CHAPTER 1

Introduction

I wrote this book for clinicians, teachers, and others who want to help children and teenagers affected by autism spectrum disorders (ASD) to improve their social skills. This clinical guide offers practical approaches and suggestions for teaching social skills to children and teenagers with autism and related conditions. Once regarded as rare, more recently these disorders have received a great deal of scientific and media attention as a result of rising prevalence estimates. In 2009 the United States Centers for Disease Control and Prevention (CDC) reported that spectrum disorders are as common as 1 in every 110 people (CDC, 2009). Given the current prevalence estimates and the empirically supported importance of early identification (Dawson, 2009), we undoubtedly face a growing, and aging, ASD population. *The fastest-growing area of need, in terms of ASD and mental health, is likely to be with older children, adolescents, and adults.*

Many clinicians, including those who do not specialize in treating people with ASD, are being asked to work with patients who desperately need some type of help with impaired social functioning. The number of families seeking treatment far exceeds the available clinical resources in most communities. School systems are also being called on to serve a growing student population identified as having either autism or a related condition and therefore needing special services. Most schools are relatively unprepared to deal with this growing demand, and school officials are unsure of how best to meet the needs of students with ASD

and their families. This problem is by no means limited to specialists or special education teachers. On the contrary, many students with higher-functioning forms of ASD are served almost exclusively by regular education teachers and are taught the general educational curriculum. Thus, the onus is placed on regular education teachers, many of whom have had little or no training on working with students with ASD.

Most therapists and mental health clinicians have some familiarity with social skills training as a treatment approach for a variety of childhood disorders and problems. It is a commonly used approach in the treatment of many childhood disorders. Nevertheless, social skills training is generally not effective as the *sole* form of intervention for most psychiatric or behavioral disorders (e.g., Spence, 2003). It is but one component of a comprehensive intervention program that may include therapy, school consultation, and sometimes medication. This approach is also standard when working with individuals who have autism spectrum conditions. In individuals with ASD, the social disability may be viewed as fundamental—or the common impairment threading across all spectrum disorders—but it nevertheless is related to many other factors and aspects in the person's life. Treatment should therefore be integrated, building appropriate prosocial skills and addressing as many related factors (e.g., communication impairments, hyperactivity, overselectivity) as possible. Thus, let me offer a word of caution for readers of this guide: *although social skills training is generally best viewed as an important component in any comprehensive treatment program for a child with ASD, it should typically not be the* only *type of treatment provided*.

This guide represents an attempt to address a growing need in the mental health care and educational communities, to assay current thinking in this area, and to disseminate potentially useful approaches for social skills training for children and teens with ASD. As such, the material in this book draws from multiple theoretical approaches, clinical interventions, and treatment models. It does not represent any single social skills training curriculum. In integrating material from multiple sources, I have sought to provide clinicians and teachers with a resource that provides both conceptual and hands-on material, enabling the practitioner to decide which approaches best fit the needs of the particular client with whom he or she is working. Both mental health clinicians—that is, psychologists, therapists, social workers, and school psychologists—and educators—including both regular education and special education teachers as well as school counselors—should be adequately prepared to treat these children and their families now and into the foreseeable future.

What Is ASD?

The disorders collectively known as ASD are neurodevelopmental conditions typically diagnosed early in childhood. The exact etiology of these disorders is unknown. Although genetic factors are generally accepted as being at least predisposing factors, there are likely multiple genes involved and myriad pathways that can lead to a final diagnosis of an ASD. It is also probable that spectrum disorders arise from a variety of sources, meaning that no single cause underlies all cases of ASD or autism. Furthermore, there may be genetic predispositions that can be triggered by environmental or developmental insults or events that may make possible the subsequent development of the ASD. This diversity in ontology probably helps to explain the variability seen in people with ASD. Individuals on the autism spectrum can and do look very different from one another in every way imaginable—language ability, intelligence, sense of humor, interests, desire for human closeness, and prognosis, to list just a few.

Regardless of cause, all spectrum disorders are characterized by deficits in social interaction. The other two core domains of interest are communication deficits and the presence of repetitive behavior and restricted interests (*Diagnostic and Statistical Manual of Mental Disorders* 4th Ed., text revision [DSM-IV-TR]; American Psychiatric Association, 2000). A person's behavioral profile in the communication and restricted behavior/interests domains influences specific ASD diagnosis. In early childhood, for example, an adolescent with high-functioning autism likely was delayed in developing spoken language, whereas one with Asperger syndrome may have been precocious in terms of language development or at least not delayed. There is also some evidence for wide differences in learning profiles with respect to visual–spatial abilities and verbally mediated skills. However, as stated previously, *all of these disorders are characterized by deficits in social interaction*. Problems with communication, both verbal and nonverbal, and stereotyped behavior and/or restricted interests are diagnostically informative but are not the defining features of the spectrum disorders.

A Word on ASD Subtypes

"Autism spectrum disorders" is a term that encompasses three related neurodevelopmental conditions: autistic disorder, Asperger syndrome (AS; also known as Asperger's disorder), and pervasive developmental disorder not otherwise specified (PDD-NOS). The distinction between high-functioning autism (HFA) and AS typically does not determine

the type of social skills intervention chosen. However, there are some general characteristics unique to each group[1] that may affect how one intervenes to effectuate change in social skills. Diagnostically, autistic disorder precludes a diagnosis of AS—they cannot coexist. AS is distinguished by the absence of intellectual disability or the delayed development of spoken language. In adolescents who are higher-functioning (i.e., within the range of normal cognitive functioning, or not mentally retarded), differential diagnosis of HFA and AS may be difficult. There is some empirical evidence that youths with AS tend to be "active but odd" in their social interaction attempts as compared to those with HFA, who tend to be more aloof and passive (Ghaziuddin, 2008). In other words, children with AS may be more likely to initiate inappropriately (e.g., ask personal questions), intrude into the personal space of another person, and be more socially impulsive and naïve. On the other hand, those with HFA might respond appropriately to questions asked about themselves but not feel the need to reciprocate, or ask questions of conversational partners.

In practice, the latter group may be more difficult to carry on a conversation with, while with the former it may be difficult to get a word in edgewise! When one or the other of these characteristic sets is present, it will determine the type of intervention implemented. A sense of social deficit pervades all ASD subtypes, regardless of how intellectually gifted the person may be.

As this book goes to press, we face proposed changes in the next edition of the DSM (DSM-5) that will substantially affect how we conceptualize the spectrum conditions (see *www.dsm5.org/Pages/Default.aspx*). These changes may make much of the difficulty surrounding specific subtype diagnosis a thing of the past. "Autism spectrum disorder" will be the diagnostic label for individuals now labeled as having autistic disorder, AS, childhood disintegrative disorder, or PDD-NOS. The separate diagnostic labels (e.g., AS) will no longer be applied, as they are absorbed into the single spectrum condition. These changes, largely based on a lack of data consistently supporting a clear distinction between mild autistic disorder and AS, are not universally supported. For instance, in a 2009 *New York Times* article, Dr. Simon Baron-

[1]Making broad generalizations about characteristics associated with an ASD subtype is difficult because of the tremendous individual variability within the diagnostic subtypes. There will always be exceptions, when such generalizations are made. Nevertheless, knowing the "typical" characteristics associated with a subtype can be helpful in treatment planning, as long as knowledge of the individual client supersedes any such generalization.

Cohen (2009) asserted that scientists are just now beginning to identify biological and genetic markers associated with AS, a relative newcomer to the diagnostic scene, first included in the DSM-IV in 1994.

Despite the proposed changes to our diagnostic system, the specific profile of social deficits presented by the client can be useful in determining *how* to deliver the intervention. For instance, intervention with a child who is socially aloof and essentially uninterested in his peers and friendships will look quite different from intervention with a child who is highly socially motivated but naïve and awkward around his peers. As the mental health profession moves toward a more holistic view of ASD, distinguishing specific diagnoses within the spectrum will become a thing of the past. Because the HFA–AS distinction does not drive the choice of social skill intervention(s) and in light of the move toward a more unified view of autism spectrum disorders, *the term "ASD" is used throughout this book to refer to people with HFA, AS, and/or PDD-NOS.*

Why Focus on Social Skills Development?

Socialization deficits are a major source of impairment regardless of cognitive or language ability for individuals with ASD (Carter, Davis, Klin, & Volkmar, 2005), and they do not remit with development. Indeed, impairment and distress may increase as the child approaches adolescence, when the social milieu becomes more complex and demanding, and as the individual becomes more aware of his or her social disability or "differentness" (Schopler & Mesibov, 1983; Tantam, 2003). Owing to this increasing self-awareness and the growing social complexity associated with middle childhood, social skills deficits may presage mood and anxiety problems later in development (Myles, 2003; Tantam, 2003), especially among higher-functioning individuals with ASD. The importance of social interaction and having a group of friends in which one feels accepted and supported is often overlooked, or taken for granted, by people without a severe social disability.

Social acceptance affects the overall quality of life and, for teens especially, has an impact on academic functioning and developing identity and self-worth. Indeed, social difficulties in ASD have been found to be linked to multiple other problems. Although it is often assumed that individuals with ASD prefer to be alone and have little social contact, many people with ASD are intensely aware of their isolation and unhappy about their lack of connectedness with others (Attwood, 2000). Moreover, clinical reports indicate that deficits in social interac-

tion may lead to more serious problems, specifically anxiety and mood disorders, as children with ASD mature. Both teens and adults with ASD are at increased risk for depression and anxiety (Ghaziuddin, Weidmar-Mikhail, & Ghaziuddin, 1998), which can negatively impact academic and social performance (Myles, Barnhill, Hagiwara, Griswold, & Simpson, 2001). A self-awareness of social deficits, emotional isolation, and secondary problems with depression can be detected in these two statements made by adolescents with ASD:

- "Asperger's is the reason why my friends are paid to take me places by my parents."
- "Because I have Asperger's I always have to worry about my social skills, and I can mess up really badly at any time."

Finally, it is generally accepted by behavior analysts and psychologists that all behaviors are purposeful. If the drive for social interaction is present but the child lacks the knowledge and capacity to use appropriate social skills to satisfy this drive, he or she will probably begin to apply more socially *inappropriate* behaviors to get this need or drive met. For example, if a high school girl cannot figure out how to be accepted by peers in class in the same ways that the other girls are accepted (e.g., by talking about topics of mutual interest, such as current television shows), she may find that acting up or telling inappropriate jokes gets her some amount of peer attention. And although such behaviors may successfully garner attention, they also often lead to such unintended consequences as school detention as well as eventual rejection or further isolation from peers. The point of this example is that if the drive is present but the requisite skill (knowledge of and fluency in skill use, or the like) is not, other less desirable behaviors will likely be called on to satisfy the drive.

To summarize:

- Socialization problems are the key defining feature of all ASD subtypes.
- For cognitively higher-functioning individuals with ASD, socialization problems often stem *not* from lack of motivation but rather from lack of ability.
- Social skills deficits are associated with other problems, including anxiety, depression, and further isolation, that impede the child's success and quality of life.

For all these reasons, it is logical to make social skills training a focus of treatment for children and teens with ASD.

Why Target "High-Functioning" Youths?

As previously discussed, there is considerable heterogeneity among people with ASD. The level of cognitive functioning, or intelligence, is one area that can vary greatly among youths on the autism spectrum, affecting how treatment is delivered and what is targeted within any social skills intervention program. Higher-functioning adolescents with autism spectrum conditions have been found to initiate social interaction with peers more frequently than do their lower-functioning peers with ASD. Their rate of social initiations, however, is still about half that of their typically developing (non-ASD) peers (Bauminger, Shulman, & Agam, 2003). Teens with ASD also tend to receive fewer social initiations, or bids inviting action(s), from their peers. *Both minimal social initiations on the part of the person with ASD and lack of opportunity to respond appropriately to the initiations of others likely affect social functioning to its detriment*. Given that a general lack of *knowledge and skill* of how to initiate social actions (or reciprocate or interact, etc.) rather than a lack of *desire* underlies teens' perceived social isolation and loneliness, it is imperative that they are taught *how* to initiate interactions more frequently and more effectively.

This guide focuses on social skills training approaches for school-age children and adolescents with ASD who are considered "high-functioning," typically defined as individuals without severe cognitive impairment. In most research literature, the term "high-functioning" refers to people with ASD whose assessed Full Scale IQs fall at or above the borderline range (i.e., IQ≥70) and, usually, who are able to communicate verbally. The reason for focusing on this specific group of individuals, as defined functionally, is that doing so affects the specific types of interventions undertaken. Children who do have co-occurring intellectual disability can learn more appropriate social skills, but the approaches used to teach individuals with significant cognitive and verbal limitations are *qualitatively different* from those that can and should be used with individuals without such limitations. Individuals with co-occurring intellectual disability may require more intensive adult prompting and visually based rather than verbally based teaching strategies. In teaching social skills to an adolescent with comorbid intellectual disability, for instance, one might include modeling appropriate social skills based primarily on simple visual aids (e.g., cartoon pictures) and also provide tangible reinforcers to help motivate skill practice. As you will see, for example, many of the strategies in this guide are verbally mediated or require a fair amount of instructor modeling and self-reinforcement.

With respect to the decision to focus on school-age children and older subjects (i.e., ages 7–17), the approaches one implements with a

school-age child are qualitatively different from those undertaken with a very young child. The social play of very young children differs from that of school-age children in that there is more reliance on props and less social reciprocity; their social networks and friendships lack the complexity and depth seen in the peer groups of older children. Although some adaptation of teaching methods and content is necessary for teenagers, in general the approach to training or instructing a 10-year-old with ASD is fairly similar to that with a 15-year-old.

Despite being able to demonstrate average—or sometimes significantly above-average cognitive functioning—youths with ASD nonetheless generally manifest severe social limitations and impairments. Their unique cognitive profiles, combined with communication difficulties (e.g., monotone speech), contribute to difficulty in interacting in social situations as well as understanding and recognizing their own internal states. The social interaction difficulties encountered are profound and do not tend to improve developmentally without intervention. Difficulties with processing information about others, such as interpreting others' intentions and inferences, lie at the heart of the social difficulties characteristic of ASD. Adolescents with ASD typically have great difficulty in understanding the social expectations of their peers, knowing how to act in unstructured situations (e.g., a school field trip), and adapting their behaviors to fit the demands of the situation. Compounding these inherent social skills deficits, problems with emotion regulation and overarousal all too often amplify the subjects' impairments.

Although people with ASD, especially those with AS, do not necessarily have a problem with speaking, difficulties with the most basic practices of social communication are characteristic concerns. Recognizing how nonverbal cues such as a person's tone of voice or intonation can alter the intent and interpretation of a spoken communication is often problematic. So is understanding nonliteral language, such as irony or sarcasm. The social communication of individuals with ASD is further hampered by such problems as not knowing how much information to provide, not readily providing contextual cues to help the listener make sense of the topic of conversation, and often making tangential or off-topic comments (Twachtman-Cullun, 1998).

In summary, youths with spectrum disorders uncomplicated by intellectual disability should not be viewed as less *severely affected by social deficits than those with classic autism or severe cognitive limitations.* In fact, their heightened self-awareness during later childhood and adolescence and their desire to interact with peers likely *compound* their social deficits over time. For this reason, and also owing to the differences in teaching approaches discussed earlier, this guide focuses on higher-functioning youths.

Overview of Social Skills Training

"Social skills training" is a term used to describe a broad class of interventions designed to remedy interpersonal skill deficits. All of these interventions share the goal of improving children's social competence, usually as a means of promoting adjustment and decreasing impairment. There is no single unifying theoretical approach that underlies all social skills training approaches. However, the basic assumption is that social competence is related to attaining and maintaining satisfying social relationships, which in turn are related to an improved quality of life (Segrin & Givertz, 2003).

Unlike many of the skills children are taught, like how to brush one's teeth or ride a bicycle, social skills are almost entirely context-dependent. As opposed to more *concrete* skills, social skills rely on unwritten "codes of conduct"—that is, they vary depending on the situation, the people one is with, what just happened, and what is about to happen. Even more perplexing for individuals with ASD who can typically learn and follow set rules very well is the fact that social skills change over time. For instance, a 4-year-old may learn that he or she should approach other children as potential playmates and politely ask, "Do you want to be my friend?" This is a fine skill for a 4-year-old, but when the boy or girl is 13, that same social skill is no longer appropriate. This difference helps to convey why social skills training interventions are so difficult, namely, it is hard to nail down a moving target!

Gresham, a pioneer in the field of social skills training, has differentiated three types of social skills deficits: skills acquisition deficits, performance deficits, and fluency deficits (Gresham, Sugai, & Horner, 2001). A *skills-acquisition* deficit conveys that the child lacks the know-how for performing a given skill. A *performance* deficit is present when the child has the knowledge but fails to demonstrate the skill when it is needed. Finally, a *fluency* deficit is present when the child knows the skill and is motivated to do it well but "renders an awkward or unpolished performance of the social skill" (Gresham et al., 2001, p. 334). *The type of deficit indicated should determine what type of intervention is done*, whether it be teaching the skill, prompting its use, or practicing and rehearsing the appropriate skill in a natural setting. Consider the examples provided in Table 1.1, which describes some of these deficit types as they might be expressed in a child with ASD.

Most social skills programs follow a similar teaching sequence (e.g., Evans, Axelrod, & Sapia, 2000). After first assessing the child's functioning to determine which specific social skills to target, the skill(s) are taught—often in a small-group format with same-age peers. Following the didactic instruction, the child gets the opportunity to prac-

TABLE 1.1. Types of Skill Deficits

Type of deficit	Examples	Intervention possibilities
Acquisition	1. Child does not know what cues indicate it is okay to talk to someone (e.g., person smiles at you). 2. Child lacks understanding of how nonverbal behaviors (e.g., a smile, a wave of the hand) communicate emotions.	Teaching discrete skills in a one-on-one or group format
Performance	1. Child does not initiate conversations at school despite demonstrating the skill during sessions with the therapist. 2. Child verbalizes an understanding of the importance of nonverbal communication, yet fails to use facial expressions or gestures while speaking.	Integrating teaching within the child's classroom; involving other peers, siblings, etc.
Fluency	1. Child interrupts others to start a conversation about topics that are not of interest to peers. 2. Child stares at peers when speaking and waves hand emphatically when approaching someone in greeting—almost to the point of touching the peer.	Providing feedback on skill performance; modeling appropriate execution of the skill

tice the skill in a semistructured setting (e.g., in the training group) before attempting to transfer the skill to the child's natural environment (e.g., school) to promote generalization. In addition to teaching skills that the child is either lacking (acquisition) or has difficulty performing well (performance or fluency deficit), most approaches also attempt to reduce competing or other problematic behaviors (Gresham, Thomas, & Grimes, 2002).

What We Know from Non-ASD Populations

There is empirical evidence supporting a relationship between successful social relationships, or *social competence*, and psychological health (Parker & Asher, 1987; Greene et al., 1999). Moreover, social skill deficits are associated with the development and diagnosis of many child-

hood psychiatric disorders (Hansen, Nangle, & Meyer, 1998). Social skills interventions have been implemented for the treatment of most childhood disorders and problem behaviors, including attention-deficit/hyperactivity disorder (ADHD) (de Boo & Prins, 2007), depression (Segrin, 2000), aggression (Nangle, Erdley, Carpenter, & Newman, 2002), and shyness (Greco & Morris, 2001). Behavioral approaches—by far the preferred methodology of most social skills training approaches—include such strategies as modeling, role play, rehearsal, providing feedback to the child, real-world practice, and reinforcement.

Models of ASD Social Dysfunction

Social skills training is often a core component of treatment programs for youths with ASD for whom social skill deficits are the fundamental problem. I make no attempt to cover all of the theoretical models and scientific conceptualizations proposed to explain the various social dysfunctions seen in ASD. However, an overview of some of the primary theories can help shape our understanding of the social skills deficits frequently seen in this population. For more information on these theories, the interested reader is directed to Carter et al. (2005) or to the research underlying these orientations that is provided in this volume's references.

The most widely espoused theory for explaining ASD social dysfunction is probably theory of mind (ToM), or mindblindness, proposed by Baron-Cohen (1995). According to ToM, social deficits result primarily from an inability to consider and conceptualize one's own mental phenomena as well as those of others. This basic shortcoming makes it especially difficult to predict or understand the intentions, feelings, and beliefs of others. Indeed, lack of understanding that a person has feelings, thoughts, and beliefs that do not always correspond to reality and an inability to attribute such thoughts to self or others make it quite difficult to make sense of or predict other people's behavior. Such deficits can make social reasoning impossible and social discourse overwhelming.

Consider the case of "Ben," a 15-year-old who is unable to appreciate that his classmates do not share his intense fondness for riddles and rhymes. In fact, not only do they not share his interest, but they also find it irritating that he insists on rhyming when he speaks up in class, and they tease him about it. Unfortunately, in Ben's case, he was able to recognize the teasing as such and was deeply hurt by it. His propensity to answer in rhymes—for instance, when responding to a question from the teacher—was so driven a compulsion that he felt powerless to

refrain. Another example demonstrating impaired ToM is the middle school student "Ari," who has a crush on a girl in class, one that is not reciprocated. Ari tries talking to the girl, and eventually he even shares his feelings with her. The girl, wanting to spare his feelings, does not directly tell him that she likes a different boy. Instead, she politely tells him she appreciates his feelings and, when he asks her out time and again, finds convenient excuses to decline (e.g., "My family will be out of town then"). He persists in asking the girl out, totally oblivious that she is interested in someone else. In essence, Ari lacks any awareness of a tacit social rule that most young people "get" intuitively, namely, that multiple rebuffs of a social invitation usually indicate disinterest and that therefore he should desist. In both of these examples, the boys with ASD seem unaware of practical commonsensical knowledge that is collectively "shared" by their peers. To put it another way, they simply don't "get it," and this lack of insight sets them up for rejection and social humiliation.

A second theoretical model links social dysfluency to deficits in executive functioning (EF), a group of abilities that allows one to plan ahead, shift priorities, and act purposefully despite distractions or competing demands (Ozonoff, 1997). There are many specific abilities that fall within the EF domain; those that appear to be most impaired in children with ASD are related to flexibility and planning (Ozonoff & Jensen, 1999). Logically, deficits in EF could lead to some of the commonly seen problems in ASD, including poor application of formal knowledge to real-world problems, a tendency to perseverate (i.e., repeat actions or words) and difficulty in staying on task when working or interacting with others. Deficient EF characteristic of ASD might be best exemplified in commonly seen problems with adjusting to altered routines and unexpected changes. Consider a teenage girl who comes to English class prepared for the test she has studied for, only to be greeted by a substitute teacher announcing that the test will not take place today because the regular teacher is ill and she wants to use today as a review day. Most students can readily accept this change in plans and perhaps even be relieved by the realization that they have an extra day to study. This student, however, becomes very upset and dysregulated. She might react in a hostile way, perhaps yelling at the substitute teacher, or become very quiet and even more rigid (e.g., retreating to a corner to read her favorite book while rocking from side to side in her chair).

Weak central coherence (Frith, 2003; Happe, 1996), a third theoretical explanation, may also help elucidate the social deficits evident in ASD. This theory highlights problems with understanding the "meaning," or gestalt (whole picture) of things seen in many people with ASD.

An inability to attend to *context,* to integrate pieces into a central totality, underlies social deficits in individuals on the autism spectrum. In other words, successful social functioning necessitates that one integrate multiple pieces of context-dependent information, such as recognizing the relationships among various individuals, following the thrust of the conversation as it shifts from person to person, and such other factors as the time and environment—all at a very fast pace in order to respond appropriately. Children with ASD generally lack these abilities. There are many ways in which problems with synthesizing multiple pieces of information to inform the whole can detrimentally affect social functioning. Consider the teenager who attends only to the verbal message "Nice shirt!" without noting the facial expression (a smirk) or tone of voice (condescending) of the person making the comment—or even the fact that other students are laughing. The message a teenager with autism might take away from the exchange might be "this is a sincere compliment" when, in fact, quite the opposite message was intended.

Klin and colleagues (Klin, James, Schultz, & Volkmer, 2003) described the enactive mind (EM) model as postulating that people with ASD tend to possess a general orientation to *things* rather than *people*. Based in cognitive neuroscience, the EM model explains why some people with ASD may be quite intellectually gifted or knowledgeable in certain areas of expertise (e.g., telephone circuitry) and yet be severely impaired socially. In studies using eye-tracking technology, which permits the researcher to determine exactly what a person is attending to and noticing in the environment, it has been found that people with ASD tend to neglect nonverbal social cues such as eye contact and pointing (Klin, Jones, Schultz, Volkmar, & Cohen, 2002). A failure to notice such social cues as they occur naturally would inevitably contribute to frequent misperceptions or oversights relating to important social interactions and, of course prevent appropriate social responses. One person's subtle wink, for instance, can be quite salient—it might signify an inside joke or indicate that he or she was just kidding (i.e., "Disregard what I just said"). But a person with ASD, who might not attend to eye gaze patterns, would not perceive this information or assign any salience to it and would therefore have only the verbal communication on which to base his or her understanding of the situation.

At this time, no single theory is universally accepted as an explanation of the developmental course of social deficits observed across the full range of spectrum disorders. Each theoretical model has its own strengths and limitations, and it may be wise to draw on aspects of several of the models, especially as we learn more about the neurological underpinnings of ASD (South, Ozonoff, & McMahon, 2007). In conceptualizing why a student struggles to appreciate the fact that his

peers have little interest in talking about his favorite topic—dot matrix printers, for example—principles from ToM may be useful (e.g., an inability to distinguish his own interests and thoughts from those of other people) and can guide intervention. With this student, the explicit teaching of such skills as inferring someone's thoughts based on his or her facial expressions or actions might be useful. In another example—say, in explaining to parents how their daughter can apparently effortlessly commit to memory the titles and publishing information of her favorite book series and yet be unable to identify any of her classmates by name—the EM model might be more applicable. However, in many cases, the incredible variability observable among individuals who are on the spectrum in terms of level of social motivation and social skill may make adoption of any single theory to explain the social deficits of ASD difficult if not imprudent.

Specific Social Deficits of ASD

The types of skill deficits seen in children and adolescents with ASD are diverse. Fluency deficits are seen in many higher-functioning students with ASD who have received explicit training in social skills and want to do well but who struggle with performing the skills in a fluid and natural way. However, acquisition and performance deficits are also seen. In addition to deficits in specific discrete social skills such as appropriately modulated eye contact, youths with ASD often have difficulty with more "fluid" skills such as noticing and sharing affective experience and perspective taking (Gutstein & Whitney, 2002). Deficits in these higher-level skills inhibit a person's ability to maintain age-appropriate friendships in adolescence, when peer relationships are expected to be based on reciprocity and a shared understanding of unspoken things held in common.

The variability seen in social functioning across people who have spectrum disorders cannot be overstated. This variability is one of the main reasons why applying "predetermined" programs to enhance social functioning can be challenging. However, some deficits are frequently seen and should generally be considered when assessing a child's social abilities. Following are some of the more common skill deficits in children and adolescents with ASD:

- *A failure to establish a shared reference point when conversing with others.* A person with ASD may *launch* into a topic of discussion without providing enough—or even any—background information for his or her conversational partner.
- *Lack of consideration, understanding, or appreciation of social*

norms or "rules." This deficit can be seen in the awkward or abrasive way a teen with ASD might approach a stranger or respond in class when asked a question. The youth might come off as rude or irritable when, in fact, he or she just doesn't observe such typical social "niceties" as responding with a smile or refraining from making potentially offensive comments (e.g., "Wow—your hair looks awful today!").

- *Overreliance on "scripts" for conversation, or stereotypical expressions used without reference to the context.* A person with ASD may learn a rule for social exchange (e.g., greet others with a smile and handshake) and then apply that rule across all situations independent of the context (e.g., applying the rule at all social events, including funerals and school dances).
- *Difficulty in understanding the nature of friendship.* Many youths with ASD struggle with appreciating the concept that friends can be shared, that friendships are not monogamous relationships. This deficit may be related to previous negative experiences with peers, prior difficulties in making new friends, or anxiety about how to interact in social groups. It can lead to jealousy and/or aggression. Similarly, a child may consider a peer to be a friend when the relationship is not truly reciprocal. A teen with ASD might call a peer a "friend" simply because that person acts civilly toward him or her regardless of whether the peer actually initiates conversations or invites the teen with ASD to do anything outside of school.
- *Lack of respect for personal physical space.* Along with the motor clumsiness and coordination difficulties often present in ASD, it is common to see teens with ASD impose on adults' and peers' personal space. A female counselor treating a child on the spectrum might be surprised, for example, when the client suddenly hugs her—and perhaps too tightly—at the end of a session owing to a lack of appreciation of personal space conventions and potential sensory difficulties.
- *Misperceptions of others' intentions and social behavior.* Teens with ASD may believe they are being bullied or picked on when in fact they are not. Conversely, they may not recognize when they are being targeted in a joke.
- *Misinterpretation of the nonverbal aspects of communication*, such as one's tone of voice and facial expression. A person with ASD might fail to notice another person's shift in tone of voice, or they might perceive it but not recognize how it alters the communication (for example, by not realizing that the person is only joking).

While this list is by no means exhaustive, and it is unlikely that any single child possesses all of these deficits, it provides examples of some of the commonly seen social challenges presented to therapists and teachers who work with children and teens on the autism spectrum. A model of ASD social dysfunction is depicted in Figure 1.1. This figure may be used as a handout with families as a tool for explaining some of the social difficulties children with ASD typically encounter and how they arise.

Among people with spectrum disorders, those with better-developed verbal and cognitive abilities have been found to initiate more social interactions with peers (Sigman & Ruskin, 1999). However, their interactions are often awkward or sometimes even offensive. Teens with ASD, especially higher-functioning individuals, are likely to struggle to be accepted and to experience attendant distress related to their lack of requisite skills. They are usually not well integrated into the social networks of their peers (Chamberlain, 2002) and may in fact experience considerable loneliness (Bauminger & Kasari, 2000). Moreover, social communicative competence is associated with better long-term outcomes for people with high functioning forms of ASD (Marans, Rubin, & Laurent, 2000). Given that the motivation to interact with peers is typically present but the skills are deficient, explicit training in appropriate social skills is a reasonable treatment approach.

There is currently a great deal of interest and research in determining how effective social skills development interventions are for youths with ASD. In a meta-analysis of 55 single-subject studies of school-based social skills training interventions for students with ASD, Bellini and colleagues (Bellini, Peters, Benner, & Hopf, 2007) concluded that social skills training approaches were only minimally effective. In a comprehensive qualitative review of group-delivered social skills programs for children and teens with ASD, White and colleagues (White, Koenig, & Scahill, 2007) found that multiple methodological shortcomings (e.g., small sample sizes, inadequate tools for assessing change) in prior studies have impeded our ability to accurately assess effectiveness. There is agreement among scientists and clinicians alike that, although social skills instruction for ASD is a logical treatment choice, much more research is needed in addition to evidence-based treatment manuals focused on promoting the generalization and maintenance of the skills gained (White et al., 2007; Rao, Beidel, & Murray, 2008).

Although research examining the effectiveness of social skills interventions for children and adolescents with ASD is still in its infancy, social skills training as a general class of interventions is an established method of treatment for other disorders that has generated growing

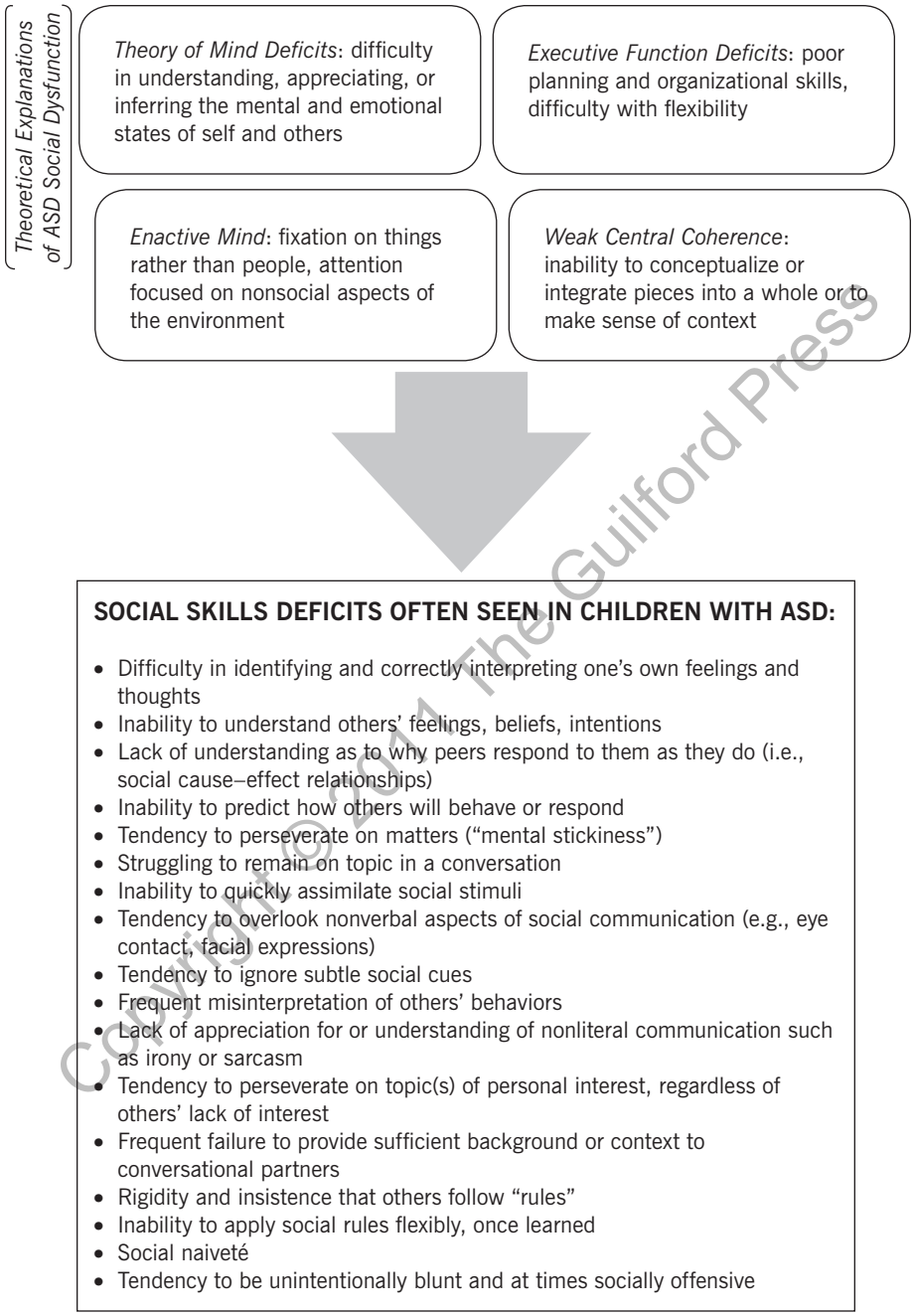

FIGURE 1.1. Model of ASD social dysfunction.

empirical support (Mueser & Bellack, 2007). Such training has been integrated successfully into treatments for social phobia (e.g., Herbert et al., 2005; Bogels & Voncken, 2008) and schizophrenia in adults (Tenhula & Bellack, 2008; Granhom, Ben-Zeev, & Link, 2009), among other disorders and life problems. In summary, much is yet to be learned about how to most effectively improve social functioning in cognitively higher-functioning people who have ASD. Considerable progress, however, is being made in identifying promising strategies for improving the social functioning of youths with ASD. This volume provides readers with the relevant information on these supported and emerging strategies.

Organization of This Book

Sources of Material

Given that children with ASD fail to acquire age-appropriate social skills and usually lack opportunities for positive peer interactions, it is logical to assume that explicit instruction in social skills should be effective in helping them to be better prepared to succeed socially. Writing a clinically oriented book for practitioners and educators on social skills training approaches for ASD, however, is challenging in that there are no empirically supported treatment programs currently available. The logical questions to ask, therefore, are: "So, how do practitioners know what to do with patients on the spectrum who need such treatment?" and "What, then, goes into a guide on social skills training for ASD?" The content, suggestions, and related materials in this book derive largely from the current empirical research in the field as well as from clinical experience with this population and a basic theoretical understanding of these disorders. A great deal of research has been conducted in this area that has helped to shape our current understanding of what works best for whom. The general caveat addressed to readers of this guide, however, is that much of this research is preliminary and the conclusions tentative.

Our understanding of the effective treatment options for youths with ASD is still relatively early in its development. Not having a firmly "empirically supported treatment" for this clinical population, however, should not prevent us from treating kids who clearly need help based on what empirical evidence is available. As solid research continues to be carried out in this field, we must provide services to the best of our abilities by utilizing the knowledge and research that are thus far available. We must also inform our patients and their fami-

lies about the limitations of our current clinical knowledge, including what is and is not known about the effectiveness of the treatments we provide. With this type of full disclosure, the clients we serve can make informed decisions about how they want to invest their time and resources in treatment.

Interventions based on the principles of applied behavior analysis have been successful for many children with ASD in improving communication deficits and reducing interfering and repetitive behaviors. Therapeutic interventions targeting social deficits, however, have not yet met with the same level of success. Indeed, social skills deficits remain the paramount treatment challenge for practitioners who work with individuals on the spectrum. In conclusion, the material in this book is derived from multiple sources including empirical data from peer-reviewed research studies and clinical trials, the available treatment manuals, professional experience with this population, the experience of colleagues who work in this area, anecdotal evidence, and my own theoretical knowledge of ASD. Where appropriate, the source of the information cited is provided. The interested reader is encouraged to gather additional information whenever possible on the specific approaches discussed.

Overview of the Chapters

Social skills training as an intervention approach has a long history in the field of mental health treatment. Accordingly, most practitioners who work clinically with children have a basic familiarity with many of the techniques traditionally used to teach social skills. Such knowledge can be very helpful in working with children on the autism spectrum. Many of the specific strategies covered in this book are adapted from research and clinical work on social skills training for non-ASD populations. Also, a solid knowledge base of typical social development during childhood and how nonautistic children interact with peers provides a good benchmark against which to compare the behaviors of our clients and students with ASD. The strategies in this volume have been modified for children and teens with ASD to help address learning difficulties or special challenges often seen in ASD. These modifications are highlighted within each chapter, and examples of successful implementation of the specific strategies are offered.

The chapters in this volume cover a broad range of practical information and suggestions for social skills training for youths with ASD. The chapters are divided topically as follows:

- Chapter 1. The theory and background of social skills training; key aspects of the primary social difficulties associated with ASD.
- Chapter 2. Clinical evaluation of social skills deficits in ASD; psychiatric concerns that can affect socialization.
- Chapter 3. An overview of the major types of interventions as well as significant adaptations made in delivering social skills instruction to youths with ASD.
- Chapter 4. Social skills training approaches used in group therapy.
- Chapter 5. School-based social skills training approaches; interventions that can be implemented in the inclusive classroom.
- Chapter 6. Strategies intended primarily for use in a clinical setting.
- Chapter 7. Promoting social skills training in children at home; overcoming common obstacles that affect social functioning.
- Chapter 8. Planning beyond childhood; addressing social competence in later adolescence and adulthood.

At the end of the book, suggested resources for further information, organized topically, are included in the section titled "Further Reading." The Appendix contains several blank forms that can be photocopied and adapted as needed by practitioners. Throughout the book, numerous case examples are offered to demonstrate client problems and intervention strategies. When the examples are based on real cases, all identifying information has been changed. The forms and worksheets may be photocopied for readers' use in practice or modified as needed to address the social skills difficulties that your specific client or student faces.

In conclusion, social skills training should typically not be the *sole* intervention used to treat an individual with ASD, as other interventions (such as medication, individual therapy, or parent training) are also needed to address each client's unique concerns. However, social skills training is a practical solution for addressing the primary social deficits characteristic of spectrum disorders. Social skills training has been applied to many other childhood problems and psychiatric disorders with mixed success. However, there are two important "givens" relating to children's social skills and their overall mental health:

1. *Deficient social interaction skills are associated with poorer functioning and mental health outcomes.*
2. *Social competence is associated with better overall adjustment and successful outcomes.*

These two principles hold true for individuals with ASD, as they do for neurotypicals.

Case Example

By the age of 12, "Samantha" had been hospitalized owing to aggression three times. Each hospitalization was preceded by an aggressive incident toward her family or peers. She was diagnosed previously with bipolar disorder and ADHD and had previously been prescribed several different medications.

In the sixth grade in a public middle school, Samantha was educationally classified as emotionally disturbed and had an individualized education plan. She was primarily taught in regular education classes, with some help for math. She typically did well in school academically but had more difficulty socially. Samantha had received social skills instruction throughout elementary school as part of her school's curriculum. Her parents reported no social concerns during her early elementary years, noting that Samantha interacted with peers appropriately, her parents set up many playdates for her, and she had several friends at school.

During her fifth-grade year, however, she began having problems with some other girls in her class. Samantha complained that they picked on her and called her names. She reacted by telling the teacher, or sometimes she would rush out of the class, crying and asking to go home. The problems escalated into the sixth grade, and Samantha began reacting more aggressively—destroying property and threatening peers.

Upon meeting with and observing her, the school psychologist concluded that Samantha was applying tactics or skills used by *younger* children in interacting with same-age peers. For example, after lunch outside she approached peers on three occasions, asking "Do you want to play with me?" The girls she approached on the first two occasions were not engaged in playing, but rather were just sitting near each other and were talking. On the third occasion, the two girls Samantha approached were reading books silently next to each other. On each occasion, Samantha reacted negatively—either yelling at the girls or running away. On the third occasion, she became destructive and began kicking in lockers.

After referral and a comprehensive evaluation, Samantha was diagnosed with Asperger syndrome. The school psychologist began seeing Samantha after school regularly and had daily "check-ins" with her between classes. Samantha struggled with emotion regulation and had many social skill deficits. She was often unable to express her emotions

appropriately to peers and also had difficulty in interpreting the affective cues of others. She did not readily recognize when her own emotions were beginning to escalate, and she lacked practical strategies for regulating her emotions. She therefore typically overreacted and felt badly about it afterward, which left her feeling even worse about herself and lonely—thus exacerbating her social difficulties. The chosen treatment for Samantha addressed her emotion regulation as well as the teaching (skills acquisition) and practice (skills performance) of social interaction skills appropriate for adolescents.

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