

Perspective Taking Across The School and Adult Years For Persons With Social Cognitive Deficits

A proposal for a perspective taking spectrum and related critical curriculum and support to facilitate adult success.

Joe, a 6-year-old boy, with a passion for chemistry, was working with a therapist in my office for difficulties related to Asperger Syndrome. Joe had an amazingly sophisticated vocabulary and language skills that reflected his strong intelligence, measured to be in the superior range. While a number of Joe's academic skills were incredibly high when compared to his developmental age, he also presented with complex deficits in his ability to relate to others, especially his peers. In an effort to help one of my clinician's understand Joe's limited perspective-taking abilities and how they impacted his social interactions I asked her to observe me interact with Joe. I then asked Joe to tell me everything he knew about chemistry. This delighted Joe and he enthusiastically began to tell me all about the topic. As he did so I initially responded with active listening, then slowly I got up out of my chair, walked out a door and stood on the other side of the door only to have Joe continue to look at my chair and talk about chemistry.

Joe's difficulty regulating his interaction with me directly related to his ability to speak while considering his listener's point of view. From my years of clinical work with persons who have diagnostic labels that reflect weaknesses in social cognition (e.g. autism spectrum disorders, non-verbal learning disabilities, ADHD), it is apparent to me that perspective taking plays a key role in our ability to relate to others not only for the purpose of socialization but also to interpret meaning that is critical for academic work and personal problem solving skills critical for living independently as an adult.

The term "perspective-taking" (PT) is an informal way to discuss what is often described in the literature as "Theory of Mind" (ToM). PT was introduced into my clinical work to over ride the difficulties educators and parents experienced when trying to understand of the concept of ToM. It was my impression that most people can begin to make a guess

about the implied meaning of perspective-taking given that the general population acknowledges that each person has his own “perspective”.

PT is a social executive function task as it requires the processing and responding to multiple levels of information simultaneously and within an incredibly limited time frame (1-2 seconds). Perspective-taking requires one to consider not only a person’s own thoughts but also those of the person(s) he or she is communicating with. The following bullets very briefly describe many of the critical elements involved in the perpetual act of perspective taking required whenever one is in the presence of another person, even if there is no direct interaction:

- Actively considering and adjusting to the **thoughts and emotions** of one’s self as well as the person(s) one is communicating with.
- Actively considering and then **comparing and contrasting beliefs** (e.g. religious, political, and cultural) of one’s self as well as the person(s) one is communicating with.
- Actively considering and then adjusting one’s message given the **prior knowledge or experiences** of one’s communicative partner(s).
- Actively considering and then adjusting given the **motives and intentions** of one’s self and/or their communicative partner.

Natural abilities to sustain attention and engage in the multiple tasks involved in perspective taking is at the heart of each person’s ability to interact at a level that is perceived as fulfilling for all persons in the communicative environment. Some of the results of PT include the abilities to: interpret the needs and wants of others; provide responses that are considered empathetic; safely navigate around person’s who may have ill intentions; interact with nuance so that others do not perceive you to be too demanding or too straight forward; interpret assignments at school by understanding the perspective of the characters studied or those of the teacher who is grading the assignment; share in the passions or delights of others even without sharing the same level of interest in the

topic purely because one can enjoy the underlying relationship that is evolving; and engage in acts of socially related critical thinking and personal problem solving.

Persons with the same labels do not necessarily share the same skills:

Most persons are born with solid perspective taking skills that began in utero and then developed intuitively through basic human interactions shortly after birth through early childhood and ultimately across our adult lives. The growth of perspective-taking skills continues across all persons lives, thus unlike many skills we learn in school this one is evolutionary with each developmental perspective taking lesson leading to a deepening of awareness that allows for more mature and wiser interpretations and responses. For persons born with social-cognitive deficits, or those who acquire them through accident or injury, the evolution of this critical process is not guaranteed.

In my clinical experience I have observed that the perspective taking abilities one develops by early elementary school has a direct impact on one's ability to develop and functionally use verbal and non-verbal language and nuance to engage in increasingly sophisticated interactions as our students age. Those with sustained weaknesses in this area, even if they have solid cognitive and emerging language learning abilities, often demonstrate difficulty with higher level forms of language, including abstract interpretation of meaning, as well as forming an overall conceptual understanding of what is being discussed or read. Those with severe deficits in PT, may be unable to develop verbal and non-verbal communication skills that move them beyond the initial but very important ability to focus on their own desires, needs and thoughts during communicative interaction.¹

¹ Severe deficits in perspective taking ability may ultimately limit one's ability to function with complete independence as an adult, however it does not mean the child is not able to learn a great range of practical skills across a lifetime that will help him to function with increasing independence as he ages.

Although the act of perspective taking is deeply embedded in our eventual success as communicators and personal problem solvers, the ability to measure it through standardized tests remains elusive. Given its very abstract nature, one's ability or lack of ability to take perspective of others is not currently associated with the official diagnostic descriptions of persons with autism spectrum disorders as defined in the DSM IV or for persons with nonverbal learning disabilities. While a lack of development in perspective taking directly impact's ones ability to develop social skills and language, professionals often only refer to "social skill problems" and "difficulties with verbal or non-verbal communicative development" in the anecdotal descriptions of a larger label such as "autism" or "Asperger syndrome". Thus, the autism spectrum diagnostic labels are given to persons who represent extremely wide learning abilities when it comes to their potential development for social and communicative skills which directly impact their ability to function or not to function as independent adults.

The great divide between a traditional education and a functional education:

My motivation to understand more about the depth of perspective taking deficits comes from concern about how we educate children across their school years with the supposed intent to help them develop into adults who can feel satisfied with their ability to participate in and contribute to society. It is my belief that we can do a better job recognizing the strengths and weaknesses of our students with the goal of designing a curriculum that facilitates growth towards functioning as an adult. PT deficits, whether manifested in a person with low or high cognition and language, strongly increase the likelihood that the student will have difficulty transitioning into adulthood without direct educational intervention. However, I have come to the conclusion that we can do a better job at predicting the intensity of life skills curriculum (work, daily living and leisure) that should be defined and explored at school and home based on the different levels of PT skills a student demonstrates.

In recognizing that every single person has the ability to learn, I also recognize that all persons do not have the ability to learn the same information. Given that I have always

worked with adults as well as children, I have had many opportunities to observe what happens when children are taught a standard educational curriculum without regard to their level of perspective-taking/ social interpretive skills. These standards of education are highly regarded currently in the United States, however they were established with the belief that all children have solid social communicative skills. From my work with persons from ages 5 to 65, I have had many opportunities to learn *backwards* what we should have taught students to help them work towards achieving increasing or full independence in adulthood, which is an implied goal of public education.

Sarah, a 22-year-old young woman was recently diagnosed with Asperger Syndrome at her university medical center. She graduated from high school as a merit scholar with confident hopes for success in college given her academic accomplishments in high school. Her first year at a 4-year university resulted in dismal failure, as she could not keep on top of the organizational and communicative demands expected of the university student. Sure that this experience was due to problems with the university personnel, she was transferred to a different university where once again she was met with the same difficulties. During her third year out of school she moved back home and worked for a small non-profit agency where she could focus on her computer knowledge. There she was able to succeed given the small nurturing environment of the company while she was also able to contribute given her strong technical knowledge. During this time she also continued to take a couple of classes at the local junior college. This combination of working in an environment that supported her cognitive skills while taking a reduced number of classes provided for a successful year. Armed with success she moved back to the 4-year university that she last attended. While initially doing well, as soon as she felt overwhelmed by an assignment she described that she “completely shut down”. Once again her lack of communication, problem solving and organizational skills led to her academic failure across her classes. This time the university asked her to not return. Left on her own while barred from attending her university, she had become secluded in her apartment refusing to leave even for a community Asperger support group meeting. At the same time she tried to assure her family that she would work it out all by herself. Her parents ultimately insisted that she move back home. Upon returning home she had

to cope with the humiliation of academic failure and the realization that she had not learned to develop skills for independence at college even though she received awards for her academic accomplishments e in high school.

It is critical that educators, administrators and parents realize persons with social cognitive deficits, even those with exceptionally strong cognitive and language skills, have to learn much more than the standard curriculum in their elementary through high school years, to prepare them for adult independent living.

The Spectrum of Perspective Taking Skills and Related Adult Outcomes:

Given that special education is based on helping students learn to thrive in “least restrictive environments” where they can live with “increasing independence,” it is not uncommon for adults to interpret these concepts to mean that all children will be able to function independently as adults as long as they are blessed with good teachers who are familiar with the latest educational techniques. While I strongly believe all students can learn and improve their functioning relative to who they are today, I realize that not all students have the ability to learn at the same pace or the same lessons. In fact, if we try and teach all children the same lessons we easily can overwhelm some of our students and send them into behavioral and mental health spirals. When a parent of a 12-year-old child with significant mental retardation, very limited communication skills and extremely limited perspective taking abilities told me: “If my child is not able to live and hold a job in the community independently by the time he is 18 years old, I will personally hold the director of special education accountable,” I realized that we have not done a sufficient job helping parents learn how their children’s learning differences will likely impact their children’s outcome even with the best of teaching.

As researchers struggle to define perspective-taking deficits, it is becoming increasingly clear that perspective taking skills are not entities that you are or are not born with; instead there is a spectrum of perspective taking deficits. I propose 3 levels of perspective taking functioning and the related outcomes for persons with these deficits. The purpose

of the proposal of this spectrum is to establish more realistic goals and potential outcomes that will allow us to celebrate the smaller steps of progress a student achieves, regardless of functioning level. I believe that in our attempt to treat all students the same, we set unrealistic goals for many. Unrealistic goals establish unrealistic expectations making it more difficult to celebrate the critical smaller foundational steps of learning that should be celebrated with the students and their parents and teachers.

The three levels on the spectrum of perspective taking:

Children with social cognitive deficits can experience enormous changes in their language, behavioral and relational abilities during their early developmental years (ages 0-5). A child with very weak communication and behavior skills at age 3 may have a very different command of the world by age 5. However, once children enter the 1st or 2nd grade we begin to see some consistency in their learning abilities across their life. The following three different levels of perspective taking are to be considered for children who are at least in 1st or 2nd grade. Since no one model applies to all people, this information should be perceived as a guide rather than as a set of facts.

1. Severely Impaired Perspective Takers (SIPD)

Students with SIPD generally have mental retardation that accompanies a diagnosis of autism. These students have extremely limited abilities to understand the perspective of others even if given clear explanation, visual information and time to consider the information. However, they enjoy being in the presence of others, much of the time, as long it is clear what others want from them in the environment. The following bullets notate some specific traits that might be observed in elementary school and beyond:

- a. Generally they learn about the expectations others have for them through routinized experiences. Changes in expectations/routines even if explained can be very distressing and cause significant behavioral reactions.
- b. Weak development of language. Nearly all of these students are non-verbal or minimally verbal. These students are prone to behavioral distress

given their lack of functional receptive and expressive communication skills.

- c. They can make gains in communication with augmentative communication systems and/or verbal language, however most spontaneous communication is related to the students specific wants and needs in the form of making requests. Comments with language, if the student does comment, is usually to reference a thought he is having without the ability to explain clearly to his listener what he is thinking..
- d. Loves and enjoys persons in his family as well as familiar educators, friends, and so forth. Has great difficulty relating to persons based on what other persons might enjoy doing. However, they are often happy to receive and give hugs when they feel good. The presence of their loved ones can help to relax them.
- e. Unless highly routinized, participation in reciprocal communication or interactions with adults requires a highly structured environment to help the student follow through with an activity.
- f. Given their very limited ability to consider the perspective of others, they have great difficulty learning and maintaining their attention as part of a large group. Most of these students do best in a 1:1 learning environment or in a very small group.
- g. Very limited expressive and receptive interpretive language skills. These students are very literal in how they perceive the world and how they express themselves.
- h. Great difficulty engaging in a discussion about the different belief systems of two or more people, given that this type of concept is not apparent to them.
- i. Can learn skills that are factually based. In addition to learning to use a communication system (verbal, augmentative or both), many of them have abilities to do basic math, basic writing, and acquire reading decoding and basic comprehension skills.

- j. Will do best when their education focuses on their own understanding of the world and introduces them to community events and expectations. They usually enjoy being out in the community and are best at learning when provided with opportunities to participate in events that are highly structured and fulfilling to them. This may include grocery shopping, food preparation, functional math skills, and job skills in an environment they enjoy. Learning in these environments is the most efficient given the intrinsic motivation that community and functional experiences provide.
- k. Difficulty learning conceptual information that they cannot relate to. This includes learning from textbook or other types of information that do not intrinsically make sense in their daily experiences.
- l. Clearly have cognitive strengths in specific areas of academics, sports, arts or leisure. These should be celebrated and encouraged.

Students with the above profiles will most likely need strong supported living across their adult years in all environments: community/work, leisure and home. Due to their tremendous difficulty learning as part of a larger group, they generally require close supervision in the teaching environment. Paraprofessionals are important members of their educational treatment team. Progress will continue to be celebrated across their lives as long as adults are there to continue to encourage and support new learning. They are wonderful people who can exhibit enjoyment, love and good sense of humor when they feel comfortable and secure.

2. Emerging Perspective Takers (EPT):

Emerging perspective takers may have mild mental retardation to advanced cognitive skills with a solid emergence in the use of verbal or augmentative expressive and receptive language skills to communicate their daily needs. By upper elementary school they understand that other people have some level of different thoughts, emotions and experiences however *they need to think long and hard* about this before they can figure out what they might be. Perspective taking for the EPT student might be considered “social algebra.” It is not that they are

without the ability to consider other people's thoughts and emotions, they just often need guidance to consider, incorporate and react to the information they are acquiring. From my clinical work it appears that one of the critical issues with this population is the amount of time and guidance it takes to think through what others might be thinking. Normally a communicative message is processed and responded to within 3 seconds, so students who require 20 minutes to consider and respond to others are perceived as having a serious disability that impacts their social and academic functioning, even when cognitive and academic testing may reveal a number of areas where they function in the normal to above normal range. The following bullets notate some specific traits that might be observed in elementary school and beyond:

- a. The students use verbal language or sophisticated computer driven augmentative communication systems to convey their ideas to others. However, given their deficits in perspective taking they will exhibit difficulty in the following areas:
 - i. Narrative language skills: being able to consider other people's prior knowledge to describe clearly and efficiently information for others to comprehend about their life.
 - ii. Pronoun referencing: will most likely have difficulty understanding pronoun references and use them appropriately in their own early communication in early elementary school and possibly beyond that time.
 - iii. Grammar may be immature and lack elaboration.
 - iv. Tendency towards strong literal expressive and receptive language.
 - v. Language is often self-focused with difficulty focusing on the thoughts or needs of others.
 - vi. Difficulty answering "how" and "why" questions, strikingly better at answering the factual "who, what, when, where" questions.
- b. Tendency towards an over-focus on detail rather than conceptualization of ideas. For example:

- i. Communication may be highly tangential as they have difficulty tracking the underlying concept of that is being discussed.
 - ii. Reading comprehension is best at the factual level, great difficulty understanding the main idea of a passage or book.
- c. Tremendous difficulty with social pragmatic skills even though they may attempt to spontaneously engage in social interaction with others. Interactions tend to be preservative.
- d. Given the social nature of group learning, they have difficulty participating and learning as part of the larger group in classrooms even though they may be educated in a large group setting given their stronger cognitive abilities. Generally they need directed instruction from a paraprofessional or educational specialist within the large group setting to help them maintain attention and break down concepts so that they can understand what they need to do.
- e. Overwhelmed by organizational tasks.
- f. Difficulty with personal problem solving and asking for help.
- g. Difficulty with written expression
- h. Need direct instruction about life skills such as hygiene, shopping, money management, employment, cooking, cleaning, and budgeting since they do not easily infer information or learn through observation.
- i. Demonstrate love, companionship and personal preferences with regard to the people they choose to share their friendship. They desire social interaction but have difficulty initiating and sustaining it particularly with their own peer group. Do best with highly structured social situations.
- j. Clearly have cognitive strengths in specific areas of academics, sports, arts or leisure. These should be celebrated and encouraged.

Given this description, these students show potential for directed instruction about the concept of perspective taking using very explicit and visual teaching techniques such as comic strip conversations, social stories, clear explanations and role play. While they continue to struggle in this area, small gains are

wonderful experiences as they can relate better to others with each small step of learning. They also have good abilities to continue to learn across their lives, however they will need to have alternative curriculum lessons during their school years to help them learn directly about life skills for work, college, leisure and home-life. While in school, if taught in large group classrooms they generally need a paraprofessional or special educator nearby to help them better conceptualize the information being taught.

Adults with emerging perspective taking skills may be able to live and work with relative independence in the community, after a routine has been established across these environments. At the same time, they will need a support team nearby throughout their life to assist with problem solving complex situations that arise in daily life such as changes in job demands, job searches, budgeting, moving living environments or difficulties encountered in personal relations at work or in the community. These folks, as long as they are motivated and have helpful adults near by, will continue to learn more sophisticated concepts. They need assistance with breaking down complicated concepts into small more concrete parts. These adults seek friendship, have a great sense of humor and can celebrate the progress they are making.

3. Impaired Interactive Perspective Takers (IIPT)

The impaired interactive perspective taker (IIPT) is the student who looks like everyone else at school, at least initially. The IIPT students have solid to advanced cognitive skills with solid language development. They have a lot of information about the world and will comment openly about their areas of interest. Socially they are very interested in pursuing peer relationships and they understand the “superficial social rules,” meaning they are aware that there is an underlying rule-based system that helps to negotiate social situations. They can tell you the more concrete social rules “stand in line,” “say please,” “don’t interrupt,” however, they have a great deal of difficulty perceiving how those rules apply to them. They have poor self-awareness. They are far less aware of the

more subtle or sophisticated rules or non-verbal signals that help to mitigate social relationships as students' age. While these students may appear "normal" on the outside, there are differences in how they process and respond to the more socially abstract information. It is not uncommon for younger students with IIPT to turn in their peers for breaking rules on the playground, while not being aware that the act of turning in a peer breaks a far greater social rule. Their struggles with social interpretation and abstraction become more evident as they age given the increasing complexity of social interaction and academic interpretation.

They are called "impaired interactive perspective takers" because their greatest deficits become apparent at the moment of interaction with their peers. Adults are far more flexible in accommodating to a single-minded conversation, but peers are unrelenting in their requirements that interactions be reciprocal. Peer based interaction requires not only the formulation of thoughts one might wish to communicate, but also persistent monitoring of how others might be interpreting or responding to the message so that the message can be adjusted as needed to meet the needs of the communicative partner. This is a social executive function task.

Sue was a beautiful middle school girl who had worked with me in an individual and group session to help her develop social thinking and related skills. During our individual sessions we worked actively on perspective taking concepts, the length of a message, how to adjust a message in response to another, etc. One day in our group session with other middle school girls, all of the girls were told that the goal for the day was to "ask questions of other girls about their life".

We reviewed the importance of focusing your communication on the needs of others and using your own language as an avenue to explore others, which directly positively impacts how other people feel about you. After a thorough review of the concepts I asked who wanted to start. Sue raised her hand then said, "I had to audition in the school play. I had to learn 50 lines" and then she recited many of the 50 lines in her audition. Upon retelling of her audition she

added, “I even get to sing in the school play” and then she started to sing. She only stopped when another girl in the group gave her a very blunt non-verbal cue to stop talking. This was on videotape and we used it during our next individual session to increase her awareness of the perspective of others during a spontaneous social exchange.

In addition to difficulty with reciprocal peer interaction, the following bullets point out other issues common for this group. However, given their strong academic and language skills demonstrated on test taking, the challenges to these students are not easily revealed. More commonly their challenges come to light in late childhood or early adolescence when they start to demonstrate feelings of depression, inadequacy or lack of being able to relate to others through sustained friendships.

- a. Great difficulty with organizational tasks; their organizational struggles are deep and require a lengthy intervention to help them conceptualize, task analyze, manage time., They also need assistance with perspective taking, functional communication and problem solving.
- b. Difficulty with written expression. This relates to weaknesses in fine motor control (penmanship) as well as conceptualizing and pre-organizing the material.
- c. Deeper reading comprehension that requires a strong analysis of the social-emotional nature of the characters being explored in literature or history.
- d. Some students have tremendous difficulty understanding math concepts.
- e. Abstract thinking and making inferences. They tend towards more literal interpretation, making it difficult to be flexible in deriving meaning (verbally and nonverbally) quickly during communication.
- f. Social relatedness as described above. Given that they do have “superficial” knowledge of social interactions they generally do well on standardized tests exploring social pragmatic knowledge, however functionally they struggle tremendously. It is difficult for them to get adults to understand the level of their deficits as they have a good vocabulary and physically look like their peers.

Unfortunately, their peer group very quickly notices subtle “quirks” and can be very unforgiving.

- g. Tendency towards perservation on specific themes or topics both in their spoken and written expression.
- h. Limited social experiences in the community. May need assistance learning to navigate shopping, job interviews, adjusting to the “hidden curriculum” of the job as well as pursuing social relationships in less structured environments.
- i. Very confused when it comes to dating, despite a strong desire to develop these relationships.
- j. May lie to avoid dealing with situations that overwhelm them.
- k. Difficulty participating in group activities, including in larger classrooms group and smaller academic workgroups with peers.
- l. Most likely of all the 3 levels of perspective taking to get teased/taunted by their peers.

These students are generally taught in the mainstream educational environment, however they benefit from direct instruction in social thinking and related skills for managing the complex requirements of the older child and young adult. They may be the least likely group to require the assistance of a paraprofessional, but they do benefit from special educators who offer insight into strategies that help them break down tasks, (academic and social) to prevent them from feeling overwhelmed.

In addition to the social challenges (which often lighten up a bit in high school), as these bright students go to college some of their greatest challenges will come from their failure to seek assistance or clarification, and from their organizational/problem solving weaknesses. While we might describe these folks as having a “mild” disability, given their many academic or cognitive strengths, actually due to their difficulties learning the complex skills of functioning as adults, their deficits are not at all mild. Many parents call my clinic to seek assistance for a 20 or 30-year-old child with IIPT who has not developed skills for independence with regard to life and work skills.

This group has the greatest likelihood for full adult independence; however, they may be slower than their neurotypical peers at achieving it. As they get older they also become more keenly aware that they are not able to process social information quickly and efficiently. This can be a source of great frustration that does not calm just because they are getting older.

Even if these folks make the choice to live with fewer opportunities for social interaction, they desire to be able to function in groups and to have close friends. They are generally terrific, friendly people with a good sense of humor when they feel comfortable.

Summary:

The intention of this article has been to explore different levels of perspective taking deficits in persons with weaknesses in social cognitive processing. This information is intended to better understand reasonable educational expectations while also promoting the need to create a more functional curriculum to meet the social, organizational, and life skills needs according to their different levels of need. The three levels of perspective taking functioning included:

1. Severely Impaired Perspective Takers (SIPT)
2. Emerging Perspective Takers (EPT)
3. Impaired Interactive Perspective Takers (IIPT)

Ultimately all students should be provided, at the very least, with an education that facilitates the development of skills for success in life, whether this is to achieve a higher level of education, participate with increasing independence in the work environment and seek leisure activities in the community. Given that students have different learning abilities we have to be reminded that they also need different curricular standards to facilitate this goal of education: to live and work successfully in our communities.

We as parents and educators need to improve our own abilities to describe and discuss our childrens’/students’ level of functioning to create realistic expectations and more finely tuned educational treatment plans. This article was written with the intention of providing a framework to foster more specific instruction for our wide range of students with social cognitive deficits.

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