



# 17

## LANGUAGE OF CHILDREN WITH AUTISM

### THE TWO WORLDS UNDERLYING VERBAL COMMUNICATION

MARION BLANK AND MARY BETH CULL

#### THIS CHAPTER EXPLORES:

Social Interaction

Language

Verbal Communication

Discourse

Hyperlexia

Autism Spectrum Disorders

*Although I could speak I often didn't use language in the same way as others and often got no meaning out of what was said to me . . . I had a whole system of relating that I considered 'my language.' It was other people who did not understand the symbolism I used, and there was no way I could or was going to tell them what I meant.*

Williams, 1992, p. 29

#### AUTHORS' NOTE TO READERS

**MB:** My story begins four decades ago, at the start of my career. A colleague suggested that I might find it interesting to meet a certain child. And so I met a 4-year-old boy with autism who could not respond to even the simplest of questions but was nevertheless adeptly reading the front page of the *New York Times*. Since that time, as I pursued many areas of language, I have maintained an interest in understanding and helping children with autism. I was delighted when I was offered the opportunity to write this chapter, since it gives me the opportunity to bring together a range of concepts central to understanding the lives of these extraordinary children.

**MBC:** When I began in the field, autism was already a "hot topic." A wealth of academic research and a variety of treatment models were steadily appearing. Keen to be a part of what was happening, I began working as a therapist in a home-based intervention program. Following that, I moved to New York. Committed to building on what I had learned, I was fortunate to join the newly created interdisciplinary program at Columbia University. That led me to my working with Dr. Blank, and to this chapter.





## INTRODUCTION

**Autism** . . . A term that floods today's world—through movies, books, ads, and every other channel possible. The non-stop coverage makes it hard to believe that the concept of autism did not even exist until the middle of the twentieth century. The neglect is particularly striking given that the syndrome presents behavior that is hard to miss. For example, a person—with no foreknowledge of autism—seeing real individuals such as Amanda Baggs (on YouTube) or the fictional character Raymond Babbitt in the movie *Rain Man* would not have a shred of doubt that these persons are markedly different from most other people.

So, how could autism have gone “unseen” for so long? The answer probably rests with the paucity of concepts that were available for interpreting developmental phenomena. For a start, children's behavior was not well understood. The very concept of childhood—as a unique period in the life cycle—is relatively recent (see Aries, 1962). Hence, there were few, if any, tools for studying and interpreting children's behavior.

### EXERCISE 1



View a film or video depicting someone with autism. Possibilities are *Rain Man*, *Molly*, or *In My Language* (Amanda Baggs on YouTube: <http://www.youtube.com/watch?v=jnylM1hl2jc>). Focusing on language, facial expression, gestures, tone of voice, emotions, and social miscues, list ten specific behaviors you see as different.

With the developmental process of childhood essentially invisible, differences in development were even more invisible. Child psychiatry did not even exist as a discipline in the United States until 1930, when Leo Kanner was appointed to the faculty at Johns Hopkins University. And it was Kanner, an émigré from Austria, who first used the term autism in a paper where he detailed the developmental course of eleven children he had treated (Kanner, 1943).

## A CORE CONSTELLATION: SOCIAL INTERACTION, LANGUAGE, AND VERBAL COMMUNICATION

Autism, a syndrome that involves the biological, psychological, and social spheres, affects every major realm of behavior, including motor functioning, sensory hypersensitivities, sleep patterns, and digestion. The breadth of its effects is one of the reasons that a term now commonly used for classifying the children is Pervasive Developmental Disorders (PDD).

In his groundbreaking 1943 paper, Kanner identified a constellation of behaviors. Not all children with autism will display severe difficulties in all areas. However, the clusters outlined by Kanner continue to be accepted as hallmarks of the syndrome.

- 1 *Social skills*: social interaction was askew with the children seeking an “extreme autistic aloneness that, whenever possible, disregards, ignores, shuts out anything that comes to the child from the outside.”
- 2 *Language*: several children did not develop language, though most (eight of the eleven) did. In those eight, however, the language was focused on “nouns identifying objects” (“naming”), adjectives indicating colors, and numbers. In those who displayed more extended language, i.e. sentences, that language often represented “parrot-like repetitions of heard word combinations.”





- 3 *Communication*: the children showed patterns where their language failed “to convey meaning to others.”

(Kanner, 1943, pp. 242–243)

## EXERCISE 2



Read Kanners 1943 paper. This classic paper is available at [neurodiversity.com](http://www.neurodiversity.com) ([http://www.neurodiversity.com/library\\_kanner\\_1943.html](http://www.neurodiversity.com/library_kanner_1943.html)). From Kanner’s write-up, identify five types of behaviors or symptoms that represent domains other than the three noted above that he states are associated with autism.

In the following year, another Austrian, Hans Asperger (1944), identified a separate group of children who showed significantly reduced social interaction and communication skills. His cohort functioned at a higher level of language and, in some cases, had notably outstanding skills in other areas (often math and music). Asperger also brought to the fore difficulties in communication that did not directly involve language, such as problems in “eye gaze, gestures, posture, voice quality, **prosody** (melodic quality of speech)” (Frith, 1991, p. 10).

## THE SPECTRUM CONCEPT

Once recognized, the disorder attracted attention from behavioral scientists eager to understand the forces behind this unique constellation (Rutter *et al.*, 1971). At the time, however, the number of reported cases was low (about one in 2,500 children). A disorder that rare meant that interest in autism was confined largely to academia.

That has now changed. The numbers keep skyrocketing, with recent figures suggesting the rate may be as high as one in 150, according to the Centers for Disease Control and Prevention’s Autism and Developmental Disabilities Monitoring (ADDM) Network (2009). There is considerable debate as to whether this increase actually reflects a combination of greater awareness and better diagnosis—children who previously would have been classified as mentally retarded may now be classified as autistic. There are others who believe that the rising numbers reflect a true “epidemic” caused by factors such as environmental toxins (Blaxill, 2004).

Along with the increase in numbers, there has been an increasing recognition of large individual differences among children with autism. Some individuals show the full range of symptoms, while others show only a few. To capture this variety, the American Psychiatric Association (2000) created the concept of a spectrum: specifically, **Autism Spectrum Disorders** (ASD). Currently, Autism Spectrum Disorders (ASD) is used synonymously with Pervasive Developmental Disorders (PDD), the concept that we discussed earlier. The term Autism Spectrum Conditions (ASC) also is used. In keeping with the current practice of naming the individual before naming the condition that the individual has (person-first language), children on the spectrum are not referred to via labels such as “autistic children.” Rather, terms you will hear are ones such as “children with autism” or “individuals with ASD.”

Based on the severity of the problems, a child is placed at different points along the spectrum. Classic autism is at the extreme lower end, while a stronger command of language places a child at the higher end. **Asperger Syndrome** (which is sometimes used synonymously with high functioning autism) is also part of ASD. Asperger Syndrome is a condition marked by difficulties in social interaction and repetitive patterns of behavior or interests; however, individuals with this syndrome, in contrast to others on the autism spectrum, show a relative absence of language delays and difficulties.





Despite the varying abilities, children on the spectrum continue to display the constellation that Kanner outlined in the realms of social behavior, language, and communication. Our goal here is to provide an overview of these areas and guidelines as to how they relate to one another.

### UNDERSTANDING THE CONSTELLATION—STEP 1: SOCIAL COGNITION

The current understanding of autism owes a great deal to advances that have taken place in the social sciences over the past several decades, particularly in social cognition and infant perception.

For generations, infants' minds were thought to be masses of "blooming, buzzing confusion" (James, 1890, p. 462). The assumption was that babies, at birth, lacked any significant cognitive skills. In the 1970s, this view was challenged by research showing that infants possess an array of abilities, termed **social cognition**, that include particular skills in social interaction (e.g. making eye contact, attending to faces, listening to voices, categorizing speech sounds, etc.) (Cohen and Salapatek, 1975). This research encompassing areas such as **gesture language**, **joint attention**, **mirror neurons**, and **theory of mind** shows social cognition flowering throughout the first two years. The end result has been a long-delayed recognition of the richness of the infant's preverbal social cognition.

The decreased level of social initiation of children with autism contrasts with the pull towards social contact that marks typical infants (Stern, 2002). The exact nature of the differences is now being defined through the use of paradigms for studying social cognition in **neurotypical** infants (a term coined within the autism community to describe individuals whose neurological development follows what most people conceive of as normal).

#### ***Gesture Language and Joint Attention***

When describing their concerns, parents of young children with ASD are likely to offer comments such as:

"He doesn't make eye contact."

"She doesn't ever seem to point the way other kids do."

These comments signify problems in areas known as **gesture language** (Colgan *et al.*, 2006) and **joint attention** (Bruinsma *et al.*, 2004).

- Gesture language refers to the rich system of intricate movements that, without speech, conveys much of our thoughts and feelings. While some of the actions are conscious (e.g. shaking one's head to indicate "no"), many are produced without awareness or intent (e.g. a facial expression of surprise; a body posture of dismay, etc.).
- Joint attention, by contrast, contains definite communicative intent. The goal, often conveyed via gesture language such as eye gaze or pointing, is to reach out to another person to share an experience. An infant under a year, for example, who is looking at something and wants a parent to do likewise, may take the adult's face and move it so that it is positioned to do what the infant desires.

Both gesture language and joint attention involve the rapid transmission of complicated information. In this respect, they are similar to the split-second decision-making





described in the book *Blink* (Gladwell, 2005). We see how people, relying on their social cognition, can instantly size up a situation and make valid judgments—without being aware of how they are doing this, or even that they are doing this.

A similar process happens repeatedly in normal parent–child interaction. The initial research in this sphere focused on mother–child interaction. From the outset, it demonstrated that mothers, without explicit training, are equipped to identify and interpret the endless array of small, subtle, non-verbal behaviors that infants produce. Similarly, from research on attachment behavior, we have long known that mother–child interaction is bidirectional (Ainsworth *et al.*, 1978). The adults are not the sole actors in the exchange. Babies are active participants as well. They are equipped not only to interpret the non-verbal behaviors produced by the caregivers, but also to produce comparable behaviors of their own. In ASD, however, the babies are not “performing” in the way that adults intuitively expect. This causes a profound alteration in the parent-child relationship and all interpersonal relationships that follow.

Ironically, because the interpersonal system is designed to function without thinking, the parent may often be unaware that something is wrong. He or she may experience a sense of unease, but be unable to identify its source or significance. This situation is one reason why autism—even when present from birth—often remains undiagnosed in the first two years of life.

### **Mirror Neurons**

Gesture language, joint attention, and other social skills appear as part of the baby’s intense desire for interpersonal contact. However, motivation alone is not enough. The skills also come into play because the infant possesses an ability to sense “what people are about.”

Consider, for example, the following. An 8–10-month-old baby, in interaction with an adult, is imitating actions such as clapping hands and playing peek-a-boo. The baby’s responses come easily and accurately. Then the adult puts his arm over his shoulder and pats his own back. The baby again imitates correctly.

While this last action may seem mundane, it is actually quite remarkable. Why? In many imitations, the babies can see all the relevant components. So, any imitation can be attributed to their being able to directly compare how well their response matches the model. In the last action, however, this is not the case. There is no way infants can see their own backs. Their accurate imitation, therefore, suggests that, independent of any direct experience, babies know what their complete bodies look like. That allows them to simply observe what others are doing and know what they must do to replicate the action.

Research on **mirror neurons** offers a possible neurological mechanism to account for the infant’s skill (Rizzolatti and Craighero, 2004). The studies, initiated with monkeys, and subsequently replicated with humans, show that with the execution of particular actions (e.g. reaching for a fruit), there is a firing of specialized cells in the cortex, termed mirror neurons. These nerve cells fire both when an organism acts and when the organism observes the same action performed by another. This happens whether it is the organism itself carrying out the action or the organism simply observing others carrying out that action. It’s as if the observing animal had carried out the action itself.

Significantly, in contrast to the ease of imitation in neurotypical children, those with ASD often have difficulties in imitation. There is increasing research aimed at determining whether a deficit in the mirror neuron system plays a role in their behavior (Iacoboni and Dapretto, 2006).





### Theory of Mind

A host of symptoms exist in ASD. In an effort to make sense out of the wide-ranging, seemingly unconnected symptoms, an intriguing hypothesis has been put forth that has come to be known as **theory of mind (ToM)** (Frith, 1989).

ToM refers to the cognitive capacity that allows a person to accurately ascribe mental states (intentions, beliefs, perspectives, emotions, and desires) to other people. In essence, it is the ability to know what is on the minds of others and thereby see the world through their eyes.

One test of ToM is the **false belief task** and one version, often called the ‘Sally–Anne’ task, is depicted in Figure 17.1. After witnessing the sequence, a child is asked where Sally, upon her return, will look for the marble. Children who can see the world through Sally’s eyes will say that Sally will look in the basket (since that was the marble’s location when Sally left); children who cannot separate their own minds from those of others will say that Sally will look in the box (since that is the location where the child has seen the marble placed).

Many children with ASD fall into the latter group, leading Frith to conclude that they

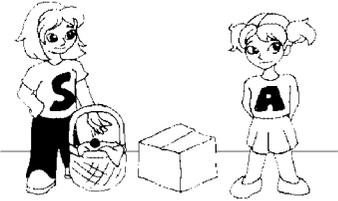
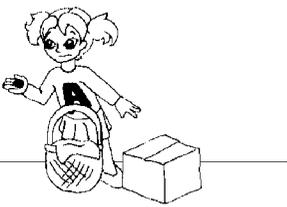
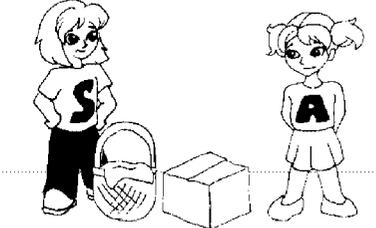
<p>#1</p> 	<p>Two dolls, Sally and Anne, played with a marble. Sally is putting it away in a basket.</p>
<p>#2</p> 	<p>Sally leaves. Anne, now on her own, takes the marble out.</p>
<p>#3</p> 	<p>Anne replaces the marble—but in the box, not the basket.</p>
<p>#4</p> 	<p>Sally returns.</p>

FIGURE 17.1 The Sally–Anne task: one version of false belief task





have an “inability to realize fully what it means to have a mind and to think, know, believe and feel differently from others” (1989: 173). Recent work, however, has shown that ToM deficits are not specific to ASD, but are shared by other groups of children with limited language skills (Yirmiya *et al.*, 1998). Although this has resulted in a questioning of Frith’s hypothesis, the paradigm has been pivotal in opening up new avenues for exploring children’s mental processes.

### EXERCISE 3



Return to the list of behavior you composed for Exercise 1. Examine the identified behaviors and see how many represented seem to be ones reflecting differences in social cognition.

The issues thus far discussed in social cognition represent only a small slice of this rich domain. We will return to this area in Step 3 (Verbal Communication) to show how it permeates the ways in which language is used. But first, we need to address the development of language itself.

## UNDERSTANDING THE CONSTELLATION—STEP 2: LANGUAGE

Language problems in ASD have received far more attention than almost any other area. **Language** is defined as the communication system used by humans that comprises a rule-governed set of arbitrary symbols, spoken or written, able to be combined in a hierarchical fashion, and the rules of which are shared by members of a community. Developmental delays in language onset have been found to be near universal in ASD, but many of the children do eventually develop language (Boucher, 2003). However, as with the three children in Kanner’s group, for a significant percentage, the absence, or near total absence, of language continues throughout life. Because of the paucity of good epidemiological data, solid figures are not available, but the Yale Child Study Center (2009a) estimates that 30–50 percent remain non-verbal. In many cases, parents report that some speech was present early on, but that somewhere in the second year of life, it faded away.

This situation means that studies of language in children with ASD are primarily confined to those who speak. With such a large segment of the population excluded, conclusions about verbal abilities in ASD must be viewed with caution.

Given these methodological limitations, what might reasonably be said about the children’s language abilities? The answer to this question varies depending on the realm of language being studied, i.e. whether the focus is on **phonology**, **semantics**, or **syntax**.

### **Phonology**

Phonology focuses on the sound system of a language, the **phonemes**—units of speech sounds—and how they combine in words. There are, of course, great variations between languages in this regard. Some familiar examples are the difficulty Japanese speakers experience with the liquid sounds of English such as /r/ and /l/ and the comparable difficulty English speakers experience with the guttural /s/ sounds of German. (Symbols for phonemes appear in slash marks.)

However, for all languages, the speech sounds are not chance, isolated units. Rather, they represent a set of unique sounds that are governed by cognitively based rules that we use, generally outside of awareness. For example, if asked what makes the plural in





English, most speakers of the language will say that it is the “s.” However, the “s” represents only an orthographic (written form) convention. Phonologically, we actually produce and differentiate three different sounds for the English plural. There is the [z] as in “dogs,” there is the [s] as in “cats,” and there is the [əz] as in “dishes.” (How phonemes are pronounced in certain words appears in brackets.) Without awareness or instruction, our **linguistic competence** allows us to use and apply these variations with uncanny accuracy across vast numbers of words—even words we have never heard before.

The sound analysis component of language is governed by particular neural areas, and disruptions in those areas result in specific speech impairments. For children with ASD who have reasonably extensive expressive language, phonology does not appear to be a major area of difficulty. They do show delays and, at times, some subtle difficulties. Overall, however, their skills in the phonological area do not seem to be significantly impaired (Tager-Flusberg, 2007).

Another source of speech failure stems from motor issues. These include problems in (1) motor planning (associated, for example, with apraxia of speech), and (2) the **speech organs**, such as difficulty in moving the lips, the tongue, and the larynx. When these problems are present, speech production is distorted or absent. This had led some investigators to suggest that autism may be “as much a disorder of motor behavior as of cognitive behavior” (Bram *et al.*, 1977: 59).

Should motor problems be a factor in ASD, they could help explain the absence of speech in the 50 percent of children who remain “non-verbal.” Similarly, motor problems might explain the equivocal results of efforts to teach the children sign language (Seal and Bonvillian, 1997). Like speech, signing requires a host of complex, sequential motor skills. Clearly, its development would be compromised were motor difficulties present.

Generally, motor problems receive relatively little attention, even though they may hold invaluable information for understanding nonspeaking children with ASD. Hopefully, in the years ahead, this area will receive the attention it merits.

### **Semantics**

Semantics is what most people have in mind when they hear the word language (Kearns, 2000). This term, referring to the meanings of words, encompasses the huge array of verbal concepts we possess and which are conveyed via the nouns, verbs, adjectives, and adverbs of the lexicon.

Semantics gives us the power to encode into language every aspect of life. Which aspect someone learns to encode varies considerably, depending in part on experience, needs, and interests (Wierzbicka, 1992). For example, while we are comfortable using words like “computer,” “google,” and “twitter,” people of only a few generations back would have no understanding of such concepts. In other words, semantics is, to some degree, driven by experience.

Given the connection between experience and semantics, and given that the experiences of children with ASD are different from those of typical children, it is only reasonable to expect that their semantics will be different as well. And indeed they are (Bishop, 1997). Children with ASD tend to focus on nouns, particularly those in their specific interest areas (such as dinosaurs, trains, maps). They also rely on using familiar phrases and terms, often over-generalizing them in “unusual” or “inappropriate” ways. For example, one cold day, a child with ASD learned the phrase “I’m freezing.” After that, she would use those words to identify any uncomfortable situation (including being thirsty and hungry).

In light of their social difficulties, children with ASD predictably experience problems





with the semantics of the social-affective world. This includes understanding the vocabulary of emotions, particularly more subtle terms involving hope, disappointment, and contentment.

In the same vein, they have trouble with **deixis**, words whose meaning is relative, depending on who is speaking, as well as the time and place of their usage. For example, the first- and second-person pronouns are examples of deixis, for their **referents**, that is, what is being signaled, depend on the perspective of the speaker. For example, every speaker can legitimately call himself or herself “I.” That “I,” however, becomes “you” when someone else addresses that “I.” The problems children on the spectrum have in this realm become apparent when witnessing a high-level kindergartener with ASD whiz through a set of advanced math concepts, and at the same time, struggle with the correct use of “you” and “I.”

These difficulties are even more striking when one sees how typical 2-year-olds resolve these problems in deixis. Although they initially display similar patterns, within a short period of time (generally lasting only a few weeks), the confusions are resolved and the children comfortably refer to themselves in the first person.

As discussed above, children with ASD tend to concentrate on nouns. Further, the nouns are more likely to reflect inanimate objects (such as cookie, car, ball, and square) as opposed to animate beings (such as girl, boy, and Mommy). All this restricts the potential for communication. Even children at the upper end of the spectrum, who may possess extensive vocabularies, still display many of these symptoms (Tager-Flusberg, 2007).

#### EXERCISE 4



To see the limitations of trying to create meaningful messages when you are restricted solely to nouns, try the following: imagine you are with a friend and wish to impart the message that you just witnessed an accident where a truck struck a car and the car was totaled. Permitting yourself to use any noun in the lexicon, but no other type of word, try to formulate that message.

### Syntax

Syntax refers essentially to the rule-based organization that allows us to combine words into phrases, clauses, and sentences. In English, there are two main pathways through which syntax accomplishes its duties. One is word order. It's what allows us to perceive, as totally different, sentences with identical words as in “Mary sees Jack” and “Jack sees Mary.”

Awareness of word order starts early in life, with typical English speaking children around 2 years of age understanding the subject-verb-object sequence (O'Grady, 1997). Word order tends to be a robust skill, and any deficits that do occur do not seem unique to ASD; in other words, other developmentally delayed populations with language difficulties show similar problems (Bartolucci *et al.*, 1980).

A second pathway in syntax rests with a small group of words and markers on words that defy easy definition. These linguistic components are characterized by the term **grammatical morphemes**, and they include suffixes that impart grammatical information, such as plural and tense markers, and **non-content words**, words that also do grammatical work in a sentence, such as “the,” “is,” “was,” “who,” “-ing,” and “-ed.” While these types of words and markers might seem dispensible, consider the sentence “If it is to be, it is up to me.” With nary a **content word** in sight (nouns, verbs, adjectives, and adverbs), a message is still clearly conveyed. These terms, have meaning, but their meaning is subtle and intangible.





Given their abstract nature, one would expect grammatical morphemes to pose problems for children on the spectrum. Research shows that this is the case in that the mastery of non-content words, in particular, is differentially affected in ASD (Blank and Mileski, 1981; Eigsti *et al.*, 2007). Having difficulty with non-content words impacts not only the production of speech, but comprehension of speech as well. For example, imagine not discriminating between “is” and “was.” With no perceived difference in meaning, any ability to communicate about the past is seriously compromised.

Similarly, imagine not knowing the referent to *she* in a verbal stream such as “A man helped the woman cross the street. She was surprised.” That lack of knowledge leaves the listener to experience the two sentences as a scattered group of words involving two people, with no clear sense as to what the connections are. So problems in syntax have major consequences for comprehension.

### **Hyperlexia**

Up until this point, we have been considering spoken language. There is, however, another realm of language that is often not raised in discussions of autism. It is the realm of written language.

It deserves mention for many reasons, not least of which is the fact that a number of children with ASD show remarkable abilities in written language (Grigorenko *et al.*, 2003). With little to no training, they become expert decoders, able to read almost any word they see—even long multi-syllabic ones they’ve never previously encountered. Their skill is labeled **hyperlexia**—a term designed to convey the idea that, in a reversal of the normal pattern of development, written language abilities exceed those in spoken language.

The abilities are confined to single word decoding and, in almost all cases, there is little or no comprehension of what is being read. So, the reading is generally thought to be a circumscribed skill with no role to play in verbal communication.

As often happens in the evolving field of ASD, this position too is being challenged. There are several documented reports of nonspeaking individuals with ASD who have learned to read and write and have gone on to college (Eastham, 1992; Prince-Hughes, 2002). Currently, no one knows the extent to which nonspeaking individuals can acquire meaningful verbal skills via the printed word. We believe this to be an exciting area that may provide an alternative pathway to language for children with ASD—even those who are non-verbal (Blank, 2006; Maldman, 2006).

#### **EXERCISE 5**



The website <http://ralphsavarese.com/> is devoted to DJ, a non speaking person with autism who was initially deemed to have significant intellectual delays. Among its pages is one titled DJ’s Writings. Go there and read his “Letter To My Former Teachers . . .” Take his comment, “Your breathing would make me nervous,” and use it as a model for identifying three additional traits of ASD that illustrate some of his unique perceptual and emotional experiences and the way in which he uses semantics to capture these experiences.

### **UNDERSTANDING THE CONSTELLATION—STEP 3: VERBAL COMMUNICATION**

The two realms thus far considered—social cognition and language—are ones that, to a considerable degree, are independent. The same cannot be said of verbal communication, which exists only through a steady interweaving of social cognition and





language. In other words, verbal communication is always a composite of the two other realms.

Embedded in the preceding paragraph is a fundamental distinction; namely, that while verbal communication draws upon language, the two realms do not represent a single process (Blank *et al.*, 1979; Sperber and Wilson, 1986). George Bernard Shaw, the famous Irish playwright who is known for his caustic wit, captured the distinction in his characterization of a particular woman who “lacks the power of conversation but not the power of speech” (Speaking of Speech, 2009).

The following incident, reported by the parent of a 6-year-old child with autism, reflects a similar distinction:

I took Damien to a new place the other day. He immediately walked into a bathroom, glanced at the toilet seat and with no one in sight, said, “That is O.” It’s so weird. I thought that all I wanted was for him to talk. Now he’s doing that, but it’s all wrong.

Though the mother understandably lacked the relevant terminology, she was essentially saying that the issue did not rest with the child’s language but rather with his communication. Specifically, in terms of content (i.e. semantics), his observation about the shape of the seat was correct. However, it was in terms of communication that something was “wrong.” The content of his message was not suited to the situation.

There is a strong pull to use the two terms—language and verbal communication—as if they were synonymous. For example, children with autism are commonly described as having language deficits, with no mention of their ability in verbal communication. It is as if the use of one of the terms (in this case, language) automatically encompasses both realms. The end result is a serious muddling of important distinctions.

Attempts have been made to separate the two areas by finding a replacement for the term verbal communication. **Pragmatics**, one that is often selected (see Verschueren, 1999), is designed to go beyond language (a system of sounds and symbols) and represent language as it is used (the use of those sounds and symbols in speaking with others). However, pragmatics is a vast, multi-component area. Among its skills is the ability to “convey just the right amount of information for the conversational context” by being able to:

- 1 manage turns and topics in conversation;
- 2 choose the most polite and appropriate form to express an intention;
- 3 adjust speech style to the characteristics of the listener;
- 4 judge correctly what a listener already knows and wants to know.

(Yale Child Study Center, 2009b)

With these many complex facets that elude easy definition, it is difficult to present a clear picture of exactly which of the many components are affected in ASD.

### ***Adopting a Discourse Approach***

Another approach to “verbal communication” is **discourse**. Stemming from the Latin, *discursus*, (“running to and fro”), discourse concentrates on the flow of language that exists between the participants in a conversation (Renkema, 2004). When researchers take a discourse perspective, children with ASD are found to display a range of characteristics marked by:

- failure to respond to adult initiations;





- responding in a noncontingent or non-topically related way;
- failure to expand on the ongoing topic.

(Hale and Tager-Flusberg, 2005, p. 520)

(These limitations apply, of course, only to the approximately 50 percent of children who demonstrate significant mastery of language.)

This set of characteristics may seem rather skimpy. Nevertheless, these three limitations alone can show why discourse in children with ASD is a challenge. To see this, let's examine some basic dynamics of any discourse.

### ***The Speaker: Initiator and/or Responder***

Discourse, by definition, involves at least two speakers. While the meaning of the word speaker would seem to be obvious, it has implicit features that are significant. One is contained in the -er suffix, which is a marker for identifying a person in a particular role, e.g. a person who teaches is a *teacher*, a person who paints is a *painter*, and a person who speaks is a *speaker*.

It may seem strange to view matters from this perspective since most roles (teachers, painters, etc.) are confined to limited segments of the population. No such limitation exists *vis-à-vis* speakers since any and all individuals who so choose can take on this role. Nevertheless, it is as much a role as any other.

As with all roles, for the activity to take place, specific material is required. In the case of the teacher, for example, it is a curriculum; in the case of the speaker, it is ideas expressed via language. The ideas can arise in two ways. In one, the speaker introduces (i.e. initiates) the content. In the other, the speaker responds to the initiation—with the response expected to link to the content already “on the table.” In other words, a speaker can be either an **initiator** or a **responder**.

As a conversation develops, the two participants share the roles of initiator and responder, with different patterns emerging depending on the relationships. In a superior–subordinate relationship (e.g. doctor–patient), for example, the superior generally maintains the initiating role for much of the exchange. By contrast, in a peer relationship, there is more of a balance—with each participant sharing initiating power (Blank, 1980; Wallach, 2008). Of relevance here is the way this dynamic plays out in children.

### ***The Initiator–Responder Roles in Young Children's Discourse***

When children are very young and their language is still limited, they find it difficult to initiate and sustain discourse. As a result, in conversations with their parents, the adult is often the primary initiator—placing the child primarily in the responder role. You will see this below, in a dialogue between a mother (M) and child (C).

- M: Do you want some more? (Child eats some more.)  
 M: You like that, don't you?  
 C: More meat.  
 M: What do you say?  
 C: Please. (Child gets some meat.)  
 C: I want tomato.  
 M: But you don't like tomato.

(Lytton, 1980: 208)





For the most part, the children are keen to participate even when restricted largely to the responder role. Their aim—being the very social beings that they are—is to stay in the interaction. To do this, what they need—and have—are the social skills that allow them to respond, thereby maintaining the turn-taking that gives conversation its back and forth quality (DeMaio, 1982). So when children with ASD show the first characteristic above—namely, failure “to respond to adult initiations”—it signifies the absence of the requisite “to and fro” of discourse. There is the “to,” but there is no “fro” in return. In other words, there is a breakdown in the basics of conversation.

The dynamics are somewhat different when the child with ASD displays the second characteristic—that is (going back to Hale and Tager-Flusberg’s three characteristics), he or she offers a response that “is noncontingent or non-topically related.” Here, the child is displaying somewhat more advanced discourse skill in that a noncontingent response is still a response. As such, he or she is exhibiting a simple level of turn-taking so that there is an element of “to and fro.” Nevertheless, noncontingent utterances are challenging for the partner to handle since they seem off topic. Imagine, for example, how you might feel if you asked someone, “What is the time?” and the response you receive is “I want ice cream.” So, when a child offers this sort of response, the discourse is, once again, derailed.

By contrast, the third limitation (“failure to expand on the ongoing topic”) generally reflects a problem in the initiating role. While an initiator has more power to direct the discourse, he or she is still not free to say anything that comes to mind. The implicit expectation is that the initiations will relate to the situation at hand. In other words, the initiator is using his or her turn to “expand on the ongoing topic.”

Typical children generally are able to achieve this by 3 years of age. For example, in the following segment, a mother is setting out foods for the evening meal. The child, taking notice of what is happening, initiates and then expands the exchange with a second initiation, as follows:

Child: (pointing to a box on the table) Mommy, what’s that?  
 Mother: That’s chocolate pudding mix. I thought we’d make some for supper tonight.  
 Child: Can I mix and help you?  
 Mother: Sure you can.

(Blank and Franklin, 1980: 139)

Appropriate initiation is another problematic area for children with ASD. The question “Can I mix and help you?”—an initiation which so easily falls off the lips of the typical 3-year-old—is, for the child with ASD, like an utterance from a foreign language. It reflects the encoding of a wide range of concepts including social relationships (“help you”), action patterns (“mix”), and the idea of potential (“can I”). For children with ASD, each of these components poses a hurdle, leaving them without the tools needed to keep a topic ongoing.

In concert, the children’s problems affect both the initiating and responding roles, resulting in barriers to sustained discourse. In many ways, the problems are a reprise of the interactions at the preverbal level—except now the important layer of language is involved. This chapter started with a quotation from Donna Williams, an individual with autism. The experience of a single person cannot be taken as representative of the many different individuals on the spectrum. However, this quotation is invaluable in giving us a glimpse into what happens when the initiating and responding roles are not operating as expected, thereby placing an individual into the anomalous world of language without communication.



**EXERCISE 6**

Record a conversation between any two individuals. Within the conversation, highlight a set of ten exchanges and then code each to see who initiated each exchange and the response it elicited. (Note: It is helpful to separate initiations that are in the form of questions from initiations that are in the form of comments or statements.) If you know any individuals with autism, repeat the exercise. The dyads then can be two individuals on the spectrum or an individual on the spectrum with a neurotypical person.

**CONCLUSION**

In this chapter we have focused on the patterns that mark the children's language and communication. We have not touched upon the enormous intervention efforts that have been mobilized to foster the children's development (Gerlach, 2003; Dawson, 2008). Nor have we discussed the issue of outcome.

Intervention studies report improvements in functioning, suggesting that their efforts are successful. However, the gains are often confined to (1) limited spheres of behavior—such as teaching children a small repertoire of signs to request things they want, or (2) a small percentage of the group—with the greatest gains achieved in the children who were at higher levels prior to intervention (Baghdadlia *et al.*, 2007; Landa, 2007). Still, currently we have not yet found the techniques, strategies, and regimens that will allow most individuals with ASD to achieve independent adult lives (Howlin *et al.*, 2004).

As with so many issues in this field, reports of major outcomes are mixed and represent a source of heated controversy.

- One side views the reports solely as anecdotal records that reflect the wishful thinking of biased participants. Since they lack scientific merit, the only “reasonable” action is to dismiss them. The end result is a tossing aside of promising leads that could be of enormous value in deciphering the puzzle.
- Another position exists at the opposite end of the continuum. Displaying an acceptance that matches, in intensity, the other group's skepticism, this group readily welcomes the reports as proof that recovery is attainable. The focus tends to be on implementation of the key elements deemed central to the change. The end result can easily be misdirected resources with little or no gain for the vast majority (Blank and Cull, 2009).
- There is a third view, captured in the statement of the Autism Society of America that “People with autism have a different way of looking at the world, and that should be embraced and celebrated.” This approach sees the children through the prism of difference and not deficiency. From this perspective, recovery is an imposition of the neurotypical population and not something needed in the ASD population. The end result is a call for accepting autism as one of the many variations of the human condition. For additional material on this perspective, see Paradiz (2002) or the Autistic Self Advocacy Network [ASAN] (2009).

In a field as complex as autism, markedly different views are to be expected. Hopefully, with the sophisticated tools that are increasingly available in neuroscience, medicine, biochemistry, and other fields, these differences will steadily be resolved, as new information is obtained.





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## OTHER RESOURCES

### **Books Written by Individuals with Autism**

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