The Stress Matrix

IMPLICATIONS FOR PRENATAL AND BIRTH THERAPY

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Preface to "The Stress Matrix" article

The "Stress Matrix" article was written in the mid 1990s just before Alan Schore's, Affect Regulation and the Origin of the Self was published, and before I became aware of the works of Stephen Porges and Dan Segal. The article was my attempt to make sense out of several approaches to working with people who have shock imprints from the pre and perinatal (PPN) experience. I also wrote the article because at the time because I had studied with several different people who developed different language to describe what I viewed as the same basic imprinting phenomena. These people included, Jim Said, Lowel Ward, Hans Selye, Franklyn Sills, William Emerson and Peter Levine. I had studied personally with all of them except Hans Selye. In addition I had the privilege to do collaborative work with Jim, Franklyn and William.

I wrote the article to pull together my own understanding or their works, acknowledge the commonality between them and respect them all at the same time. I did have some charge about all this because at the time there seemed to be a schism between advocates for containment models and forms of work that appeared less contained. I actually attempted to write something that would level the field and show what each had in common.

When you read "The Stress Matrix" it is important to understand that it was written before I immersed myself in the neurobiology of self-regulation and the social nervous system. The article describes my understanding from the work we had done in the 1970s and 1980s. Yet, just rereading the opening paragraphs of the article I can see the precursors to my attempts at understanding coherent narratives vs. cohesive narratives that Mary Mains and the attachment theorists describe.

As you read "The Stress Matrix" article it is important to understand that the article really describes shock processes from this historical understanding and especially from the perspective of the sympathetic nervous system. When I read the article with this historical perspective and the understanding at that time, reading the article makes much more sense to me.

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INTRODUCTION

More and more evidence suggests that most people experience shock one or more times prenatally, during or shortly after birth. For this reason it is imperative that prenatal and birth therapists have an understanding of the mechanisms by which the psyche, nervous system and body imprint shock and later recapitulate the experience with a series of 'shock affect' behaviors. In this article we will explore how an understanding of the Stress Matrix and knowledge of the human nervous system can support effective therapy for infants, children and adults who have experienced shock during these early formative months of life. The Stress Matrix is a conceptual model that I find among the more useful therapeutic tools for assessing the degree of trauma and shock imprinting clients have experienced (Figure 1).

Why Understand the Stress Matrix?

As practitioners, we have all had experiences with clients where the information we are receiving does not add up. Sometimes a flag goes up while we are doing an intake or working with a new client. The energy of the situation may feel elusive, erratic, jumbled or fast. The information that we are receiving may not stack up in a way that allows our system to resonate with our client with a sense of knowingness. Such a feeling might raise any one of the following thoughts or feelings:

What is going on here?

I feel confusion.

I'm not sure what I am looking at.

Something does not feel right here.

I do not trust the signals I'm getting from the client.

This client is presenting in a way that seems just too smooth to be true.

In these situations, if we ignore our own feelings, our safety may be at stake. Our own safety is paramount, more important even than the safety of the client. This may sound strange. However, if we are not safe, the client will not be safe in our presence. If we attend to our own safety first, we create an environment in which our clients can also be safe. It is therefore imperative to have a structure that helps us create a safe environment.

I find the Stress Matrix to be one of the most useful conceptual models to refer to when the above kinds of flags appear. The Stress Matrix supports me in making choices that allow me to err on the side of caution, to proceed slowly and to come to a sense of rightness or congruency within myself about the relationship I am forming with the client.

Even if one has an excellent, trusting, working relationship with a client who carries significant shock affect trauma, the Stress Matrix is a useful tool with which to re-evaluate the direction of the therapeutic process. By using the Stress Matrix as a conceptual model to assess trauma imprinting

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and present affect behaviors, we can support ourselves as practitioners by setting boundaries and creating a therapeutic structure that meets our client's needs. This may include not accepting the client into our practices, providing appropriate referrals to other able practitioners, or getting supervision therapy for ourselves. Or it may be that the client's situation necessitates a team of therapists and/or allied health practitioners.

The Stress Matrix is designed to give us as practitioners an effective way to assess the degree of shock affect or shock imprinting a client is carrying. Moreover, the Stress Matrix helps us to assess the client's 'leading edge' or 'therapeutic edge.' The 'leading edge' is that area of challenge that allows the person to face his or her traumatic and/or shock memories while maintaining access to his or her resources and the ability to be consciously aware.

The Stress Matrix is left-brain knowledge. Used in conjunction with congruent perceptions of our client's process, with intuitive knowing and with a personal 'felt sense' of the situation, the Stress Matrix affords us a level of discrimination that helps us make solid decisions about the therapeutic interventions we make with our patients/clients.

KEY CONCEPTS

Below are some key concepts vital to understanding the Stress Matrix. You may be familiar with some or all of the terms included here. However, my particular way of defining these terms and distinguishing between them may be new to you.

Definitions of Trauma and Shock:

Even though trauma and shock are on a continuum with each other, I find it useful to distinguish between them. Below are definitions that I use for trauma and shock. Later in this article I will expand on these definitions.

- *Trauma* is an injury that occurs during an event that, to some degree, propels a person mentally, emotionally and or physically toward overwhelm.
- *Shock* is a physiologic process that occurs in response to trauma if a person goes into overwhelm.

Dorland's Illustrated Medical Dictionary (28th Edition) has some useful definitions of *trauma, birth trauma and psychic trauma:*

- Trauma: a wound or injury, whether physical or psychic.
- Birth trauma: an injury to the infant received in or due to the process of being born. In some psychiatric theories, the psychic shock produced in an infant by the experience of being born.

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- *Psychic trauma*: an emotional shock that makes a lasting impression on the mind, especially upon the subconscious mind.

Trauma happens to prenates, babies, children and adults and can have several origins. Traumatic events accelerate a person toward overwhelm and begin to interrupt the person's ability to integrate his or her experiences. Trauma may be psychic, emotional or physical. It can occur as a single incident or be constant and repetitive. It can be participatory or passed down through generations. It can be a result of inappropriate pacing—an experience that happens too fast or too slow. Trauma is often the result of medical interventions during pregnancy, birth or within the first several days of birth.

I appreciate the term *psychic trauma* because it is my experience that early traumatic events invariably make lasting impressions on the mind. These impressions imprint the psyche, setting up overlays that influence character structure and personality development.

The definition of 'shock' in *Dorland's Illustrated Medical Dictionary* (28th Edition) is twofold:

1) A sudden disturbance of mental equilibrium.

2) A condition of profound hemodynamic (of the heart) and metabolic disturbance characterized by failure of the circulatory system to maintain adequate perfusion of vital organs (and is marked by) hypotension, hyperventilation, cold, clammy, cyanotic (blue) skin, a weak and rapid pulse, oliguria (urination), and mental confusion, combativeness, or anxiety.

Basically, shock is a physiological process that causes the psyche and body to shut down other than to attend to basic survival needs. It occurs when a person is challenged (traumatized) into overwhelm, interrupting the person's ability to orient and integrate his or her experience. A higher degree of trauma, shock is, in fact, a 'dissociative' process. It may be lifesaving not to feel or experience sensations in the body.

Shock Affect

As stated before, from a practitioner's point of view it is important to distinguish between actual physiological shock and 'shock affect' behaviors. The word 'affect' is often used in conjunction with emotional expression. Shock affect behaviors result from the person recapitulating some aspect of his or her shock experience physically, emotionally and mentally. In the extreme state, frequent and/or intense recapitulation of shock experience can cause a person to go into physiological shock. Most of the time, however, a recapitulation episode does not put the person into physiological shock. Rather, it reproduces a lesser degree of the shock experience energetically in the nervous system, especially

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the autonomic nervous system, and somatically in the body.

These shock affect symptoms are both physiological and psychological. For example, William Emerson, whose work I will soon discuss more extensively, has pointed out that the eyes of people with shock affect trauma may split—one eye can move in one direction while the other eye moves in another. The eyes can also have a glossy appearance. Eyes will also indicate the strategy or strategies of consciousness that people will use to compensate for the shock affect stimuli. They may withdraw their attention within themselves and compress their attention or they may dissociate to someplace outside their bodies. When people are managing their attention in these ways, they are demonstrating 'compensation behaviors' to shock imprinting.

In shock, the body may physiologically go into a freeze state. This freeze state may be recapitulated as shock affect behavior. You may have had the experience of being unable to move as you are waking up. You try to move your arm, for example. You are aware of thinking, of trying to move, but your body does not respond. Another example is trying to act, but being unable to move after a frightening experience. Some people go into a shock affect state when another person is angry with them. They will emotionally freeze and be unable to respond effectively.

Shock affect responses are not physiological shock. They are behaviors that the body produces in response to input triggers or imagined triggers. These triggers activate shock memory. Thus shock affect behaviors are an indication that a person has experienced shock imprinting. Trauma and shock affect behaviors include:

- breaks in continuity of movement patterns,
- specific postures the person assumes,
- catecholamine responses in the neuroendocrine system,
- hyper- or hypo-tonicity in the musculoskeletal system,
- expressions of anger, rage, fear or terror, withdrawal of attention,
- stops and affective shifts in the fluid tide system,
- a breakdown in communication within the person and in relationship to others and
- other compensatory behavior.

It is very important for prenatal and birth therapists to distinguish between 'shock' and 'shock imprinted' or 'shock affect' behaviors. Many craniosacral and body therapists use the words 'shock discharge' to reference energetic and physiological discharge patterns. What is actually happening is that the memory of the shock imprinting is discharging. The person is not going into shock. Therefore, I do not refer to 'shock affect' behaviors or 'shock imprinted' behaviors as 'shock.'

Awareness of our own shock affect behaviors and feelings can personally be very helpful. For example, if someone said to me, "Ray, there is a police person at the door for you," my heart and breathing rates might speed up. I might begin to feel anxious and begin to sweat as I walked toward the door.

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My system might go on active alert. In my thoughts, I might anticipate the worst. And my inner child might be scared. These symptoms would be indications that I have some unresolved shock in my system.

One reason that we may experience so much shock affect behavior like the example above is because we have habituated it. The part of us that was hurt has lost communication or internal contact with our 'resource abilities,' that is, with our ability to be in present time and to move at a pace that allows us to integrate our experience and to respond with appropriate effective expression. The hurt part never got acknowledged. Moreover, it became disconnected and established itself as a vortex, out of contact with our resource abilities. In the example of the police person at the door, a resourced response would be, "Oh, there is a police person at the door. Let's see what they want."

In order to come out of the freeze state or that shock state, it is necessary that we develop a relationship with the freeze or shock state that facilitates integration of the state with present time resource abilities. This new integrated relationship with our previous shock affect experience allows us to reclaim the consciousness that we lost when we went into that shock experience in the first place. This allows our psyche, energetic system, nervous system and physiology to reconnect and realign.

The Stress Matrix provides a framework that allows the prenatal and birth therapist to become very efficient in assisting people to reclaim what they lost when they went into shock in the first place. A major part of this is slowing down the pace to allow the person to connect their resourced self with their shock experience.

Resources

It might be easy to conclude that all we needs to do is maintain an ideal resourced state and we will live happily ever after. A few moments of any person's life will immediately dispel this myth. Every life has challenges, ups and downs, overwhelms, joys and sorrows, passion, success and tragedy. The primary questions to ask here are "How do we meet these challenges?" And, if we are faced with some overwhelming calamity, are we able to reorient, heal and grow from the experience?

In the therapy that I do with adults in small process workshops and with infants and families, it is my habit to establish where the client's resources are before I attempt to work with trauma-based material. It is often the case that traumatic impacts turn out to have their origin in early shock imprinting. I find it therapeutically prudent to come to know what resources my client has access to before he or she gets too far into a session.

Resources can be physical sensations, sensory awareness in the moment, touch, smell, sight, sound, taste, movement and

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internal visceral awareness. Resources support present time awareness and the ability to orient ourselves in time and space, hold appropriate boundaries for ourselves and make appropriate choices. Resources also bring discordant body rhythms within the nervous system, heart rate, breathing rate, movement patterns and energetic rhythmic patterns into a state of harmonic resonance. Basically, resources help us to accurately receive and perceive sensory input, assess the input and respond appropriately.

A major goal of prenatal and birth therapy is to reestablish connection with our resources, to be able to have access to them throughout the varied challenges of life and to expand those resources. A practitioner needs to discover with each individual client what his or her resources are. The process of discovering these resources may take detective work; each individual has a unique set of resources. Effective therapy improves the client's life in the present and in the future by supporting access to spiritual, mental, emotional and physical resources that facilitate the full expression of human potential.

Recapitulation, COEX, and Imprinting

Each of the states of consciousness described in the Stress Matrix may or may not be resourcing. This means that shock itself may be resource. If it were not for the body's ability to go into shock, many of us would not be alive. The farther away we get from the ideal resourced state into shock, the higher the likelihood of adverse imprinting.

I believe that all early experiences leave imprints on our body, mind and emotions whether these experiences are non-traumatic, traumatic or shocking. The problem is that most of us, in some way, unconsciously revolve our lives around trauma and shock trauma imprinting.

Single imprinting events build on top of each other. Later traumatic events actually pack or compress on top of or 'recapitulate' the earlier imprinting events. Stanislav Grof describes this as a 'COEX system.' By this he means similar emotional sets and memories from different parts of a person's life form a system of 'COndensed EXperience.' Each time a trauma is recapitulated, the imprinting from the original trauma is amplified. This building of a COEX system continues throughout life unless 'uncoupled' or 'repatterned.'

Each COEX system revolves around a theme. The basic themes develop during the early preconception to post-birth period. Early trauma and shock imprinting may contribute to major assumptions or belief systems that will govern the person's entire life unless the traumas are resolved and repatterned.

The earliest traumas may occur during the process of embodying—just before and during conception and during the process of gestation. They affect the development of the nervous, muscular, skeletal and endocrine systems.

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Figure 1: Comparative Stress Matrix Chart

Hans Selye	Frank Lake	William Emerson	Lowell Ward	Peter Levine	Randolph Stone	Raymond Castellino
Eu-stress	Ideal	Resourced	Ideal	Rest	Ether	Quiet Presence
Alarm Reaction	Coping	Coping	Coping	Active alert	Air	Active Alert
Resistance	Oppositional	Oppositional	Defended	Fight / Flight	Fire	Fight/ Flight
		Premarginal Stress		Warble		Leading Edge
Exhaustion	Trans-marginal	Transmarginal Stress / Overwhelm	Exhaustion	Shock	Water	Shock / Over-whelm
	Death	Expiration	Death	Death	Earth	Death

Figure 1: The Stress Matrix Chart. The seven columns equate the terms of states of being in the stress continuum from seven different sources. Emerson, Levine and Castellino define a transitional pre-shock stage called premarginal stress, a warble or a leading edge. The chart unifies the stress matrix vocabulary.

Birth imprinting usually recapitulates the earlier imprinting and sends the original trauma imprinting deeper into physical structural levels.

THE STRESS MATRIX

A Historical Perspective

The information on the Stress Matrix chart comes from several sources. Following is an overview of major contributors as well as background information about the evolution of the Stress Matrix as I use it.

Dr. Hans Selye, the Canadian researcher who redefined the word 'stress' in his book, *The Stress of Life*, says that stress is "essentially the rate of wear and tear on the body." He observed consistent, systemic biological reactions and adaptations to stress. He called them the *general adaptation syndrome (GAS)*. The GAS has three phases: 'alarm reaction,' the 'stage of resistance' and the 'stage of exhaustion.' He also defined a state known as 'Eu-stress' or 'good stress.' In a state of Eu-stress, a person has the capability to hold presence, accessing the full range of his or her resources.

Dr. Frank Lake, an English theologian and psychiatrist who observed patients during regression therapy, noted that stress and trauma are part of the same continuum. He defined a Stress/Trauma Index, with four degrees, or grades, of stress and trauma. The four degrees are:

- Ideal
- Coping
- Oppositional Stress
- Transmarginal Stress

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In Lake's model, there is no trauma in the 'ideal' state.

In the 'coping' state there is trauma and some stress response, but the trauma does not overwhelm the person and he or she is able to meet and perhaps even enjoy the challenge. In 'oppositional stress' the trauma becomes so challenging that the person is required to use tremendous resources to maintain presence during the experience. Strong oppositional forces like rage and extreme tension in the body are experienced here.

In 'transmarginal stress' the traumatic forces are so strong that they are totally overwhelming. The person goes into shock and psychically dissociates from the experience.

Dr. Emerson did his doctoral thesis on what happens to the adrenal system during traumatic events. He later worked directly with Dr. Lake. He modified Dr. Lake's four-stage index by adding a transitional state at the end of 'oppositional stress' and before 'transmarginal stress' that he called 'premarginal stress.'

In his doctoral research, Emerson found that, as the amount of stress increases, the adrenal system (the fight or flight mechanism) is increasingly taxed. He says that during ideal states there is no stress on the adrenal system at all; in the coping states, the adrenal response begins to get mobilized in a way that excites the person; the person is on alert. Emerson says that it is during oppositional stress, when the fight or flight mechanism is fully mobilized, that the body's muscle tone becomes hypertonic and the person has access to explosive physical and emotional power. The ability of the adrenal glands to produce the power-giving steroids in the oppositional stage is of limited duration. The adrenal glands eventually get to a point of exhaustion. The transition into the exhaustion of the adrenal system marks the premarginal stress stage and the onset of transmarginal stress or shock. At this point of exhaustion, the body goes through a rapid transition from hypertonicity to hypotonicity. As the descent into shock continues, the person goes deeper into transmarginal dissociated states. The deeper a person goes into shock, the closer he/she is to death.

Emerson points out that in transmarginally stressed individuals we may find various degrees of dissociative behavior, personality disorders, 'borderline' behavior, and, in the higher degrees of transmarginally stressed people, multiple personality disorders.

In the late 1970s a chiropractor, Dr. Lowell Ward, applied Selye's stress concepts to assessing spinal stress. He calls his work Spinal Stressology. Ward also developed a stress index similar to Lake's and Emerson's using the terms, 'ideal,' 'coping,' 'defended' and 'exhausted.' Ward views the cranial, spinal and pelvic structures and mechanism as a 'single synchronous unit.' Through an intricate system of x-ray analysis, measuring

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more than 64 specific criteria in young people and adults, Ward was able to develop norms whereby he could accurately and repeatedly assess the stress state of the patient and predict the patient's ability to recover. In addition, as he began using his methods to evaluate several thousands of patients (by 1981 he had evaluated and treated more than 14,000) he was able to make direct and repeatedly accurate correlations between the patients' physical conditions and their emotional states. Since 1980, Dr. Ward has trained hundreds of chiropractors, including myself, to use the intricate evaluation and treatment methods he developed. Many of these practitioners have been able to consistently reproduce Dr. Ward's findings. However, Dr. Ward has yet to incorporate prenatal and birth experience into his work. The major disadvantage of Ward's system is the requirement of extensive full spine x-rays, the health hazards of which have long been recognized and largely ignored.

In 1980 Dr. James Said, a chiropractor and Polarity Therapist, correlated the work of Dr. Lowell Ward with Dr. Stone's Polarity Therapy. Dr. Said introduced many of us, including Franklyn Sills and myself, to these concepts through his courses based on Dr. Randolph Stone's Polarity Therapy. In his *1971 Notes* on Polarity Therapy, Dr Randolph Stone addressed how trauma and shock imprinting overlay the essential being or primary consciousness of the being. Basing his ideas on Ayurvedic principles from ancient India, he sees the primary consciousness overlaid by a continuum of five elements: either, air, fire, water and earth. He looks at antagonistic, yet interdependent relationships between the five elements and reports how they combine to create the primary attributes of our emotions and body. He asserts that, on the energetic level, it is within the interaction of the five elements that the trauma and shock overlays leave their imprint and obscure one's access to primary consciousness or 'authentic being.'

Dr Peter Levine has also had a significant influence on many of us in the healing arts community with his approach to healing shock trauma: 'Somatic Experiencing.' Levine examined the animal kingdom and developed the continuum of rest, active alert, fight or flight and shock that I use. I will define and delineate these states later on in the paper.

Franklyn Sills uses similar concepts to those already mentioned in his approach to craniosacral therapy.

I have taken, adapted and integrated all of this material into my particular style of facilitating babies, children, teenagers and adults to resolve and repattern prenatal and birth trauma.

The Comparative Stress Matrix Chart

As you look at the Stress Matrix chart, you will see that it is a grid that organizes human experience, expression and states of being along a singular continuum. It begins

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with an ideal state of presence, progresses to higher and higher states of activation, approaches a state of overwhelm and transitions into overwhelm. In the Comparative Stress Matrix Chart (Figure 1) note that each term in the matrix is descriptive of a state of being or consciousness.

Emerson, Sills, Levine and I identify an important transition state between 'fight or flight' and overwhelm. Emerson calls it a 'premarginal state,' Sills uses the term 'perturbation' and Levine calls it a 'warble.' During this transition state, the body progresses through a series of pre-shock changes that indicate that it is about to enter into overwhelm or shock. I refer to this transitional state as the 'leading edge.' Simply put, the leading edge is a primary therapeutic window for healing and repatterning shock imprinting. While working with clients in the leading edge, perturbed, premarginal or warble state, practitioners can help the clients to bridge and integrate the energy that has been sequestered in dissociated states with the resources and energy of conscious awareness. I will go into a more detailed definition of the leading edge and some suggested applications later on in the paper under the section titled "Therapeutic Strategies."

Following is a detailed description of each of these stages of consciousness. Please remember that each of these stages is part of a continuum that leads to higher levels of stress.

Ideal, Resourced, Rest, Ether, Quiet Presence State

During this stage, when a person is in a fully resourced state, there are certain attributes and behaviors that will be present. Generally the person will be relaxed, will demonstrate ready access to 'quiet presence,' will know what they are feeling emotionally, what they are thinking and what they are sensing in their body. The person will be in an integrated state and have equipoise. His or her autonomic nervous system is in balance, with a parasympathetic dominance. Calm warmth will permeate his or her body and emotions.

From a craniosacral perspective, when the person's body needs resourcing, the fluid tides will respond by going into a series of still points. The body naturally seeks still points when it needs to build resources. Still points can only be produced in a quiet, relaxed state. As the body builds resources in the quiet state, it will produce full longitudinal fluctuations that are resonant with what osteopaths and craniosacral therapists refer to as the 'long tide.' This is a keynote to the ideal, resourced state.

When a person's body and psyche is rhythmically in tune or in 'harmonic resonance' with the slow rhythms of the long tide, the person's system will function optimally. This does not mean that the person has to be moving slowly to achieve an optimal state. A person can be in a meditative state or moving with a lot of physical exertion while in harmonic resonance. As long as the rhythm at

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which the person is functioning is in harmonic resonance with the long tide, the person will have optimal access to his or her potential. I believe that this is the state that Hans Selye calls 'Eu-stress.' In this state of harmonic resonance with the 'long tide rhythms' the person will have ready access to his or her pleasure-enhancing and pain-reducing hormones.

The state of 'quiet presence' (as I have termed this stage) amplifies the 'long tide' as a resonant field of very slow oscillation cycles of about 90 seconds to 2 1/2 minutes. I have found that this long tide resonant state is essential for optimal homeostasis of the autonomic nervous system and all of its related functions.

In my research I have found that establishing the slow 'long tide' tempo and harmonic resonance frequencies can optimize healthy birth and establish successful parent-child bonding, attachment and breastfeeding. I consistently work to establish these rhythms with babies and parents during BEBA Therapy.

Alarm Reaction, Active Alert, Coping, Air State

Active alert is a state of readiness for immediate, decisive action. It may be, but is not necessarily, accompanied by anxiety, some fear, or, in Polarity terms, the awakening of 'fire' (though active alert itself is an 'air state'). Physiologically, the body may start to sweat and the eyes may start to dilate. The adrenal cortex begins to secrete catecholamines. 'Active alert,' or 'coping,' requires that we make a decision about our safety that may precede the decision to immediately jump up and run, or turn to face the threat, charge and fight.

Active alert occurs when something catches our attention and causes us to stop, look around and make sure there is no danger. It also makes us ready to act if need be. We see this stage in the animal kingdom when there is an unfamiliar sound or movement in the periphery or there is some sense of impending danger. In the wildlife videos that Peter Levine shows, the animals go into a state of sensory active alert. They are watching, listening, and assessing as the muscle system is made ready.[1] For example, a jackrabbit lifts its head and turns its ears in the direction of the sound. In humans, the active alert state can be stimulated from the outside in a manner similar to this or it can be self-stimulated by one's own thoughts and emotions which are based on some unresolved trauma or shock.

In active alert, lateral fluctuations and distortions of the tide rhythms will interrupt the fluid tides. Lateral fluctuations are tidal movements that move at varying angles across the body or cranium. These lateral fluctuations are the body's attempt to adjust itself to some stress or an energy block that has not resolved.

[1] Peter Levine shows several wildlife videos in his training that exemplify the states of active alert, fight or flight, warble, and letting go into a freeze state or shock.

The active alert may cause our tides to stop. There is a difference in sensation between a stop and a still point. The stop is an abrupt ceasing of the tidal movement. When this happens, the practitioner should utilize 'quiet presence': stop, wait, orient himself or herself, and relax within, thereby reflecting the 'stop' to the client. If the client is in a safe environment, his or her system will shortly resume a lateral fluctuation, long tide or go into a still point. The practitioner's perception of the stop and the subtle acknowledgment of it with a relaxed, reflective state can be very therapeutic for the client.

Resistance, Fight or Flight, Oppositional, Defended, Fire State

If the threat persists, a surge of adrenal cortical 'fight or flight' energy catapults us into action. We turn to face the threat or we take flight and run. Fight or flight can be coupled with rage or terror. We are in survival mode. The adrenal hormones and catecholamines increase in the blood. What was tense during the active alert stage becomes tight and compressed. What was sweaty becomes hotter and the eyes may dilate even more. In its pure state, fight or flight is the active form of the 'fire' state. The stop gets more emphatic in the fluid tides. It is easy to observe and recognize and accurately label these states.

As I have mentioned before, William Emerson points out that a person or animal can only sustain the 'fight or flight' state for so long before the adrenal cortex begins to burn out or exhaust itself. We do not have unlimited fight or flight resources. If we are in flight, we can only run for a finite length of time. Emerson also recognized that pre-shock states and behaviors manifest prior to the person going into shock. Emerson called these pre-shock attributes 'pre-marginal stress' symptoms. When we begin to experience 'pre-marginal stress,' which Peter Levine calls a 'warble,' we are on the edge of our shock affect symptoms.

Franklyn Sills uses the word 'perturbation' to describe the sensation of the energy in the pre-shock or warble state. According to the craniosacral fluid tide model, the energy within the fluid tides has a perturbed, rapid vibration sensation.

Peter Levine shows wonderful videos of animals that have just escaped predators. They stop after the chase, assess that they are momentarily in safety, go into what appears to be a state of rest and clearly ripple as the charged energy from the chase discharges. During the discharge phase, the body naturally sparks off, ripples off or shakes off the unresolved energy of the charged shock state.

Peter Levine points out that human beings are the only species that has the capacity to consistently override this physiological discharge phenomenon and store the energy in our bodies as an unresolved charge. It is not that we do not have the capacity to discharge

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the unresolved energy. It is just that, with the higher cortical levels of our central nervous system, we habitually override the discharge process. The result is that we store stress in our bodies on all levels, across all systems in our bodies. This stress becomes the underlying cause of chronic and acute phases of dis-ease.

From a therapeutic perspective, the pre-shock state is important because it is a clue that the client might be about to move deeper into their shock affect. However, if the practitioner slows the pace down and holds quiet presence with the client at that warble's edge, the client will connect with his/her resources and will begin to discharge the energy of the stored shock.

When individuals or groups are bonded in oppositional energy, the oppositional energy may be perpetrated on others. If the fight mechanism is layered on top of unresolved shock, it is common for people to blame others. It is my belief that oppositional bonding, coupled with unresolved shock, is the basic underlying cause of prejudice.

Exhaustion, Transmarginal Stress, Overwhelm, Shock, Water State

If a person's or animal's adrenal system is pushed to the limit, it will exhaust. If the perturbation or warble continues with no discharge, there will be a point when the animal or person will reach a state in which it surrenders. As the animal or person goes into that surrender state, it will drop into shock. Peter Levine's videos show that there is an apparent signal between the prey and predator. The prey actually drops, surrenders and dissociates before the predator makes the kill. I have a hunch that it is the goal of many mystic teachings to access this state of conscious awareness because this surrender is the state between life and death.

To discuss this stage, it is helpful to review the definitions of trauma, shock, shock imprinting, shock memory, and shock affects proposed at the beginning of this article.

- *Trauma* occurs when there is any impact or influence that takes the body in the direction of overwhelm.
- *Shock* is what the body and psyche do when they go into overwhelm. Overwhelm has inherent in it the attributes of shock. This can be on a visual level, emotional/auditory level and/or a kinesthetic/sensate level in the body.
- *Shock imprinting* is an overlay on the primary being that results from the direct experience of physiological shock.
- *Shock memory* is how we carry that imprinting in our psyche and body.
- *Shock affects* are behaviors and reactions that happen in present time as a result of triggers that activate shock memory.

Shock itself is a state that the body and psyche go into prior to death. The physiological symptoms of shock are

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characterized by tachycardia (excessively rapid heart rate) followed by bradycardia (a drop in heart rate), cold clammy skin, cold sensations throughout the body, shaking in the body, eyes dilating and a drop in blood pressure. If the shock state persists, the person will eventually lose consciousness.

During physiological shock the psyche dissociates. Dissociation is the psychological equivalent of shock. The person's experience becomes overwhelming. Therefore, they will narrow their experience down to a range within which they are able to manage the overwhelm and survive.

After a person has experienced shock, if they have not discharged or resolved the shock trauma, they will imprint that shock, and manifest shock affect symptoms when their stress level raises and/or they experience some event that activates the shock memory. The intensity of an experience determines the degree to which the experience imprints. Regardless, the imprint will be held across every level of being, from psychic levels through the physiological levels, down to the cellular level.

In daily life, any one of us may experience a trigger that causes us to react as if we are experiencing some level of shock when, in fact, our life is not being threatened nor are we in real danger. Someone may say something in a tone that triggers an unconscious memory. By activating the shock memory, the corresponding physiological responses of the trauma will also be activated. We may experience fear; our heart and breathing rates may increase; our eyes may dilate and we may begin to sweat. These reactions are shock affect reactions, not physiological shock.

I think that the occurrence of physiologic shock during birth is grossly under-reported and the long-range effects of birth shock on babies have heretofore been little understood. I think that, more often than not, at some time during a birth, most babies experience some level of shock, especially during the later stages of birth when the baby is likely to experience a loss of oxygen or hypoxia for a short period of time.

Death, Expiration, Earth State

Death is the culmination of shock. Consciousness separates finally and completely from the body. The life force that animates the body ceases to do so and moves on to the mystery beyond physical existence. The body resolves itself, "ashes to ashes, dust to dust, earth to earth."

Figure 2: Nervous System Hierarchy Chart

Sensory / Motor	Nervous System Level	Functional Level	Primary Functions	Therapeutic Approaches
Visual Conscious awareness Seeing/Perception	Neocortex	Mental thought	Conscious awareness Discrimination Differentiation	Verbal rational therapies
Auditory Listening Speaking Responding to sound	Limbic System Midbrain	Emotional feelings and memories ANS / NES* Special Senses	Motivation Connection with emotions Bonding Boundaries	Emotional therapies
Kinesthetic Orients with Movement Proprioception	Brain stem Cerebellum	Physical Body Structure	Survival Sustains life	Somatic therapies

Figure 2: The Nervous System Hierarchy Chart. View this chart from the bottom up, the Kinesthetic, Brain Stem level up. Working with clients who have shock trauma requires repatterning the nervous system from the brain stem level upwards. This approach requires an integrated model of somatic, emotional and rational therapies. *ANS=Autonomic Nervous System. NES=Neuroendocrine System.

OBSERVING THE NERVOUS SYSTEM

Tracking a client's autonomic nervous system (ANS) responses through activation and settling cycles is another essential skill for prenatal and birth therapists as well as a great help when using the Stress Matrix. Hans Selye, Randolph Stone, Peter Levine, William Emerson, Franklyn Sills and myself all pay close attention to how the ANS functions. Peter Levine especially has championed tracking autonomic cycles by identifying and giving attention to what he has called 'resourcing vortices' and 'trauma vortices.'

Activation and Settling Cycles and the Autonomic Nervous System (ANS)

The autonomic nervous system is centrally located in the limbic and midbrain portions of the brain. These areas are highly influenced by emotions. The ANS consists of two opposing yet cooperative systems: the parasympathetic nervous system (PNS) and the sympathetic nervous system (SNS). These systems always work in conjunction with each other; at no time is one totally inactive.

The parasympathetic nervous system (PNS) acts to calm and slow us down. The PNS slows the heart and respiratory rates and is dominant in digestion, assimilation and elimination. The PNS is typically more active in the settling part of the ANS cycle. The

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sympathetic nervous system (SNS) speeds us up. The SNS is dominant during active alert and fight or flight states of consciousness. The SNS is more active during the activation portion of the ANS cycle.

The parasympathetic and sympathetic systems actively work to balance each other. Efficient functioning of the neuroendocrine system (NES) is dependent on a balanced autonomic nervous system. To the degree the ANS is out of balance, the NES is also out of balance. Trauma and shock imprinting have strong influences on the ANS and NES. The perception of danger and/or stress that we have accustomed ourselves to can cause our sympathetic nervous system to override the parasympathetic nervous system.

Activation and settling cycles are observable. If the sympathetic system is overriding the parasympathetic system, the client's nervous system can be in a stressful state of activation. Emotionally, the client may be hyper-aroused, angry, fearful, agitated, have difficulty sleeping or have nervous symptoms. Babies will cry for long periods of time, may be inconsolable, have difficulty sleeping, have difficulty settling to nurse and be fussy much of the time.

If a client's parasympathetic nervous system is overriding the sympathetic system, it may mean that his or her adrenal system is exhausted or is becoming exhausted. The client's body may be hypotonic. He or she has little energy and tires easily. Babies may stare off into space, appear disconnected, be unable to hold their heads up, show diminished response to outside stimulus and have difficulty attaching to and sucking at the breast.

In both cases, when either the PNS or the SNS is overriding the other, babies will have difficulty attaching to their mothers, fathers or other primary caregivers.

It is the practitioner's job to support the discovery of the babies' or adult clients' resources, to build the potency in the resources and ANS balancing, and to observe the healing of the system. All healing in the body, including emotional healing, is in some way related to establishing a normal balance in the ANS between the sympathetic and parasympathetic nervous systems.

A Story from the Animal Kingdom

The following story was inspired by Peter Levine's attention to the animal kingdom and ANS functioning.

Imagine a doe and fawn peacefully grazing in a meadow. From a distance downwind a hungry coyote picks up their scent and begins to stalk them. The coyote carefully approaches the deer. As the doe becomes aware of the coyote's presence, she simultaneously perks up her ears and signals her fawn not to move. The doe and fawn are on active alert. They can take flight in a moment. The coyote, aware he is discovered, lunges and bolts toward the fawn. As the coyote enacts the intention to lunge, the doe signals the fawn to take flight. They bound away. The coyote chases and

chases until finally he exhausts his sprinting resources. This time the deer outrun him.

When the deer are safely away from the coyote, they stop to collect themselves. The energy charge of a narrow escape and near death experience have built up in both deer's bodies. At this point they stop. Their bodies begin to let down, settle and go through a series of sympathetic activation cycles and parasympathetic quieting cycles, revving and settling cycles. They gradually come to a place where they sustain themselves for some period of time in a state right between an activation a settling cycle. When they reach this state their bodies will begin to discharge with a series of energetic ripples, quivers, and shakes. As they quiver and shake, they discharge all residual build-up left over from their encounter with the coyote. When the doe and fawn settle, they move on to their next grazing place with calm equipoise.

Peter Levine points out that human beings are the only creatures that consistently override their ability to somatically discharge shock through autonomic sympathetic and parasympathetic cycling. The deer went through the activation of active alert, fight or flight. Then, as they discharged the stress of flight, warble cycles allowed them to discharge the trauma imprinting. He advocates that practitioners learn how to track each client so that the client is able to relearn how to stay in the shock discharge state as a method of resolving shock trauma. It is evident that this somatic discharge state resolves the shock imprinting on the brain stem level.

The premarginal, perturbation, warble, leading edge state is the state between the trauma imprinting states including active alert and fight or flight and the shock imprinting state. It is a transitional state that can bridge or link our resources with the energy that is bound up in either trauma or shock imprinting. It is the key process in healing stored trauma/shock imprinting. Tracking these activation and settling cycles and learning to identify and help clients to access the transitional state between fight or flight and shock imprinting are key tools for practitioners.

Neuroendocrine Responses to Traumatic Events

I think that the difference between what Selye calls 'Eu-stress' and traumatic stress is registered in the neuroendocrine system. Many practitioners who do various forms of trauma resolution work have observed that two different people who experience the same situation will react and respond entirely differently. One person, in response to a traumatic experience, may be able to mobilize himself or herself into effective action and maintain a clear mind, while another person may buckle and collapse under the same or a similar experience. The reasons for this are numerous.

However, the point I wish to make here is that I believe the neuroendocrine system of the

first person will produce endorphic hormone neurotransmitters and the second person will produce catecholamines. Endorphins are the body's opiates. They are released when the person meets a challenge from a perspective of choice and personal power. Catecholomines are the stress hormone neurotransmitters and tend to accelerate a person's aging process. I believe the person who has the Eu-stress experience has the capability of holding presence, accessing a full range of spiritual, mental, emotional and physical resources. The second person will tend to be fear and/or rage driven and will be unable to have conscious access to his or her spiritual, mental, emotional and physical resources. These two people will have entirely different perceptions and experiences of the same situation.

When a person is able to respond to a given situation from the point of view of Eu-stress, producing endorphic hormones, he or she will be able to remember the event without charge. There is no charge associated with the memory to be reactivated.

When a person responds with catecholamine production, this charge will be stored as a trauma imprint or memory. When the person recalls the stressful event, his or her psyche, nervous system and body will to some degree reproduce the charge that he or she experienced during the original event. These stored imprints become the basis for traumatic memories.

Unresolved charged memories influence the way one reacts during present events. It takes a lot of present time energy to maintain unresolved charged memories in one's psyche, nervous system and body. It is very important to understand that memories are not just visual images. Memories have a full range of thoughts, emotions and sensations. Charged memories from traumatic imprints interrupt the free flow of energy throughout one's whole being.

Effective therapy will support clients to repattern or change stressful activating reactions into resourced Eu-stress responses. As Peter Levine has stated, the person will change his or her relationship to the event. He or she can recall it and remain unaffected by the memory. The person will be freer to respond in effective ways that make fuller use of his or her potential. This is true for babies, children, teens and adults.

Nervous System Hierarchy Chart (Figure 2)

In observing how a client resources himself or herself, a practitioner may note if the client demonstrates a dominance for kinesthetically, auditorally or visually oriented behaviors. Kinesthetically oriented people will be inclined to sensation awareness and body movement. Auditorally oriented people tend to be very aware of listening, speaking, responding to sound and emotional feelings. Visually oriented people tend to be more intellectual and more organized in their thought processes.

Each of these basic approaches will activate one part of the nervous system more

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than other parts. Kinesthetic activities will activate the brain stem level of the nervous system more than the limbic or neocortical levels. Auditorially oriented people will tend to activate their limbic system more than their brain stem or their neocortex. Visually oriented people will tend to activate the neocortical levels of the nervous system more than brain stem or limbic system levels.

While this view is a gross over-simplification of how the nervous system functions, it is therapeutically useful in some basic ways. The practitioner can use the Nervous System Hierarchy Chart to assess on which level or levels his or her client tends to function and to note how resourced the client is on those levels.

A fully resourced person will demonstrate optimal functioning throughout his or her nervous system. So, preferential behaviors in one area over another indicate the possible existence of traumatic imprints for which the person has compensated. The compensation pattern initially functions as a resource. However, over time, the repetition of the compensation pattern will limit access to his or her full potential.

After the initial shock experience, dissociation becomes a part of the person's compensation patterns. Dissociation is a partial or total disconnection of our consciousness from our bodies. It is a psychic survival mechanism—the psyche dissociates while going into actual physiological shock—and is one of the primary mechanisms that imprint during shocking experiences. During shock, the dissociation process is essential. This is how the person survives!

In a life-threatening situation, the dissociation process is very resourcing. Shock is nature's way of preserving life and/or transitioning to death. In the preservation of life, it is a primary survival mechanism. If a person is to die, shock may provide tremendous analgesic and anesthetic effects and support the transition of consciousness from the physical body.

In the nervous system, the mechanism of dissociation follows a progression according to the following principle: As shock or shock imprinting onsets and increases, function begins to decrease, first in the higher neocortical visual functions, then progressively through the limbic system and midbrain levels and, finally, in the brain stem.

The further that one moves from trauma imprinting to shock imprinting, the more disconnected one becomes from resources that support one's consciousness to remain embodied. The closer one gets to overwhelm, the less one is able to maintain neocortical conscious awareness. As the overwhelm continues, nervous system functions will close down the limbic system and the midbrain functions. Finally, one is reduced to brain stem survival functions only.

Later, when traumatic memories are reactivated, it is possible to assess the level and degree of the impact by observing how the person functions. When a person begins to

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lose the function of rational thought and speech, he or she is in a dissociative progression.

During a session, I mentally refer to the Nervous System Hierarchy Chart as I observe the client. If the client is acting out of survival, it indicates that he or she is functioning from the brain stem level even though he or she has access to higher nervous system functions. This means that the client is recapitulating a shock affect state and is losing contact with his or her resources and full use of his or her higher nervous system functions. In this situation I work with the client to keep conscious awareness of the process. Usually this is done by supporting the client to slow down the process and decompress the experience. I support the client to stay in conscious awareness of physical sensation and to witness himself or herself in the moment. In this way, the client maintains contact with his or her neocortical function.

WHY SOMATIC WORK MOST EFFECTIVELY DISCHARGES SHOCK IMPRINTING

I advocate a form of therapy that integrates the best of verbal, emotional, and somatic approaches. In my experience, it takes somatic work to effectively discharge shock imprinting.

Since we, as humans, have the capacity to override the ability to somatically discharge shock imprinting, we may miss the opportunity to connect with the discharge faculties that exist via the brain stem and cerebellum.

I believe that is one of the reasons why human beings are so emotional. We attempt to discharge through our emotional system, which is primary governed via the limbic system and the midbrain. By discharging through our emotional system we do not fully access the brain stem and levels of the cerebellum, thereby missing the opportunity to resolve and repattern shock imprinting.

It also takes a lot more energy to discharge through and reorganize with the emotional system than it does through the physical body. When a person attempts to discharge through the emotional system, he or she may experience some temporary relief or uplift. But, if shock imprinting is the underlying cause, emotional discharge will not sufficiently reach the brain stem level to allow the ANS to balance and normal autonomic cycling to reestablish. To repattern shock imprinting, it is prudent to build the client's therapeutic reorganization from the brain stem upwards.

When the potency in the system has sufficiently built up and the client's nervous system is strong enough, he or she may naturally go through a phase of emotional work, including catharsis. However, if the therapy focuses too much on the catharsis as the primary therapeutic tool, the therapy will be less efficient or the person will not resolve his or her trauma on the lower levels of the brain.

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An analytical, rational approach to repatterning shock imprinting starts from the top at the neocortex. This approach often doesn't reach into the limbic and midbrain emotional system and rarely reaches the brain stem level. At the same time, it is important to note that bridging brain stem somatic therapy or emotional therapy with verbal, neocortical approaches allows the person to more fully integrate his or her experience.

This is why rational and emotional therapies that do not integrate the somatic body perspective are not as effective over time. This is one of the major reasons that a thorough grounding in fluid tide craniosacral work is essential to my approach to prenatal and birth therapy for babies, children and adults.

Conversely, if the therapy avoids emotional expression, the limbic system will not be appropriately activated and integrated. Containment at the expense of healthy emotional expression and catharsis may equally disallow a person to fully integrate and repattern shock imprinting.

I am very appreciative of emotional and rational therapies but I feel strongly that the most efficient therapy is one that integrates all levels of the nervous system: neocortex, limbic, midbrain, and the brain stem and levels of the cerebellum. If we do not slow down to consciously track the experience at the same time that it is occurring, then we will not go to the brain stem level and fully discharge the shock imprinting.

THERAPEUTIC STRATEGIES

Following are therapeutic strategies that I consistently employ during sessions that can be used in conjunction with the Stress Matrix. I use these tools routinely because I have found that most people that I work with have experienced shock at some time during the pre- and peri-natal periods of their lives. If shock trauma or transmarginal stress is present, it is prudent to make sure that the client has ready access to his or her internal resources and that his or her pacing needs are met. Failure to do this may result in the client recapitulating his or her trauma, reinforcing the trauma imprinting.

Quiet Presence and Pacing Skills

From a therapeutic perspective, if we slow the pace down and hold quiet presence with the client at his or her leading edge, the client will begin to discharge the energy of the stored shock. Moving in the slow rhythms of the 'long tide' supports the client to somatically discharge shock imprinting on the brain stem level.

Babies' responses and reactions to input can be as varied in expression and intensity as those of adults. While what babies do and express and our response to them is important, the critical components are that we keep our attention and empathic contact with them and that we attend to their pace or tempo. We need to move at a pace that allows us to keep contact with them. Reactive responses need to

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be acknowledged. The baby and parents must be encouraged to control the pace and the therapeutic space.

When working with babies, children or adults in regressed states, their nervous system, fluids, tissues, and bony structures respond as if they are in the state to which they have regressed. With recapitulation and COEX matrix dynamics, a regressed client may be expressing or experiencing trauma impacts from several different time periods. It is important to focus on manageable units with the client. In Peter Levine's terms, 'titrate' and pace the process with the client so that they can access their healing resources as well as touch their trauma experience.

Developing a Therapeutic 'Felt Sense'

In the therapeutic model that I have developed, the first thing I do is to establish contact, rapport and safety. Most importantly, I establish with the client his or her own 'felt sense' of their resources! It is in this area of experience that the client can feel his or her personal power, endorphic sensation of pleasure and a new way to be with pain.

One of the goals of the work is to establish contact with and support the underlying essence of the primary being or to establish contact with the primary essence of the being. This contact has a characteristic 'felt sense' (Levine) that can be identified and cultivated. Learning to orient in the moment with our attention in our body, relaxing and focusing attention will teach the art of quiet presence and the skill to perceive and discern the felt sense of when you and your client are in integrity with the primary carrier wave essence of being.

To learn mastery of an instrument, a musician must practice playing the instrument. A therapist's instrument is his or her body. Training and practicing with his or her body and attention develop a therapist's art. This means that, by practicing the art of quiet presence, the practitioner will gradually learn to identify the felt sense and the internal 'knowing' when he or she has contact with a person's primary essence. I am intentionally not describing these sensations specifically because they are:

- Developed from the inside out.
- Subjective sensations based on individual perception. Discussion with other skilled practitioners can help confirm one's felt sense.

This is a skill that is learned from holding quiet presence and trusting one's perception. Over the years working with myself and hundreds of students, I have found that it is more efficient for students to develop their own sensate vocabulary and then compare their sensations with others while they are tracking another person at the same time. This process allows practitioners to 'come into themselves' as they develop their skills.

It is also my experience that the least efficient way to learn these skills is by approaching them intellectually first. These

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skills are experientially, not intellectually, based. Didactic information, however, should not be ignored. Didactic knowledge is very helpful to provide a framework or matrix on which to place your own experience. Students who attempt to match their experience to what they think others are experiencing tend to have the most difficult time learning these therapeutic sensate skills.

The primary principle for the efficient learning of these skills is to cultivate quiet presence within oneself, slow down, be aware of one's experience and trust the experience one is having.

Therapeutic Verbal Skills

Develop language that is simple, reflective and that directs the client's attention to his or her resources, to a leading edge, and serves an immediate need. The most effective verbal skills for repatterning shock imprinting are seldom analytical or interpretive. They are direct, simple statements or questions paced in a way that support the client's ability to access his or her resources, move into his or her leading edge, effectively cycle through his or her autonomic responses and integrate.

Figure 3: Building Congruent Corollaries: A Partial List

Clinical History	
Prenatal	Facial Expressions
Birth	Non-Verbal Behavior Cues (In Response To
Postpartum	Verbal, Tactile And Kinesthetic Stimuli)
Pre And Peri-Natal History	Kinesthetic/Palpation/Energetic Far, Near
Multigenerational History. What	Touch, Direct Touch
Happened To Parents And	Emotional States
Grandparents?	Ability To Witness
Stress Matrix Evaluation	Fulcrums
Brain Function Hierarchy Evaluation	Shapes
Visual Structural Patterns	Vectors
Cranial Shape and Molding	Conjunct Or Trauma Sites
Static Posture (Weight Bearing/Sedentary)	Conjunct Pathways
Trauma Posture(S)	Schema / Movement Patterns
Muscle Tonicity	Trauma Position
Movement Patterns	CRI / RTM
Emotional Assessment	Tonicity
Trauma Posture(S)	Auditory
Body Rhythms	Speech Patterns / Listening Patterns
Energetic Rhythms	Autonomic Responses
Fluid Tide Rhythms	Activation / Settling Cycles
Eyes Movements	Personal Knowing
Eye Contact	

Figure 3: Partial list of information that practitioners collect and use to build congruent corollaries.

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Congruent Corollaries

Corollary congruency is the process of accumulating observations and correlating them to build a congruent picture. One adds observations and collects information until the picture is clear. Once the picture is clear, new information should act to confirm it. In the process, as you look, as you listen, as you palpate, as you interact, there is a sense of rightness. The gathering data lines up and matches your personal knowing (felt sense of rightness). There is a sense of "Aha, I've got it!" I call this picture 'congruent corollaries.'

In practice I've found it is very useful to refrain from coming to a conclusion too soon. If I wait for the felt sense of rightness to drop in and keep looking, giving myself permission to swim in the uncomfortable state of unknowing, the gathering of information reaches a critical mass and sooner or later all the pieces fall into place presenting a whole congruent picture. Figure 3, Building Congruent Corollaries is a partial list of observable cues from which I draw in developing a congruent picture.

The Leading Edge or Therapeutic Edge

Another significant therapeutic tool and resource is to establish, track and sustain presence with a client's leading edge or therapeutic edge. The leading edge, as I have mentioned before, is that place in the cycle where a person begins to activate and is able to hold presence or self-awareness before they lose their ability to orient and go into overwhelm or enact a compensation behavior.

We are on our leading edge when we begin to activate from either external or internal stimuli without losing connection with our ability to orient and resource. The leading edge occurs before we go into overwhelm. It is a state in our consciousness that includes the challenge of our next step. It allows us to dance on the edge of the challenge while orienting and accessing our internal resources.

Anna Chitty, the noted polarity and craniosacral teacher, states:

> Being on your leading edge is the ability to be activated and still resourced enough to act or move in a way to complete the activation cycle. If you take your time, you could complete the activation cycle. If you don't take your time, you could spin into overwhelm.
>
> The leading edge is before the overwhelm. It is sort of like before the rapids when the water begins to get a little bit bumpy but you still feel your resources to handle it. Holding yourself at that place will allow your system to cycle quite naturally. If you get too far, your system will not be able to cycle from sympathetic to parasympathetic.

It is in the establishment of the client's own resources that he or she is able to develop the skill to be in present time, approach his or her own personal therapeutic edge, ride that edge, experience his or her being and develop the still to integrate.

How Gabreal Explored His Leading Edge: Therapeutic Techniques in Practice

Gabreal is a six-month-old boy who was born at home to Katie, who is a single mom. Katie is very sensitive to her body. She is among those women who knew immediately that she was pregnant. When Katie told Gabe's father that she was pregnant, Gabe was in cellular development as a morula just about to emerge into the womb from the fallopian tube. This period was very stressful for mom, dad and, yes, for Gabe. We think that Gabe experienced the stress too, not just because he was inside his mother but because his therapeutic exploration and movement patterns indicate that he experienced the stress. Graham Farrant and others call this level of imprinting 'cellular memory.'

By the sixth month after his birth, Gabe and his mom had participated in ten BEBA sessions. During several of the sessions Gabe was supported to explore movement patterns that he initiated and to play with toys that he selected. Gabe was very explorative and was able to crawl all over the treatment room.

During his tenth session Gabe chose to play with a three-foot plastic green tube with which he had played several times before. He picked up the tube and blew on the end. I picked up the other end and blew on it in a way that made a quick, mildly startling sound. Gabe reacted. He looked to his left at me and then to his right at his mom. As his head approached the midline, while he turned his head from left to right, Gabe's face and eyes indicated that he was disoriented. He began to cry. He recovered from the apparent disorientation because he was able to connect with his mom.

My blowing on the tube was a stimulus that caused Gabe to activate. This whole sequence took only a few seconds. At this point in the session I apologized for startling him and supported him to resource with his mom.

I believe that the combination of the sound and Gabe's head approaching the midline was a leading therapeutic edge for him. I believe that, during this sequence, Gabe experienced an activation of unresolved cellular memory from his tube journey and expulsion into his mother's womb. His choice of the tube toy is indicative of Gabe's way of telling us about his tube journey. His movement pattern from left to right and his affect activation at the midline indicate his feelings of the unresolved conflict between his parents. I explain the derivation for interpreting movement patterns in my paper, *The Polarity Paradigm Regarding Preconception, Gestation and Birth.*

When we viewed the videotape of this sequence in slow motion, a new perspective of the activation process was revealed by Gabe's facial expressions. As he approached the midline, he appeared to disorient and agitate. When his eyes reached the midline, it appeared that he was very disoriented and more agitated. His eyes indicated the possibility that for that brief moment he was dissociated. As he crossed the midline, he was able to reorient with his mother, settle himself emotionally,

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and go on with his exploration. I believe that this activation is indicative of a time when, in his prior experience, his psyche and cellular system either went into shock or were very close to it. Yes, I believe that it was possible for his undifferentiated system to register the shock even at the morula and blastocyst level of development.

In the above example, Gabe's leading edge occurred in the moments just prior to his disorientation at the midline. In the moments before the disorientation, Gabe was still oriented. The problem was that the whole sequence went by so fast that Gabe was unable to stay oriented and resourced through the sequence. Gabe's emotional activation and apparent disorientation allowed us to identify a break of continuity in his emotional system and body movements.

Forty minutes later in the session Gabe found his way back to the tube and began to play with it. Serendipitously, he was again between his mother and me. This time his mother was on his left, and I was on his right. We both played with the tube. This time, I told him what I was about to do with the tube each time before I did it. I tracked the energetic sense of his autonomic activation and resourcing cycles. As he began to speed up, as indicated by his breathing and the felt sense of the tempo, I would slow myself down. When we together came to a point of cooperative equipoise, I told Gabe that I was going to pick up the end of the tube and blow on it. As I blew on the tube, I sustained the tone so as to follow his gentle activation/resource cycles. I repeated this with him about six times. Each time I forewarned Gabe that I was about to blow on the tube with the words, "Here it comes again." Each time I made the noise through the tube, I was activating his system, and increasing the time with the activation. I did this in such a way that he could hold presence with the noise. This was in marked contrast to the first time in the session, 40 minutes before.

Therapeutically I was able to slow the pace down, and repeat the sequence enough times so that Gabe was able to approach the disorienting part of the cycle, this time without being disoriented, and to maintain contact within himself with his ability to orient and resource. With each repetition, I would work to sustain his presence in the leading edge and play with him so that he appeared to be able to change his relationship with the activating stimulation. I believe that as Gabe turned his head back and forth from left to right and right to left, he was repatterning the midline break in continuity that he had associated with his mother's and father's conflict about becoming pregnant. It appeared that he was able to establish continuity across the midline and differentiate between his parents' difficulty about his conception and his own experience of his tube journey. At the end of the sequence, Gabe simply let go of the tube and moved on to another exploration.

His mother reports that Gabe, who is now four-years-old is very interested in the ocean,

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swimming and snorkeling, an activity that requires him to breathe through a tube. He easily swims the length of the swimming pool. In addition, Gabe is extremely physically well coordinated for his age, cooperative, fun and compassionate.

SUMMARY

Repatterning or resolving shock imprinting requires a body-oriented approach that integrates the nervous system from the brain stem through and including the neocortex. The Stress Matrix, used in conjunction with an understanding of the basic functions of the nervous system, is an extremely useful tool for supporting clients in repatterning and resolving trauma and shock imprinting. The Stress Matrix helps the practitioner perceive the clients' leading edges, therapeutic challenges, and activations. The therapist can then support the clients to work at a tempo or pace that supports their access to resources, allowing for new healing connections within the psyche, nervous system, and body. It is the clients' tempo that allows for self-awareness, the awareness of resourcing sensations, connection with other resources and the acknowledgement of the trauma memory. All these resources combine to repattern previously confining memories to more functional ways of being that enriches the clients' lives, as well the lives of those around them.

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He is the co-founder, Executive and Clinical Director of BEBA (Building and Enhancing Bonding and Attachment): A Center for Family Healing and Research, a non-profit research clinic in Santa Barbara devoted to strengthening the bonds between prenates, babies/children and their parents and optimizing children's physical, emotional and mental development.

Through a separate organization, the Castellino Prenatal and Birth Therapy Training, he offers three-day "Womb Surround Therapy"[sm] Process Workshops for adults, a two year, 42-day Foundation Training on resolving early trauma and further clinical and internship training for healing arts professionals.

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He is married and the father of two grown children.

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