Chapter 1

Coregulation
Primacy of Resonance

Coregulation is essential for human beings and critical to early development. As noted by Allan Schore, the coregulating dyad of neonate and parent is paramount:

> . . . The "experience" that is required for the "experience-dependent" growth of the brain in the first two years of human life is specifically the social-emotional experiences embedded in the attachment relationship between the infant and the mother.[45,46]

Schore elaborates upon what constitutes attachment within the dyad:

> . . . psychobiological attunement, interactive resonance, and the mutual synchronization and entrainment of physiological rhythms are fundamental processes that mediate attachment bond formation . . .

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[45] Allan N. Schore, "Parent-Infant Communications and the Neurobiology of Emotional Development," Chapter 4 of *Affect Dysregulation and Disorders of the Self*, W.W. Norton & Company, Inc., New York, 2003, (*Affect Dysreg*), 73.

[46] Schore anticipated the dyad to be formed with the parent who carried the pregnancy. However, the primary dyad may be with a parent who did not carry the pregnancy. At birth, the fetus possesses a merged identity with the womb parent. Sustaining the baby-womb parent dyad supports bonding and attachment. Disruption of this relationship, whether unexpected or planned, impacts the neonate. Essential is the provision of accurate reflection and space for the baby's feelings.

> To put this another way, . . . the mother is synchronizing and resonating with the rhythms of the infant's dynamic internal states and then regulating the arousal level of these negative and positive states. Attachment is thus the dyadic (interactive) regulation of emotion (Sroufe, 1996).[47,48]

"Entrainment of physiological rhythms" includes the coregulation of the autonomic nervous system, which manages physiological functions that occur without conscious thought, such as breathing, digestion of food, heart rate, and healing from injury and illness. In the neonatal intensive care unit (NICU), infants and neonates are, typically, continuously monitored for their heart rate, respiratory rate, and oxygen saturation level. Periodic measurements of other parameters, such as blood pressure, may also be taken.

"Interactive resonance" and "regulating the arousal level" refer to the dynamics of the interaction between neonate or infant and caregiver, that teach, through coregulation, the management of emotions. Eye contact, facial expression, touch, and speech, are gestures that support bonding and attachment. The importance of this type of human connection is reflected in the observations of Dan Siegel:

> . . . I am proposing that the mind develops at the interface of neurophysiological processes and interpersonal relationships. . . . Interpersonal experience thus plays a special organizing role in determining the development of brain structure early in life and ongoing emergence of brain function throughout the lifespan.[49]

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[47] Allan N. Schore, "Minds in the Making: Attachment, the Self-Organizing Brain, and Developmentally-Oriented Psychoanalytic Psychotherapy," Chapter 2 of *Affect Regulation and the Repair of the Self*, W.W. Norton & Company, Inc., New York, 2003, (*Affect Repair*), 39.

[48] "[Trevarthen] noted, 'The intrinsic regulators of human brain growth in a child are specifically adapted to be coupled, by emotional communication, to the regulators of adult brains' (1990, p. 357). . . . growth [of the baby's brain] requires brain-brain interaction and occurs in the context of an intimate positive affective relationship." *Affect Repair*, 39-40.

[49] Daniel J. Siegel, *The Developing Mind—Toward a Neurobiology of Interpersonal Experience*, The Guilford Press, New York, 21, 1999. (*Devel Mind*)

> Early in life, interpersonal relationships are a primary source of the experience that shapes how genes express themselves within the brain.[50]

When circumstances dictate that the neonate resides in the NICU, parent-infant bonding and attachment faces disruption. When parents cannot be present, the use of cuddlers provides an additional layer of support. While older infants may be ready for more active engagement, quite often, neonates and younger infants in the NICU need sleep to promote brain development and restoration. Grigg-Damberger and Wolfe note:

> The greater time spent sleeping in infancy and early childhood is thought to reflect the crucial role sleep (especially REM sleep) plays in fostering optimal brain development, cognition, and behavior. . . .
>
> . . . Four prospective studies have shown poor-quality sleep in hospitalized premature and term infants has lasting effects on later cognitive functioning. . . .
>
> Such findings have prompted interventions to improve sleep quality in neonatal intensive care units including kangaroo care (placing baby upright against the parent's bare chest to sleep), environmental noise reduction, lights on 7:00 AM to 7:00 PM (and off the rest of the time), nonpharmacological treatments for pain, and postponing routine care and procedures when the infant is sleeping.[51]

Quite often, the goal of a cuddling session is to support the baby to sleep. The minimum recommended duration for a cuddler session is forty-five minutes, which is the duration of a sleep cycle.

[50] Siegel, *Devel Mind*, 14.
[51] Grigg-Damberger MM, Wolfe KM. Infants sleep for brain. *J Clin Sleep Med*. 2017;13(11):1233–1234.

As a CPBT-BCST practitioner, I arrive with the general intention to be present as practitioner and support the neonate or infant in their priority, whatever form that may take. The root always is respect for the sentience of the neonate or infant and trust in their innate wisdom as to what it is they need. Coming into energetic resonance sets the container for the work.

Within this context, the neonate or infant perceives a greater degree of safety and may feel encouraged to express themselves. They may show birth story.[52] Confident that they will be listened to, they may cry to share deep emotion associated with their birth story. Or they may drop into sleep, sometimes, a kind of profound, spiritual sleep.

The following seven vignettes portray the practice and benefits of coregulation. All of the vignettes exhibit the use of PPN affirmations, which is discussed in Chapter 2. *Johnny* and *Corbin* illustrate entrainment of physiological rhythms. *Sadiq* demonstrates the interplay of somatic and energetic coregulation. Khadija connects on verbal and energetic levels, while Orabeth responds to verbal PPN affirmations. *Mr. Moreno* shows the depth of connection possible through a solely energetic approach. *Reed* illustrates the potential for an energetic approach to minimize the need for high tech, dehumanized care.

[52] "Birth story" may refer to the literal birth or to the broader span of pre-conception, conception, implantation, gestation, birth, and the perinatal period.

Johnny

Nurse Hien asked that I hold Johnny, whom she was holding in an attempt to soothe him. Johnny had been born at 40 weeks and weighing 4,946 grams (10 pounds, 14.5 ounces). He was now 46.6 weeks and just under 5,443 grams (12 pounds). I imitated the configuration of two blankets over Hien's shoulder and washcloths for spit up, which testified to Johnny's reflux. Hien shared that Johnny had been born by caesarean section due to low fetal activity.

Johnny cycled through a hard left turn of his head accompanied by crying. He cried often and, as he was not calming, at +20 (twenty minutes into the session), I shifted him to face me, chest-to-chest. To help hold such a large child, I placed pillows at the sides and embraced Johnny in a sandwich. Hien shared that Johnny was treated with therapeutic hypothermia for the first seventy-two hours after birth.[53] He had had many low indicators initially. When intubated, he had cried so much that they had removed the tube. His numbers were more "normal" now.

The new nurse, Jomari, who had arrived at shift change, shared that Johnny's parents resisted medications. They were very engaged and wanted to know test results immediately. Johnny let his head drop with his face in my chest and slept. Because his breathing was labored, a few times, I shifted his face so he could breathe better. Around +75, I offered the *No Fault: Everything that is here was here before you came. You did not cause it. It is not your fault. It is not your job to fix it*. He gave a slight cry, then dropped into deeper sleep.

[53] "Neonatal body cooling, also called newborn therapeutic hypothermia, lowers your baby's body temperature to treat hypoxic ischemic encephalopathy (HIE). HIE is a neonatal brain injury that occurs if your baby's brain doesn't receive enough oxygen." "Whole Body Cooling for Hypoxic Ischemic Encephalopathy." *Children's Hospital Colorado*, June 01, 2024, *https://www.childrenscolorado.org/doctors-and-departments/departments/neonatal-intensive-care-unit/neonatology-programs/whole-body-cooling/#:~:text=During%20neonatal%20cooling%2C%20your%20baby,the%20severity%20of%20brain%20injuries.*

About a half hour later, I was hot and hungry and ready for a break. Jomari placed Johnny in his isolette. After he left, I was able to place my hands on Johnny's crown and feet. Holding our connection, I said, "*I'm moving my hands*." Pause. "*I'm moving my attention*."[54,55] Johnny remained in his deep sleep.

2nd Session

About 45 minutes after my first session with Johnny, Jomari asked me to hold him, again, because he was dysregulated. I held Johnny chest-to-chest in a pillow sandwich, as before. In no time, he was asleep. By +20, I felt the deep shift in myself from our coregulation. I left at +30, the end of my shift.

[54] This differentiating practice derives from the principle of "touch and attention." It supports the neonate and infant to transition from coregulation to self-regulation.
[55] There is a set of eight foundational principles that originated out of Ray Castellino's work with small groups and families. Ray would invoke these principles at the outset of a womb surround as an essential aspect of creating a safe container for the work. See Appendix B, "The Principles."

Mr. Moreno

Nurse Brielle asked me to hold Mr. Moreno, who had been born at 26.5 weeks, and was now 49.5 weeks old. Mr. Moreno was not dysregulated, but was despondent. Brielle commented that his mother had not been coming. She was not completing the tasks requisite to taking Mr. Moreno home. For our two-hour session, I held the large boy across my lower lap, facing outward. Brielle chirped at him, "Where's your smile?" I wondered what she thought Mr. Moreno had to smile about, given a six-month stay in the NICU and his mother's absence.

I sat looking straight ahead, occasionally, looking down to check on Mr. Moreno. I remembered a workshop I had attended at an Association of Prenatal and Perinatal Psychology and Health (APPPAH) conference. Ray Castellino and acclaimed midwife, Mary Jackson, were co-facilitating. Mary and Ray were long-time collaborators, Mary having co-taught my CPBT training with Ray. For the first thirty minutes of the workshop, they said little. Ray laughed and said, "You're all going to leave and tell people, 'They sat there for half an hour and didn't do anything.'" After a pause, Ray said, "We're coming into resonance."

He meant the entire room. The entire audience was coming into resonance, not just Ray and Mary. The point was, we are not healers.[56] We do not *do* anything. We provide the support for something greater, the inherent healing mechanism, to work. The point was "content follows connection." Mr. Moreno's nurse came from a different orientation. She wanted to see a happy baby. She wanted to see a cuddler coaxing a smile. She repeated many times her cajoling of Mr. Moreno in a high pitch, "Why aren't you smiling?" Finally, taken aback by my stoic approach, Brielle asked in a critical tone, "Are you okay?"

[56] Ray did not refer to himself as a "healer." He felt it connoted arrogance.

I was holding midline. Center-ground-neutral. A wide perceptual field. Waiting. I was waiting for Mr. Moreno and me to come into resonance. That was the work I was here to do. “Yes,” I replied to Brielle.

At +30, Mr. Moreno was asleep. At +60, still asleep, Mr. Moreno squeezed his face as if to cry. *Yes!* I reflected. *That’s right! That’s part of your story*. *That really happened*. Mr. Moreno listened, then settled. After a time, we repeated—Mr. Moreno cycled, I reflected, he settled. We did this a few times.

Shift change came at +90. The new nurse, Aurelia, stood in front of us, looking down at Mr. Moreno, who was now sprawled on his back, his arms and legs outstretched and dangling, his energy that of one lost in deep sleep. “He loves being held by you!” said Aurelia. Brielle observed this and, when she came upon me later in the break room, said, “He enjoyed your zen.” I appreciated that she could change her view. Thereafter, Brielle and I enjoyed a warm relationship, seeking opportunities to work together.

Corbin

Nurse Lauren requested that I hold Corbin during gavage feeding. He was in an isolation room. Corbin was born at 30 weeks and was now 39 weeks old. He had dual, large-diameter oxygen tubes, blue and white, an orogastric gavage line (through his mouth), and two monitoring wires. I held him for seventy minutes.

Lauren laid Corbin with his head in the crook of my right arm. Pretty soon he twisted around with his back against me and looked about. Later, he returned to the crook. Shortly after, he had his hand around the gavage tube. I pried his fingers away. Corbin's initial cry was not too long or too loud. When he was calm, I brought the pacifier to one side of his mouth. He moved to take it in a casual way, not fast, not hesitant, and settled into compressing against the tip of my finger. Cradled in my right arm, I could cup his bottom with my right hand, but couldn't reach his feet. My left finger was in the hollow of the nipple.

At one point, I lost the pillow from under Corbin. I had learned already that he dysregulated if I took my finger from the pacifier, so I waited for Lauren to come near and asked her to adjust the pillow. Another time, the morning sun got brighter and Corbin seemed annoyed by it. I asked Lauren for a blanket to shield him. Instead, she lowered a second window shade.

At about +40, to stave off falling asleep, it occurred to me to review anatomy. Starting with the crista galli, I ran through the reciprocal tension membrane (RTM) sequence twice—adding a few landmarks that I must visit when in the neighborhood: crista galli, falx, tentorium, Sutherland's fulcrum (straight sinus),[57] third ventricle, lamina terminalis, fourth ventricle, cerebrospinal fluid (CSF) to brain

[57] "In terms of mechanical function, the membranous articular mechanism of the cranium is moved and regulated by the automatic-shifting-suspended fulcrum of the reciprocal tension membrane, located in the area of the straight sinus where the falx adjoins the [tentorium cerebelli]." William Sutherland, "Part 34, The Tour of the Minnow," from the notes of Mrs. Adah Strand Sutherland, Rebecca C. Lippincott, D.O., and Marion Howe Wilder, D.O., of six versions of extemporaneous delivery, and one transcription by Roland E. Becker, D.O., of a recording of a seventh extemporaneous delivery, 1948-1951, compiled by Anna L.

and down spinal column, sympathetic nervous system down spine, cauda equina, filum terminalis; the complete RTM, the wondrous tensegrity.

Then I tracked the minnow.[58] In the left lateral ventricle, the minnow spun about its vertical axis at a rapid speed while dropping in a less rapid manner down into the fluid, the CSF. The sensation was of activity, life, but I perceived the downward movement as loss of life force. At the third ventricle, there was nothing distinctive. The minnow spun around the cyclone. In the fourth ventricle, there was high energy and light, and nothing notable in the flow split out of the ventricle.

I made it twice through my survey of the minnow when Corbin began showing birth story. He started by twisting his head to one side and holding, then to the other side, each time gaining velocity until he was in a rapid twisting of his head from side to side; then a strong arch back of the head and a strong push with his feet; his face squeezed and sometimes he was crying—but not horrendous cries. I immediately recognized what he was doing and provided PPN affirmations—*Yes! That's right! That really happened. That's part of your story. . . . And you made it! You're here! I know you have a big story and I'm really glad that you're here, Corbin*.

Corbin would settle and cycle again. Eventually he dropped the pacifier and I was able to put my left hand under his feet for resistance. There was space between cycles, kind of the same leisure as when he engaged the pacifier. After several cycles, I began to suggest that he could *just go to the edge*.[59] This took a few attempts. On the last one, he did not express the full sequence before settling.

Wales, D.O., 1971, and contained in *Contributions of Thought, The Collected Writings of William Garner Sutherland, D.O.*, eds. Adah Strand Sutherland and Anna L. Wales, D.O., The Sutherland Cranial Teaching Foundation, Inc., Yakima (*COT*), 346, 1998.

[58] Tracking the minnow is elaborated upon in Chapter 14 and it is recommended that the reader read their way through the book to reach that material. For now, enjoy the minnow. Let "minnow" be something you apprehend with all your senses. Hold wonder about "minnow." For those of you in thrall to the contemporary mind, you have choice.

[59] "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." Raymond F. Castellino, D.C., R.C.S.T., R.P.P., *The Stress Matrix—Implications for Prenatal and Birth Therapy*, (Stress Matrix), 2, 2000, contained in *T10*, M1.

At about +55, a doctor came and listened to his chest, anterior and posterior. When she finished, she looked at the monitor and said, “I’ve never seen his respiratory rate so low. Maybe you should hold him all the time. Usually it’s in the 70s or 80s.”

“What is it now?” I asked.

“In the 30s.”

“I’ve been holding him for about an hour.”

At about +65, a pulmonologist came by. He explained to Lauren that this baby is a mystery. They don’t know why he has cysts in his lungs. He wanted to examine Corbin for lymph nodes.

I thanked Corbin for his gift before Lauren took him.

Sadiq

I held Sadiq four times in two weeks. He was born at 24 weeks, and was two months old when we met. The nurse, Hannah, noted that Sadiq had been cuddled the previous day for eight hours and had cried nonstop. I tried various strategies to help Sadiq settle with varying effect, none lasting. At +20, Hannah showed me how Sadiq liked to be moved side-to-side while vibrated up and down from his bottom. She did this while standing for about ten minutes and Sadiq calmed.

I carried on from my sitting position and was able to get Sadiq to settle and to sleep. Whenever he cried, I would hold him by the hips and raise him up in air above my head, up and down, several times. Once Sadiq quieted, I would move him side-to-side combined with the vertical motion to settle and sleep.

At +45, Sadiq fell into a long sleep. It felt as if there was a physical bond between us, belly-to-belly. We were together for one hundred forty-five minutes. In our last hour, Sadiq dropped into much deeper sleep and was no longer disturbed by room sounds. Previously, the metal door—a good twenty feet away—latching closed or opening was enough to cause Sadiq to wake and dysregulate.

The physical therapist arrived to work with Sadiq, saying that his head and neck were hyper-flexed. He commented that Sadiq had coded for fourteen minutes when he was born.[60]

2nd Session

A week later, I held Sadiq for one hundred forty minutes. He was still a frequent, even continuous, crier and made no eye contact. The method developed the last time continued to be my best tool. When Sadiq cried, I hoisted him up in a vertical plane above my head. When he stopped crying, I rocked him until he fell asleep.

[60] "Coded" refers to cardiac arrest and/or a cessation of breathing necessitating medical intervention.

Nurse Jomari shared that Sadiq had coded for seventeen minutes and been on ECMO for three weeks.[61] He had swallowed a lot of meconium. Now, Sadiq was on a methadone withdrawal protocol.

About fifteen minutes after putting Sadiq down, I was able to hold him, again, for a third hour. I tracked his minnow and found a shark's fin that had purpose, intention, potency. I narrated the minnow from the left lateral to the third to the fourth ventricle and Sadiq was quiet the entire time.

I told Sadiq that we are alike in that movement is a big aid. I told him that moving helps me to integrate and settle, as it seems to be of great help to him.

When my shift ended, I told Sadiq I would see him next week. I left him awake in his crib, *moving my hands*, then, *my attention*. Sadiq did not cry when I left.

3rd Session

The following week, Nurse Hannah asked me to hold Sadiq. Many nurses stopped by to say hello and to express concern for Sadiq. Today, Sadiq was not as amenable to settling in the rhythm of chest-to-chest rocking. He wanted the full deal. I let him fall asleep in a vertical plane in the air above my head, then pulled him to my chest. He dropped in deep at about +50.

Between doctors and supply carts, there was a lot of disruption in the room. I felt angry after all the work that Sadiq and I had done to settle. I focused on the feeling of our deep connection at heart-belly and our energetics. Sadiq managed to stay asleep during the traverse of the supply cart. However, at +65, the doctor's stethoscope sent him into dysregulation.

I found that if I sat forward and vertical, Sadiq could settle with chest-to-chest rocking. He was asleep again at +70. The therapist arrived after +80. He didn't want to wake Sadiq and indicated he would

[61] "Extracorporeal Membrane Oxygenation, or ECMO for short, is an advanced therapy that is sometimes used to do the work of the heart and lungs when a patient's own organs are too sick or weak to work on their own." "Extracorporeal Membrane Oxygenation." *Yale Medicine*, June 01, 2024, *https://www.yalemedicine.org/conditions/ecmo#:~:text=Extracorporeal%20Membrane%20Oxygenation%2C%20or%20ECMO,to%20work%20on%20their%20own*.

standby for the end of my shift. At +90, Sadiq and I were in deep connection when I returned him to his crib. I did the ritual of *moving my hands*, now, *moving my attention*. Sadiq stayed asleep.

The therapist was amazed that Sadiq didn't wake. I realized that poor Sadiq probably doesn't get much continuous sleep. Everyone is working so hard to manage him. I thanked Sadiq for his gift.

Khadija

Khadija was born at 34.4 weeks and was 11 days old when we met. I was asked to hold her for fifteen minutes, until her feeding time. She had a powerful minnow, moving toward me, rising out of the water.

2nd Session

An hour later, Nurse Aurelia asked me to hold Khadija, again. We were able to spend forty-five minutes together. Khadija was awake, lying on her right side. There was a softness to her. Her arms were extended. I held Khadija to my chest in the posture in which I had received her. Her deep sentience could be felt. I thanked Khadija for her gift.

At +15, I gave Khadija the *No Fault: Everything that is here was here before you came. You did not cause it. It is not your fault. It is not your job to fix it.* Her eyes grew heavy as she listened. Holding Khadija as she slept, being in coregulation with her felt sublime.

Orabeth

Nurse Hien asked me to hold Orabeth because she was screaming. She was a large baby due to have surgery the next day. I felt a half-inch bump on her scalp and saw the red ring around it. Orabeth was often quiet, raising her head, eyes open and looking around. But she was not settling. Finally, around +30, I realized that this was her sequence, she was cycling.

Yes, that's right. That really happened. That's part of your story. I said this over and over. Orabeth listened, dropped her head in a slow manner, and settled. At +40, she was asleep, prone across my belly and chest.

At +90, just before I left at the end of my shift, Orabeth resumed screaming. I settled her in her crib, but she again screamed. I felt sorry to leave Orabeth and Hien in the same shape as when I had arrived.

* * *

Cycling

"Cycling" refers to the repetition of a fragment of one's story. It is the expression of one's implicit somatic memory of preverbal experience. Everyone cycles. Something exciting or aggravating happens at a tempo too fast to be integrated while it is occurring. The unintegrated content reappears in a story that we tell over and over. When the telling of the story is driven by a compulsive need, it indicates an imprint, the presence of unintegrated experience, also known as "trauma." Perceiving that another human being hears and understands is essential for integration of the trauma.

Adults may appear to be cycling in the memory of experience from a time when they were verbal, often telling of something that happened today. However, the energetics underlying and propelling the telling were most likely not born today. The energetics are the imprint. The contents of the story—what

happened today—are not central. It is the preverbal energetic pattern that recapitulates. The body knows the energetic pattern and will appropriate present events as the vehicle to display the implicit energetics.

Being born, at a minimum, may be exciting or aggravating and often occurs too fast for parents and baby to integrate in real time. The neonate has a story to tell. Owing to the subtlety of Orabeth's gestures, the lack of crying or apparent dysregulation, it took me a while to comprehend that she was cycling.[62] My reflection back to Orabeth, recognizing and affirming her story, supported the integration of her trauma, enabling her to sleep.[63]

Birth Sequence

Ray teaches of the fundamental imprint of the birthing sequence, which is unique to each person, a function of how they were born:

> . . . There is a sequence of what happened before [the head engaged the pelvic inlet], what happened at the beginning [of engagement], what happened at the middle [when the head moved through the middle of the pelvis], and the end [when the head emerged and the whole body came out], and what happened afterward.[64]

Ray is pointing out that it is not just that the baby makes a movement that may be related to their birth story. It is that the implicit memory of the body is so faithful to reality, that the movements are recorded

[62] "When traumatic experience is not completed or integrated, something must be done to bring that about. Otherwise the compensation, survival and dysfunctional behaviors left over from the trauma will be repeated and recapitulated over and over again. The resolution of traumatic imprints from prenatal and birth experience allows healthy bonding and attachment to happen." Castellino, *T10*, Module 2, Bonding and Attachment with Treatment Strategies (M2), (*T10*, M2), Bonding and Attachment Notes, (Bonding), 2, 2010.
[63] "What allows the settling is the willingness to be with the feelings and expression that the baby has to make . . ." Castellino, Raymond. *Two Layers of Support—Creating the Conditions for Healing*. Interview by Susan Lange OMD, L.Ac., Owl Productions and Castellino Trainings, 2014. www.owlproductions.net and www.castellinotraining.com (*Two Layers*)
[64] Castellino, Lange, *Two Layers*.

in their original sequence, the energetics of which are recapitulated *in that sequence* over and over again, as the body retells the imprint of the birth story.[65]

Though every person may not pass through the birth canal, everyone is born. Every person experiences the event of coming into the creation and that event imparts a sequential birth imprinting of before-beginning-middle-end-after.

Imprint

An "imprint" is a body memory of an event. A simple way to think of it is as a worn path. Consider two locations separated by a field of grass that is six feet high. Imagine that, during birth, the fetus becomes stuck against the bony protrusion of the lumbosacral promontory. The fetus attempts to free themself by rotating their head from side to side in a rapid fashion.[66] Eventually, the baby finds a place of rotation that allows the head to pass around the lumbosacral promontory, freeing the whole body to move forward in the birth canal.

The zigzag gesture—the rapid back and forth rotation of the head—may be likened to a path walked through the tall grass. It can be found again with ease. It is the only anomaly in the field, a course where the grass has been flattened, enabling ready access.

Imagine the fetus is born and the neonate resides in the NICU, where, from time to time, the nurse straps a cuff around their ankle to measure blood pressure. Because the nurse seeks the best reading, they look for a moment of calm. Suppose I have the opportunity to work with the baby on a piece of their birth story, after which the neonate settles into a very deep sleep that affords integration of their experience. It is this profound state that the nurse wants to capitalize on in order to document the neonate's health in the most positive light.

[65] "Ray researched and taught the manifestation of "sequential behavioral patterns" that originate from "sequential imprinting" from ancestral, conception, gestation and birth experiences." *Castellino Prenatal and Birth Therapy Training*, June 24, 2024, https://castellinotraining.com/.
[66] I came to recognize this gesture through the work of Karlton Terry, who has elaborated a vocabulary to describe gestures made by babies. This rapid back and forth of the head, Terry refers to as a "zig-zag."

But the neonate dislikes this intrusion. Like the situation encountered during birth when the fetus's impulse to move through the birth canal was halted by the lumbosacral promontory, the neonate cannot proceed with their impulse to attend to their inner journey, the reorganization resulting from our resonance. How to navigate this stuck place? There is one clear path.

Unsuccessful at pulling their foot from the nurse's hand, the neonate zigzags. It is an intelligent response. It worked before. I don't mean to suggest that conscious thought went into choosing this response to the attaching of the ankle monitor. Rather, that the implicit body memory of this successful gesture that won continued movement through the birth canal was immediately available as an instinctive response. "Stuck" equals "side-to-side rotation of the head." This is the worn path through the field of tall grass. This is the "imprint."

Transparadigm Care

The nurse's attunement with the baby enables them to get the good blood pressure reading. Or does it? Many times, I have seen the nurse look with disappointment at the blood pressure reading. What has been captured is the neonate's reaction to the disruption of their integration of the energetic reorganization of their system. It is an imposition of allopathic-efferent medicine over energetic-afferent healing that undermines the objectives of both.

If we create a new NICU, one of mutual support and cooperation, we could find a way to honor the energetics while meeting allopathic requirements. We might strap the monitor onto the ankle at the outset of the cuddler session. Or, we might allow time for integration prior to taking the blood pressure reading. If we hold the shared intention to serve the needs of the neonate, we can find our way, together.

Reed

As I sat with Nazih, I watched the growing crowd of nurses at Reed's isolette across the hall. Reed had been born at 24.2 weeks and was now 89 days old and weighing 4,xxx grams (8.8 pounds or more). Before reaching Nazih, I had walked past Reed's open isolette where two nurses appeared to be assembling the BCPAP equipment in haste. "BCPAP" is bubble continuous positive airway pressure, which involves air tubes secured to a knit cap that grips the cranium with a snug band that sits across the temple and just above the eyeline.[67] The cap and piping manifold turn the child into a video game character and complicate human connection.

The most premature neonates on BCPAP are typically in 482. Perhaps Reed had been moved to the less critical Creek to transition to room air, perhaps with the aid of a nasal cannula, and with the BCPAP equipment stationed bedside just in case. The most difficult part of inflating a balloon is exerting enough pressure to initiate expansion. Thereafter, the balloon stretches with much less effort. Similarly, the greatest strain for the neonate or infant with undeveloped lungs, is exerting enough pressure to initiate expansion of the alveoli (lung sacs) at the beginning of inhalation.

The situation is further complicated for prematurely born babies, commonly those born before 30 weeks, by a lack of surfactant. This substance coats the interior of the alveoli, giving them elasticity and preventing the inside of the collapsed alveoli from sticking to itself. Without surfactant, the alveoli are more brittle and fold into themselves upon exhalation, making it more difficult to initiate the next inhalation. If the neonate can survive three days, often, the lungs will begin to mature on their own.

[67] "Bubble continuous positive airway pressure (BCPAP), a noninvasive respiratory support modality used to manage newborns with respiratory distress, provides continuous pressure that helps prevent derecruitment of alveoli, increasing the lungs' functional residual capacity, and thus decreasing the work of breathing." Al-Lawama M, Alkhatib H, Wakileh Z, Elqaisi R, AlMassad G, Badran E, Hartman T. "Bubble CPAP therapy for neonatal respiratory distress in level III neonatal unit in Amman, Jordan: a prospective observational study." *Int J Gen Med*. 2018 Dec 24;12:25-30. doi: 10.2147/IJGM.S185264. PMID: 30636889; PMCID: PMC6307683.

However, without modern intervention, many would die of what is known as respiratory distress syndrome (RDS).[68,69]

CPAP—continuous positive airway pressure—exerts a minimum amount of pressure at all times, which stops the alveoli from collapsing all the way upon exhalation, thereby reducing the effort required to initiate inflation with the next inhalation. CPAP is typically used for adults needing respiratory assistance. BCPAP—"bubble" continuous positive airway pressure—is an adaptation of CPAP in which the expiratory (carrying the exhaled breath) tube immersed in water emits bubbles that cause rapid pressure fluctuations.[70] The variability in the pressure decreases the strain of trying to breathe, minimizing the long-term impact of premature birth on the respiratory system.[71]

When Reed's oxygen saturation tanked into the low 80s, the nurses pitched a feverish effort to bring the BCPAP online. A new care provider, who seemed to be a respiratory therapist, joined the crowd. The lead nurse, Brielle, who was also Nazih's nurse, peppered the respiratory therapist with questions about how to stabilize Reed. They had been at it for about fifteen minutes that I had observed. It seemed that the BCPAP did the trick, as the crowd dispersed. Brielle and her intern, Julie, stepped away, maintaining vigilance.

After holding Nazih for forty minutes, Brielle asked me to take a break for about fifteen minutes for touch time and return to hold Nazih during his gavage feeding. I tossed my gown into the hamper, which was located beside Reed's bay. His alarm was sounding and had been for some time. I stood a little more than twelve inches from the foot of Reed's isolette, greeted him in silence, and commenced "Mother

[68] Sarah DiGregorio, *Early—An Intimate History of Premature Birth and What It Teaches Us About Being Human*, Harper, New York, 2020, (*Early*), 101-102.
[69] For elaboration of the evolution of medical treatment of respiratory distress syndrome, see DiGregorio, *Early*.
[70] "This oscillation effect may add to the efficacy of b-CPAP in volume recruitment." Hany Ali, Bubble CPAP for Prevention of Chronic Lung Disease in Premature Infants. *Cleveland Clinic*, 2024, https://consultqd.clevelandclinic.org/bubble-cpap-for-prevention-of-chronic-lung-disease-in-premature-infants.
[71] "Pressure oscillations generated during bubble CPAP therapy produce vibrations that are similar to those produced by high-frequency ventilation, and may improve gas exchange and CO^2 elimination." Neonatal CPAP Therapy. *Fisher & Paykel Healthcare Limited*, 2024, https://www.fphcare.com/us/hospital/infant-respiratory/neonates/cpap/#bubble.

Earth-Father Sky," a centering exercise of Ray's. Before I could finish one iteration of the mantra, the alarm stopped. I congratulated Reed on regulating.

I went to the break room and returned to look upon Reed, who was flagged on the cuddler list for holding. I had been looking for him when I had been asked to hold Nazih. I turned to Brielle, just across the hall and said, "Reed is on our list for holding."

She shook her head. "He's unstable. I don't want him to crash on you. Nazih is ready for you."

* * *

Harmonic Resonance

Brielle was a senior nurse and we knew each other well. Which is to say that I believe she represents the best in NICU nursing and that if she felt a cuddler could have handled this, I believe she would have trusted me to do it. I think it's reasonable to surmise that this *Reed* vignette illustrates the state of thought among allopathic practitioners.

Reed was dysregulated. Keeping him stable was a priority. The use of coregulation as a strategy to stabilize his autonomic nervous system was not considered an option. I had received training from the NICU to hold premature neonates on BCPAP and had prior experience doing so. I don't know whether all NICU nurses are aware of this training.

I am not qualified to make a medical evaluation of the risk associated with bringing Reed out of his isolette for me to hold. However, removal from the isolette is not always requisite for coregulation. My brief experience with Reed stopping his alarm told me that we could coregulate at a distance. It could also have been possible for me to sit beside the isolette and make contact from there with a full range of CPBT and craniosacral options available.

There was a moment when Reed's oxygen saturation level was in the low 80s, when the nurses were absorbed in their flurry of preparations of the BCPAP, when I walked by the isolette. There was a moment when two options were present to respond to the desaturation. One was technological and

reinforced the isolation of the infant. One offered human connection to counterpose the numerous and chronic isolating effects of living in a NICU.

Had the nurses understood that lack of human connection is cause enough for the infant to dysregulate, they could have responded by coming into resonance with each other, connecting with Reed, possibly making physical contact and offering PPN affirmations. Their social nervous system, their harmonic resonance, could have supported Reed to regulate. Instead of resonance, the nurses offered the tension field of their frenetic assembly of the BCPAP apparatus, which would likely have had the effect of exacerbating Reed's condition.

The love present in the nurses' caring for Reed is not in question. Camaraderie, respect, and teamwork were evident between the two nurses, Brielle and her mature trainee, Julie. I have experienced oxygen saturation in the high 80s and understand the weakening effect of the loss of oxygen. The urgency of raising Reed's saturation level is unequivocal. If recruiting the BCPAP technology were deemed necessary, there is a difference between responding in crisis mode through the lens of personal activated material, which likely results in doing something *to* Reed, versus acting in connection to and with awareness of Reed, which results in doing something *with* Reed. The former is traumatizing; the latter is healing.

Could it have been possible, when the saturation alarm first sounded, for the nurses to have come from a grounded place and, in connection with each other, for Julie to have placed a hand on Reed's chest, while Brielle stood shoulder to shoulder with her, or placed a hand on Julie's lower back, providing that second layer of support?[72] This would have been a radical alteration of the field in which Reed was suspended. It could, on its own, have been enough for him to regulate.

[72] That the NICU already has leanings in this direction is reflected in a flyer posted in the staff area of the NICU, which gives instruction on the provision of palliative care, including, "Take a moment to center/ground yourselves before entering a patient/family space" and "Be present to, acknowledge, and validate expressions of suffering." "Palliative Pearls." *Pediatric Palliative Care Department*, [Hospital name omitted in service to HIPAA.], July 18, 2024. See Appendix D.

If it had resolved the oxygen saturation, it would have been appropriate to talk with Reed. To acknowledge that he needs human connection and name that the NICU does not provide as much as is desirable. This would include explaining why Reed is in the NICU and what needs to happen for him to leave; that the nurses are here to support him to be strong and healthy enough to go home to his family; that episodes like this only prolong his stay in the NICU and his separation from his family. All of this talking would be done in small segments held by long pauses for Reed to comprehend and respond to the information, with reflection and support for his responses.

If this initial connection and contact of the nurses had not resolved the saturation and the BCPAP were necessary, before proceeding, it would have been appropriate to inform Reed of what was going to happen and why. Again, in small segments and with support for Reed's responses. Then, while assembling the BCPAP gear, narrating for Reed what they were doing and why. The value and necessity of communicating in advance and allowing space for the neonate or infant to receive and process the information is emphasized throughout John Chitty's book, *Working with Babies*.[73] Neonatologists, Dr. Robert White, Dr. Liisa Lehtonen, Dr. Kristina Reber, and Dr. Raylene Phillips, advocate for nurturing communication with neonates and infants even during the provision of life-saving medical care .[74]

Love, camaraderie, respect, and teamwork filtered through a lack of awareness of the sentience of the neonate or infant and a lack of awareness of the significance of a social nervous system produce vibrational incongruity, as compared to the resonance of this ethos expressed through conscious honoring of the sentience of the neonate or infant and their need for a social nervous system. Granted, I did not see what transpired before I arrived. In my brief passage near Reed's isolette, I was not aware of the nurses explaining to Reed what was happening. These things may have occurred. In my brief exposure to the

[73] "Again, the effect can be reduced by pre-stating the intention and pausing for the sentient baby to process the information before proceeding." John Chitty, *Working with Babies—A Five-Part Therapy Method for Infants and Their Families*, Polarity Press, Boulder, (*WWB*), p. 83, 2016.

[74] "This fundamental requirement is easy to forget amidst the urgency of critical and intensive care; however, it is possible to provide the highest level of medical care in a nurturing and supportive manner. . . . Even the most critically ill baby can be acknowledged as a tiny human being and spoken to in a soothing voice while life-saving interventions are ongoing." White RD, Lehtonen L, Reber KM, Phillips R. "A pivotal moment in the evolution of neonatal care." *J Perinatol*. 5-6, 2023 Apr;43(4):538-539. doi: 10.1038/s41372-022-01436-z. Epub 2022 Jun 18. PMID: 35717458. (*Pivotal*).

scene, it seemed that both nurses were behaving as if caught in the shock of crisis response, with elevated heart rates and accelerated breathing of their own, and self-isolation by looking down rather than making eye contact with each other.

Transparadigm Care

The safe level of oxygen saturation yielded by the BCPAP operation could be considered proof of success. Is it? Is it success to keep neonates in a state of chronic isolation to the degree that their inherent need for coregulation cannot be met?[75,76] Is it success to interpret the inevitable dysregulation of those weaker or less savvy neonates and infants who cannot or refuse to compensate for their social nervous system-deprived environment by supplying stable vital signs to satisfy requirements of the NICU, to interpret this dysregulation as indication of the need for technological intervention? As if their ability were independent of the coregulation with primary caregivers that is essential for healthy development on every level, including regulation of the autonomic nervous system?

Is it success to override the body? To teach Reed that when he dysregulates he should not seek human connection, but, rather, external intervention in the form of a machine? Is it success to offer remedies that reinforce isolation and marginalize the innate capacity to regulate through resonance and touch?

There was a moment when a different choice could have been made.

This is a moment. Right now. This book in your hand.

[75] "Given the abundant evidence and decades of experience, it is time that every NICU make a commitment to provide comprehensive nurturing stimuli with each of their patients, even the smallest and most vulnerable. Although there may be specific times when limited interaction is necessary, it must be acknowledged that these limitations are often employed far beyond what existing evidence would support." Robert White, et al., *Pivotal*, 5.
[76] "While advances in medical science and technology continue to increase NICU survival rates, we must commit to a renewed focus on ensuring NICU graduates not only survive but thrive." Robert White, et al., *Pivotal*, 5.