Social Communication Learning Styles as a Guide to Treatment and Prognosis:

The Social Thinking-Social Communication Profile™*

A Practice-Informed Theory

*Formerly known as the Perspective Taking Spectrum

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Joe, a six-year-old boy with Asperger Syndrome and a passion for chemistry, was a client in our clinical practice. His amazingly sophisticated vocabulary and language skills were a reflection of his strong intelligence, measured to be in the superior range. While a number of Joe's academic skills were quite high when compared to his developmental age, he presented with complex deficits in his ability to relate to others, especially his peers. In an effort to more fully understand Joe's social communication and perspective-taking abilities during an assessment, he was asked to talk about his favorite topic, chemistry. This delighted Joe and he enthusiastically began his monologue. Initially, the therapist listened attentively, but then she stood up and walked out the door. While standing on the other side of the door, she could hear Joe continue to spout his chemistry knowledge… to an empty chair.

Diagnostic Soup

Joe's seemingly oblivious response to his conversational partner's exit is one example of how a person with Social Communication Learning Challenges (SCLC) may struggle with attending to the thoughts, emotions, and needs of those with whom they interact. In the same situation, another person with SCLC, perhaps one not as intellectually bright and academically skilled as Joe, might have noticed his conversational partner leaving the room; yet another person with SCLC might have noticed someone leaving the room but would not have considered switching to a different topic to keep the partner engaged. All three of these individuals could easily have a diagnosis of Asperger Syndrome (AS).

In the past, AS, High Functioning Autism (HFA), and Pervasive Developmental Disorders-Not Otherwise Specified (PDD-NOS) were all generally referred to as "autism." Now with the latest anticipated changes to the *Diagnostic and Statistical Manual of Mental Disorders, 5th edition* (2012), Joe's diagnosis of AS will no longer be included. Instead, the three categories (AS, HFA, and PDD-NOS) will be collapsed into one term and will be referred to as Autism Spectrum Disorder (ASD) with differing levels of severity. This broad term provides almost no direction for understanding an individual's needs, prognosis, and/or treatment path. In fact, one of the greatest issues with collapsing the categories is captured in the well-known saying: "If you've met one person with autism, you've met one person with autism."

Many researchers have attempted to differentiate HFA from AS. Although some argue for the relevance of diagnostic distinctions, many don't. Further, a significant body of research addresses co-existence or co-mingling of mental health problems (anxiety, OCD, depression) and ASD and ADHD, which simply muddies the diagnostic waters as it is difficult at times to clearly distinguish symptoms related to anxiety and symptoms related to social learning challenges (Reaven, Blakeley-Smith, Nichols, Dasari, Flanigan, & Hepburn, 2009; Pine, Guyer, Goldwin, Towbin, & Leibenluft, 2008). To complicate matters, other diagnostic labels also suggest the strong possibility of SCLC; these include but are not limited to Attention Deficit

Hyperactivity Disorder (ADHD) and the related Attention Deficit Disorder (ADD), Tourette syndrome, hyperlexia, Mixed Expressive-Receptive Language Disorders, Non-Verbal Learning Disorder (NVLD), apraxia, etc. There are additional diagnostic labels, such as bipolar disorder, social anxiety, shyness, and social phobias that also affect one's use of social communication. It is not uncommon to receive reports that diagnose the same child as having AS, bipolar disorder, ADHD, OCD, and anxiety—or, in other words, *diagnostic soup*.

Parents find the practice of diagnosis *du jour*, or "Label of the day," both perplexing and frustrating:

> "We have had him evaluated six times…. I am extremely frustrated with every therapy/treatment that we have tried thus far….It seems like I know more about Asperger Syndrome than the professionals I have engaged to help. He is now 21 and we are running out of time to find solutions. My husband is 66 and I am 63— we are at our wit's end and we need some real solutions. We feel like we have been sucked in and sucked dry by the experts who profess to know what will help."

Comments like this from parents, combined with our own clinical frustration with the diagnostic labeling system, led us to consider how we could better define an individual based on a profile of socially-related learning strengths and challenges across different developmental ages, with the objective of crafting a more individualized treatment approach.

Social Communication
The obvious goal for professionals working with young people with SCLC is to better define key factors in assessment and then use the information to develop treatment(s) based on a differentiated prognosis to prepare for the transition to adulthood. Given that social learning disabilities present with lifelong challenges, treatment should not stop as the individual emerges into adulthood; options all through the person's lifetime must also be defined.

When determining a student's social functioning level and appropriate recommended treatments, we have found it most helpful to "start fresh" with each individual, which means we *do not* consider the student's previous diagnostic labels to help us determine his or her social functioning. Instead, we examine the student's social communication learning abilities (strengths and weaknesses) and consider his or her mental health factors, social developmental level, temperament (for lack of a better word), and specific likes and dislikes.

We begin by acknowledging that the social communication learning process is fraught with complexity and that the social communication process is also a social emotional process. We respond emotionally (internally and perhaps externally) to those who are around us and how they treat us and others. Therefore, factors to consider are those related to social language and to social emotional processing. These include being able to read the context, responses related to non-verbal cues (i.e., situational cues), what one knows or doesn't know about the communication partner, the person's facial expression, body language, breathing patterns, and tone of voice, etc. At the same time, one must also consider one's own mood and the mood of the other person. The social communication process is synergistic and dynamic and constantly evolves with age.

While everyone is feeling a push for evidence-based practices, surprisingly little is known in our educational and mental health treatment communities about how we use social communication concepts/skills to form societies from a normal developmental perspective (Winner, 2007). The importance of this statement cannot be understated. If we continue to base treatment decisions on a person's outward social skill production (symptoms) and not on the core concepts of how that person processes and responds to his or her own and another person's social mind, our treatments will always lack depth. Further, if we place individuals together in treatment groups in which they share relatively few social learning strengths and weaknesses and emotional coping mechanisms but do share a diagnosis, we usually fail to provide good use of the treatment sessions or best practices.

Social Thinking
The term Social Thinking® was created by Winner in the late 1990s as a way to move beyond and beneath the level of simply teaching social skills. This early work focused on how social cognition and emotional processing contribute to a social skills conceptual framework for those more able to learn complex information through a language and cognitive-based learning approach. The framework further recognizes that those individuals who have social learning issues, but who also have strengths in language and cognition may especially benefit from therapy that is based on the elements of social cognition.

Social Thinking is a *strength-based* treatment ideology offering related treatment strategies for individuals who have social learning challenges and solid cognitive and language skills. Thus, those who are targeted for treatment using strategies from Social Thinking are individuals who can grasp the notion that considering and responding to social thoughts is complex. Social Thinking strategies and concepts are not only utilized in social interactions or when sharing space with others but also for socially interpreting movies, TV shows, and literature, and in a variety academic areas (such as history, social studies, and situations like peer work groups when relating to one another is required for academic success). Yet even within this subgroup of students who have social learning weaknesses along with language and cognitive strengths, students do not all show the same level of SCLC or of academic learning issues. Because of this, Winner discouraged the practice of "grouping" students for treatment solely on the basis of the most recent diagnostic label.

Winner introduced Social Thinking in the book, *Inside Out: What Makes a Person with Social Cognitive Deficits Tick* (Winner, 2000). In this book, she proposed the conceptual framework for Social Thinking (ILAUGH Model™) as a way to explain the range of social cognitive processing patterns that are noticeably relatively weak in persons with SCLC. The model is based on the core theories reported in the literature to be critical for those with social issues. These include: Theory of Mind (Flavell, 2004), Central Coherence Theory (Happé and Frith, 2006), and Executive Functioning (Hill, 2004). Winner argued that all are relevant to understanding this group of students. The ILAUGH Model was (and is) a way to show the connection between how the challenges in the social mind are connected to the student's academic abilities throughout the school years. The ILAUGH Model of Social Thinking is briefly summarized below:

I = Initiating communication in unfamiliar or more stressful social communicative contexts.
L= Listening with eyes and brain: suggesting listening is not all about auditory processing but also how we synchronize non-verbal communication cues to process and respond more succinctly to a message.
A = Abstracting and inferencing: the ability to predict and glean meaning from language and non-verbal and contextual cues.

U = Understanding perspective: relating largely to understanding a student's Theory of Mind. Perspective taking is not one thing but many happening at once that include being able to perceive your own and others' thoughts and emotions, physical intentions, language-based intentions, prior knowledge and experiences, belief systems, and personality. Individuals are required to incorporate the above information and respond within milliseconds to two seconds.

G = Getting the big picture, gestalt: thinking; relating largely to Central Coherence Theory and executive functioning.

H = Humor and Human Relationships: lends itself to understanding relationship theory of communication.

Developing a Scale of Social Functioning: The Social Thinking-Social Communication Profile (ST-SCP™)

The framework underlying the ST-SCP began several years ago when Winner noticed that some of her students were showing positive changes related to the treatment strategies she designed. However, she also saw that other students seemed unable to grasp the treatment concepts, even though many shared the same diagnostic label. To complicate matters further, a sub-set of these students needed detailed lessons in how the social thought processes worked, while others with similar cognitive and language levels had a strong grasp on the information but struggled to integrate the concepts in their daily social communicative interactions. It also appeared that different academic learning issues were somewhat related to different levels of social functioning. It was from these observations that Winner proposed that students should be placed into treatment groups based on social functioning level rather than similar diagnoses. The result was that Social Thinking groups ran more smoothly because students were more open and able to engage in discussions and social skills practice that directly related to them.

As Winner began to share this information at conferences, audiences expressed an interest in how to figure out their students' social functioning in order to determine treatment groups. The desire for this information prompted Winner to describe, as objectively as possible, the observational process for determining social functioning as well as which types of treatments appeared to be relevant for each group. She also recognized that there is a distinct group of individuals who *do* benefit from specific social skills training, but are not appropriate candidates for Social Thinking. The original scale was published in articles, books and websites and was referred to as: *The Perspective Taking Scale* which included three categories: Severely Impaired Perspective Taker, Emerging Perspective Taker, and Impaired Interactive Perspective Taker. This was only the beginning of a dynamic tool that has continued to change over time. Important input from colleagues such as Stephanie Madrigal and other therapists helped to encourage the addition of more levels of social functioning and a better understanding of the social mind. After several years of developing the scale, Dr. Pamela Crooke joined the team and the scale has continued to evolve based on reviews of the literature, clinical experience, and discussions with family members, fellow educators, and mental health professionals. Currently, six treatment categories are represented and it is now referred to as: The *Social Thinking-Social Communication Profile™ (ST-SCP)*.

The scale continues to change according to the most recent research literature combined with extensive clinical experience and family input resulting in what the American Speech-Language Hearing Association (2005) refers to as a type of "evidence based practice." However, the ST-SCP has yet to be formally researched by an independent team of scientists. We have shared our practice-driven theoretical approach with many professionals and parents internationally, and the feedback has affirmed the functional use of the ST-SCP as a descriptive tool that can be of use to others. In fact, one primary motivator for publishing

this article is to encourage researchers to explore the scale to help determine which aspects can be confirmed as scientifically valid.

The ST-SCP as treatment tool

It is worth repeating that the ST-SCP is not a diagnostic scale. It is to be used once a student or adult has been recognized as having social skills problems, regardless of the person's diagnostic label. The original purpose of the scale was to encourage a more thoughtful approach to creating and sustaining social skills treatments, whether they are provided via individual treatment sessions, in groups, or both. The purpose of the scale has broadened since its introduction. It now also helps to predict a student's academic learning challenges that are linked to social learning abilities. Additionally, it is used as a tool to help families and professionals better understand how symptoms they see in a student third grade or older may help to predict how that student will function as an adult. Having this information can help families and professionals identify which types of educational lessons will most help a student to be as independent as possible in his or her adult years.

Social radar system -The different categories of the ST-SCP

A key factor in developing astute social thinking and related social skills is the ability to observe social contexts and how people share space within these contexts, including the nuances of their social interactions. Observation requires awareness of one's surroundings and the people within them. We noticed that our students had different levels of awareness in their environment; logically, a person has to be aware of his or her environment before being able to actively make increasingly sophisticated observations within it. Winner would describe some of our students as being "aloof," but fellow clinicians felt the concept of aloofness was too vague a description. Hence, Winner began to describe neurotypical social communicators as having a very active *social radar system* and our students' differing levels of social functioning as representing, in part, different levels of social radar. The weaker the social radar, the more socially impaired the person.

In one of Winner's workshops, she shows a YouTube clip of a "flashmob" called "frozen in Grand Central Station." In this clip, at an appointed time, a large group of people who have all come to New York City's Grand Central Station collectively stop in their tracks and freeze, regardless of what they had been doing. They stay frozen in facial expressions and body position for approximately two minutes. Videos capture the responses from others at the train station as they notice that a group (100+) of their fellow travelers suddenly stands still. Workshop audiences, after seeing this clip, typically laugh as they watch the faces of people trying to figure out what is happening and why. This clip is a great example to describe how some individuals who have social learning challenges might simply walk through the train station at that moment and not understand that anyone was doing anything out of the ordinary - even when encouraged to notice those who are frozen. Another group of individuals might also walk through the station without noticing the frozen people until it was pointed out to them and then they would think it was really funny. Still another group of our students would immediately notice that the frozen people were doing behaviors that were unexpected for that context. Those three different groups represent the range of social radar, from weakness to strength, while also helping to explain why each group needs its own treatment strategy.

As mentioned, the original three basic groups represented in the ST-SCP has grown to six descriptive categories with two that have sub-categories. The profile also now includes neurotypical functioning as an anchor on the scale. The other five categories represent a differing levels of social functioning to refine social treatment implementation. It is important to note that the scale is designed to show abilities and

issues across many diagnostic labels — not solely ASD. It represents the range of functioning from a person who has a severe deficit in social communication to a neurotypical social communicator. The categories of social functioning are:

1. Severely Challenged Social Communicator (SCSC)
2. Challenged Social Communicator (CSC)
3. Emerging Social Communicator: (ESC)
4. Nuance Challenged Social Communicator (NCSC)
    a. Weak Interactive Social Communicator (WISC)
    b. Socially Anxious Social Communicator (SASC)
5. Neurotypical Social Communicator (NSC)

6. Resistant Social Communicator (RSC): described as an alternative category in lieu of ESC or SDSC

Multidimensional descriptors for different profile categories
The ST-SCP is multidimensional and based on the synergistic and dynamic ways in which social cognition impacts our social and academic learning as well as our emotional health. To further explore each of the categories of social functioning, we use descriptors to guide our observations in different aspects of functioning related to the social mind. These include:
a. Understanding one's own and others' minds (including the use of social radar)
b. Emotional coping (mental health challenges)
c. Social problem solving
d. Peer interaction including play
e. Self-awareness
f. Academic skills
g. Bullying, tricks, mental manipulation

Social functioning and prognosis
We postulate that the variance in people's social functioning is due to the level of neurological functioning or dysfunction present at birth. This hard-wired level, in turn, has an impact on the extent of the social and sensory learning ability or disability. Because students with social learning challenges represent a heterogeneous group of cognitive, sensory, and language based functioning, it would make sense that these students did not all have the same ability to learn concepts; hence, their outcomes from treatment will vary, regardless of the treatment's intensity during the school age years.

However, the fact that we often refer to this heterogeneous group by clinically describing them with similar labels (e.g., autism spectrum disorder, ADHD, behaviorally disordered, etc.) makes it difficult for teams to discuss how students will have different treatment outcomes even with intensive treatment programs. Parents are often confused when they meet another bright child with ASD who is doing very well in the mainstream program at school when their child is not. They assume that because both children have the same diagnostic label, both students must be functioning at the same level, leading them to the conclusion that their child is not doing well because of the quality of their student's treatment team. Describing the different social functioning levels allows use to describe, for example, why a particular student does not do well in his language arts class and will continue to struggle with mainstream classroom teachings as they become more complex. Logically it makes sense that this same student will likely not succeed in a college level course and may need to explore vocational training as part of his high school experience.

Therefore, later in this paper, we describe the general prognosis for each social functioning category but only as it relates to students who are eight years old or older. As speech-language pathologists, we have all worked with students who are non-verbal or minimally verbal in their early preschool years who appear to pop into language when they are four, five, or even six years old. Some who have solid language delays may even go forward and develop very strong language skills in the early years of elementary school. However, based on our clinical experience, we have found it extremely rare to work with a child who has already been part of a good treatment program in his or her early years who makes remarkable shifts in social learning behavior once the student is in second or third grade. Yet we often sit in meetings where the team discussion assumes that a student who functions as a Challenged Social Communicator will go to a four-year college or university and will live away from home. We feel it is important to work with families and treatment teams to develop a logical guideline for what can be expected as the child moves into adulthood based on what we currently observe. This information is critically important for making decisions that relate to what needs to be designated for treatment in the student's IEP that will conform with his or her current functioning category and that also relates to where to educate that student across the school day. Placing a child in the mainstream for the full school day in high school or even middle school limits his or her ability to learn explicitly practical skills of daily living when the student is a weak social communicator; these skills will be sorely needed upon high school graduation.

The prognoses defined below are designed to help delineate the discussion teams should have about a student and where to focus their treatments. They also aim to help parents prepare for the adult years not only financially, but emotionally as well. Many families of our students with solid intelligence and language will not qualify for federal monies that support adult treatment programs; this means we need to assist our families with the transition as their child moves into adulthood; it is not only the student who makes the transition.

We are pleased when a student is able to do better in his or her adult years than our prognosis indicated; however, we have yet to observe this happening with any frequency.

Will students move across the categories during childhood with well-designed, intensive treatments?

This is *not* a scale of development nor is it "recovery-based." We do not expect individuals to move from one social functioning category to the next unless he or she started at the very high end of one category and then merged into the next category (e.g., if a person started as a very high emerging social communicator, with age and learning he or she may merge into a weak interactive social communicator). Individuals who are best represented by one category at eight years of age are considered to be solidly within that category throughout their lives, although improvement within that particular category is to be expected. It is important to recognize that social development continues to evolve throughout childhood and even in adulthood; maturity is our students' friend. What people may not have been able to learn a few years back, they can now grasp, in part aided by maturity. However, those who are emerging social communicators are developmentally different in how they learn social information. As a result, as they continue to acquire new information, they will still be behind their peer group in how they process and respond to it. When we look at a person's progress, we need to focus on how the individual has improved compared to himself or herself rather than how that person compares to others of the same age.

Distinguishing students level of functioning on the Social Communication Profile is in no way meant to limit the growth of an individual but is intended to guide treatment and set realistic expectations for learning and independence or the lack thereof. In other words, this profile system is *not* a way for treatment professionals and parents to move individuals to the next "higher" profile category. It should *never* be used as a measurement tool for determining progress in therapy or as a pre/post treatment tool because that would imply that the scale is linear, which it is not. It is also not designed for use with preschool children (we use modified play scales for this age range) or with older adults (category descriptions do not fully describe their issues and needs). Finally, note that many individuals will have characteristics in more than one category. The idea is to determine which profile characteristics best describe the individual globally in order to define and move treatment in the appropriate direction.

The profile *is* appropriate for determining what type of treatment approach to use (e.g., behavioral vs. social cognitive or a combination), the trajectory of treatment, and prognosis. It is also a crucial tool in determining which individuals should be grouped together for treatment.

What the scale has yet to capture
Getting the ST-SCP into its current form has taken 15 years of observation and tweaking. What we know needs to continue to be explored with relationship to this scale includes but is not limited to the following:

- Detailing how students within each social functioning category change with developmental age. We know that an emerging social communicator looks and acts a bit different at 6 years old, compared to 10 years old, compared to 16, 24, and so on. This will obviously take a team of researchers many years to concretely sort out.

- Winner's ideas related to assessment of persons with social learning challenges are included in the final chapters of her book: *Thinking About You, Thinking About Me*, 2nd edition (2007). In these chapters, she details tasks that are part of her Informal Dynamic Social Thinking Informal Assessment and describes possible observations you might make as you have students engage in these tasks. What our team has yet to do is fine-tune the assessment to specifically delineate which social functioning category a student may be in based on his or her performance on these tasks. We would also like to do research about whether we can see common standardized test result traits when specific social pragmatic tests are used with students who have similar social profiles.

- Ultimately, we plan to develop a tool with which users of the ST-SCP would answer a range of questions about their students based on the multidimensional categories are describing to help with more objective suggestions for identifying a student's ST-SCP category. Related to that tool, we also plan to present basic ideas for starting treatment with students at each category of functioning. It may be possible to create a bit more of a concrete description of different therapeutic treatment ideas to use with students once we identify their Social Communication profile category. We will still need to keep in mind that treatments will need to be sensitive also to our students developmental ages and that many have very real mental health needs that are related to their social learning challenges which require simultaneous treatment. Therefore, one treatment approach will never be fully effective as anxieties, depression, and related counseling must be considered. However, developing related assessment tools and different treatment ideas will be our life's work. Given this notion, the authors request you avoid sending emails to request this information at this point in time.

ST-SCP Category Definitions
The following ST-SCP categories are described here along with related subcategories. For each level, we first describe the group's strengths, followed by areas of noted relative weakness related to the multidimensional categories we are exploring, and then the prognosis.

As you review this information, you may find traits from more than one group seem to apply to one individual you are considering. When this happens, try to determine which level includes the most traits associated with it that relate to the person you are considering.

Neurotypical Social Communicator (NSC)

General description: For the most part, the individuals in this group are developmentally "on track" in their acquisition of milestones of social development. Although some may have an expressive-receptive language delay, their social abilities are a relative strength. They are reasonably flexible in working with a range of people and changing situations, in play-based, peer-based, and academic situations. While they do make social errors across their lives (sticking their foot in their mouth, not always being sensitive to what someone is thinking or feeling, etc.), these errors are considered within the bandwidth of "normal social behavior"; such social errors are just considered part of "being human." An important point is that individuals in this group continue to learn from their mistakes and become more adept socially throughout their lives. Individuals this category may seek counseling from friends or mental health professionals for social issues over the course of their lifetime. Those referred to as neurotypical have learned social thinking intuitively but benefit from some basic social communication reminders particularly when engaging in social problem solving. The social world is too complicated for any individual to participate in without some support.

Strengths: This group has a strong social emotional connection to the world and an astute social radar system but can still become overwhelmed by social demands combined with the normal demands of stages of development; they may face anxiety and depression. However, this isn't due to a social learning challenge but instead is just part of life.

This group demonstrates a range of social functioning from people who appear "very cool" and who constantly adapt their social behavior to meet the expectations of the group (social chameleons), to those who tend to prefer to be in a smaller social circle and stick with a trusted friend, to those who are somewhat quiet in social situations. However, the individuals in this group are able to establish and maintain some form of peer networks that allow them to feel connected within whatever community they choose while also maintaining employment as they age.

Treatment: Some may seek the help of counselors to navigate the complicated waters of social emotional relationships, work, and life pressures. Many seek the counsel of friends and family.

Prognosis: Neurotypical functioning implies that this group has good opportunities to succeed (and opportunities to fail) given the choices they make at achieving the job of their choice, maintaining their job, relationships, marriage, and so on.

Nuance Challenged Social Communicator (Includes SASC and WISC)

This category consists of two different groups of students: Socially Anxious Social Communicator (SASC) and Weak Interactive Social Communicator (WISC). Those in the WISC group appear to have solid social learning challenges as a cornerstone of their social skills weakness but social anxiety often takes root as they age and recognize that they are perceived as lacking in nuanced social skills. We hypothesize that this group's social anxiety is the foundation for their social skills weaknesses, as their pervasive social anxiety prevents them from easily accessing their social cognitive information, making them appear to be more socially inept than they actually are. We have found the SASC work through issues related to social anxiety/social skills more quickly than the WISC; however, both groups benefit from the same treatment. That is why we have placed them both in the same ST-SCP category, that of subtly different social communicator.

Socially Anxious Social Communicator (SASC)

General description: These are Blenders and Faders with anxiety. They try to blend in or subtly fade out and others are likely to describe them as shy. They function "under the radar" and often try to appear to others as "fine" but avoid many social situations outside of their family.

Those identified as SASC have a highly developed social radar; in fact you could argue they interpret the information they receive through their social radar with exaggeration. Rather than recognize that people have thoughts about each other in mostly benign ways, the SASC is often highly concerned about *any* thoughts another person is having, even if the SASC logically understands that he or she also routinely has small thoughts about others when around people.

This group, we hypothesize, is born neurologically to experience more anxiety and to intuitively doubt their social abilities. Their resistance to interacting in situations that make them uncomfortable can mean they appear to be more socially limited than they actually are. When comfortable or in their social element (usually around family and close friends), they appear much like a NSC. However, when their social anxiety emerges, it appears to diminish their access to their social cognition and they appear much more like a WISC (the next group described). The huge shift in their social behavior from appearing comfortable around others to appearing highly uncomfortable and disconnected from others marks the SASC. When feeling socially anxious, those who are in the SASC group over-focus on their feelings of anxiety and need to retreat from others, leading others to resist interacting with them. This then affirms the need of SASCs for their social anxiety: a catch-22.

Those in the SASC group often appear much like the next group (WISC) but can be differentiated because of their response to treatment and their ability to make progress once tools for anxiety are in place.

Strengths: This group has strengths in the areas of language and may have basic to advanced intelligence as well as the ability to achieve in a range of nonacademic pursuits. Academically, as a whole, this group can be quite solid. However, some have a tendency to also be anxious about their workload and may succumb to anxiety, unable to complete their assignments. It may be that this group has difficulty with executive functioning, which may at the core of their anxiety. This could impact not only their social relatedness (social executive functioning challenges) but also their organizational skills (organizational executive functioning). Some of the students in this group we have worked with may be slightly more literal and naïve than others their age; however, this may result from a lack of overall social skills practice as they shy away from relating to people when they feel uncomfortable. Individuals in this category often excel in

careers that allow them some level of predictability and fewer demands to interact with co-workers or clients.

Areas of concern: Many individuals are mistakenly thought to have behavior issues because of a refusal to participate in activities that are anxiety provoking. Group work can be difficult throughout school and work, and many learn strategies to avoid social interactions, including isolating themselves through books, computer gaming, videos, etc. Sensory integration/sensory processing issues need to be ruled out with this group and are generally, to date, unexplored. It is reported that those with social anxiety, when compared to other types of anxiety, have the hardest time gaining and sustaining employment.

Treatment: The SASC benefit from Social Thinking combined with other cognitive behavioral approaches for treating social anxiety. The focus of treatment is on helping the SASCs appreciate their own nuanced social competencies while also realizing how others interpret different aspects of their social functioning and how they can shift those social interpretations by shifting their social behaviors. As they become more affirmed in their social competencies and their ability, to some extent, to recognize that they can impact people they are less comfortable around in a more competent social manner, they then can work at minimizing the presentation of their social anxiety. The key is to explore and celebrate competencies through guided practice, role play, and exposure prior to actively attempting to minimize the social anxiety. Mental health professionals should be actively involved in working with SASCs, especially if they can work on teaching and reteaching the core concept of Social Thinking and related social skills.
 The SASC can be put together in a treatment group with the WISC and work well together.

Prognosis for SASC: Although those born to higher levels of social anxiety will need to monitor their anxiety and continue to work to keep it within a level with which they can cope, they have the best prognosis for living as successful adults with treatment.

Weak Interactive Social Communicator (WISC)

General description: May appear typical at first glance to adults and perhaps peers. The sustained impression held by peers is that of a subtly awkward and odd person.

These students demonstrate what we would consider to be fairly well developed social radar in that they are highly aware that they have thoughts about people and people have thoughts about them. They also understand that each person has his or her own unique perspective of the world. However, they lack perception of the subtleties of social cues and may be neurologically less attuned to other's facial expressions, body stance, and gestures, thereby limiting the feedback they receive from others when interacting. As the nuanced demands of social communication increase with age, so does the discrepancy in how the WISC is perceived by his or her peer group.

This group often tends to have normal to way above normal verbal language skills and cognition; most did not have a language delay when young. As elementary school children they typically can pay attention in a classroom but may be far more rigid than their peers and subtly more literal. Some are very bright (some in specific areas of interest and others in global areas of knowledge), but most also have executive functioning challenges that may make written expression and organizational skills more difficult than would be expected given their academic intelligence.

They attempt to work in groups but may miss the subtle cues of how to relate with peers when the teacher is not leader with mixed success. They clearly get along with some peers and in some situations better than others, so they will not always stand out as pervasively making social errors, but they make enough errors for the peer group to single them out. They tend to prefer the attention of adults and may seek them out as often as possible to talk to, even during recess and lunch breaks at school.

When in peer-based social situations, they may be more focused on surviving the moment by focusing on their own thoughts and expression of their own ideas than in thinking about how people are thinking about them in that moment. The breakdown seems to be greatest when the student has to demonstrate his or her social competencies in the middle of spontaneous social interactions. If born an extroverted personality, they appear egocentric and monopolize the conversation. If more introverted, they tend to withdraw from group communication, implying to their peers they are not interested in being with others, even though they often crave acceptance by others. After the interaction, they recognize they have been rejected or are being treated poorly by their peers. As they age into upper elementary school and beyond, they can be keenly aware that they are doing something wrong socially but can't define what it is.

Peer rejection of WISCs is significant given their lack of nuanced ability to blend into a range of peer groups and show interest in their peers as effectively as they would like. By the end of elementary school, they typically are aware they are not well accepted by their peers without understanding what it is they may be doing or saying that is perceived as awkward.

We believe this group is highly targeted by bullies because peers perceive this group to be somewhat neurotypical but just enough different to call them names, make fun of them, etc. the peers of WISCs don't understand they have a true social learning disability. To make matters worse, adults, particularly those outside of the home, see these students as charming and engaging with adults, failing to see that the peer group would not describe them in this way. Teaching and counseling professionals often consider them "neurotypical enough," see they may be performing adequately to exceptionally on tests related to academics, and conclude they do not have any true social learning issues. This can happen especially because WISCs tend to pass most of our standardized social language/pragmatic tests. As mentioned, the peers in the WISCs' world, however, are able to see the social differences with little effort. Parents often report that their children talk to them about feeling rejected and disconnected from their peer group, which makes both parent and child sad and concerned. When they bring their concerns to the professionals, these concerns may be dismissed because the adults find the student so easy to talk to. Truth be told, especially by middle school and beyond, there is no single adult monitoring how a child functions throughout the school day.

Given how aware the WISCs are of how they are treated by their peers, they are at *very* high risk for developing social anxiety, OCDs, and depression by upper elementary school and beyond. For many, by the time they are pre-teens and teens, mental health treatment is critical and needs to be blended with Social Thinking type treatments.

The WISC may have a more significant to subtle history of sensory-based challenges and as they get older they still need to be assessed by an occupation therapist to rule out more pervasive sensory challenges that may limit the student who functions as a WISC to fully attend to learn or interact in groups or focus on organizing their thoughts

Assessment: Why are individuals in this group so difficult to assess?

The WISCs are almost always able to explain the basic social rules ("talk the talk"), even when young but struggle to apply the rules in the moment with nuance. They also have issues with the social executive functioning of perspective taking ("walk the walk"). While able to pass Theory of Mind tasks, they may be weak empathizers and relatively low in their understanding of how their intentions are being read by their peers during communication. They may also struggle to read communication nuances to intuit others' subtle communicative intentions.

When a student is referred for assessment based on parent concerns about social challenges, the student is typically screened or tested by a psychologist and/or speech language pathologist. While an adult may notice some "mild" social issues, on standardized tests these students tend to excel at demonstrating their social knowledge. However, tests by their very nature have to simplify and compartmentalize social information, removing the dynamic synergistic nature of the language-based communicative act. Almost all tests of social interaction focus almost exclusively on social language, failing to assess how the body and eyes play into the dynamics of social communication. The tests also fail to assess how the individual being evaluated communicates, neglecting to assess communicative responses within the millisecond timing required to communicate competently. Hence, tests oversimplify the communicative act, especially for the WISC students whose real issues relate not to their lack of social knowledge but to their failure to integrate all that they know in the moment of interaction itself.

Assessment should involve, when possible, observing the students with their peer group or through a series of informal dynamic Social Thinking assessment tasks that explore how they respond in the moment, e.g., the Double Interview described, *Thinking About You, Thinking About Me*, 2nd edition (2007).

Testing executive functioning skills is also recommended for this group as many have executive function challenges that may cause them to be less productive at completing schoolwork even if they are acquiring all the academic knowledge.

After WISC students, who tend to be bright, have completed standardized tests, they will often fail to qualify for services, with the IEP team saying their problems are too "mild." The difficulty with describing their social skill challenges as *mild* is that they are not mild according to the students' peers. They are only mild when compared to persons with more severe social learning challenges. However, as you will see when reading the levels described below, those with more obvious social skill challenges are more easily forgiven by their peers. The WISCs who we describe as having mild problems may find it very difficult to sustain a job or marriage as they become adults.

Strengths: This group tends to be solid to extremely good language users and many have keen academic intelligence, scoring well to exceptionally well on tests. They may also demonstrate many other talents, such as in music, arts, or even athletics. They can be voracious learners, specifically in the realm of science (also in literature, history, or any number of varied topics). This group, however, can be confused by subtle abstract language such as the way we communicate so indirectly with each other.

Areas of concern: Some individuals in this group *do* have academic issues, mostly related to feeling overwhelmed by the executive functioning load and inadequate social emotional coping mechanisms.

Some may have what is described as dysgraphia (difficulty coordinating the physical act of writing) while also having simultaneous difficulty organizing ideas, sorting related details, or considering the reader's interpretation while also focusing on grammar and punctuation. Yet when each area of written language is tested independently, these individuals can perform well. It is not uncommon that they also have poor organizational skills and need more assistance to complete and turn in their homework. Some may have other learning disabilities that may or may not be related to their social learning challenges, such as difficulties learning abstract math concepts or dyslexia.

Peers are often unkind to this group because they perceive them as mostly "neurotypical-looking." They are the group most at risk for persistent bullying, teasing, and trickery, not only as children but into their adult years. This group may intentionally or unintentionally provoke or insult others. If they talk too much in class or in a meeting, they may be perceived as a "know-it-all" or "show off." They may state their thoughts about another person without fully realizing how that person is feeling upon hearing this perceived criticism.

Anxiety and depression often plague the WISC. Their higher level social radar system unfortunately allows them to tune into the negative thoughts others may have of them without recognizing which social competencies they lack that contribute to the perception. This group is weak in fully understanding the depth and complexity of social emotional concepts, such as making and keeping friends, what it takes to maintain a marriage, and so on.

Treatment: Treatment programs, especially for students who are 11 years old or older, need to focus on the possibility of comingled issues related to anxiety, depression, and weak social competencies. They have less anxiety about how the world works than they do about the subtle social complexities and feelings of social rejection and imperfection.

Treatment should focus on exploring social emotional nuance and sophistication, including understanding how intentions are perceived by oneself and by others. These students require time to practice nuance-based social skills, which include dynamically adjusting social behavior based on the people and context. This group often has had limited practice in socializing because of their tendency to isolate themselves or because they have been rejected from peer groups.

Treatments of choice are those defined through the teachings of Social Thinking, not exclusively through the work of Winner and colleagues but also of other professionals who work to explore the dynamic intricacies of the social mind through a cognitive behavioral format (e.g., Tony Attwood, Carol Gray, those involved in the SCERTS Model, etc.). Although Applied Behavioral Analysis (ABA) may be helpful when those in this group are very young to work through rigidities and inattentiveness in groups, it becomes less useful past elementary school. We often teach our adolescents and adults with WISC that their "good intentions are not good enough." Instead, it's all about how their intentions are perceived.

Self-advocacy, assuming increased responsibility with regards to life skills, practice in the community, and accepting responsibility for their own learning are key across adolescence and into adulthood.

Some WISCs have significant executive function challenges that limit their ability to complete their coursework assignments even if they are cognitively learning much of the material presented in class or in books. With students who face tremendous challenges with completing their schoolwork, it is important to

be realistic about their potential for being able to do the coursework in a college/university program. During the school years, try to cut back on the number of academic classes to help this type of student focus on learning organizational skills for managing their workload when it is less intense. It's important to help the students learn at what level they can learn to manage their own assignments and how to advocate for themselves as they leave the high school campus and enter into the academic world of the university system. Some of our students, while very bright, do not learn to effectively manage their homework/classwork; these students would likely benefit from a transition to college program that teaches self-management of academic homework. Or, if the student has a strong history of rejecting the idea of completing classwork/homework, vocational training programs shouldn't be ruled out as a way to help maximize his or her learning strengths in a more hands-on type work environment. With maturity, these same students may be able to participate in a university-type academic program after they gain further maturity and insight into how they best learn and self-organize to produce written assignments.

Prognosis for WISC: Prognosis for this group can be quite good, but it can also be fragile. This group has one of the best prognoses for transitioning into the adult world and fulfilling their own expectations related to intellectual achievement, getting and maintaining a job, finding a life partner, etc. However, this group also has the greatest risk of not having a safety net if unable to succeed. They are often achievement-oriented and bright but may struggle to do their work independently because of organizational issues. It is not uncommon to see this group ill-prepared and overwhelmed by having to assume responsibility not only for work but also sleep schedule, hygiene, meal planning, budgeting, completing homework on time, developing peer relations, dating, and coping with their own sexual needs.

Many who are perceived at one level as "successful" as adults ultimately seek counseling or are told they need counseling for their lack of nuance-based social emotional connection with others (spouse, friends, children, or at times even their workmates). Others have made choices in careers and partners that allow them a very stabile, happy life but seek counseling to understand why they had so many problems as children or at other times in the past.

Emerging Social Communicator (ESC)

General description: Awkwardly engaged: Issues may not be apparent without verbally relating to the person for a few minutes.

The ESC represents the largest range of individuals within the ST-SCP. Its characteristics are likely to evolve into a less extreme presentation as the individual gets older. Those who continue to present with strong symptoms described below beyond early childhood tend to be described as "weak emerging social communicators" and those that have many of these symptoms but demonstrate them more subtly being described as "solid emerging social communicators." We decided to not formally acknowledge the emerging and solid functioning aspects of the ESC by appointing them their own categories on the ST-SCP given that we may group these students in the same treatment group. Yet, when we have enough students to form different treatment groups, we group them based on the "emerging" and "solid" categorization. It is our experience that the social presentation we describe as the emerging social communicator represents what people classically think of as high functioning autism or Asperger's Syndrome, but we have also met many students diagnosed initially as ADHD who clearly fit this profile.

Note: While not a preferred situation, there are times when a solid ESC is put into an intervention group with WISCs because of similar levels of cognition and/or language. In this case, the solid ESC will lag behind others in the group in terms of speed and efficiency in understanding and using treatment information. Differences in social awareness and the fact that ESCs have a greater need for basic social lessons may frustrate the WISC and impact their progression.

Observable social, emotional, sensory, and academic learning traits of the ESC often include (also explained in further detail throughout this section):

- IQ-related intelligence measures that span from intellectually challenged to bright; gifted and talented for verbal or performance IQs or both.
- Have a weak social radar system; not highly in tune with what is happening around them from a social situational perspective. Socially aloof.
- Have a range of sensory integration issues (that are prominent when young), which may result in self-stimulatory behavior (flapping, toe walking, rocking, food sensitivities, etc.), depending on the student.
- Have a history of a language learning delay or disorder.
- Usually desire social interaction but struggle to relate to peers of their own age without facilitation. Seek out interactions with adults.
- Some have an unusual tone of voice, possibly a loud voice.
- Weak at tracking what others are talking about and making related comments or asking questions.
- Some have odd posture or rigid movements when communicating or sharing space with others.
- Weak at reading situational and physical social cues (facial, gestural, tonal, etc.).
- Weak at understanding their own and others' emotions.
- Lack social nuance when compared to their peer group.
- Show perseveration in thoughts or interests; may have unusual interests compared to their age matched peers. Given their intense interests, they may develop strong specific skills related to their areas of interest.
- Are inefficient at thinking through social perspective taking; usually need extra time to process and respond to social information.
- Are most likely to fail the early Theory of Mind tests when in preschool/early elementary school, but may be able to pass these same tests as they get older.
- Most, if not all, are delayed in their development of joint attention and many are very weak in their development of pronouns when in preschool and early elementary school (due to inefficient processing of social perspectives of themselves compared to others).
- Use more literal or rigid interpretation of spoken and written language, which is likely to impact their ability to interpret reading of literature. Many are described as having auditory processing deficits or central auditory processing deficits.
- Most have significant executive functioning difficulties affecting homework and written expression.
- Have anxiety related to how the world works; less social anxiety as they have limited social awareness of how they are perceived. For example, may become stressed if a class that is to end at 3:00 p.m. is not actually dismissed until 3:03 p.m.
- Are weak at critical thinking and problem solving required from fourth or fifth grade and beyond.
- Have poor self-awareness of how they are being perceived.
- Have poor adaptive functioning skills (parents may call them "smart but clueless").
- Can have strong scientific visual learning strengths but not a requirement for this category.

- Enjoy a more slapstick form of humor (irony and sarcasm are harder to grasp, but our older students begin to acquire more of a knack for it).
- Many are quite motivated to do well when given behavioral systems and cognitive explanation.
- Many have weaknesses recognizing others' communication intentions and therefore are more likely to not recognize when people may have poor intentions; e.g., weak comprehension of stranger danger.
- Have difficulty paying attention in groups (classroom size) and often even when in relatively small groups (three or four people).

Individuals within this group have difficulty adapting to the social behavior of their peers; they tend to stand out from the group as socially unusual or awkward. Early strong characteristics are always present and observable in preschool or early elementary school and can be the reason for an earlier diagnosis than those who are WISCs. In the early years, this group often lacks the natural development of joint attention and requires intervention to understand that others have thoughts that are different from their own.

However, the intensity of their symptoms and characteristics that define them as ESCs may gradually be minimized with therapeutic intervention combined with maturity, so that by middle or high school they may appear to have much "milder" symptoms. Parents and professionals mistakenly then think the students, because they don't appear "so obviously autistic", are now not autistic at all. Yet their more rigid cognitive patterns and weak Theory of Mind persist as weak compared to their overall intellectual level. In fact, this group, while making progress in ridding themselves of the more intense and maladaptive behaviors, face extra burdens as they get into upper elementary school and beyond because they are weak critical thinkers and social problem solvers.

The ESCs are sensory-seeking or less attentive when feeling overwhelmed or placed in large group environments where they struggle to attend as part of a large group. In school, their weak social radar systems prevent them from efficiently learning in "group think" situations. Consequently, they are much better at concentrating and learning when only required to focus their social attention in a smaller group (e.g., 1-3 other people).The irony is that we often place these individuals in large group learning environments because their measured IQ/learning ability may test as average or higher. Such placements assume they are able to learn in a group. When unable to do so, a paraprofessional is assigned to assist. This means that the paraprofessional is paying attention in the group and then translating the information to the individual, who then attempts to complete the schoolwork. Some ESCs do learn to attend to the teacher in a classroom, especially when sitting in front of the classroom, but lack understanding of how to modulate their own behavior in a group. This results in instances of talking out of turn, talking for an extended length of time and inability to work well in peer based groups.] Although clear social learning challenges exist, this group often enjoys being around others. Known to be off-topic, tangential, or perseverative in communication, they still enjoy communicating with a variety of listeners.
They often have a very good sense of humor, and, in spite of stereotypes to describe this group as "anti-social," we find many actively seek social connection with one or two people. They often enjoy befriending others at school who function much like themselves.

This group is often celebrated early in development for their incredible honesty, not having flexible enough social minds to effectively manage mental manipulation (manipulating others and awareness that others may be manipulating them). This is based, in large part, because lying involves the social complexity of understanding the other person's perspective, which is extremely difficult for this group. As they age, most

are able to learn more about how this process works and may then participate in it, but they are quite delayed in this compared to their peer group. Neurotypical students are able to manage this concept by six years old, but our ESCs may not start to explore it more conceptually until they are in fourth or fifth grade, depending on the student; they may always be weak in discerning this type of information. For example, they may be able to lie on a basic social level when taught that not all facts should be stated aloud (e.g., say something tastes good to make the cook feel okay).

Given the weakness ESCs have in mastering mental manipulation, they tend to struggle with the concept of "stranger danger" when they are young because they need to be taught that others have different thoughts or may try to manipulate their thoughts. Thus, they are at risk for being easily tricked. Some students trick them for fun and others can trick them in ways that put this group in danger. This issue continues into adulthood with the introduction of mental manipulation such as email scams, false advertising, and people who target them to take advantage of their trusting/unaware nature (e.g., you've just won a million bucks!).

While most individuals in this category stand out to peers as "awkward and odd," the ESC has limited self-awareness. The peer group is far more forgiving of their differences than they are for other profiles previously mentioned (SASC and WISC). In fact, friendship clubs and peer mentoring programs are usually ideally designed for the ESC. The NSC peer will much more readily volunteer to help with students who have more obvious social deficits, given their own NSC peers recognize the peer mentor's actions as altruistic rather than attempting to recruit the ESC to be in their own dynamic personal social circle.

The ESC may not realize the social hierarchy of the playground/school and so only want to be friends with the peer groups that are not a natural fit for the ESC's social ability. Because of their lack of knowledge about the social dynamics of the group, they may think they are being included when others laugh around them or make comments. Peer mentors can be helpful silencing the other students and also determining when an ESC may not be in the right situation at the right time.

As mentioned earlier with regard to language learning and academics, most, if not all in this profile range, have a significant history of a language learning disability and many have pronoun learning challenges as part of their early language issues. This group is likely to not pass the basic Theory of Mind tests early in development, but will improve in basic Theory of Mind testing usually by upper elementary school or beyond; yet they still exhibit advanced Theory of Mind issues compared to the NSC across their lives.

This group of students always has issues with being overly literal. They process language as a surface structure without realizing that most language requires social inferencing (interpreting situational cues, determining the motive of the communicative partners, interpreting the words spoken, assessing the tone of voice, etc.) to determine the intended message. While most are able to learn how to decode written language well and comprehend factual information, an apparent lack of social processing paired with deficits in executive functioning and central coherence make it very difficult for the ESC to comprehend literature or the social nuance of the classroom. Most struggle with sarcasm.

Individuals within this group have very weak narrative language (they struggle to organize and convey thoughts through verbal and written language in a way others can easily understand). To narrate one's story with language requires the speaker to consider what the listener or audience knows and doesn't

know and how to share (narrate) the information in a manner that makes sense to this other person's life experiences.

Some have an artful ability to convey their own thoughts in writing based on their own interests and perspective if they are able to create written work free from others' guidelines and expectations. For example, they may write a pretty good science fiction fantasy story but can't produce an essay assigned by the classroom teacher. This can be very frustrating to the teacher, parent, and student alike as there is often a discrepancy between self-generated written expression based on a student's area of interest versus completing homework assignments requiring the student to take perspective of the teacher's expectations, etc.

Most (but not all) are highly disorganized and tend to over-focus on details and lack conceptual thinking. Many struggle to summarize their thoughts or write summary-based information (book reviews, etc.). Most need extensive assistance to understand the myriad of social and work expectations delivered each school day.

With regards to anxiety, most ESCs experience anxiety tied to the imperfections of how the world actually works compared to the way they think the world should work. Many struggle with transitions, understanding what may be next on their schedule or why their schedule may need to change on any given day. They may also become easily confused in dynamic social environments, which may lead to emotional as well as sensory dysregulation. This group, from our observation, does not have severe social anxiety as they don't have enough social awareness to be highly anxious about how they are perceived by others. However, persistent anxiety about the complexities of the world can overwhelm them, especially when in preschool and elementary school. Their anxieties may calm a bit with age and maturity but can still be considered pronounced compared to their NSC peers.

Employment
In terms of employment, it can be difficult for an ESC to find employment without assistance given their weak job interviewing skills. However, once in a job that fits their learning style, they can be highly productive and successful workers. Their work peers will continue to notice their more obvious social, critical thinking and problem solving weaknesses and provide them with some extra assistance or mentoring, without feeling insulted by their lack of nuanced social emotional sensitivity. This means if they can find employment, they are often likely to be employed for a long time.

In adulthood, the individuals in this group continue to struggle to learn social nuance and sophistication and still seem a bit "awkward and odd" to their neurotypical work and community-based peers. In some ways, this more obvious lack of understanding may be helpful in a work and community setting because others are more likely to be forgiving of social errors when they know the person can't help it.

Given a real lack of social critical thinking, most struggle with jobs that require personal problem solving. They are best when engaging in tasks where they work around others but aren't required to interact dynamically with others as part of their job description. Many are excellent scientists, computer programmers, horticulturists, animal scientists, or the many variations of those and other areas.

Strengths: Although some individuals within this category are intellectually very gifted, others may have borderline verbal intelligence; hence, there is a range of academic learning abilities and language skills. It is

not uncommon for academically gifted and talented ESCs to score very well on IQ and academic tests. Many, but not all, have stronger visual learning skills than auditory processing ones. Many are excellent text decoders and can read (decode) early in development. Individuals within this profile often do best academically in the early years of school when their attention to detail makes them strong rote learners. However, they can excel as they age in the areas related to their interests. Some higher level or solid ESCs can become wonderful students as they are devoted to following routines, which include studying. If born to a temperament or encouraged to develop a pattern of engaging in hard work and tenacity, the individual may become quite successful at meeting academic course requirements, even if unable to fully understand the work. There are many high level adult ESCs who live most of their life achieving different university degrees. They may be good at studying information but not as able to apply it outside the classroom and, when unable to find employment, they return to the university to seek another degree. This subgroup of ESCs can excel at learning in a structured environment.

Early in development, this group is often able to impress others with their ability to learn basic academics with relatively little guidance (e.g., learning to decode text independently before five years old); however, many run into more complicated learning problems as they approach the curriculum of nine and ten year olds (when critical thinking and problem solving are used to participate in the curriculum as well as with their peers). Reading comprehension of literature, fiction, and any material that requires social processing (e.g., greeting cards, abstract humor in ads, etc.) continues to be difficult for this group throughout their lifetime. Because ESCs can be very focused on their interests and find comfort in familiarity, they are able to enjoy and excel in jobs or careers that may seem redundant to others.

Assessment
The ESC is often one of the easier groups of student to formally assess because they have verbal language skills by the time they are in elementary school but are more likely to score poorly on tests of pragmatic language and problem solving. They also demonstrate easier-to-document social awkwardness because they tend to lack social chameleon-like behavior, tending to be more formal or polite in all social situations.

However, because there are few strong tests of social critical thinking, test results alone should not be used to determine relevant treatment goals. It continues to be important to observe this group in a variety of settings and develop treatment goals that help to establish core social thinking cause and effect, prediction, emotional development, reading comprehension, etc.

Areas of Concern:
Some of the significant concerns related to this group include:

The ESC is more literal in their interpretation of language and non-verbal cues, struggling to keep abreast of the growing critical thinking demands of academic topics that require social thinking, such as reading comprehension, written expression and abstract ideas conveyed in middle and high school social studies lessons. This group tends to comprehend more fact based information and while they more score well on standardized tests which often lend themselves to testing of factual knowledge, they may often struggle to interpret information based on predicting what people are thinking and feeling. Hence, many will struggle with tackling grade level curriculum in middle and high school even if their test scores in a given subject (such as reading comprehension) indicate they are functioning at grade level.

This group also struggles to relate to their peers in a manner expected of their developmental age and measured IQ. Depending on their personality, some may struggle to figure out how to enter into peer groups and initiate social language and non-verbal communication to actively maintain interaction with in the group while others with more assertive personalities may barge into peer groups and dominate the conversation without realizing they are out of step with their peers. They also tend to be far more naïve than their peer group, not anticipating other's motives, which may make them more susceptible to being tricked or bullied without realizing this is happening to them.

This group has very weak self-awareness of their social ability making it difficult for them to recognize what they may be doing that is considered to be unexpected social behavior with their peers. Since they have such poor self-awareness of their own and other's social behavior they are far more likely to learn new social thinking and related social skills when directly mentored by peers or taught in lesson from educators/counselors than if simply included in activities where they are expected to model appropriate social behavior.

Treatment: The ESC will benefit from a variety of treatments over time and is not well served by one type of intervention. When they are young, they need treatment based on establishing or enhancing joint attention skills, sharing enjoyment with others, and helping to establish sensory regulation. In addition, expressive and receptive language skills are typically an area of continued focus. A blend of behavioral, relationship development, sensory integration, speech and language services, as well as the teachings of social thinking will all be important. Often social thinking is introduced only after basic awareness to others is established.

Young children
Play ABA is often beneficial for establishing attention and basic skills in this profile group. Additionally, relationship-based interventions such as Floortime®, RDI (Relationship Development Intervention), and Integrated Play Groups (Wolfberg, 2003) are all needed for early social growth. The use of visual schedules and emotion regulation (Dunn-Buron, 2003) are also important.

School age plus
Appropriate paradigms include the SCERTS Model® (Prizant, Wetherby, Rubin, Laurent, & Rydell, 2006) and/or the Ziggurat model (Aspy & Grossman, 2007) combined with the CAPs (Henry & Myles, 2007). Other relevant approaches based in Cognitive Behavior Therapy include Social Stories® (Gray, 2010) and basic concepts related to Social Thinking.

They can work in a group of up to four individuals who are also ESC. They enjoy the group process and usually consider the others in the group to be their friends. They tend to do well acknowledging others in the group but often don't know what to do to sustain the interaction or appreciate what others are thinking and feeling.

This group benefits from continued learning about Social Thinking and related social skills at basic levels throughout their lives. Progression of lessons must start with first learning they have their own thoughts, others have thoughts, and finally how and why people manipulate those thoughts.

Transition to adulthood

It is critical to honestly explore each ESC's ability to learn at the abstract and critical thinking levels and to independently manage his or her own unmodified homework assignments to determine the ESC's readiness or fitness for attending an academically-based college/university program after high school.

If the student has a history of requiring intensive adult support to help him or her through academic coursework, the treatment team should encourage the student to participate in high school vocational training programs. Many ESCs are practical, hands-on learners and vocational training provides them a more direct path to developing skills for independence.

Virtually all ESCs need some form of job coaching once employed because they are not sensitive readers of subtle situational or social cues in complex environments.

Prognosis for ESC: ESCs live with *guided independence* across their adult years. They are typically slow to leave the home due to their more naïve understanding of the world and limited social and adaptive development, which slows but does not eliminate their own march toward independence. Many ultimately live independently but have a trusted team of adults (parents, other relatives, or paid caregivers) to help when dealing with social critical thinking and significant changes in their routine. For example, a 32-year-old with AS lived in his own apartment, prepared his own meals, maintained hygiene, took the bus around the community (although he had a driver's license), paid his bills, maintained a job, and kept his apartment relatively clean. However, when life changes occurred (moving to a new apartment, applying for a new job, dealing with a bus schedule change), he usually needed his parents to help problem solve.

Challenged Social Communicator (CSC)

General Description*:* Highly distracted in unstructured social situations but more capable in highly structured situations.

This group tends to be easily recognized by their obvious social learning challenges from a very early age and should be quick to be labeled as having autism. They exhibit many if not all of the features of the ESC but with more extreme characteristics. Please review the checklist of symptoms for the ESC.

CSC individuals are usually overwhelmed in unstructured social contexts because of having a very weak social radar system. They are detail focused, missing the gestalt. They have severe context blindness, which while socially is a significant weakness, helps them to attend more actively to details the NSC may not have noticed. They often are highly focused on their particular area of interest while having a limited social attention span. They are often observed to gaze around the room when more than one other person is communicating in a group and have extremely limited attention in a classroom setting. Sometimes described as "aloof," individuals in this profile category still demonstrate interest with interacting with others but struggle to maintain attention to another when a person does not relate to them about topics or games that are of interest to them. While we often state that students with autism need to participate in social skills groups, the CSC struggles tremendously to attend and learn in this overwhelming environment not only when very young; their difficulty with actively attending a group spans their lifetime.

They may be sensory-seeking when feeling overwhelmed because their social learning challenge is often paired with extensive sensory regulation challenges. Anxiety within this group is centered exclusively on changes in their world, including routines, people, environment, etc. They do not experience social anxiety.

The CSC not only has a history of expressive and receptive language challenges, but these challenges continue across their lives as they lack the ability to develop sophisticated linguistic structures or to comprehend complex abstract reasoning, etc. When the research is said and done for this group, it is likely to show all of these students have difficulty both acquiring the accurate and rapid use of pronouns in their conversational speech and with most if not all learned language through the early use of echolalia (echoed speech). For many, some form of echolalia may continue into adulthood.

The development of joint attention is markedly reduced for this group, with lessons related to this concept needed well into their elementary and eventually secondary school years. This group clearly fails the basic two Theory of Mind tests (First Order Thinking and Second Order Thinking) at the time their NSC peers are passing the tests (four to six years old), but they will persist in struggling tremendously with these concepts across their lives. The concept of mental manipulation (related to second order Theory of Mind testing) may be able to be taught to them cognitively/conceptually to some extent with direct and intensive teaching as they move into upper elementary and middle school if they have near normal intelligence. However, they will still be extremely weak in applying this knowledge fluidly in less structured situations. Hence, they have more severe weaknesses than others in recognizing stranger danger. This means they need to be taught explicit rules for avoiding potential hazards with strangers; they cannot be expected to figure out who has good versus poor social intentions.

Lacking abstract language-based reasoning combined with their tendency to over-focus on details, they struggle tremendously with inference and prediction. As a result, they are very weak in socially based critical thinking and problem solving.

It is not uncommon for the CSC to struggle to discern reality from fiction; many get cartoon or movie characters stuck in their heads, and they insist that these characters are real. Most children (and many adolescents) in this profile category struggle to distinguish between reality and fiction (i.e., they believe that the images seen on TV are real). They may insist that things happen the way they do on TV and become frustrated when unable to replicate them. Given their lack of defining these boundaries, a student with CSC may state "my dad is buying a Rolls Royce," when the NSC would have stated, "I wish my dad was buying a Rolls Royce."

Perspective taking needs to be actively taught to this group. The CSC is often able to learn (with direct instruction) how to understand others' perspectives while playing games. In other words, the point of playing a game is to keep the other person from knowing your cards/plan. It is common for the CSC to not be able to properly whisper to another or know how to hide their cards because this requires higher level awareness of determining who knows what and how to hide information from others once it is determined the others don't know what you know.

Many individuals in this profile are good at decoding factual text and can also be good with math calculations; in fact, many excel at reading decoding and can quickly do basic math problems. However, it is commonplace for this group to lack the ability to comprehend inferential information such as that conveyed through math word problems, etc. Hence, as the curriculum becomes more inferentially based, they struggle tremendously to be able to independently complete schoolwork and will continue to struggle to understand the assignments even when provided with a tutor or a paraprofessional.

Spoken and written expression, compared to their same age NSC peers, are difficult. They may struggle tremendously with narrative language. Peers and adults intuitively determine individuals in this group have difficulties with conveying a message accurately. Because of this, the NSC peer or adult will use 20 questions with the CSC to try and figure out what the individual is trying to communicate or what he or she needs if unable to state it succinctly.

Awareness of time passage, that is, a sense of urgency, is often very difficult for this group. When given tasks to do, they struggle to appear to others as if they are motivated to do the task because they approach it slowly and often are unfocused as they move through it.

Their parents often state that they are *not* accidental learners in that they don't absorb new learning from simply being exposed to new experiences. Instead, parents have reported (and we have noted ourselves from years of clinical experience) that these individuals had to be explicitly taught concepts related to social learning and social skills.

They are likely to have extremely limited or no self-awareness, which prevents them from perceiving what others might be thinking about them. The peer group is very quick to see that the CSC is socially atypical and are far more forgiving of their differences than they are for other profiles previously mentioned (SASC, RSC, and WISC). Trained peer mentors can be quite helpful in encouraging increased social interaction with CSCs.

While individuals within this group may do well in a specific work environment, they often struggle throughout their lives with change. This is typically due to the fact that they tend to have an extreme focus on details without the ability to understand how those details connect to form conceptual thinking to learn new skills or complete a task. When required to do the same task in a new environment, since they haven't conceptualized the task to begin with, they must relearn all the steps of the task. This lack of conceptual thinking makes generalization of learning difficult. However, once employed in a *predictable/routine* job, these individuals tend to keep it. This group tends to feel most comfortable adhering to a schedule. Once they are taught how to use a system of transportation to move around their community, they are usually punctual and can learn (with direct instruction) to be more and more efficient in their productivity over time.

The CSC lacks social basic social problem solving, but adults in the community become familiar with them and often look out for them.

Strengths: This group is comprised of individuals with a range of intellectual functioning. Most individuals in this group commonly have "splinter skills" in academic skills, such as the ability to decode or remember and state factual information. Many also have visual learning strengths over auditory processing but not universally. Individuals in this group tend to be concrete thinkers and crave/need structure for their best performance. Because this group finds comfort in routine and predictability, they may do very well in jobs based in redundancy and routines.

While we are aware of the many learning challenges this group faces when expected to participate in the full inclusion type of educational experience, we want to note that CSCs are often interesting, delightful personalities with their own unique preferences, not only in activities but also in who they choose to spend time with. They have a very interesting view of the world and can have an excellent sense of humor.

Although the world can seem overwhelming to this group, once strong treatment programs are put in place, this group can enjoy achieving success and feeling proud of their accomplishments.

Assessment
The CSC will generally score poorly on most, if not all, social language tests and tests of problem solving and will usually also demonstrate expressive and receptive language learning issues on formalized tests. Tests of adaptive functioning typically show strong deficits in social and communication areas, if not in other areas as well. Qualifying these students for treatment is not typically the problem; the more difficult consideration becomes determining which treatments should be utilized at different times in their development to help them function as independently as possible. Placing these students in a full-inclusion program to have them strictly learn the curriculum of their age group will not provide them with the functional adaptive skills they need for navigating adulthood.

Areas of concern
There are many areas of concern for this group; however, their lack of social understanding is immediately obvious to the peer group which helps them to rally support from others. School age peers and adults alike are likely to lend support without being told to do so.

From a learning perspective, this group has a tendency to over-focus on facts. Further, their lack of conceptualizing about the world makes them much more difficult to teach. Most neurotypical people take conceptual thinking for granted and struggle to provide the level of details this group needs to learn to succeed at tasks. This can be a challenge in the classroom as teacher's depend on student's ability to predict and infer what is required to participate with others as well as how to engage in the curriculum beyond 2nd grade.

This group needs very implicit, direct teaching not only in school but in the community. They will not transfer the idea that the math lessons they participated in to learn how to count money have anything to do with using money in the community. Virtually all of these students need paraprofessionals and later, job coaches to help them acquire basic understanding of how to participate in specific situations.

Treatment: Very much like the profile category listed earlier (ESC), extensive and intensive therapies are important for establishing a shared intentional communication system, including: joint attention skills, sharing enjoyment with others, helping to establish sensory regulation, and constant focus on expressive and receptive language. This is a group that benefits from a variety of treatments over time and is not well-served by one type of intervention. In other wordslimiting treatment to only ABA or social relationship, sensory, Social Thinking, or expressive/receptive language treatment will fail to address the myriad needs of the CSC.

This group requires individualizedinstruction for most concepts because when grouped with others, they are unable to sustain attention and therefore don't actively learn to be part of a group.

Highly structured programs that teach toward independence and problem solving, such as structured TEACCH (www.teacch.com), are tremendously helpful for this group. These individuals benefit greatly from structured teaching classrooms, even if this means the child may be pulled out of the mainstream classroom to learn how to use his or her own abilities to forge a sense of independence and success.

Treatment should be selected by exploring each CSC's unique strengths and weaknesses as a way to tap into eclectic treatment regimes. The appropriate intervention will depend on the cognitive, sensory and language learning level of the individual within this profile and his or her age.

The CSC will strongly benefit from vocational training when in high school and transitional post-secondary programs. They will not do well in a more traditional academically based college/university type program post-high school.

From a social thinking treatment perspective, once the CSC is able to communicate spontaneously to discuss information he or she perceives and have the basic sensory and behavioral regulation to attend in a one-to-one teaching format, social thinking treatment can be one of many tools used. With this particular group, working on building their awareness and understanding of their own and others' social thoughts, is critical. We have three major areas of basic social thinking we work on with this group over all of their school age years and they will continue to learn more about these concepts well into adulthood:

1. I have thoughts about myself.
2. I have thoughts about you so that I recognize your thoughts are different from mine.
   a. I can identify what I know that is different from what you know.
   b. I can recognize who may be able to help me answer a specific question and why.
   c. I can protect who knows my thoughts by learning to whisper or just keep a thought in my head.
3. I can manipulate your thoughts.
   a. I can hide information from you.
   b. I can lie.
   c. I can tell when someone may be lying to me.

Young Children
Functional ABA is often beneficial for establishing attention and basic skills in this profile group. Additionally, relationship-based interventions such as Floortime and Integrated Play Groups (Wolfberg, 2003) are all needed for early social growth. The use of visual schedules and emotion regulation (Dunn-Buron, 2003) are also important.

Prognosis for CSC: CSCs may require significant guidance throughout their adult years; the more successful CSC can live with *guarded independence* during their adult years, meaning they may live in an apartment or as part of a group home and follow their routines independently, once learned. However, they need to be actively monitored because they may not realize when a problem may be arising.

They are able to learn skills to become employed in a variety of highly structured and routine-based jobs. Most if not all individuals in this profile category do not benefit or excel in university programs focused on academic performance; CSC tend to be more hands-on learners as they don't easily apply information from one context to the next.

Severely Challenged Social Communicator (SCSC)

General description: Inattentive and internally distracted: singularly focused on internal thoughts and sensory input; conversely limited or at times unaware of the social and situational demands imposed by the people in context.

Strengths: Some, but not all, have strong islets of intelligence (e.g., talented artist, math calculation skills, ability to complete puzzles, navigational abilities on a computer that are not predicted by their low adaptive behavior, or communication or general cognitive skills). Individuals in this group learn best in a highly predictable environment and may learn core rote concepts related to their academic skills (math facts, reading decoding). Some are excellent text decoders and are able to follow written fact-based visual schedules into adulthood. Many are considered to be friendly at times and enjoy the company of others, meaning they sit near others and stay calm while they engage in tasks of interest to them or routines they have been trained to complete.

A small percentage of those who are SCSC may have unusual areas of strengths and are referred to as "savants" given their other patterns of learning weaknesses. Some savant talents may include music or mathematical or science knowledge that is factually based.

Areas of concern: This group could be described as having a very weak to extremely weak social radar system. They are not naturally attentive to those around them, particularly in a complex environment where many people are doing many different things all at once. Therefore, they will not benefit from educational environments where several students are grouped together to learn in the group. They do their best learning in an uncluttered 1:1 environment with active sensory regulation treatments to help their brain and body learn to focus together. All have severe issues in learning and working as part of a group (of any size). They struggle to self-regulate in a group. In fact, if a teacher talks (shifts attentions) to another, this individual may become wholly inattentive or conversely angry because of his or her lack of understanding of how and when to listen and learn alongside others.

These individuals will have severe language impairments that coexist with intellectual impairments. Many are non-verbal or minimally verbal. If language is developing, it almost always includes a high percentage of echoed speech and/or may have spontaneous communication at the word level; they have limited syntactical development.

They may have extreme sensory integration challenges. They tend to have intense demands for processing sensory information in specific ways, often engaging in repetitive patterns related to the sensory world (e.g., flipping a string, flapping their arms, rocking their bodies, pacing back and forth, etc.).

All have challenges in the development of their Theory of Mind, but it is thought that some may have more insight as they age than we can easily measure effectively. Although they may have strong preferences for who they want to be with and who they want to avoid, they lack the social knowledge/sophistication to initiate and sustain friendships or even basic politeness measures to relate to peers consistently (NSC peers or their own similar peer group). This group of students is virtually ignored by the school bullies as the SCSC is often too spaced out to even notice the negative intentions of the peer.

This group is very, very literal with related weak to severely weak auditory processing skills. Many are limited to being able to follow one-to-two step commands. Reading comprehension is limited to simple instructions or specified facts.

This group also tends to struggle greatly with written expression, although some can learn basic handwriting skills but have difficulty applying these skills to write more than basic wants, needs, or directions.

They also appear disorganized in managing information from the greater environment; however, they can be very skilled at tuning into their own environment and routine. They can become distressed if their routine is modified or their organized materials are changed without their participation in the process. Some are quite self-injurious or prone to physical violence involving others.

They are much better learners in their areas of specific focus or interest and struggle to learn information that is not part of that focus or routine. They learn best when the activities they engage in are visual, concrete, and have a logical progression they can be taught to follow.

They benefit from intensive interventions to encourage more functional communication systems, whether based on the use of verbal speech and language, augmentative communication (computer-based visual communication), and/or sign language. The purpose of communication development programs is to help them more effectively get their wants and needs met without experiencing emotional and/or sensory dysregulation. Other critical aspects of treatment involve teaching them to learn and then follow routines specific to time and place, self-soothing routines to minimize physical aggression of self and others, and how to use whatever academic skills they have learned to help guide their own behavior in their routinized environments. For example, if they are good at basic word to sentence level reading decoding, teach them to read their own cues as to what they are supposed to do next when using spiral-bound index cards to provide sequenced directions.

Assessment: This is a difficult group to assess for their potential for abstract thought, such as Theory of Mind, because they have significant if not severe receptive and expressive language difficulties. It is difficult to use most formalized tests that require any aspect of back and forth social interaction (which is the test paradigm for most social language/language based testing) because the SCSC struggles to understand how to participate in these contexts. The best assessments are those that observe the SCSC participating in a series of functional tasks and determining what types of information help them to learn, e.g. verbal, visual, physical cues, etc.

Treatment: Given their limited level of social communication, inability to make basic interpretations, extremely weak critical thinking, and problem solving paired with their very weak social radar system, the least restrictive learning environment for the SCSC is typically in a self-contained classroom based on their need for 1:1 instruction. This makes sense due to their very real weakness in understanding they are part of a group and adapting their behavior to the group.

They need intensive and early intervention to assist with sensory regulation, joint attention, relationship development, development of functioning communication skills, organizational skills, and adaptive living skills. They also require blended treatments of sensory regulation and functional ABA to encourage the development of functional adaptive living and learning skills and functional communication skills.

Those in the SCSC group will *not* benefit from the core concepts of Social Thinking due to their lack of language development and associated metacognitive awareness. This is a group that benefits from highly integrated treatment models such as the SCERTS® model, Ziggurat, or CAPs.

The TEACCH model is a critical program for this group, helping them learn through routine and structure.

Prognosis for SCSC: The SCSCs will continue to learn throughout their lives and will make gains when compared to their own level and rate of learning. The SCSC is a person who is highly dependent on adult support and will remain dependent on caregivers to help with decision making, emotional regulation, management, and changes in routines. All individuals who are best described by this profile should be legally conserved by a responsible adult as they enter into adulthood.

An alternative category on the ST-SCP: ***The Resistant Social Communicator***

Over the years we have noted a subgroup of students who we often thought were ESCs or WISCs but did not benefit from group learning experiences. We have spent years wrestling with how to meet their needs and where they fall in the profile. We decided to create an alternative and distinct category unique to these individuals. This group is explained below, but the following illustration should help to visually explain our thinking.
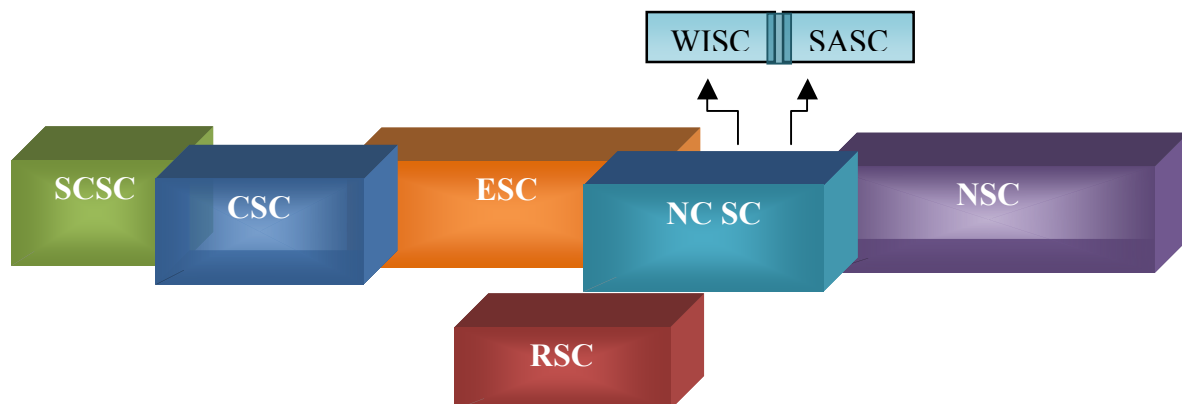
While we are quite sure that there is a distinct category that represents the RSC, we are unclear as to the origin. It is highly likely that temperament, evident at birth, is a contributing factor. Certainly, the environment plays a role, but there are many variables that fall under the umbrella of "environment" that it is impossible to point to one. Many of our parents of RSCs report having a great deal of difficulty setting effective behavioral boundaries with their children from the very earliest of years. Certainly early social experiences with peers and family members contribute to the resistant social style. Our clinical experience has shown that this group falls between the ESC and the WISC with regards to social knowledge level.

One important point: Some of our students in adolescence who function as "solid" ESCs - given lessons in social thinking and maturation - evolve into WISCs and DO NOT progress through the RSC category which is why we developed a separate category on this profile.

Resistant Social Communicator (RSC)

General description: Insisters and arguers. May say they are not interested in others but are class clowns or seek out people to complain to about how no one understands them. In short, they are attention seekers by getting people to attend to their inappropriate actions but then acting like they didn't want the attention.

These individuals do not blend well into a group because they make the group be "all about them" and take great silent delight when receiving the full attention of the group (negative or positive). When encouraged to work at blending into the group, they tend to argue and resist, making offensive statements to adults and peers alike and often say, "I don't care how I make people think and feel!"

Interestingly, when they have individual treatment, it often becomes apparent that the RSC's understanding of social thinking and related social skills is delayed, with a lack of understanding of some basic social concepts. Therefore, their attempts to take over the group may be due to a lack of understanding of group dynamics that they have refused to acknowledge until the therapist establishes a safe 1:1 working relationship with them.

The RSC has a fair social radar system in that such individuals are not well tuned in to how people feel about them. Instead, they tend to think in more black-and-white terms ("that person likes me" or "that person doesn't like me") without understanding the subtleties of the mind or the shifting impression we can make on people in a day that builds into our social emotional memory.

This group does not efficiently make the connection between the fact that how they behaved yesterday impacts how people treat them today or tomorrow. Instead, they understand how they want to be perceived and therefore think they *are* perceived this way. The RSC often perceives himself or herself to be bright and greatly misunderstood. Given that they believe their intentions are good, the fact that others don't regard them with such high esteem proves to RSC that others are village idiots and jerks.

This group can be openly defiant and often demeaning to others who don't agree with their line of thinking. However, when they do connect positively with another, they can be very sweet to the other person for at least a short period of time. They may also have a good sense of humor with regard to what they find funny and believe that everyone else enjoys the same jokes or comments as them. Many tend to become more exuberant with their humor but don't easily understand that people may not be laughing with them. Unfortunately, when others laugh out of nervousness or discomfort, it confirms in their mind that they are really funny, perpetuating their use of humor at the wrong time, with the wrong people, or in the wrong place.

The RSCs are often more literal in their interpretations of social situations, reading comprehension, etc. than their peers. They are often incredibly rigid in their thinking, insisting that people follow the rules they believe should be the rules. When they don't follow their own rules, they shrug it off as their weakness. For example, many we have worked with have insisted on pure honesty from others but then are often caught lying themselves.

Many, but not all, have other learning disabilities but often measure intellectually as solid if not bright in their overall full scale IQ. We think that younger children in this group are likely to be somewhat slower to pass basic Theory of Mind tasks (first order thinking, second order false belief testing, etc.), and some may have a specific language learning disability (SLI). However, by the time they are in middle school they can be quite manipulative. They can be very good at lying but have difficulty understanding when others lie to them. They can be naïve without realizing it and so easily taken advantage of by their peers. They may do things to try and fit into a desired social group without realizing they are being used by their peers; most of their friendships are not deep. They may have one or two childhood friends who have stuck by them into adolescence; most don't form new friendships as they age that are not cyberspace-based.

It is not uncommon to see the RSC diagnosed as behaviorally or emotionally disturbed. It is very common that they are well known in the office of the school disciplinarian; some become school phobic as they age into upper middle school or high school. By high school at the latest, virtually all have comingled anxieties or depression as they often face peer rejection and have difficult relationships with their parents. Yet, when counseling help is offered, they likely may seek isolation and avoid working on relationships stating, "I don't care." Only a persistent counselor will break through.

Assessment: Why is this group so difficult to assess to determine their social learning disability?

To begin with, we are all just human. Most of us are driven to work with students who help to make us feel good about our work and our efforts as parents and professionals. The RSCs use a strategy that doesn't serve them well in the long run but does provide them with the perceived power they seek in the moment: they try to make people (including professionals who work with them) feel like fools when in their presence. Once they have offended us, at times deeply, it is relatively easy for the professional to minimize the conclusion that these students have a learning disability and maximize the idea that they must have emotional disorders because they are seen as trying to hurt people who are attempting to help.

Strengths: Many have normal to way above normal verbal intelligence and may score average to above average on academic tests. They are often very good at fact-based learning as well as have talents in the arts, computers, or even sports, but have difficulty being a team player. Their ability to use humor can be quite clever, when infused at the right time and right place.

Areas of concern: While some may be diagnosed with a language learning weakness, most are perceived as good language users and are especially skilled at arguing. However, they may not perceive themselves as argumentative and instead appear to think if they just keep explaining something; the other person will eventually get it.

From a mental health perspective, they can become depressed, which can manifest itself in lashing out at others in a blaming and condescending tone. This group tends to wear out not only their teachers but their parents and siblings. Most don't appear to have a lot of social anxiety (they are more oblivious to how they are impacting others) because that would require a more tuned social radar system. However, they do face serious mental health challenges because they face so much rejection. This is a group characterized by weak flexible thinking, relatively weak abstracting, poor problem solving, and they are often highly

disorganized. Over time, they may receive a diagnosis of a learning disability related to these core characteristics or may not.

From an emotional processing point of view, the RSCs appear to be somewhat sluggish or limited in their understanding of the nuanced fine lines that define our different emotions. They tend to be more black-and-white thinkers with regards to reading or interpreting others' emotions. Therefore, they don't project others' emotions effectively nor do they effectively regulate their own emotions to stay emotionally in step with others. They are often seen as highly emotional and reactive and may be diagnosed with Opposition Defiant Disorder (ODD) if not as bipolar.

It is likely many have undiagnosed sensory integration challenges; an OT should be consulted to rule these out as well as any other related issues.

Treatment: This group benefits most from intensive individual therapy. Treatment, however, will not progress if the RSC has not established a solid, trusting relationship with the teacher or counselor. Even if the RSC does form this relationship with a professional, the professional should still count on the RSC being surly at times, testing the boundaries of the relationship.

Given their propensity to seek honest discussions, they tend to prefer people who have direct treatment styles, giving them clear information about what they are doing well and what they need to work on to learn more about the social emotional process.

They often need to begin with what we describe as "inside-out treatment" for them to anchor socially through recognition of their own social value system. By studying who they like, don't like, and why, they realize they are forming their own social impressions and reacting to what they think and feel based on how others treat them. It will take some time (at times years) to help them to appreciate that if they require people to act and respond emotionally in certain ways for an RSC to like them, it eventually makes some sense that others likely have those same social expectations for them.

Unfortunately, individuals within this group have received a lot of attention for *not* participating well in groups. Yet, as treatment professionals and parents we erroneously begin treatment by insisting they should modify their social behavior so they can blend into the group when they don't understand the value of blending; after all, they get so much valued attention for standing out. When we begin treatment by presenting them with social expectations that others have for them and asking them to work to meet those expectations, this is what we call "outside-in treatment"; we don't find this to be a successful approach!

It is important to recognize how much the RSC needs to learn about social information. Some need to begin with intensive lessons related to "thinking with their eyes" and eventually moving on to teaching how we use a "brain filter" and the "social fake" to survive social times when we may want to blend into the group and not do or say things that make people have "weird thoughts about us." This same type of treatment is even needed for adults who are considered to be RSCs.

Social Thinking and cognitive behavioral therapy are ultimately the treatment tools for this group, but during the early years (young child and adolescent) of development, ABA and reward-based systems are needed to motivate them to participate in treatment that they find to be nothing but hard work. A real problem with RSCs and behavioral management systems is they try to figure out how to manipulate the

system or the people who have created the system. They make a game of trying to find the holes in the behavior plans.

The RSC is often a logical, practical thinker who benefits from vocational training programs when in high school. They are more prone to struggle in classroom type learning environments given their challenges with working in groups.

Prognosis for RSC: This challenging group, if not actively treated as children and adolescents, can become very dysfunctional adults filled with anger and blame. They tend to end up on the doorstep of the psychiatric community who may not know what to do with them as medication alone does not soften their edges when relating and responding to others. Many adult RSCs are unemployed and may be rejected from their families. If they receive treatment before adulthood (young adults and before) and acknowledge they have a social emotional learning disability and need to learn to navigate their behaviors and emotional responses based on others' expectations, their prognosis is more in line with the WISC. Still, many need extra guidance with critical thinking and understanding others' complex motives into their adult years (much like the ESC).

Final Thoughts

Concluding with an uncomfortable observation

In later adolescence and middle school, most NSCs do not want to assist or be the peer-mentor to the "solid" ESC, RSC, or WISC because the larger peer group can't as easily define these students' social thinking differences. To be frank, the peers think this higher functioning group of students with social learning challenges looks "too normal" to have special compensations made for them. The NSC peers, at this point in their own social development, don't want to be aligned with students who are socially different in more subtle ways. Most NSCs of this age are struggling to make their own place in their school's social system and become less agreeable to work with or mentor these higher level students who appear to be so "normal looking"; they fear this relationship may lower their status among their own peers. In fact, it is this higher level group that tends to be more bullied by NSCs, but individuals in this higher level group can also be guilty of actively bullying others.

Ironically, those students who function in the lower categories of the ST-SCP get the most peer assistance. Peer-based mentor training programs, from our observation, tend to be the most successful when the NSC is assigned to work with emerging ESCs, CSC, and SCSCs. As they volunteer to help the more obviously challenged students, the NSC may actually gain social status among their NSC peers.

How do we know the scale is accurate?

The ST-SCP was developed by Winner, Crooke, and Madrigal, three speech language pathologists who are using their extensive clinical experience and knowledge of the research to organize their years of observations while developing treatment programs for students across the spectrum of social communicative function. They are presenting their observations in writing to encourage others to research these observations to affirm that most of what they have written has value in helping to understand how to create more meaningful and efficient treatment programs. The goal of these authors is to encourage treatments that are dedicated to helping our youth with social learning challenges develop useful skills that

can be used not only during their school age years but that are meaningful and actively utilized during their adult years. Given the information presented in the previous several pages, it is likely no surprise that we do not support the notion that educating all of our students in a highly academically-based program serves them well in the long run; many need many more functional adaptive lessons than are provided in the mainstream.

Social communication is incredibly complex. It is multifaceted and at the core of so much of what we, as humans, do on a daily basis and throughout our lives. It involves, among other things, the ability to emotionally process and respond to others as well as integrate and interpret academic information. So, when a person's social communication is delayed, challenged, or atypical, the impact on daily functioning can be enormous. Unfortunately, co-morbid mental health issues are often comingled within social communication challenges, and treatment for individuals with higher level language and cognition is frequently hampered by mental health struggles.

Current research into the types of treatment for those with ASD or related issues has shown varied and limited success. Unfortunately, studies addressing social skills are often limited to the length of a university or academic semester, preventing longer term study of how treatments impact students over time. A further complicating variable is the exploration of how mental health setbacks are likely common and certainly affect immediate outcomes. Recently a researcher, well versed in social anxiety, asked us how we try to minimize the social anxiety and treatment setbacks students experience once we have taught them to have greater awareness of the social world and their participation within it. This question, in some ways, cuts to the chase of social intervention! Ultimately, treatment will need to mirror the needs of our students/clients by addressing their co-occurring social learning, academic learning/executive functioning, and mental health challenges with management strategies for all issues. In short, research will no doubt continue to struggle to capture all the variables our students are dealing with as long as it only focuses on one variable at a time, e.g. "social skills learning" versus "social cognitive learning" versus ability to deal with anxiety and depression or pressing sensory integration issues. Our students are complex and examining the effectiveness of treating multiple social, academic, and mental health needs at once is equally complicated. The unfortunate reality is that therapists and parents are faced with finding treatments that encapsulate the "whole" individual and it is at this juncture that we hope our scale will help.

We have examined the Social Thinking-Social Communication Profile "in-house" for the last several years, and our pilot data show strong levels of reliability in coding profile categories among and between clinicians. This profile has also been an important and crucial part of how we place individuals into groups and then plot the course of treatment. Individuals are never placed into treatment groups based on a diagnosis but rather according to their social communication profile (e.g., WISC or ESC, etc.). In this way, treatment is tailored to the level of those in the group more accurately. For instance, an emerging ESC with a diagnosis of Asperger Syndrome wouldn't be placed into a treatment group with a student who functions as a WISC (also diagnosed with AS) because treatment *should* be dramatically different given these two individuals function at different categories on the ST-SCP. In this way, we avoid dipping into the Diagnostic Soup of ASD.

Finally, our motivation in sharing the ST-SCP with the public is to encourage others to examine and research its clinical usefulness and efficacy. We are hopeful that researchers will be inspired by this unique profile as it may lead to important advances in how the field conceptualizes treatment decision-making.

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