

## **The Nexus of Consciousness – The Place Where Healing Begins**

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*(The articles I include in Heartland newsletters are of my search to explain and integrate survivor experience, therapeutic process, and standards of care with a scientific foundation found in the latest consciousness research. Armed with premises that colleagues in trauma research and therapy have proclaimed for years, I sought other perspectives in consciousness research: Trauma alters perception of reality and definition of self, as manifested by dissociative barriers.)*

### **An exercise in awareness.**

Julian Jaynes in The Origin of Consciousness in the Breakdown of the Bicameral Mind, (Houghton Mifflin, 1979) poses an exercise in consciousness that I would like you to follow for a moment. “Picture a purple cow.” Hold the image and ask yourself the following: Which direction is it facing? Can you see an udder? Is there any movement? Is it dark or light purple? Share this exercise with friends and compare answers. There are no wrong answers.

I use this example in our professional training to illustrate a number of features in consciousness process. At this moment, the aspect that I ask you to consider is where in your mind you hold and view this image. The answers are telling, yet have a commonality. That image is perceived in a concrete location inside the mind with a spatial orientation to the person. Some see the image behind them inside, while others see it in front outside. Again, there are no wrong answers. Take note of the phenomenology of how you experience the answer. When you picture the image, where do your eyes focus? Note the experience of shifting your focus to an object in your immediate surroundings. This exercise acquaints you with a place and a process that human beings use naturally and take for granted.

For the sake of scientific clarity, we call this place the “nexus” and the process “blending”. We integrate the phenomenon in the term “blending place”. This is a normative process that developmentally concretizes around 32 months of age. (Based on research referred to in an article in the Summer 2003 Newsletter.) Every human being utilizes this normative phenomenology every waking moment, remaining blissfully unaware (not conscious) of the nexus unless made aware by an exercise such as the “Purple Cow”.

### **Looking for how mind and body connect.**

The phenomenology of the nexus, that of the mind-body connection, is defined as the place of interaction of one's external world with one's internal world, of one's physical body with one's mental state, and of one's past experiences with one's present moment. Though the phenomenology has long been known, the location of the nexus (the mind-body connection) has been a central debate of science and philosophy since humanity's

earliest literature. Let's take a stroll through history and humanity's search to identify the nexus.

Since human beings have been conscious of "self", philosophers debated and physiologists searched to explain where and how the self/mind/soul interacts with the body. Historical references to the mind-body connection, a nexus through which the self interacts with the surrounding environment, are evident among the first recorded language of early cultures.

Early civilizations thought that the self and/or soul dwelled in the heart. Imhotep, an Egyptian physician who recorded his observations of human physiology, illustrates this in his written observations. He had noted that people with head injuries behaved differently from the norm. He observed the brain, which was encased in bone, seemed similar to bone marrow. A broken head, like a broken bone, didn't stop life. An injury to the heart did. Logic led Imhotep to assert "that the heart was where the mind dwelled."

The Greek culture also believed that the soul dwelled in the heart. Aristotle, in defining the function of the brain, declared it to be "a radiator to cool the passions of the soul". Was this Aristotle's phenomenological explanation for hot heads who lost their temper? Aristotle used the phrase "the 'common' sense" to describe the nexus. Not referring to one's judgment (good old "horse sense"), common sense indicated a kind of interaction that integrated the basic five senses. The integration then made sense experience a function of memory, imagination, and awareness.

As knowledge of physiology grew, correlation between behavior and the brain became specific. Hippocrates alluded to the nexus relationship in that "the brain exercised the greatest power in man; it was the control center that interprets the understanding." Galen, who lived in the second century, was the first philosopher/physician who extensively mapped out the most complete atlas of the body with reference to organic structure and function. Galen's research defined human physiology, though sometimes incorrectly, for 1000 years. He saw the brain associated to the mind and body" as the instrument of the soul".

In the 15th century, Galen's research was challenged as physiology became more defined. As a researcher of the time, Rene Descartes took note of a small gland at the base of the cortex that then had no known function. Descartes conjectured that this structure, the pineal gland, was the nexus of mind-body. His assumption was probably based on its centrality when he wrote "the human soul must have a well-defined operational center in the brain controlling the movement of animal spirits through the nervous system. The pineal gland is where the rational soul interacts with the machinery of the body, its temporary abode." The pineal gland became known to those with a metaphysical interest as the "third eye" by which the soul perceived the physical world.

A twentieth century observation of a nexus comes from Charles Scott Sherrington whose research mapped out the various structures and corresponding functions in the brain.

Sherrington implied the nexus in his statement that “the cerebral cortex is a complicated switchboard and the abode of the psyche.” Sherrington’s statement was an exception rather than the rule for science at that time. At the turn of the twentieth century, in the attempt to make psychology a “pure” science, behaviorism focused solely on the physiological correlates to behavior and viewed “self” as a function of behavior sets. In this movement, the phenomenological observations of James, Freud, and Janet were replaced by the behaviorism of Watson, Pavlov, and Skinner. Some saw this as an attempt to counter the confusion in science arising from the mind-body debate.

### **An editorial aside about “pure” science.**

Of parenthetical interest to me is the fact that this shift of thought away from consciousness was also responsible for the closeting of the theories of dissociation in the writings of Janet and others. It was not until the late 1960’s that once again the phenomenology of dissociation began to emerge. The trauma symptoms of survivors of the war in Viet Nam, of domestic and sexual violence against women, and of child abuse focused a few scientists back to the issue of dissociation as a trauma defense. Janet was rediscovered.

William James wrote extensively with significant insight into consciousness. But behaviorism denied the existence of an unconscious and also the concept of self. In the late 1960’s, in the societal shadow of the “Me” generation, consciousness and James were rediscovered. Altered (or maybe more correctly, altering) consciousness was explored with cults like Hare Krishna, movements like Transcendental Meditation, technology like biofeedback, and use of chemicals like LSD with Timothy Leary.

As we move into the 21st Century, we are back to the future in both traumatology and consciousness. The same struggle for “pure” science seeks once again to downplay the “self” in relation to the physical structure. A case in point is psychiatry’s attempts to be a “pure” science and find the right medication that will stop flashbacks and other trauma symptoms. Usually this altering of consciousness of memories creates great anguish to survivors. Sure, symptom relief is desired; but, most survivors protest loudly at the loss of control over their memories.

### **The current thought on mind-body interaction.**

This brings us to the modern philosopher/researchers posing novel answers to the mind-body nexus. The Cartesian belief in mind-body dualism perpetuated what the majority of philosophy and science held until the end of the twentieth century. While many have researched and written on the subject, I prefer two for their adroit and well expressed presentations: Bernard Baars and Antonio Damasio. They both disagree with an actual mind-body dualism. Both seem to agree in an “aspect” dualism to describe a process of interaction between mind and body. Both use a similar metaphor for the nexus and concede that the specific locus of the body and mind connection is as yet not identifiable. Damasio explored Spinoza, a contemporary of Descartes, who held that body and mind were a unity. Damasio states that to Spinoza, it was, “no body, never mind.” Numerous

theologies would disagree; we will come back to this later.

Baars is a cognitive neuropsychologist with the Wright Institute who wrote In The Theater of Consciousness. (Oxford University Press, 1997) Baars has been researching his model of consciousness called the Global Workspace theory since the 1980's. On an occasion in which I had the privilege of hearing Baars, he made the statement "brain proves mind". The substantiating phenomena within the brain that to Baars show the evidence of mind are scientifically observable processes: internal speech, mental imagery, conscious perception, emotional feeling, effort, and fringe experience.

As conscious phenomena, Baars would place them in the theater of consciousness from which this interaction is "broadcast" within the organism and outward toward one's social context. The theater's stage and spotlight become Baar's metaphor for the nexus with the remainder of the theater as the representation of various aspects of consciousness contributing to the presentation of self.

Antonio Damasio is head of the Department of Neurology at the University of Iowa Medical School and author of The Feeling of What Happens (Harcourt, 1999). Damasio describes the process of consciousness as a person waiting in the wings of a stage and at the moment one becomes conscious, he/she "steps into the light." In his recent publication, Looking for Spinoza (Harcourt, 2003), Damasio concedes there must be a nexus but says that given current science it is illusive.

Both authors find it necessary to have the theater metaphor for a nexus to explain the consciousness process. Both refer to the physiological manifestation of mind as brain maps. Baar's concept of a brain map relates to an observable normative phenomenon and unrelated to trauma. These physiologically measured patterns, identifiable with imaging techniques such as PET and fMRI scans, relate to specific contexts on which the mind focuses. The patterns are present whether imagined in the mind or experienced in one's social context. Each map would represent how the brain is being used by self in a given context. This brings us full circle to trauma.

Trauma researchers as Bessel van der Kolk have observed such patterns associated to trauma flashbacks and each unique to the context of a specific trauma. Research has also indicated how in dissociative identity disorder, each dissociated alter has a unique pattern. This pattern parallels what Baars calls a brain map. This simply means that a PET imaging scan of the brain would show how each alter uses the brain differently. It is technically possible while under the scanner to know which alter is forward or blending with the Core self at a given moment. This is a frightening thought if one does not keep in mind that the only way this can be done is with equipment to which very few have access and in which one would have to participate.

Consciousness research is clear that processes used in dissociation are more normative than some would have us believe. Trauma is only one definer of context that the mind must have memory/feeling/behavior sets with which to respond for survival sake. That is

consistent with both Baars and Damasio's rationale for the various patterns used by the self in one's interactions with the social/external world.

### **Let's work with the premise.**

The concept of a blending place has been established in the research and phenomenology we have noted; the location of it is not known. The "purple cow" exercise is an example of how normative and logical the phenomenology is. The mind uses the normative processes in daily functioning. The mind will have in the blending place what is pertinent to the context where one is at any moment. Other context information is held out of consciousness. If you are at work, you will have present what is needed for that context. Yet, should a family member call you at work, the context memory/feeling/behavior sets will be available. You will be able rather quickly to shift your focus and interact with the family member. When the call is complete, you can return to work.

I would like to take you for a look inside the mind using the principles of Baars and Damasio theories and findings. On the stage of consciousness is your Core self, standing in the spotlight. The Core self is the star of the show. (Core refers to you as the person who was born into your body and has grown up through all of life's experiences. The Core self experiences the moments of life. Damasio calls this the Autobiographical self in his definition of Core consciousness.) With your Core self is the Work context part, the supporting actor, standing to the side or behind the Core in the spotlight. The Work part holds the context information needed for the job. Blending occurs by sharing the spotlight and makes context-related memory/feeling/behavior sets available to the Core self to do the job.

Now the phone rings. On answering and recognizing the family member, the Family context part rushes to the stage from the wings (a place not in consciousness) and steps into the light with the Core self. The Work part steps into the umbra of the spotlight. Ideally, when the call is complete, the Family part leaves the stage so the Core self and Work part can get back to the task at hand from the spotlight in the blending place. Two other scenarios are possible. If the outcome of the call requires another contact, the Family part will wait in the back of the stage (the penumbra) for the phone to ring. Phenomenologically, you will notice thoughts drifting from work to the Family part's anticipation of the phone call.

The other scenario assumes the call was distressing. The Family part leaves the stage. The Core self gets back to work. Time goes by. The phone rings and you have an uncomfortable feeling. On answering, the call is concerning work but you continue to have an uncomfortable feeling and don't know why. This is what Baars calls fringe experience. The feeling represents a context that is not fully conscious at the moment. This is as if the door to the stage wing is open and the Family part is listening from off stage. Its presence is sensed as feeling. Unless one takes the time to become aware of the feeling, its source will remain hidden from consciousness.

We have just described what happens in a normative process of consciousness. If you

have never experienced trauma, you have just learned of the phenomenology you may take for granted each day. However, trauma survivors can relate to this phenomenology and will often say, "So. What's new?" Because of this phenomenology, consciousness research helps to explain how trauma symptoms impact the survivor.

Let me illustrate. A Viet Nam vet is stops at an intersection, sees a grassy expanse with the sun reflecting off puddles of water, and freezes with slow shallow breath. He is startled back to awareness by someone pounding on his vehicle window. Though it has been thirty years, his Soldier context part comes up. His Core self is blending with the Soldier part who is standing in front of the Core self. In that moment, the context is so parallel to the rice paddies in which he patrolled, that conscious perception is only that of Viet Nam. Not until the distraction is he brought back to the present.

This illustrates both a flashback and a dissociated context part being present in the blending place (nexus). The external associations triggered the memory back into consciousness. The Soldier part was present in the same state as in the context of patrolling with stealth. The Core self was able to regain awareness of his surroundings and go to work. For the next few days, he experienced severe muscle stiffness and cramping that physical therapy did not relieve.

Three phenomena are clear. In response to the external triggered, a context part comes up. That part experienced body sensations, thoughts, and responses as if in that context. The memory that comes up with that part is so dominant in consciousness that discrimination between past and present is lost. Inside and outside the head looks the same in visual perception. Yet when brought back to the present, the Soldier part doesn't dominate. If it had, he may have injured the man, thinking it was the Viet Cong.

Then as fast as it came, the memory disappeared. He was able to go to work and function without thought of the event. However, the physical difficulty was related to the same symptom set as he had for days after that patrol event. This demonstrates that the memory had not totally disappeared from consciousness. Rather, it remained in the fringe being experienced only as somatic sensations of breathing difficulty, muscle cramping, and overall body stiffness limiting ease of movement.

Three days after the event, he came to session complaining of the physical symptoms. By using the blending place as a means of intervention, we were able to identify the context part that was suffering. As we examined the symptoms, and looked over the week, he was able to recall the event three days prior and then to remember the trauma event from thirty years before.

By inviting the Soldier context part into the present, letting it know the war was over, and basically doing a debriefing which was not provided to many vets, the Core self was able to relate to that part of self and feel immediate relaxation and a reduction of symptoms. That is a peek into the intervention process facilitated by using the nexus or blending place.

## **Stay out of my head!**

Now let's consider the nexus phenomenon for trauma survivors as a whole. About eighteen years ago, Jim McCarthy, a social movements researcher was asked to meet with therapists and survivors to listen to their stories of trauma. (Jim is my colleague in Heartland Initiative.) Because of Jim's vast research experience with a range of social movements, he was asked to help make sense of survivor accounts of trauma. While interviewing survivors, he asked a question which therapists still don't ask, "How or where in your mind do you experience what you are sharing?"

Repeatedly, survivors related the phenomenon of blending and spoke of a place where they went in their mind or head to view and describe the memory scene(s). This phenomenon has been consistently observed in trauma survivors by dozens of therapists over the past 18 years. Some survivors are unaware of it. Others will immediately respond with a name for that nexus like "the blending place", "the switching place", or "the changing room".

Some survivors experience a very negative reaction to the nexus concept. Those will assert something to the effect that the therapist is being intrusive. Thus they scream at the therapist, "Stay out of my head." For these individuals, the concept most likely represents a context in which the survivor's mental process, thoughts, and feelings were traumatically intruded upon, thus the incredible rage and terror at the mention of the nexus process.

This is where the therapeutic rapport and trust is so crucial in the healing process. I find that these survivors are frequently very fragmented. The Core self and all aspects of her system knew few places of safety, even within the mind. Establishing mental, physical, social, and spiritual safety becomes the first goal of therapy, consistent with the recognized standards of care in trauma treatment.

The Core self needs to know that as an adult, people do not have the intimate knowledge of her experiences and thoughts that were known in childhood. In that reality is a significant safety and a beginning for healing from even the most intrusive of abuses suffered.

## **Some closing thoughts.**

The nexus concept and its related interventions has been a major factor in my work with survivors for the past six years. It has transformed therapy for both survivor and therapist by defining the real time stage of consciousness in the mind. With this model, both therapist and survivor have a common language that helps to sort out the nuances of

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trauma memory, identify the context of trauma, and provide symptom relief quite quickly. Survivors have been significant contributors to the process through highly creative interventions that work across many contexts of trauma. I am indebted to my clients whose courage has often motivated me to seek out and learn what will work.

The most telling benefit was seen in the lives of two clients I had known for many years. Therapy consisted of stabilization and support without hope of finding their Core self. In spite of how fragmented they were, hospitalization was rare. When the nexus was introduced to them and identified, a change in perception of time took place. We had often cited the phrase known in trauma work, "That was then; this is now!" And, to no avail!

The fact that the nexus also involves the perception of time, they like many clients for the first time were able to distinguish between past and present. In the past six years, both have found their Core self and made giant steps in healing that other mental health professionals had stated would never be possible. Both are interacting socially for the first time from the Core of who they really are.

An amazing fact is that the interventions promoted by The Core Integrity Model are standardized in a way that colleagues are able to cover for one another. The common language of the interventions and the blending place phenomenology allows a therapist to intervene at a time of crisis with another's client. The survivor knows the concepts and with the aid of the back-up therapist is able to once again stabilize.

This allows therapists to take time off and be confident that their colleague can handle whatever may arise. If you are a therapist who has dreaded working with complex trauma, you need to learn this approach. It will allow you to navigate through the complexity of memories and symptoms, providing healing for deeply wounded people.

I saved the touchiest aspect for last. As a person raised in and holding to a Judeo-Christian theology, I believe that we have a soul that also participates in consciousness. This spiritual tradition recognizes the soul as unique to one's identity beyond the physical self and having an enduring consciousness. Yet, there is also a physicality referred to in the consciousness of self after death.

An interesting theological debate could be conducted with Spinoza at this point. Remember the earlier quote? "No body, never mind." For practical purposes, therapists need not answer the debate; but, we must address the spiritual struggle for meaning and purpose in transcending the trauma. The spiritual needs of the human being who has been traumatized must be addressed. As you work with survivors you will repeatedly see the Core self striving to make sense out of the trauma. To not address the existential/spiritual crisis is to not fully support thriving. I invite your feedback and invite you to participate with Heartland Initiative.