ASYNCHRONY AND MENTAL HEALTH SYMPTOMS; A MODEL FOR UNDERSTANDING THE RELATIONSHIP

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Children, regardless of their gifts and deficits, must balance their input of information, the level at which they are able to process that information, and the rate at which they can successfully demonstrate new learning. Furthermore, children's level of sensory integration must be consistent with their cognitive energy to appropriately stimulate their thinking processes. When these things do not balance, asynchrony in learning occurs. Many asynchronous children are labeled with attention deficit hyperactivity disorder (ADHD), anxiety disorder, or have other mental health diagnoses. In my opinion, disparities in learning are often responsible for the difficulties we see in attention and emotional functioning. Although attention disorders and emotional difficulties may exist without incongruities in learning, the high incidence of ADHD or other disorders diagnosed in the highly-gifted population may be caused by the characteristically asynchronous development in their skills.

Sensory integration is the primary building block for all learning. When a child is exposed to new information, a complex series of events must occur for that information to be processed successfully by the central nervous system. Simplified, the sensory system must take in and accurately register input. In the case of gifted children, heightened neurological response may increase the sensory input and provide them with the necessary amount of stimulation required to activate their cognitive energy. This increased sensitivity can result in equilibrium between their advanced cognitive processing abilities and their rate of sensory integration.

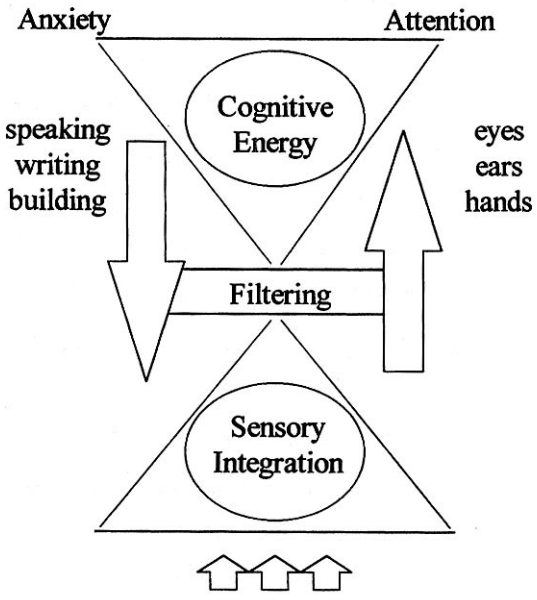
However, a child also must filter out non-essential information. As we block out certain input, we are better able to focus our attention on relevant information. When sensory input increases, highly-gifted children may or may not possess the ability to filter as much information as they take in. This can result in hyperfocusing (blocking out all other input) or inattention (blocking any input).

Additionally, once the information has been successfully filtered, it is processed for transmission to the brain. In the case of academic learning, information most often passes the eyes, the ears and the system of touch. Therefore, relative skill deficits in listening, seeing or kinesthetic processing will interfere with the rate of acquisition of new learning. This interference, in turn, may lower the level of cognitive energy and decrease cognitive stimulation. The brain then seeks greater input from the sensory system, continues to have difficulty processing the information, and perpetuates the cycle until the entire system becomes overloaded and shuts down through inattention.

Cognitively, a child must not only receive a clear signal, but must accurately process the new information. Poor reception or processing often leads to a misdiagnosis of attention deficit disorder. Children with visual deficits employ visual scanning as a technique to increase input, which may appear to others as hyperactive behavior, while children with auditory deficits nay appear inattentive and distracted. It is also important to understand that visual and auditory learning styles may or may not be determined by physiology. For example, auditory sequential learners can have poor hearing, and visual-spatial learners may have poor vision. This will further confuse the diagnostician.

Children must also be able to proficiently demonstrate their learning. This, speaking, writing, and building are necessary to complete the learning cycle. When a child is unable to express information, anxiety is often the result. When unattended, anxiety can spiral into depression. Strong motor skills, organizational skills, and the ability to speak and write frequently decrease the anxiety of the asynchronous child.

Furthermore, the entire learning system cycles through the states of sensory processing, attention, and emotional response, creating even more complexity within the system. A simple model of these relationships is as follows:



An example of how this works is illustrated by " John," a recent client. John was referred for evaluation for reading problems by his private school. He had been diagnosed with ADHD, and his parents reported that the prescribed medicine made him irritable and hyperactive. In testing, John demonstrated phenomenal strengths in abstract reasoning for both verbal and perceptual information processing. However, his visual-motor skills were in the low-average range. This was combined with poor auditory sequencing and slow visual processing speed. An interview with the parents revealed that John had always had tactile defensiveness

and was clumsy in sports. Based on our test results, we referred him for a visual evaluation by a developmental optometrist, as well as screening by an occupational therapist in the areas of motor processing and sensory integration. John's visual and motor skills were weak when compared to his strengths, while his sensory system was reported to be in a state of overreaction. In John's case, his capacity for sensory input was high, while his filtering mechanisms were average. His inability to filter out sensory information created feelings of anxiety and a constant rigidity in his muscle tone. In order to compensate, John had learned to internalize his feelings and block out all input. The internalization made him appear off-task and visually inattentive. His trial on Ritalin had created cognitive energy and had raised his level of sensory input. Without improvement in his filtering mechanisms, this increase overloaded his system, with resulting hyperactive behavior. Several months of visual an occupational therapy helped John with his tactile defensiveness, gross- and fine-motor skills and visual processing speed. Subsequently his attention improved, he was taken off the medication and a tutor was able to support him in the areas of sequencing and organization. John finally improved his writing and reading skills and, for the first time, reported feeling organized and focused.

Although he model explains the relationships between learning and mental health in a simplistic way, it can help parents and professionals understand the significance of these relationships. One of our primary functions as humans is to learn. When we focus on a mental-health diagnosis, we frequently fail to analyze the dynamic of learning, and may treat the symptoms, not the underlying learning problems. We eagerly accept a diagnosis and a medication that promises to help. However highly-gifted children don't fit the normal criteria for diagnosis. I believe that we must first assess and accommodate for asynchronous learning skills before we can successfully diagnose or treat the mental-health issues. Through collaboration of professionals in multiple disciplines, we will better assess and deal with the peaks and valleys of our highly-gifted children. Only then can we be confident that the frequent mental-health diagnoses we place on our asynchronous children are appropriate.

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