal model this paper is written from is thick with the Oneness of subtle energy, and bearing the holographic multidimensionality that is required for mind to precede matter. Which brings us to the next construct necessary for our exploration of attunement.

Mind to Matter

Another primary construct for this paper is Ken Wilber's involutory/evolutionary linear sequencing of Spirit walking down into matter. This construct is depicted in the following sequence (Figure 1) distilled from his *Excerpt G: A Comprehensive Theory of Subtle Energies*, Part II, (2006g. p, 11):

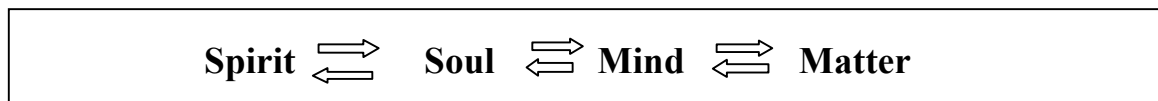


Figure 1 Wilber's sequencing of the subtle energies as they descend into matter.

This paper is wholly committed to the construct of the subtly energy aspects of mind in the UR preceding the arising of the gross anatomy of the physical body. As we distinguished earlier in the clarification of the term 'subtle' as a subtle energy body, mind is both an energy and a felt sense. This seems to be a concept that is considered but never fully embraced, talked about but always with the hedging of materialism lurking in the basements of our embodied selves, as collective skeletons in our hidden shadowed closets. Here I challenge that hedging with the

wholehearted embrace of the brain as a contracting feature of Spirit as it journeys from Oneness of Spirit to the individual embodied self. We will see this construct acknowledged in the concluding remark's that include Beaugard's Olympic Swimming Pool analogy but for the most part, it is an ideation that is not ever truly taken into operational consideration but is instead kept in the recesses of even loftiest of dialogues as purely evidentiary, lacking the sufficient collective embodied experience that would allow it to be considered and utilized as a collective reality. Wilber engages this construct in his work and yet often does not travel beyond the pages on which it sits. Here, in honor and recognition of his lived experience and adding my own, the idea that Spirit walks down into matter via the soul and mind to matter, reigns supra-ordinate and intrinsically fundamental as a construct for reality. It is a truth above all other truth presented, as well as the fundamental ground of being of which we all call real and knowable, is dependent. This changes the causal dimensionality construct of the dialogue in which this paper engages, and as such it should be kept in mind throughout the its reading.

Attunement From an Upper Right Empirical Perspective

Taking a clue from the "feel felt" in Siegel's defining statement of attunement , we look to the anatomical brain, the body's sensory capacities, and the subtle energy sensory capacity of the neural processes of the brain as it correlates to Wilber's (2006g) subtle energy body of mind, to reveal the path of attunement, beginning with the Upper Right.

Siegel designates the neurological circuitry that supports attunement in the brain's anatomy as the (p. 165) "mirror neuron system (MNS)" and specifies it to include the "parietal and frontal areas of the brain specifically, as well as the "superior temporal cortex (STC), the insula cortex (IC), and the middle prefrontal cortex." According to Siegel (p. 166), these areas of the brain interact in some capacity when "*goal directed*" so that the "*human brain creates*

representations of others' minds." To translate, what Siegel is saying here is that with intention as embodied humans, we can know at a *sensory* level, the subtle energy aspects of another's mind, and that this capacity has been clinically validated¹ with fMRI². But while these capacities are tantalizing to consider, we are getting ahead of ourselves. Keeping to the anatomy of the brain, we note that we have established so far only the location of activity of intentional resonance activities like attunement in fMRI scans of the brain. This information alone does little to tell us of what is actually happening in the finer workings of the neural circuitry.

Following the Trail of Intention Down the Rabbit Hole

We have seen that the MNS and the superior temporal regions can be said to reflect (2007, p. 173) attunement capacity in the brain. Siegel tells us (p. 172) that the actual functioning of mirror neurons in the brain essentially links the perceptual areas with the pre-motor areas enabling the perception of a goal directed act to be linked to the readying of the pre-motor planning area of the brain. Siegel calls this sequencing representative of "intention" and centrally ties it to the "heart of emotion (Freeman, 2000)." This creates an important hook that draws us easily into the Upper Left quadrant's felt experience of emotions through the sensory body which we will investigate a bit further into the paper using Bonnie Bainbridge Cohen's sensory model.

What we have introduced in the above paragraph is the evidence of the brain's functioning when one person 'mirrors' the firing patterns as if they were completing the actions, when they are only watching the actions of another. But more in keeping with our topic of attunement, it is also when someone 'feels' in an empathic sense the sensory experiencing of another human. This implies a connection or intuition across physical spatial limits and is the essence of our inquiry into the subtle energy aspects of this phenomena.

Further exploration of the subtle energy and subtle felt sense qualities of neural synaptic processes shed light on the capacity of the brain to interact across Newtonian time/space continuums. In *Quantum Physics in Neuroscience and Psychology: a Neurophysical Model of Mind-Brain Interaction* (2004), Jeffery Schwartz, Henry Stapp, and Mario Beauregard offer a contemporary model for the interactions of the brain and subtle felt sense of mind. They note (p. 2), "...an accelerating number of studies in the neuroimaging literature significantly support the thesis that, again, with appropriate training and effort, people can systematically alter neural circuitry associated with a variety of mental and physical states that are frankly pathological.³" This restructuring of neural pathways is termed, "self-directed neuroplasticity" and it serves to boldly underscore the subtle energy mind's/subtle felt sense mind's causal capacity on the structuring of the neural pathways of the brain. Schwartz et al., cite this clinical evidence as supporting the need to acknowledge "...a new science-based way of conceptualizing the interface between mind/consciousness and brain." To explicate this new science they advise with emphasis (p. 2), "Quantum dynamics *must be used in principle*." Indeed.

The Mechanics of Quantum in the Brain.

The details of the quantum complexity in the brain are understandably lengthy and full of argument considering their innovative stance and evolutionary push in a materialistic curmudgeon filled discipline, and as such, are far too lengthy to reflect fully on here. But we can hone in on the action of the nerve terminals creating the essential links between nerve cells (p. 10). For it is here that Schwartz et al., identify the location of the quantum mechanical implications. Specifically, the calcium ion channels are less than a nanometre in diameter⁴ and as such they restrict the "...lateral *spatial* dimension." As a result, "...the lateral *velocity* is forced by the *quantum uncertainty principle* to become large." At this point we have entered a purely

mathematical representation of subtle energy interaction and are dealing with variables in an equation as it is the manner in which such events are 'seen.' Moving forward, this enlarged quantum uncertainty principle (p. 10):

... causes the *quantum cloud of possibilities* associated with the calcium ion to *fan out* over an increasing area as it moves away from the tiny channel to the target region where the ion will be absorbed as a whole, or not absorbed at all, on some small triggering site....Consequently, the quantum state of the brain has a part in which the neurotransmitter is released and a part in which the neurotransmitter is not released. This quantum splitting occurs at every one of the trillions of nerve terminals.

What all this boils down to is that the mechanism of the nerve channels and the calcium ion gating process creates vast clouds of possibilities that require an intentional act (Von Neumann's Process 1) to create a collapse into a singular event that allows for, in this example, the neurotransmitter to be or not to be released, which taken in concert of the entire brain, allows for the experience of consciousness . And from a theoretical perspective, as Henry Stapp puts it so succinctly in his article *A Model of the Quantum-Classical and Mind-Brain Connections, and of the Role of the Quantum Zeno Effect in the Physical Implementation of Conscious Intent* (2009), "The essential point here is that quantum theory, in the von Neumann/Heisenberg formulation, describes the dynamical connection between conscious observations and brain dynamics."

The Sensory Connection

Bonnie Bainbridge Cohen's sensory model taken from *Sensing, Feeling, and Action: The Experiential Anatomy of Body-Mind Centering* is an excellent indicator for the pre-motor bridge to express the interaction of the subtle energy mind (Stapp's "brain dynamics") to the subtle energy felt sense (Stapp's "conscious observations"). It is the entirety of the sensory body, the nerves of the body, the spinal cord, and brain, that create the sensory pathway that Cohen illuminates so well in her sensory model:

[1] Preconceived expectation-- [2] Pre-motor focusing-- [3] Sensory input--
 [4] Perceptual interpretation-- [5] Motor-planning-- [6] Motor response--
 [7] Sensory feedback-- [8] Perceptual interpretation.

With Cohen's sensory model we can imagine the neural interactions throughout the body and brain that allow the capacity to feel our interactions with the environment and our own choices as the subtle felt sense of thought, feelings, and beliefs. Part of this feeling subtle feeling sense falls under the rubric of attunement.

The Feeling of a Frequency

Siegel has stated the definition of attunement, paraphrasing here, as that which allows the feeling of being felt between two humans. He also uses this term to address what he calls (p. 132), "internal attunement" which is a consequence of mindfulness. According to Siegel (p. 16), "Attunement is at the heart of caring relationships of all sorts: between parent and child, teacher and student, therapist and patient/client, lovers, friends, and close professional colleagues. " Each relational position in all these couplings require a first person subtle felt sense that is open and able to resonate in order to complete the attunement pattern between two people. Siegel goes on to suggest that intrapersonal attunement (p. 17), "...helps us see how mindful awareness can promote love for oneself."

Frequencies in Communion

As we have stated, attunement involves a shared felt sense which Siegel acknowledges optimally can include a (p. 130), "...sense of safety." Certainly this is a healthy contribution to parenting for a child, as well as many of the other communal pairings mentioned previously. Empathy arises in this space between two attuned individuals, one sharing in the subtle energy felt sense of the other. I would suggest this occurs primarily through the informational exchange of subtle energy mind during resonance, which is then carried into the gross physical body via the brain to inform the sensory apparatus of the body through the quantum mechanical synaptic

firings of our neural circuitry. In this way, lovers feel the rosy rush of a blush as their lover undresses them with their eyes from across the room, and mother's run to assist toddlers on the verge of tears in a frustrated moment long before the first frustrated tear falls. These attuned states happen first in the subtle energy matrices that inform matter in every aspect of being. We feel this evidence all the time but have confused the cause with the medium of expression.

Conclusion

Attunement can be seen as an subtle energy/subtle felt sense analogous to an (Beauregard, p. xi), "Olympic swimming event" that is facilitated in the UR quadrant's "Olympic swimming pool" gross anatomy of the brain, neural pathways, and quantum mechanical synaptic channels and gates. Additionally we have explored this phenomena very briefly, as a first person felt experience that allows for the feeling of being felt or understood by another, as in resonance and attunement. From the individual experience, it is easy to see how attunement arises in the Lower Left quadrant in the mutual understanding of the collective 'we' perspective, and we can postulate here on its value in the replication of the social structures of a culture in the Lower Right. Siegel suggests on several occasions, and I concur, that mindfulness is a form of self attunement and as such it lends lubrication to empathy, mutual understanding and compassion. Further, our consideration of subtle energy as a medium of attunement and communication sets the stage of collective development as the next aperture of depth in the unfolding complexity of life as the higher stages of development are unfolded and embodied. It fits into Wilber's telemetry of subtle energy (2006g) and is easily seen in all the perspectives (Conat, 2010).

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¹ Gallese, 2003; Iacoboni, in press; Iacoboni, Koski et al., 2001; Iacoboni, Woods et al., 1999; Rizzolatti & Craighero, 2004; Rizzolatti, Fogassi, & Gallese, 2001.

²(Gallese, Fadiga, Fogassi, & Rizzolatti, 1996)

³ Schwartz, *et al.* 1996; Schwartz 1998; Musso *et al.* 1999; Paquette *et al.* 2003)

⁴ (Cataldi *et al.* 2002)