New Understanding and Hope for Children on the Autism Spectrum

Breakthrough Outcomes Based in Brain and Movement Sciences with Anat Baniel Method®NeuroMovement®

by Anat Baniel and Dr. Neil Sharp

Sam's Story

When Sam, a four-year-old boy with autism spectrum disorder(ASD), was brought to me, he did not speak, respond to his name, or respond to any verbal directives. He did not look in people's eyes. His movements were clumsy. He was unable to participate in any group activity for children, including music, which he loved. Those around him were overwhelmed and at a loss as to how to help him.

When working with Sam, I noticed that his coordination was poor and his movements were not sufficiently differentiated. For example, when he lay on his belly and I gently lifted one of his shoulders up a bit in the direction of the ceiling, his torso lifted as one chunk. There was hardly any twisting in the spine or in the ribcage, as would be expected in a typically developing four y/o child. At first, I helped Sam learn to move in a more differentiated way and his movements became less clumsy. He was much calmer and now was able to tolerate participating in a weekly group music class.

Nonetheless, I still saw that Sam could not make sense of words. It seemed that for Sam, words were just a garbled flood of noise. Language did not mean anything to him. I looked for a way to help Sam recognize and make sense of communication coming through these sounds.

A basic distinction in language is "Yes", or "No". E.g. "Yes" to express "I want candy", "No" to express "I don't want candy." We form this distinction, or concept, before we have the words to represent it.

Sam LOVED rice candies. I had the parents bring a bag with lots of those individually wrapped candies to a session. After briefly working with Sam with movement, I sat him on the work table facing me. By this time Sam had significantly progressed in his ability to stay quiet and focused. Very slowly, making quite a bit of rustling noise with the bag, I took one of the candies out and held it in front of his face. I proceeded to unwrap it VERY slowly. Sam was transfixed. Once the candy was unwrapped I asked him in an accentuated manner: "Do you want candy? Yes?", and moved the candy closer to his face, then "no", and moved the candy away from his face. Sam did not reply. Instead he tried to grab the candy. I made sure he did not reach it and I threw the candy in my mouth and ate it. Sam was stunned! He stared at me with the utmost attention and intensity.

After repeating this process, a number of times with the same outcome, I presented another candy, asked the same question and Sam, for the first time in his life talked and said, “Yesno” (as one word) very fast. I was tempted to give him the candy, however his brain still did not perceive the word “yes” as distinct from “no”, nor their meaning, so I ate the candy.

The next time I presented him with the candy, Sam said “yes” and before he had a chance to say “no” I quickly put the candy in his mouth. Sam successfully responded with “yes” a few more times and I stopped the session. Sam began responding in other situations with either a ‘yes’, or a ‘no’ appropriately. Language and communication began making sense to Sam. Sam’s vocabulary continued to grow spontaneously. That little boy grew up to be a musician.

How come these changes happened?

A New Way to Understand ASD

ASD is commonly understood as a brain disorder. The CDC defines ASD as a “developmental disability that can cause significant social, communication and behavioral challenges.” Others use the term “Neurodevelopmental disorder”. These are labels and descriptions that have their place. However, *what* is going on in the brain that brings about these symptoms? If we had more understanding of what is happening in the brain of the ASD child, would there be things we can do to improve the brain’s own functioning so that the symptoms will lessen, or even disappear? The answer is ‘yes’.

Breakthroughs, such as Sam experienced, are made possible by asking the question: ***“What is the job of the brain?”.*** The brain has a job to do, just like the heart has a job (pump blood), the ears (hearing and balance), the muscles (movement) etc.

The job of the brain is to put order in the disorder and to make sense out of the nonsense. To take the flow of input coming through the senses and use it to organize all action: thinking, feeling, perception, emotion and movement.

How does the brain put order in the disorder and make sense of the nonsense?

We can think of our body as a physical, mechanical system that has mass, weight and volume, and adheres to the laws of Newtonian physics. E.g., the heavier the weight, the greater the force required to lift it. This is what we are familiar with and how we understand and expect our body and the world to work and get results.

However, the brain works by very different laws, those of an *information system*. There isn’t a mechanical force, or lever, that we can apply to the brain directly that will make it work better. The brain is an information system in that it organizes and creates order in itself, and in its surroundings. What is the source of information for the brain? Most people say: “Stimulation”. Yes, stimulation is a necessary, but not sufficient condition. Stimulation alone is not enough.

It's the perception of differences in the flow of stimulation (what is also* called signal-to-noise ratio*) that generates the information the brain needs in order to grow new connections.
These connections can then be integrated by the brain into n*ew* patterns (neural networks) i.e. learning of new skills.

The better the brain is at perceiving differences in the stimulation coming through our senses, such as in sound (in pitch, intensity, quality, rhythm), sight, smell, taste, and the sensations coming from our muscles and joints, the more information it has with which to put order in the disorder and learn successfully.

The brain of the child with ASD is challenged in its ability to perceive differences. When the signal is not clear enough relative to the background "noise" in the brain, it has no informational value. Research demonstrates that these difficulties start long before we observe the typical symptoms of ASD. See References, below [1,2,3]

When differences are not clearly perceived, the world is like a soup — it does not make sense.

When the brain's ability to differentiate and create new connections and patterns is compromised, it interferes with the spontaneous process of mapping in the brain. The increasingly complex and refined motor, cognitive, emotional, and behavioral skills cannot develop. This disruption can be observed in the way children with ASD move, from as early as three to six months old. Children diagnosed with ASD vary from the norm in how they roll over, crawl, sit up, and even walk, doing so with greatly reduced differentiation.

Imagine trying to make a clear shape of a duck with five large, randomly shaped pieces (minimal differentiation), could you do it?

Figure 1

The answer is, no.

But if you had many tiny (highly differentiated) pieces, could you do it?

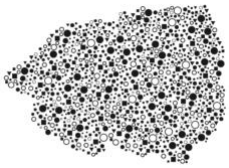


Figure 2

The answer is 'Yes'

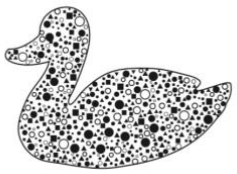


Figure 3

What Can I Do to Help the Child with ASD?

Anat Baniel Method®NeuroMovement® sees its job as providing conditions that help the brain of the ASD child get better at perceiving differences. It does this through the *Nine Essentials.* These powerful tools help the child become a potent learner. When using these *Essentials*, we also connect with the child, rather than trying to fix them and witness the brilliance of their brain.

"Scientists have defined the 'rules' governing brain plasticity. We now know how to drive brains to change for the better…. My friend Anat Baniel, working in parallel along a completely different path, has defined almost exactly the same rules (The Nine Essentials) in practical human terms;"

—Dr. Michael Merzenich, PhD, Pioneer in the brain plasticity field, Winner of 2016 Kavli Prize in Neuroscience

Each of the *Nine Essentials* can be applied at home, the classroom, and therapy. The *Essentials* are counter intuitive. They represent the shift from the mechanical model to an information model. Give them a try and be pleasantly surprised. Make sure to shift from 'fixing' to 'connecting' with your child.

The Nine Essentials

Movement with Attention

Movement is the language of the brain. The brain grows, forms, and is organized through movement. In turn, it organizes the movement of our body, thinking, feelings, and emotions. For movement to be a source of *new* information for the brain, it needs to be done with *attention to what we **feel** as we move*. Automatic, repetitive movement grooves in already existing patterns. When the child pays attention to what they *feel* as they move, the brain immediately starts building millions of new connections that usher in learning and transformation. You can use any movement the child is doing, or that you are doing with your child, and direct their attention *to what they feel* as they move. [I did this with Sam in every session] Watch video of Jonathan "The Anat Baniel Method and treatment of Autism in Children" https://www.youtube.com/watch?v=7-9NrVePsTA

The Learning Switch

The brain is either in a learning mode - the learning 'switch' is 'on' - or not. Stress, fear, multiple repetitions, fatigue and hunger turn the learning switch off. You know that the 'switch' is on when the child pays attention, gets interested, even if just for a few seconds. Over time the child will be able to focus for longer periods. A few seconds of clear perception of differences can lead to significant changes. Research indicates that short time periods are optimal for learning. When the 'switch' is off, see if using *the Essentials* turns it on. If not, take a break, back off, and come back to it later. [Putting the candy in my mouth turned Sam's learning switch on] Watch Jonathan again to see when his learning switch is turned on.
https://www.youtube.com/watch?v=7-9NrVePsTA

Subtlety

A powerful way to enhance the ability of the child's brain to perceive differences is to reduce the force and the intensity with which you move, talk to, or touch the child. The less the force or intensity, the more the brain can notice changes and perceive differences, empowering it to organize successful action. [How I moved Sam] We are told, "No pain, no gain". We tend to try harder, to force, to insist on many repetitions in an attempt to get an outcome, which unfortunately makes it harder for the child to learn and heal. Watch "Brachial Plexus Treatment and the Anat Baniel Method: Working with Devorah"
https://www.youtube.com/watch?v=LPP_77rl-Qc

Variation

Variation is at the heart of learning and a necessity for learning. Variation generates differences to be perceived. We see enormous amount of variation in the way typical children act. We can call it play, or mistakes, or exploration. The child with ASD tends to be rigid with a limited repertoire of repetitive, grooved-in behaviors. When the child has difficulty doing, or understanding something, rather than ask them to do it the *right* way, help them do it in many different, "*wrong"* ways. Then move on to something else with the same intentional, playful approach and witness the brilliance of the child's brain emerge. [The "get the candy game" was a big variation from what Sam was used to] Watch Spencer – "5 year old boy - Autism Spectrum Disorder – Potty Training" https://www.youtube.com/watch?v=JqIbVv7gslU

Slow

Fast, we can only do what we already know. That is how the brain works. To learn and master new skills and overcome limitation, the first thing to do is slow way down. Slow helps the brain notice differences and gets the child's attention. Slow helps the child's brain get out of its rigidity and compulsivity. You can find multiple opportunities to slow yourself and your child down. Try it and experience how such a seemingly simple shift can make a huge difference. [I unwrapped the candies VERY slowly]

Enthusiasm

Enthusiasm is self-generated. It is a skill you can develop as a parent, teacher, or therapist. Enthusiasm is not clapping hands, getting loud, or telling the child that they are good because they did something you wanted them to do. Enthusiasm is an *internal*, quiet and intentional process where you *choose* to feel delighted about seemingly small changes in the child. The child feels your enthusiasm, *without your saying anything*, thus amplifying the change, grooving it into the brain. Watch "Anat Baniel Method Foundation - Cerebral Palsy - Cypress' Progress" https://www.youtube.com/watch?v=cMwTDihs6Ps

Flexible Goals

The pressure to have a child progress according to the expected developmental milestones is enormous. When the child isn't performing in accordance with what is expected, often the focus is to try and have the child do what they can't. Doing this grooves in the limitations. I tell parents to stop, because "*if he could, he would; if she could, she would*". Instead, start where the child is right now. Find something, anything, that the child can already do and create a learning process around that. You can think about it as "differentiating around the edges" of what the child is currently able to do, thus creating new neural networks from which skills will develop and improve. Flexible goals also will reduce *your* anxiety and increase your creativity, resulting in greater success, vitality and joy for all concerned. Watch Cypress's Mother "Anat Baniel Method Foundation: Amy Shares the Story of Her Son Cypress" https://www.youtube.com/watch?v=8-M-FFxhb0Q

Imagination & Dreams

Many children with ASD don't exhibit imagination. After the child's well-being is enhanced by your applying the above *Essentials*, you can gradually introduce imagination by posing questions, or by suggesting different scenarios around anything that is of interest to the child. If the child is very rigid, go gently. For example, if the child likes a certain movie and watches it again and again, at a certain point pause the film and suggest something different in the progression of the film. Applying imagination with the child will upgrade the functioning of the brain.

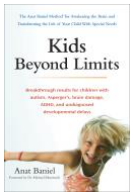
Awareness

Awareness is the glue of learning. Awareness is the highest level of functioning of our brain. Awareness is an action, a thing we do. I coined the word 'Awaring'– the action of generating awareness. 'Awaring' is the opposite of automaticity and compulsion. Awaring is being your own observer. E.g. knowing that you are moving your arm, or raising your voice, and thus having a choice in what you do. Typical children are aware from a very young age, long before they can talk. Children with ASD can have big portions of their actions outside of their awareness. As extreme as some of their behavior may seem, they don't know what they are doing. E.g., if the child is very loud, ask them to be louder, then even louder and only then less loud. The perception of differences is the beginning of control.

All of *the Essentials* are learnable skills. We suggest that you take one *Essential* at a time, for one week, starting with the first *Essential* looking to implement it anywhere you can with the child. At the end of the week proceed to the next *Essential* and practice that one for a week, while continuing to use the previous ones with which you have already experimented.

Additional Resources:

www.anatbanielmethod.com



Kids Beyond Limits
by Anat Baniel
available at
amazon.com and
barnesandnoble.com

YouTube Channel https://www.youtube.com/user/abmethod
Workshops https://www.anatbanielmethod.com/events/list
Private sessions https://www.anatbanielmethod.com/find-practitioner
Practitioner training programs: http://www.anatbanieltraining.com/

We would love to hear from you about your experiences with the work:
https://www.facebook.com/anatbanielmethod/
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References:

[1] Teitelbaum P, et al. *Movement analysis in infancy may be useful for early diagnosis of autism.* Proc Natl Acad Sci U S A. 1998 Nov 10;95(23):13982-7
[2] Phagava H, et al. *General movements in infants with autism spectrum disorders*. Georgian Med News. 2008 Mar;(156):100-5.
[3] Segawa M. [*Walking abnormalities in children*]. [Article in Japanese] Brain Nerve. 2010 Nov;62(11):1211-20.