



Somatic Approaches to Developmental Delays

DARCY MCGEHEE

Ten years ago Darcy McGehee was sure she was a dancer/choreographer, not a therapist, and was content to approach somatics in that way. Six years ago that changed. She now enjoys a richer view of the world.

I have an eight-year-old son. At the age of eighteen months I could no longer ignore his lack of ability to pick up verbal or kinesthetic cues. Jack glanced at people out of the corner of his eye, unable to share another's gaze. He slept in short spurts and had the climbing skills of a mountain goat. He was in constant motion. Try as I might to schedule him, Jack's impulse was the only clock he could follow.

By age two, Jack could memorize the entire texts of documentary videos and identify by topography all the moons of Jupiter, but he had no conversational language. His strengths were eerie. His deficits were heart-breaking and exhausting. I felt my child was being sucked away from me.

When Jack was almost three and his world seemed more chaotic than ever, I sought help. I was told that, while early intervention was crucial, we might be on a waiting list for a year and a half before Jack would receive treatment. I then began a long process

to have my son admitted to the specialists who might help him. I gave long telephone interviews; I filled out forms. When I was told the evaluation process alone would take a year, I got busy. I found the necessary people to grant the necessary diagnosis to admit Jack to a preschool for high-functioning autistic children. We began speech and occupational therapies. I read and learned and researched.

For many years I have danced and worked with dancers, elite athletes who pursue movement for creative expression. Interested in both theatre and dance, my MFA studies focused on the connection between voice and movement. I have studied traditional anatomy and kinesiology as well as somatic therapies, which investigate the connection of mind and body.

Autism is now classified as a neurodevelopmental disorder; neurodevelopmental problems are basic deficiencies or perceived lack of connection between areas of the brain that

present with increasing insistence as the infant is developing. When my son was diagnosed with PDD, or High Functioning Autism, I began looking where I was most familiar: I began exploring how movement affects neurological development, and how neurological development could be facilitated through movement.

Jack has a developmental disorder that involves a lack of synchrony and maturation in his sensory and motor development. It made sense to approach this disorder from a developmental movement perspective. This approach respects the incremental sequence of early learning that supports relational behaviors. It also sees these sequences through the lens of multiple interacting body systems.

*Under-stand-ing,
the Underpinning of Movement*
Most of us have a sense of self and of the world. We perceive our place in our

environment and we act, and the synchronizing of those sensing and motoring systems allows us to relate to the world and to survive. We reach a place in our development where we stand on our own two feet. We understand. Standing on our own two feet allows us to make a range of movement choices to our repertoire of actions: we move toward, we move away, we change direction, we change pace, all in relation to each other. Through reading the movement of others we are able to understand, to some degree, their lives and their perceptions. We have understood, which dynamically weaves together self and other. This is what I hope for for my son.

Psychiatry and somatics agree that the way we move in relation to our internal and external environments impacts the development of the nervous system, and the development of the nervous system greatly influences behavior. A conscious sense of self, or being present in the world, depends on the representation of physical states of being, processed, often unconsciously, in subcortical brain areas (Damasio, 2000). In typical development, maturation of the cerebral cortex follows subcortical maturation. Where this developmental choreography is interrupted, cortical function is unsupported. A dynamic systems perspective explains the neural consensus that defines consciousness as a social phenomenon depending on both reflexive (subcortical) and voluntary (cortical) systems. New stimuli change all previously existing patterns of neural consensus and contribute to neural plasticity (Freeman, 2000).

Autism has traditionally been described as a condition wherein a child is in his own world. Jack's comfort and learning were interrupted because he did not have a reliable, balanced sense of his own internal world. The processing and communication of Jack's internal state of comfort through

early (lower) neurological centers was compromised and did not support his higher cortical abilities. His neural growth did not have a strong foundation. It was as if his cerebral cortex was forced to make up for this lack of foundational support by maturing out of sequence, processing more information than it could handle and making executive decisions without pertinent information. This compromised Jack's ability to relate in the world.

Assessments and therapies commonly used with autistic children aim at age-appropriate task completion and controlled behavior, without addressing the foundational developmental sequences that support these tasks and behaviors. They do not effectively address what a child is experiencing or how a child completes a task; instead, they attempt to correct the problem from the top down. Jean Ayres pioneered research in developmental movement repatterning in the field of sensory integration. She states, "As long as subcortical structures remain poorly integrated, resolution of the impairment through a cognitive approach will be limited" (Ayres, 1991, 52-53). Developmentally based somatic techniques that use relational touch and movement address early, subcortical development from a dynamic systems perspective, honoring a child's moment-to-moment experience. Embodied movement offers a child a template for expressive and receptive communication. When a child understands how to move in a way that is connected to his needs and desires, skills are then transferable and can be adapted to many learning situations.

There is no simple formulaic, therapeutic approach to neurodevelopmental delays, but there is a universal sequence to the emergence of basic neurological movement patterns in typical development. I support a theoretical model that connects the emergence of these basic neurological

patterns with the development of specific areas of the brain; future interdisciplinary research is needed to clarify this connection. Movement repatterning offers movement and behavior choices to stimulate neurological development. Basic neurological patterns, inherent in the nervous system, that emerge in a well-orchestrated sequence in typical development may be elicited where development is atypical.

Neural plasticity—the flexibility and potential of the nervous system to develop and change throughout life—allows us to call forth the expression of early patterns that support emergence into the world.

Somatic Pioneers— Touch, Movement, and Meeting a Child Where He Is

Jack lived in a body very restricted in its movement choices and its abilities to make transitions or engage in relationships. A developmental, somatic-movement model addresses the many incremental, early movement patterns commonly observed in PDD and autistic children: toe-walking, side-to-side gait, restricted gaze shift, an inability to cross the midline of the body, a propensity for holding the arms up, and late or absent language development.

In exploring the best ways to support Jack's development I have had the unique opportunity to be mentored by and to observe the work of three of the top researchers in somatic and developmental therapy in North America: Bette Lamont, Martha Eddy, and Bonnie Bainbridge Cohen. These therapists and somatic pioneers look at my son for who he is, not for who he isn't. This is rare in the world of disabilities. Jack has a disorder that affected his early ability to be in relationship. These therapists placed themselves in relationship with Jack, moving with him and

touching him. With their guidance I too learned to work with Jack. Soon I held him and he held me.

I remember clearly the first time Jack placed his hands around my neck and held on to me. I cried with joy when he finally looked deep into my eyes. My husband looked to me with tears rolling down his cheeks when Jack was asked to call his brothers to dinner and, for the first time, he did.

Bonnie Bainbridge Cohen, occupational and neurodevelopmental therapist, is the founder of Body-Mind Centering, an established and evolving somatic-practice taught at the School for Body-Mind Centering. Martha Eddy, Ed.D., is an educator, researcher, and somatic practitioner certified in Body-Mind Centering. In responding to neurodevelopmental disorders Eddy delves into the somatic work, and compares this work to the more traditional scientific inquiry. Bette Lamont is the therapy director at the Developmental Movement and Education Center in Seattle. All three of these practitioners are certified in Laban Movement Analysis, a qualitative, comprehensive system of movement observation. Each of these women stresses the individuality of any child's presentations in developmental delays.

Jack's difficulties with navigating environmental and social relationships, and responding with appropriate actions, reflected his inability to come to a place of comfortable focus and to make and sequence decisions. Bonnie Bainbridge Cohen's book, *Sensing, Feeling and Action*, explains how the basic neurological patterns of movement give us the basis for attention, intention, and action. If we have the comfort to attend, we can follow our curiosity and desire with intention and action. Underlying the basic neurological patterns is what Bainbridge Cohen refers to as the "alphabet of movement": the primitive reflexes, righting reactions, and equilibrium responses.

Reflexes provide a developing infant with a subcortical template for movement. Bainbridge Cohen was the first researcher to point out that all the traditional reflexes have a modulating reflex. Even in the earliest phases of life we see a precursor to choice in movement, which evolves into an ability to make conscious, modulated transitions based on new information.

Many of Jack's early reflexes had failed to emerge or had been poorly integrated, limiting his movement choices. Incoming or sensory information from both his body and the environment could not be efficiently processed and screened. He could not come to a comfortable, grounded place of midline orientation, a milestone typically achieved around three months, at the same point an infant develops a social smile. Without reliable sensory information and proprioceptive information (about position, movement, equilibrium, and resistance), Jack is unable to discern the temporal and spatial coordinates that underlie the ability to have intention in time and space. His actions are not supported by an integrated sensory-motor loop—where moving, sensing and perceiving, and moving again are in constant relationship.

The Ability To Be Inside— Yielding, Gravity, Cells, and Support

The reflexes that underlie movement are expressions of a primary relationship with gravity. In a sense, a highly skilled mover takes movement to a more reflexive place, relaxing conscious control and trusting the body's innate wisdom and subcortical proprioception. My work with Bainbridge Cohen and Eddy has made this clear to me. This is part of my journey as a dancer and dance educator: learning to be present and responsive in the moment to support qualitative move-

ment range and creative decisions. Without the proprioception of gravity acting on the body in space, we lack the support to venture into space and cannot transition between experiences.

In the fall of 1998, while I negotiated the bureaucracy of diagnosis, I searched on-line for Martha Eddy. Martha taught a Body-Mind Centering workshop I attended in 1996.

When Jack and I first meet Martha, he is running through life at the age of 3½. At this point Jack does not read simple emotional or social cues through gesture or facial expression. He does not understand danger and is terribly confused by social motivators. Jack cannot shift his gaze and can barely turn his head. He does not bond to people, places, and things through his senses. He is hypersensitive and vigilant and yet sometimes appears to be unaware. He does not use the pronoun I, cannot express need, and cannot attend to others.

The first thing Martha asks me is what I want for Jack from the sessions. I timidly reply that I would like him to be able to express his experiences and his needs. (I had not been encouraged by the literature or specialists to expect these gains.) I want to know Jack. Martha nods.

Many autistic kids are great climbers; where they get into trouble is their inability to descend. Synchronizing weight shifts and behavior shifts challenge Jack. His abilities to change level and direction are ungrounded. His extended little frame just cannot curl into flexion. He cannot sense midline or descend through the midline. He cannot rotate his spine. Moving on the transverse (rotational) plane requires the support of weight-sensing and the ability to flex toward center. Research indicates that autistic babies present in an unusual rolling pattern of hyperextension, or they fail to roll over (Blakeslee, 1999).

Martha, Jack, and I go to the park

a lot—many different parks with an assortment of apparatus to evoke losing one's balance in supported ways while ascending, descending, running, and jumping. Martha teaches Jack and me about the time and space of relationship—the phrasing of the pause at the bottom end of each delightful descent, whether it be in the microcosm of breath or the release into someone's perceptions and finally their arms. In our first session Martha makes interesting sounds through a simple game of hide and seek. The enjoyment of discovering the source of these sounds allows Jack to direct his gaze, share his gaze, and experience being seen and heard in a pleasurable way. Jack begins a journey from defending to bonding.

Marin County, January 29, 1999

Jack and I meet Martha in the park. Jack and Martha form an immediate connection, which is unusual for Jack. Martha works with modulating tempo and rhythm in speech and movement. They engage in a game that requires Jack to track Martha's location in space, under the climbing equipment. Martha observes Jack's tiptoe walk, the lack of rotation in his spine, and his cerebellar problems with side-to-side balance. She offers cellular touch to bring out tone in Jack's arms and hands and invites softening in Jack's thoracic region, allowing the heart to pour to the back. Martha comments on the need for vestibular stimulation, prior to stimulation of the other senses, for adequate bonding.

Opening and Closing

Respiration occurs in every living cell of an organism. In the Body-Mind Centering model, cellular breathing is a fundamental developmental movement pattern, and it supports a discriminate pattern of the autonomic nervous system. Bainbridge Cohen

speaks of the rhythm of the autonomic nervous system that is reflected in a simultaneous condensing and expanding yield, expressed in a starfish-like pattern from the center through the head, tail, arms, and legs that describes a cycle of going out and coming in. This autonomic rhythm supports the initial reflexes of bonding and defending.

The very basic choice of opening and closing defines primitive relationship in the choice of moving toward or away from stimulus. We establish the vital link of the extremities to the center by moving away from center and recovering stability, both physiologically through homeostasis and in our movement. The simple action-recuperation cycle of expanding and condensing is interrupted in Jack. His sympathetic nervous system is very high toned. He moves up and out in an extensor pattern without a sense of himself or the ability to transition back to a restful, parasympathetic state.

We have all experienced a "fight/flight" reaction in response to adrenaline, where the sympathetic nervous system (the actioning part of the nervous system) takes us into motion; it takes a while to recover into the "rest and digest" phase of a more parasympathetic state. Yielding and sensing his body weight are difficult for Jack. He has had digestive problems since birth, and his sucking reflex was less connected than I remember with my first two sons. The enteric nervous system (the nerves to and from the visceral organs) is the third division of the autonomic nervous system, and it is intricately linked to transitions between sympathetic and parasympathetic states.

Martha engages Jack's curiosity to help him find stillness. She helps us both find the blood-full presence of the organs and a sense of weight, through cellular touch that acknowledges both container and contents, and through touch that acknowledges both

support and movement in cellular breathing. Martha very quickly notices the absence in Jack of primitive reflexes, such as physiological flexion/extension (a whole-body movement toward and away from the navel center) and flexor withdrawal and extensor thrust (folding and extending the limbs), that are the reflexive support for moving toward and away from stimulus. The enteric nervous system piece of this is profound in initial sessions as I witness Jack begin to connect to the core of his central nervous system. Martha picks up on Jack's need to come into flexion and his system's inability to yield into that more parasympathetic place of nurture and comfort. She is able to provide the stimulus to cue flexion reflexively as well as the container to support yielding into that flexion.

In one of our sessions Jack is able to come to midline, clear his gaze, and express the discomfort of his past experiences. He then can yield into my arms and my body. This is my first experience of Jack's tonic lab reflex, a reflex signaling a cellular, vestibular, and proprioceptive relationship with gravity. Until this time I have not felt Jack's cells connected with mine. He has been unable to knit to gravity or to me. I learn that I can help Jack to integrate his vestibular and proprioceptive reflexes by improving my own relationship with gravity, my cellular awareness, so that Jack no longer needs to respond to transition and change with hysteria. Jack starts to come in for a landing. So do I.

When yielding is present, a sense of self begins to emerge with the early push patterns.

Berkeley, January 30, 1999

Jack is upset about the transition of leaving the park. He is struggling in the stroller and crying out, "I can't stop." Martha works through touch and voice to meet him where he is and

to help him modulate to stillness. He has a definite breakthrough; he shudders and releases into her support, after which he is calmer than I have ever seen him while awake. The change is profound. I feel that the part of Jack that was being sucked away is attempting to emerge.

Oakland, January 31, 1999

We meet Martha at the studio. Martha encourages Jack to roll in both directions. When the "I can't stop" theme reemerges, Martha reinforces Jack's ability and gives him permission to stop. Jack plays piano and Martha drums out the rhythm of what he is playing on his body. When he begins to climb, she encourages him to push with his legs before reaching with his arms by giving resistance to his pelvis.

Oakland, October 17, 1999

Martha works on referencing body parts and on developing an awareness of the body in space. Jack enjoys marching about saying "My feet are on the ground." She works on a softening through the shoulders and on Jack's forebrain to hindbrain connection. Later in the day Jack says he wants to go to Jack's house, to Mom's house. We are in San Francisco for these appointments. This is the first time Jack has expressed anything like homesickness or acknowledged a sense of home. Jack wants to cuddle and tell me things. His torso has softened since Martha first worked with him in January. His increased ability to yield and flex the spine has made hugging a lovely part of his repertoire. His gaze is quite clear.

Yield and Push Before You Reach and Pull

"In spinal movements . . . we develop rolling, establish the horizontal plane, differentiate the front of our bodies

from the back of our bodies, and gain the ability to attend (Bainbridge Cohen, 1998, 4). Through embodiment and observation, Bainbridge Cohen has associated movement patterns with specific regions of brain development. Nerve tracts in the spinal cord and brain stem control the spinal push patterns. The basic neurological patterns of push of the head and push of the tail freely move and integrate the head, neck, jaw, spine, and pelvis. The push patterns utilize gravity to make weight shifts and develop the nervous system to record and communicate these changes of weight. Yielding and pushing into gravity provide a strong spring from which a child will unfurl, encouraging the spinal curves to develop in a balanced way. Pushing develops tone to support reaching. Specific, spatially directed vertebral patterns of the spine and limbs emerge from and echo the round, more whole-body experience of earlier, prevertebral, patterns. Infant movement development follows an evolutionary progression.

Jack had a very prolonged delivery; he finally emerged with the cord wrapped three times around his neck. His head, neck, jaw, spine, and pelvis are tightly held. Martha offers Jack gentle resistance to establish a rocking from head to tail. Motivated by instinct, I have been working with passive manipulation while Jack is sleeping to free his cervical region. I see how Martha uses informed touch to stimulate the expression of a movement pattern that Jack is able to integrate more deeply. She offers a cushy end point to his nudging that allows him to find a movement sequence and connection from head to tail and back again. Jack begins to be able to move his head more comfortably up and down and right and left. He enjoys the sensation of Martha's resistance. Jack is not just moving; Jack is doing the moving. He is present, engaged and active. This change is remarkable.

Look Before You Leap

In Bainbridge Cohen's model, connections through to the colliculi in the midbrain are established with the reach patterns of the head and tail. In infancy the reach of head and tail are reflexively connected to the senses for the purposes of taking in food and eliminating. Activities, such as nursing, that occur in a parasympathetic posture of increased flexion and lying in prone while experiencing gravity acting on the body (tonic lab reflex) tone the front of the body, supporting the further reach of the head and tail so that the senses can be directed in space.

Jack's perceptions and movement seem to be suspended in space. Martha supports Jack so that he can experience weight falling through his center of gravity and stimulates the sense of connection between his limbs and his center. He slowly begins to sense that he can use his center of gravity as a launching pad, and support his senses by reaching his tail to make level changes. He becomes more aware of himself as an entity, moving and changing position in space. Martha is adept at helping Jack follow his curiosity and take in information without losing touch with who he is.

I see the importance of the place where a child developmentally links yielding and pushing to reaching and pulling, even at this basic spinal level. In the space between these actions Jack begins to link the ability to attend to self and the ability to attend to the world. Rather than experience the world as a barrage of stimuli that he must defend himself from, he gradually begins to have the experience of himself acting on the world in a pleasurable way. He is linking sensory and motor acts in a new way. The cycle of yield and push, then reach and pull, is repeated in the progression through homologous movement (of two arms or two legs), homolateral movement (of

the arm and leg on the same side), and contralateral movement (of the arm and leg on opposite sides).

Oakland, October 18, 1999

Martha holds Jack and helps him to reach with his head and eyes, taking clothes pins off a clothesline. She puts him down and encourages him to push with his legs while maintaining the reach of the gaze and the arm.

Baby Push-ups— Upper before Lower (And How about Those Elbows?)

"In homologous movements we develop symmetrical movements . . . [we] differentiate the upper part of our bodies from the lower part of our bodies and gain the ability to act" (Bainbridge Cohen, 1998, 4). As a toddler Jack looked like a little linebacker—he held his arms up and close to the body. His arms seemed passive, like they didn't belong to him. His little baby fists couldn't open and take weight. His fine-motor skills seemed to develop without gross-motor support. Pushing with the arms connects the arms to the back and feeds pushing with the legs.

Bainbridge Cohen's experiential research indicates that the medulla (part of the spinal cord) activates the upper extremity push and the inferior peduncles (part of the cerebellum) activate the homologous push from the lower extremities that straightens the elbows and takes the vision to the horizon. Bainbridge Cohen says that all of the autistic children she has worked with skip the pattern of pushing with two legs. When they change levels from the belly to creeping, they flex at the hips before fully straightening the elbows, leaving them collapsed in the thoracic region and with the gaze still inward.

Martha has helped Jack to find his comfort lying on his belly and he now

has some sense that his arms and legs belong to him. She reminds him through touch and movement to feel the weight of his arms, pelvis, and legs to accomplish whatever he is attempting. She reminds him playfully of the early reflexes of flexor withdrawal and extensor thrust that support his volitional movement in the homologous push patterns. She reminds him of a centered place of rest and flexion to push out from.

Oakland, October 19, 1999

Again we work on the connection from the ground through the spine to the arms. Martha brings softness to Jack's belly and diaphragm. She works on maintaining flexion or getting up without overarching the spine. They play with brachiation patterns, hanging from the arms, maintaining elongation through the cervical spine. They find yielding and recuperation.

Oakland, October 29, 1999

Jack is playing on the floor. He softens and allows—almost invites—Martha's touch now. He works through a head-push pattern (a birth pattern) while Martha offers support and gentle resistance. A common theme of Jack's when upset is "I'm stuck." Martha helps Jack to find the proprioception in the hip joints to push himself through with his legs. They work through the push patterns to connect the head to the spine and the limbs to the spine.

The Cloverleaf for Beginning Drivers: Homolateral Movement

In Bainbridge Cohen's model, as a baby begins to push with one arm and then another he has moved from the cerebellum to the pons and is scanning across the pons. This weight shift allows a lovely lateral flexion in the spine, and enough support through one

side of the body to reach the gaze and the opposite arm toward a desired person or object. Sequencing the push of one arm and then the other takes the baby in circles or backward in space.

As weight shift and lateral flexion increase the child is able to push with one leg at a time to move forward toward his desire. Bainbridge Cohen's research indicates this homolateral push of the lower extremity tracks from the cerebellum forward to the pons of the same side, sweeps across the pons away from the midline, and loops back through the center of the cloverleaf, to the cerebellum on the opposite side. (If I draw this pattern starting in the center of the cloverleaf, the pattern renders diagonally intersecting figure eights.) With this movement we begin to match our desire to what is available, and we "gain the ability to intend" (Bainbridge Cohen, 1998, 4).

The homolateral pattern is supported by ATNR (Asymmetrical Tonic Neck Reflex), and hand-to-mouth reflex. In this reflex pattern, when an infant turns her head to one side the limbs on that side will extend (ATNR) or flex (hand-to-mouth reflex). Bette Lamont advises the stimulation and integration of these reflexes when children present with developmental delays and learning disabilities.

Maps of Perception and Movement from Neurodevelopmental Therapy

When Jack is 4½ we meet with Bette Lamont in Seattle for three appointments about a month apart. Lamont typically performs a thorough assessment of motor and sensory development, which includes mobility, language and manual competence, and visual, auditory, and tactile competence. Her testing of Jack reveals poor eye convergence, poor visual and auditory filtering skills, and hypersensitivity to touch. She observes poor midline

awareness and a distortion of information across the corpus callosum (the membrane that separates the two halves of the brain), which she feels also leads to excessive impulsivity and learning difficulties. We discuss Jack's under- and oversensitivity to pain, heat, and cold. Bette feels that if these vital sensations are mute we cannot bridge to the world. Motor indicators observed are wide base, toddler-like walking, toes turned in with some pronation of the right foot, impaired cortical opposition, and limited supination/pronation of the forearm.

Seattle, February 21, 2000

Bette clearly explains to me the sensory/motor basis for the specific delays in Jack and develops a program to follow routinely to treat these central nervous system problems at the level of the nervous system. The activities of crawling on the belly, creeping on all fours, ATNR, vestibular stimulation followed by bonding and cuddling, and oral stimulation are all designed to promote pons, cerebellum, and mid-brain maturity.

Homolateral belly crawling is hard for Jack. He is beginning to find the ability to soften into a C-curve of flexion, but the full emergence of his lumbar curve and hip extension will take time. The sacrum and coccyx at the back of the pelvis are key to mobilizing weight transference through the legs. Jack is rigid and held in this area. It is important to follow Jack's motivational cues and support his comfort while encouraging this pattern. Anything forced makes him feel out of control and brings up more resistance. Martha has shown me the importance of relationship in repatterning.

My kitchen at supertime becomes the scene of Jack crawling over Mom and Dad and his two brothers. Jack's brothers egg him on in belly races and lure him with toys while I interrupt his

preferred pattern of lifting his butt and only pushing with one leg. Pons and cerebellum stimulation bring out a more emotional and demanding Jack. His anxiety is expressed in tantrums but his autistic meltdowns are few. I feel this is a necessary stage in his developing an emotional self and the potential to be in relationship. I am willing to open up those parts of Jack that are taxing to deal with. Jack is responding verbally to sensations of too hot, too cold, and hunger, and he is sharing his gaze in bonding and cuddling. Jack has also gained more tolerance for vestibular stimulation, such as rocking, swinging, and playing on his tummy on a gym ball.

Seattle, April 21, 2000

When Jack becomes anxious, Bette notices his voice is very like a birth cry in maturity. His common expression when anxious is "I'm stuck, help." Bette teaches me her version of the birth reflex patterns. Jack's crawling has improved, but he still has difficulty pushing with his right leg and foot. He still does not open his hands on the floor. Bette feels this inability to release is apparent in children with bonding difficulties

Jack's dad, the actor, supports his language development. Jack's brothers take on his T-ball and basketball training and help Jack to be a kid, to joke and be sneaky. For an autistic child, learning to be devious is a celebrated milestone. My hands are learning to support and tone Jack's tissues. It becomes routine to work hands-on with Jack after cuddling him to sleep.

I study BMC, Laban, craniosacral therapy, and massage therapy. In June of 2000 Jack and I have the opportunity to venture to Massachusetts, to complete my somatic movement therapy training. Martha Eddy recommends that Jack and I see Bonnie Bainbridge Cohen.

We meet with Bonnie for a series of seven sessions. Jack's dad flies down to join us. Bonnie takes us deeper into the relationship between the body systems and developmental movement.

Multitasking and Patience

With the underlying push patterns in place and the head-tail reach active, a typically developing baby can reach the upper limbs in a given direction and push off. For this movement the baby returns to the cerebellum, specifically to the mid-cerebellar peduncles. If a baby has mastered the push of the arms, he can also use the reach pattern of the legs to locomote backward or to change levels by employing the superior cerebellar peduncles. This baby is already multitasking better than any Macintosh computer. There is a sophisticated level of sensory-motor integration and a concept of self and other present, as well as the beginnings of integrating social and emotional growth with sensory-motor systems.

Jack's nervous system is making connections, too, but his development is still scattered. Now almost five, he can read at a third-grade level but has only recently mastered toilet training. His vocabulary is immense but social interaction is still overwhelming. New environments and making transitions tax Jack. Fortunately he is a bundle of energy and curiosity and, despite his limitations, is highly motivated to explore.

Jack was introduced to gravity later than most children. His righting reactions and equilibrium responses that support reaching into space are still emerging. These are reflexive responses to moving off balance. As these responses emerge, Jack begins to feel more secure and confident moving through space. The playground offers opportunities to climb, slide, yield, push, reach, pull. In the Canadian winter months my house becomes the

playground, with gym balls in several rooms. Jumping, wrestling, ball throwing, and being on the floor are encouraged.

Working outside the window of opportunity afforded by the time frame of typical development, movement patterns integrate more slowly and neurological success is more incremental. Bonnie is expert at "following the child" and senses where Jack needs more foundational support to emerge. Jack is very comfortable with Bonnie. They play with various toys, the only rule being that he has to put one away before he gets another out. She works through touch to balance his autonomic nervous system. She invites him to open his grasp, and to carry his center over his legs. Bonnie also works hands-on with me to balance my autonomic system so that I can model this state of being for Jack.

Amherst, June 6, 2000

Bonnie's notes: "Jack is clearly an exceptionally bright child who needs help discovering himself and how to relate to others and move through the world. He and his mother related in an emotionally bonded and loving manner. This requires an unusual amount of trust for Jack, due to his disorientation in relation to himself and others. He also tried very hard to cooperate and trust me, even when he was experiencing great anxiety and emotional distress."

After the session I observe Jack is softer and more comfortable. He offers hugs and his gaze is clear.

Bonnie shows us how to help Jack by meeting him where he is without escalating his anxiety, so that he can experience working through things. Between sessions I notice more facial expression and eye contact to get my attention. Jack shows more ease with new situations. He responds emotionally and with an awareness of danger

when I get upset with him about running ahead of us through the woods. Until this time he had not been able to understand this kind of cue.

Jack is more relaxed. A rhythm of play and rest starts to emerge. I notice more weight-sensing in his body. His back-and-forth conversation is clearer and more sustained. In a restaurant at lunch after one session he spontaneously displays his feelings with lots of hugs and kisses. When we go to the beach for the weekend Jack is very cautious and afraid for his dad when Trevor goes for a swim.

Amherst, June 9, 2000

Jack is less settled and focused. We are transitioning to go away for the weekend. Jack tantrums about putting toys away at Bonnie's. She meets him where he is, without escalating his tantrum. He is able to work through and own his feelings without falling apart.

Amherst, June 12, 2000

Prior to the session Jack's dad leaves to return to Canada. Jack expresses to me, "My heart is sad and I am mad," "Dad is lost," "Dad is disappeared," and he tries to hide and "wait to be found." Bonnie's report describes her work with him.

"Jack's sympathetic tone was heightened. After playing with a train he refused to put it away and went to get another toy. As previously, I then held him gently but firmly as he struggled and, hysterical, screamed 'I'm stuck. Help me. Let me go, please,' over and over. I, in turn, continued to respond by saying that he had a choice—he could cry, he could scream, he could be angry, he could be afraid, he could be stuck—but, when he wanted, he could put the train away and be unstuck and get down for another toy. While I still held him he picked up pieces of the train and scattered and threw them. At the

height of his rage he pushed up from the floor with extended elbows without flexing his hips first: a major neurological breakthrough. As the end of the session came I told him that it was time to go, that his mom and I would help him put the train away and he could borrow a bat, a ball, and T-ball stand to take home that night. When everything was put away he took the ball and bat and quietly walked out, calmly saying, 'Thank you, Bonnie.' and 'Good-bye.'"

After the session I sense the profundity of what Jack has just worked through. We are both tired and more at ease with one another.

Contralateral Movement

Running joyfully down a mountainside at full tilt in June of 2000, I see Jack reflexively move into a contralateral pattern, arms swinging, legs pumping, and I know a door has opened to the future possibility of mastering this pattern on level terrain. Creeping forward is initiated by reaching with one arm, and the ease of this pattern includes and depends on all previous patterns. We yield, we push off, and we reach and pull. Bainbridge Cohen postulates that the upper contralateral reach comes from the hypothalamus, while the lower contralateral reach comes from the thalamus. In creeping the child brings the limbs underneath midline.

In changing levels to standing a typical infant uses a brachiation pattern, reaching and pulling with the arm while yielding and pushing with the leg. Bainbridge Cohen postulates that the tracks that support this pattern radiate from the thalamus through the basal ganglia. The infant practices a homolateral cruising pattern, usually side-stepping while holding on to furniture, taking neural development from the internal capsules of the ancient fore-brain to the limits of the ancient fore-

brain. When a contralateral walk emerges, neurological connections are supported through the corona radiata to the cortex. In contralateral movements we "gain the ability to integrate our attention, intention and actions" (Bainbridge Cohen, 1998, 4).

Amherst, June 13, 2000

Bonnie and Jack play on cars. Jack is pushing well with his legs in a chase game. Bonnie follows, pushing her car, varying timing and spatial direction. Jack begins to play with the surprise of confrontation and crashing and chasing her. He has no problem stopping, starting, anticipating, and changing direction. He later tantrums about putting a toy away. Bonnie holds him and he struggles and throws toys, but he doesn't say "I'm stuck." Instead he says "No, no way."

Bonnie writes about what transpires: "Jack then went through my arms as in a birthing movement out of my arms, extending his arms over his head and releasing his low brain/neck and atlanto-occipital joint, cerebellum, and pons."

Witnessing this is very profound. I again understand the importance of not forcing or bringing up resistance, but meeting Jack where he is.

I hold a question: What supports relationship? I ask this question to determine where relationship is interrupted in autism.

Jack and I return to Amherst in the summer of 2001, 2002, and 2003 for my classes at the School for Body-Mind Centering and for his sessions with Bonnie, Lenore Grubinger, and Saliq Francis Savage. Between visits I work with Jack as both mom and therapist, finding the subtleties of the work that are shared with me. I bring the work into my teaching and choreography. We lure Martha Eddy to Canada to teach and do sessions.

The themes of development are

overlapping, and they attest to an agenda that emphasizes relationship. I begin to see that the emergence of autonomy is necessary for relationship, and that relationship is necessary for the emergence of autonomy.

An understanding of the basic neurological patterns of movement endemic to the developmental process is valuable to anyone working with special needs children. Jack has taught me a lot. This knowledge is even more valuable to those who daily see and work with young infants. Traditional milestones of movement are constellations of many incremental patterns. When we see the stars in the constellations and each nova of development, we are closer to helping children like Jack with more timely interventions.

With the support of an aide, Jack attends third grade at a school for gifted children. His abilities to tolerate change and to make transitions are greatly improved. He is beginning to negotiate the split between fantasy and reality, and he doesn't always like that he can't just invent reality. I watch Jack play with his dinosaurs. He crawls across the floor in a lovely contralateral pattern. He is linking the encyclopedia of dinosaur facts he has stored in his cortex to his remarkable creative abilities and, more importantly, to his own vitality and experience.

I have (exponentially) what I prayed for in those initial sessions with Martha. Jack can talk incessantly; he loves to argue and with probing he will relate the complexities of third grade social dynamics as he sees them. He has a few friends and an archrival, who is teaching Jack about competition. Laura is very kind—not a very good speller, but that's okay. Jenni has three pet turtles, two tadpoles, and a leopard frog. Her mom works at the zoo. Tommy is always doing everything wrong. (He always beats Jack in foot races.)

Jack is becoming ever more aware

of the people who constellate his world, as his interests shift from the ether to more earthly matters. Four years ago, when we first met with Martha, my one wish for Jack was that he could express his experience. I now encourage him to trust and empathize with others.

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Darcy McGehee is an associate professor in dance at the University of Calgary, happily surrounded by three growing boys, an actor-husband, dancers, choreographers, and researchers. It is this lively experience that stimulates her questions. She invites your response to this article, or the queries that arise from it; write to her at mcgehee@ucalgary.ca. It is with humble gratitude that she wishes to thank all who come to the circle of Body-Mind Centering, all the researchers who show patience with her enthusiastic naivete, and her family, who encourage her to go inside and find a truthful path out into the world.