SECTION 1

A Model for Meltdown Behavior of Students With ASD

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Autism Spectrum Disorder, Overview

One of the biggest challenges facing teachers and sources of stress and burnout is the student with behavior problems (R. Ingersoll & Smith, 2003; Oliver & Reschly, 2007). Especially difficult are students who exhibit severe and disruptive acting-out behaviors. A group of students who frequently exhibit acting-out behaviors and who are now placed in general education classrooms, resource rooms, and self-contained classrooms are those with autism spectrum disorder (ASD; Lecavalier, Leone, & Wiltz, 2006).

ASD is a disability characterized by deficits in three major areas—social interaction, communication, and imagination (American Psychiatric Association, 2000). At one end of the spectrum are children with classic autism that is marked by significant deficits in speech and cognition. At the other end of the spectrum are individuals who have normal to superior intelligence, more typical language abilities, but still significant difficulties dealing with social interactions and managing their emotions (Frith, 1991). This group has been referred to as having high-functioning autism or Asperger syndrome. The broad category of ASD is currently being conceptualized as a single spectrum that ranges from most severe ASD to less severe ASD (American Psychiatric Association, 2010). The past decade has seen a significant increase in the number of children identified with ASD,

with prevalence estimates ranging from 1 in 110 (Centers for Disease Control and Prevention, 2009) to 1 in 150 (Stevens et al., 2007). This trend is in contrast to several other disabilities whose identified numbers have been decreasing, for example, specific learning disabilities, mental retardation, and emotional disturbances (Scull & Winkler, 2011). A common question raised by school officials is this: What accounts for this increase in ASD? The reasons are generally considered to be unclear as to whether there has been an increase because other factors are also present. The clinical definition of autism now includes a wider spectrum of behaviors. Parents, teachers, and other professionals are generally more aware of autism. Some of the children previously diagnosed as having an intellectual disability are now receiving a primary diagnosis of autism. Moreover, more services are available for children identified with ASD. All of these factors may play an important role in the increase in the number of individuals now being identified with ASD (Stein, 2007).

The term *autism* is frequently considered to refer to a medical condition involving neurological abnormalities, the actual causes of which are still being investigated in medical research. It is expected that this research will continue and provide more direction in terms of how students with autism can be better served in society. In addition, it is widely held that genetic factors contribute to the disability as well. However, for the purposes of this book, we focus on educational issues, specifically on how the disability of autism affects the student's learning and behavior in school. In particular the focus is on what individuals with ASD actually *do*—responses made in the classroom, performance levels on tasks, and activities in which the students become engaged, learn, and behave appropriately. It is understood that everything a student does is linked to many interacting factors—perceptions, motor capabilities, cognitions, language, social interactions, and emotions (Thelen, 2008; Thelen & Smith, 1996). Even the simplest behavior is a combination of many factors, each of which must be considered in efforts to understand ASD and to provide educational services for students with this disability (Novak & Pelaez, 2011; Pelaez-Nogueras, 1996).

What follows is a description of seven major characteristic patterns of behavior commonly exhibited by students with ASD: (1) deficits in social interactions; (2) deficits in verbal and nonverbal communication; (3) restricted, repetitive patterns of behavior, interests, and activities; (4) atypical responses to sensory experiences; (5) deficits in cognitive abilities; (6) physical and emotional health; and (7) motor skill difficulties.

Deficits in Social Interactions

The most striking feature of people with ASD is the problem they have with social interactions (Attwood, 2007; Volkmar & Weisner, 2009). Some individuals are totally disconnected from other people, often treating them like objects, such as a piece of furniture. Others are passive in how they accept social overtures from others, and they rarely, if ever, initiate interactions. Some students with ASD have social behaviors that center on their obsessions, such as their need to talk about their fixed interests, and their overall resistance to sharing. Other interpersonal difficulties include insensitivity to the feelings of others and a failure to understand why people act the way they do. Students with ASD may rigidly apply codes of conduct and rules without really understanding them.

These underlying difficulties in social interactions may lead to problems when contacting other people, understanding other people, and making sense of rules in a given social situation. For example, in classrooms teachers use rules and routines frequently and a student may not follow the rule because he or she does not understand it or thinks that it applies only to a given situation. Consequently, the teacher corrects the student or provides a prompt that can cause the student to resist and exhibit problem behavior. Moreover, the unusual behaviors and lack of social skills often lead to the student being teased and bullied, resulting in stress, frustration, and eventually a meltdown.

Deficits in Verbal and Nonverbal Communication

There is a wide range of communication skills and deficits in students with ASD (Attwood, 2007; Tager-Flusberg, Paul, & Lord, 2005). Some students with the most severe forms of autism never develop speech, only learn to echo others' words, or have significant speech delays. Many students with ASD have difficulties in the use of social language, especially in conversations. They often engage in one-sided unending monologues about their topic of interest. They have difficulty expressing their needs. They also have problems with the nonverbal aspects of communication, using inappropriate body language, not making eye contact, and misinterpreting other people's body language, facial expressions, and tone of voice.

Students with ASD who have difficulty conveying their thoughts and feelings may become frustrated and angry, and exhibit disruptive

behaviors. Students with little or no speech may use aggression and tantrums as a means of communication or as a result of frustration from not being understood. The problems with communication that students with ASD experience contribute to many of the acting-out behaviors that they show, which can, in turn, lead to meltdowns.

Restricted, Repetitive Patterns of Behavior, Interests, and Activities

Self-stimulatory behavior is often seen in young students with ASD or students with very severe ASD, such as flapping their hands, rocking, spinning objects, flicking their fingers, banging their heads, or grinding their teeth (Bodfish, Symons, Parker, & Lewis, 2000; Turner, 1999). There are several possible explanations for these behaviors. They may simply be enjoyable for the students. Simple repetitive actions are their way of dealing with stress, anxiety, physical illness, pain, or over-whelming sensory input. Self-stimulatory behaviors could also be used to get attention from teachers or to escape from an unpleasant task. In its extreme form, self-stimulatory behaviors can become self-injurious to indicate that the students are very upset. These behaviors include hand biting, intense scratching, face slapping, and head banging.

Students with ASD demand structure and predictability in their lives (Attwood, 2007; Szatmari et al., 2006). They have great difficulty handling transitions and change. They may develop elaborate rituals whereby things have to be done in a certain way and no deviation can be tolerated. Changes in the school schedule, such as assemblies, interrupt their rituals and can lead to meltdowns. This need for same-ness can also affect their social interactions with other students. They may insist on playing by certain rules and may try to enforce their rules on others. When peers do not comply with their wishes, students with ASD may become extremely upset and tantrum.

These students tend to have very narrow interests and become obsessed with special topics (Abramson et al., 2005). They may have a large collection of facts and figures on a specific topic such as trains, spiders, and so on. This can lead to difficulties concentrating on things like schoolwork. This obsessive quality of their special interests presents challenges for the teacher who tries to get such a student to focus on the task at hand while the student is only interested in his or her topic of fascination. Attempts to get the student to focus frequently leads to acting-out behaviors.

Atypical Responses to Sensory Experiences

Many students with ASD are oversensitive to sensory experiences compared to students without disabilities (Bogdashina, 2003; Rogers & Ozonoff, 2005). They may be oversensitive to sound, light, taste, smell, and touch. Other students with ASD may be undersensitive, for example, not hearing the teacher when spoken to (even though their hearing is not a problem). Some areas may be especially troublesome, like noisy corridors, locker areas, or lunchrooms. The classroom itself may be too bright, be too crowded, have too many distractions on the walls, and be too noisy.

The flicker of the fluorescent lights can be especially difficult to handle for students with ASD. Many students on the spectrum do not like being touched. They have a difficult time when other students, or the teacher, encroach on their personal space. Fire alarms, bells, and sirens can all cause stressful reactions. Strong odors emanating from the cafeteria, certain perfumes, and aftershave lotions can cause negative reactions. Any of these sensory factors singly, jointly, or in combination with other areas of difficulty can serve as triggers that can lead to serious problem behaviors.

Deficits in Cognitive Abilities

There are several impaired cognitive abilities for individuals with ASD (Minshew & Goldstein, 1998; D. L. Williams, Goldstein, & Minshew, 2006). These students frequently have difficulty focusing on relevant information and trouble tuning out distractions. While their rote memory is adequate, they tend to overly rely on it and miss the main point of what is being studied. Other learning difficulties include problems with organization, problem solving, and concept formation. Students with ASD can handle only small amounts of new information, have problems remembering complex material, and become preoccupied with details and parts of objects. It takes them more time to process new material. And they tend to literally interpret metaphors and misunderstand jokes, humor, and sarcasm (D. L. Williams & Minshew, 2010).

Learning difficulties can have a strong impact on how well they are able to cope with academic demands. Schoolwork can become very difficult, leaving students with ASD feeling upset and frustrated, which can lead to them exhibiting challenging behaviors.

Physical and Emotional Health

Many students with ASD have sleep problems (Malow et al., 2006; G. P. Williams, Sears, & Allard, 2004). They may have trouble going to sleep, staying asleep, waking up early, and getting enough sleep. Many parents report that their children with ASD have stomach problems (Buie et al., 2010). Chief among these complaints are constipation, stomachaches, and diarrhea. There may also be problems with eating. Children with ASD are frequently very picky eaters and often only eat and drink specific foods and beverages.

A high frequency of mood and anxiety disorders has been reported for this population (Matson & Nebel-Schwalm, 2007; White, Oswald, Ollendick, & Scahill, 2009). Students with ASD may have great difficulty in managing their stress and have problems with self-esteem and depression. Negative reactions frequently occur when a person with ASD is hungry, feeling ill, tired, frustrated, or emotionally stressed.

Motor Skill Difficulties

Despite the fact that early views on motor development emphasized that students with ASD had normal or even advanced motor development, recent research has reported that they frequently appear clumsy, have motor coordination abnormalities, exhibit postural instability, and perform poorly on tests of motor functioning (Fournier, Hass, Naik, Lodha, & Cauraugh, 2010; Ming, Brimacombe, & Wagner, 2007; Ozonoff et al., 2008). Motor deficits can make life very difficult and frustrating for these students. They face challenges in mastering basic life skills such as dressing, teeth brushing, and toileting; participating in physical education classes, sports involving hand-eye coordination, or recess activities, such as bike riding and playing games; and participating in class instruction involving problems with fine motor skills in handwriting, coloring, and manipulating materials in certain class projects.

Chapter Summary

For many years, the subject of autism has undergone ongoing research at both medical and educational levels. One result has been an increasing awareness of this disability among professionals and

parents, giving rise to increased identification in the community and in public schools. Moreover, the definition of the disability has been substantially broadened from simply autism to *autism spectrum disorders.* This term reflects the wide range of handicapping conditions associated with this broader identification category.

Students with ASD present a unique set of challenges in terms of both providing effective instruction and learning opportunities and managing behavior (especially when it comes to serious acting-out behavior). These students have deficits in many areas that significantly impact their learning and behavior—substantial social thinking deficits, communication difficulties, rigid behaviors and inflexible thinking, sensory sensitivities, health-related issues, motor skill limitations, and learning difficulties. These characteristics singly and in combination greatly increase the probability of students' acting-out behaviors leading to meltdowns at school, at home, and in the community. Under the constant strain of having to deal with a world that is frequently confusing and intrusive, students with ASD may feel stressed, become frustrated, and lose control, resulting in tantrums and meltdowns. Educators and parents must make ongoing efforts to better understand the critical role these unique characteristics play in the lives of these students. In this way, the necessary support may be provided for students to learn, behave appropriately, and grow up to enjoy a reasonably happy and fruitful life.

2

The Nature of Meltdowns

A highly charged word that typically brings much dismay to parents, educators, and service providers of children with autism spectrum disorder (ASD) is *meltdowns.* In general, meltdowns refer to the extreme actions exhibited by children with ASD when they reach an intense state of out-of-control behavior, such as screaming, tantrums, destruction of property, thrashing on the floor, running away, physical tension, and physical attacks on self and others. These outbursts can pose serious safety concerns and can substantially disrupt the environment where the meltdown occurs, whether it is the classroom, other school settings, home, or the community. Supervising adults are usually unable to interrupt the meltdown, so these explosive behaviors will run their course. The usual recourse is to make the situation as safe as possible for the child, other children, and the adults themselves. The long-term impact can be devastating. Parents often report that the threat of meltdowns significantly curtails their lifestyle by limiting their outings in the community, having visitors to their home, visiting the homes of friends and relatives, travel, holidays, and using childcare (sitters) at home. Similarly, teachers indicate that they have to be very selective with school activities that they make available to students with ASD who are prone to meltdowns. Clearly, there is a grave need to more fully address meltdown behavior of students

with ASD so that more refined tools can be developed for preventing, interrupting, and managing this severe and very challenging behavior.

The purpose of this chapter is to closely examine the nature of meltdowns exhibited by students with ASD, which Thompson (2009) aptly refers to as the *anatomy of a meltdown.* The approach in understanding meltdowns is to carefully analyze two instances of situations that lead to them. These examples then set the stage for identifying contributing factors and tracking the corresponding responses from the child during the meltdown event. This review leads to a working definition for meltdowns and, most important, provide the basis for the development of a model for describing the meltdown cycle (described in Chapter 3).

This chapter investigates the following: (1) two examples of meltdown behavior, (2) preliminary observations, (3) detailed analyses, (4) working definition of a meltdown, and (5) the need for a new model.

Two Examples of Meltdown Behavior

In the following examples, students in a typical classroom exhibit a range of behaviors leading up to, during, and following a meltdown. The setting and interactions with the teacher and other events are described in Box 2.1.

Box 2.1	Examples of Meltdown Behavior for Students With ASD

Elementary Student

Background

Ricky is a 5-year-old boy with autism. He never initiates conversations and rarely makes eye contact with other individuals. He has difficulty communicating with his peers and usually does not respond when people speak to him. On a regular basis, Ricky becomes upset and has serious meltdowns involving screaming, throwing things around, rushing around the room, and flailing his arms.

His parents report that his behavior at school and at home has worsened in that he is having more meltdowns since they moved to a different area of town and a new school. Presently, he is placed in a special education

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class at the local elementary school. His teacher reports that she has been unable to find effective teaching strategies to work with Ricky. She says that he is very disruptive in class when he has his meltdowns and that she has to remove the rest of the class to an adjacent room so teaching can continue and he can then calm down. At this stage she has been unable to identify the triggers, and when he does escalate it goes very fast.

Meltdown Incident

The students were milling around the front of the class near the teacher at the beginning of class. The front of the room was quite noisy and crowded. The teacher assistant approached Ricky as she worked one on one with him for language. Ricky jumped up and ran to the corner of the room and started screaming. He sat on the floor, put his hands over his ears, and continued to scream, thrashing his legs. The teacher assistant sat beside him and then Ricky ran off to another area of the room, continuing to scream. The teacher has a practice of a "room clear" when Ricky goes off like this. So the teacher and another assistant took the rest of the students to an adjacent small room, leaving Ricky and the teacher assistant in the classroom with the connecting door open. Ricky continued to scream and flail his arms, with the teacher assistant standing some distance from him. After about 5 minutes the screaming subsided and Ricky sat on the floor with his hands over his ears. The teacher assistant waited a few more minutes and sat on a nearby chair. The teacher assistant put some Legos on the floor and began building a house, putting some Legos near Ricky. She then prompted Ricky to help with building the house and handed him some Legos. He took the items and began to assemble them. The other students, the teacher, and the other assistant reentered the classroom and continued with their spelling groups.

The teacher commented that she does not feel she is teaching Ricky very much and that most of the time is spent just trying to engage him and to minimize the meltdowns.

Secondary Student

Background

Elena is a 15-year-old girl with Asperger syndrome. She does best when teachers and staff respond to her interests. She likes to talk about her hobbies, such as her card collection of pop singers, and talks with more animation when staff show interest by responding to her comments. She can stay focused for lengthy periods, especially with tasks that are routine and have definite closure, as in completing a page of writing or math. She enjoys independent activities such as computer games and watching TV or video programs and games.

Elena has little interest in socializing with students her own age. She tends to talk about her area of interest (TV stars, especially female singers) and does not pay any attention to what the other person might be talking about. Her speech is overly formal and pedantic, and she loves to relay factual information about her favorite singers and the songs they sing and when you can watch them on TV. She loves playing computer games and spends all of her free time doing this or watching her stars on TV. She dislikes playing sports and refuses to take part in PE class. She has a large collection of pencils and never goes anywhere without at least one pencil.

Meltdown Incident

Elena was at her desk looking at cards of her favorite singers while the teacher was explaining something to the class. The teacher directed Elena to put her cards away as it was time for class and she could sort them later during break. Elena said to wait one minute. She put her head down and started moving the cards quickly and mumbled to herself. The teacher moved toward her, knowing that she would play with the cards all day if permitted. The teacher said quite firmly that the cards needed to be put away right now and pushed one of the cards toward the center of her desk. Elena reacted quite strongly by shouting, "Leave my cards alone." The teacher told her to leave her cards and that she needed to go to the time-out area and quiet down. Elena grabbed her cards and kicked the chair over on her way to the time-out area, shouting that the cards were hers. The teacher followed her. In the time-out area, Elena began to pound on the walls, rip up materials, and kick the desk, screaming that the cards are hers. The teacher withdrew, watching her from a short distance. Elena eventually sat down, gathered her cards, and held them. She then sat in the corner, still very upset, and began to sort her cards. When she was finished she folded her arms and stared at the floor for some time. The teacher approached her and gave her a form to complete, which she did but quite slowly. When Elena had completed the form, she was directed to join the class, which she did. Toward the end of the period, when Elena was engaged with the class, the teacher reviewed the form with her and addressed how she could have sorted her cards without the big scene. Elena mumbled a lot during the meeting but cooperated overall.

Preliminary Observations

There are several similarities in these two examples:

1. Each teacher gave a direction to the student. Ricky was asked to get ready for spelling (language), and Elena was directed to put her cards away and attend to the class instructions.

2. The students continued with what they were doing.

3. The teachers persisted with their directions.

4. The students escalated further. Ricky rushed to the corner of the room screaming and fell down on the floor. Elena grabbed her cards and shouted at the teacher.

5. Each teacher approached his or her student, resulting in further escalation of meltdown behavior, involving serious disruptive behavior.

6. Each student ended up removed from the instructional setting. Ricky ran to another part of the room, and the class moved to an adjacent room. Elena was in the time-out area.

At first glance, the teachers' responses to the situations involving Ricky and Elena appear to be reasonable and consistent with standard classroom practices. Both students were prompted to begin the scheduled class activity. However, in each case, the situation worsened, with both students resisting their teacher's directions. Moreover, each student showed an escalation in behavior to the extent that they were removed from the instructional area and a meltdown involving serious disruptive behavior occurred.

Some important questions arise. What is likely to happen in the future? Can we expect more of these serious outbursts? Could they escalate even further, involving physical harm to the students having the meltdown, teachers, or other students? What could have been done differently to manage these situations so that the problems could have been avoided in the first place or at least defused once they were evident? Answers to these questions begin with a detailed analyses designed to identify factors that may have contributed to the meltdown situations.

Detailed Analyses

It is clear, at the outset, that the contributing factors to each of the meltdowns in the illustrations were a combination of, or an interaction between, events in the classroom environment and factors arising from the disability of ASD. In these two illustrations, several of these interacting variables need to be considered in order to better understand meltdowns and to more effectively manage these and similar incidents: (a) the classroom set-up; (b) teacher–student

interactions; (c) the role of triggers, ASD characteristics, and agitation; (d) functions of the behavior; (e) escalating behavior chains; (f) follow-up; and (g) the meltdown cycle.

The Classroom Set-Up

For both Ricky and Elena, classroom procedures contributed significantly to their meltdowns. The students milling around the teacher at the front of the class, with accompanying noise and crowding, probably triggered Ricky's agitation, as he is very sensitive to noise (although the triggers for him are quite varied). Similarly, Elena was already playing with her cards after the lesson was underway. Elena is possessive of her cards and has strong compulsions to complete her routines once she is underway.

Teacher–Student Interactions

Teachers typically follow through when they present directions to students, given the expectation that students cooperate with teacher directions. When students do not follow the directions, teachers usually use procedures such as acknowledging cooperative students, repeating the direction or approaching the students, and providing more focus on the direction. However, when the teacher does follow through, some students react to the additional steps taken that involve further interactions with the teacher. Both Ricky and Elena reacted negatively to their teachers' attempts to follow through with directions, resulting in additional interactions with their teacher (when the teacher assistant approached Ricky and when Elena was asked to put her cards away).

It was evident in each of these situations that interactions occurred involving both teacher and student behavior once the teacher tried to prompt the student to engage in the required tasks. For each teacher behavior there was a corresponding student behavior and vice versa. In the case of Ricky, the teacher assistant approaching him and then following him and sitting beside him appeared to escalate the situation or maintain the escalation once Ricky started screaming. In the case of Elena, the successive teacher–student interactions played a key role in the escalation process. Each successive student behavior was preceded by a specific teacher behavior. Or it could be argued that each teacher behavior was preceded by a specific student behavior. In this sense, the teacher behavior may have set the stage for the next student behavior and the student behavior may have set the stage for the next teacher behavior.

The Role of Triggers, ASD Characteristics, and Agitation

It is very common for students with ASD to become agitated when certain triggers are present. In Ricky's case the excessive noise and crowding at the front of the class, the teacher assistant approaching him, or both served as triggers for him as he is very sensitive to noise levels and crowded settings (a sensory stimulation characteristic). Similarly, when the teacher moved one of Elena's cards, she became upset and started shouting. She does not like to have her routines disrupted or have others interfere with her prize collection. Her trigger was an interrupted routine set up by the characteristic of the need for sameness and predictability.

Note: We are not suggesting that teachers should not intervene or deliver directions—rather it is important to understand how the interventions can impact student behavior. We are trying to establish that certain approaches under specific conditions are likely to trigger more problem behavior. The implication is that we need to use different approaches that show cognizance of factors that escalate behavior and adjust our approaches accordingly.

Functions of the Behavior

Both Ricky and Elena had a way of trying to control the problems they faced. Ricky wanted to control the noise and crowding, so he began to scream and run around the room. He was successful in getting away from the disturbing noise by having the class go to another room, and he was left by himself with a teacher assistant. Similarly, Elena wanted to preserve the sameness and predictability when she was sorting her cards. Her teacher wanted her to stop sorting her cards and join the class. By acting out and refusing to cooperate with the teacher, she was sent to the time-out area. In this way she was successful in being able to continue sorting her cards.

Escalating Behavior Chains

Once the teachers approached and interacted further with Ricky and Elena, each student became more agitated and displayed more intense behavior. The students' verbal responses became louder, physical gestures or actions became more vigorous, and both students left their instructional settings (Ricky ran to the corner and Elena went to the time-out area). This whole process can be described

as an escalating behavior chain, in which each ensuing behavior is more serious than the one preceding it, leading to the last one, the most disruptive of all—a meltdown. In Ricky's case, the escalation was much quicker. It is very important to note that each response from the students was preceded by a response from the teacher. In effect, the teachers' responses to the students served as cues for the successive student responses in the escalating behavior chains. Moreover, in the case of students with ASD, the escalation of acting-out behavior can occur very quickly. This implies that problem behavior needs to be addressed very early in the chain.

Follow-Up

The teachers left the two students alone but kept an eye on them. Each student quieted down. Since Ricky's communication skills are so low, any form of debriefing or direct follow-up with him would not be productive. However, the teacher and assistant met later to review what had happened, what may have triggered the melt-down, and what adjustments they would make in the future. In Elena's case, later on, after the students were underway in class, the teacher met with her and conducted a debriefing session with guided problem-solving activity and encouragement to do better next time.

It is quite evident, through this preliminary analysis of the factors contributing to the meltdown incidents, that the situations could have been managed more effectively. The implication is that teachers need to carefully examine environmental factors in the classroom that may escalate students' acting-out behavior and, at the same time, have an understanding of the children's needs and where they are coming from in order to manage their behavior more effectively.

The Meltdown Cycle

A crucial question to be asked in each of these cases is whether the same problem behaviors will occur again. If things remain much the same, the answer would be a decided yes. If the same triggers are present (noise level and crowding for Ricky and interruption of card routine or other established routines with Elena), the students would become agitated. If similar teacher–student interactions occur again, the students would escalate. Moreover, in each case the student ended up being left alone, which presumably is what they wanted—escape from the situation. If the last behavior, or behavior toward the

end of the chain, is strongly reinforced, then it is highly likely that the whole chain will be reinforced, which was the case for each of these students (they were left alone). So yes, these meltdown behaviors for each student would most likely be repeated. That is, a meltdown cycle of acting-out behavior would be established and, as such, become quite challenging to address effectively.

Working Definition of a Meltdown

The question now arises: What exactly is a meltdown? The term *meltdown* has been used in common language, or everyday English, to mean an internal collapse. For example, a nuclear meltdown refers to a major defect in the cooling system causing extensive over-heating, resulting in melting of the radioactive core and escape of life-threatening radiation. The term is also used to convey collapses in other areas, such as the recent disastrous effects in the financial world when there was a subprime meltdown. Interests rates were significantly lowered, enabling a proliferation of loans to people with poor credit, so when the interest rates rose many homeowners defaulted in loan payments, resulting in huge numbers of foreclosures and bankruptcies for homeowners and lending institutions. The term *meltdown* is also used in everyday language to communicate that people, through cumulative stress and problems, reach a point when they snap, become very angry, and go berserk—they have an emotional meltdown. Temple Grandin used the term "catastrophic reactions" in referring to the more intense and sustained meltdowns (Lipsky & Richards, 2009, p. 24).

The term *meltdown* has also become a key concept in the field of ASD. Two approaches are taken to provide a working or operational definition: distinction between meltdowns and tantrums, and critical features of a meltdown.

Distinction Between Meltdowns and Tantrums

Educators and parents are usually quite familiar with tantrums in children. These behaviors have often been called *acting-out behavior, temper outbursts, out-of-control behavior,* and *emotional flare-ups.* The behaviors have high levels of intensity, seriously disrupt the environment, and can pose safety hazards to the individual and others in close proximity. In many cases, tantrums are considered to be developmental. That is, the behaviors are something that all

or most children display in the early stages of their childhood, with reductions in frequency and intensity as the children grow older. Many parents are familiar with the terrible twos, which is the age that tantrums and oppositional behavior are typically the worst during early childhood. Some children, however, may display these behaviors throughout their childhood and into adulthood. Adults can exhibit acting-out behavior in the form of rage, assault, self-abuse, and suicide, and may assume addictive habits such as alcoholism and drug abuse. In effect, tantrums or acting-out behaviors are quite common among children as a part of growing up and are, unfortunately, a concern that is relatively common among adults. In these cases, the individual exhibits tantrums as a child and carries the behavior into adulthood. One apt description for this developmental progression from tantrums in childhood to adulthood is that these children do not grow out of tantrums; they grow into them.

In the case of children with ASD, the term *meltdown* is commonly used to describe outbursts and sustained acting-out behavior. On the surface, one might wonder why a separate term is used. Teachers and parents typically report that the behaviors look the same—a child with ASD in a *meltdown* exhibits the same intensive behaviors as another child, without disabilities, who is throwing a serious *tantrum.* The reason a separate term is used in the field is that there are several underlying differences that have important implications for interventions and service.

It is clear the behaviors displayed by a student with ASD in a meltdown have the same appearances as another student who is exhibiting a severe tantrum. In each case the behaviors have high intensity, disrupt the environment, and pose safety concerns. However, the behaviors can be seen to be very different when a more detailed analysis is conducted. These differences are listed in Table 2.1. Elaborations on differences are presented in Chapter 3 and Section II.

Note: These differences are to be seen as general descriptors only. In practice there will most likely be overlap between these two divisions in that some characteristics will be shared with some students. Moreover, the fact that the word *spectrum* is used in ASD indicates that a full range of behavioral variation across individual students is to be expected. However, this division may help educators and parents understand the nuances of differences between meltdowns and regular tantrums that have implications for effective interventions.

Table 2.1   Differences Between Meltdowns and Tantrums

Features of Meltdowns (For Students With ASD)	Features of Tantrums (Normal Development)
Awareness: The child is not aware or does not seem to care if others are watching or responding.	*Awareness:* The child is aware and looks around to see if others are watching or attending.
Safety: The child usually is unmindful if self or others may be hurt.	*Safety:* The child is usually aware enough not to hurt self.
Developmental Course: Meltdowns may become less frequent as the child grows older or may be life-long unless they are carefully managed.	*Developmental Course:* Behaviors are usually developmental and students "outgrow" them.
Social Impact: The child is usually inattentive to the reaction of others.	*Social Impact:* The child is usually quite aware of impact on others and often uses this to his or her ends.
Runs Course: The meltdown winds down slowly and cannot be stopped suddenly.	*Runs Course:* The tantrum can be interrupted, especially if student attains need.
Duration: The meltdown can last for extended periods of time, as in hours.	*Duration:* The tantrum can be short-lived. It usually stops when the child achieves the goal or realizes the goal will not be obtained.
Degree of Control: The child appears to be out of control and no one can intervene to change the course of action.	*Degree of Control:* The child appears to be in control and can stop the outburst at any time.
Need: Outbursts occur because of a specific need and will continue even when need is met.	*Need:* Outbursts occur because of a specific need and usually stop once the need is met.
Triggers: Outbursts are usually caused by internal triggers such a sensory overload, social issues, or communication failures.	*Triggers:* Outbursts are caused by external factors such as wanting one's own way, needing a specific thing.
Purpose: Behavior is usually reactive to sensory factors, social issues, or communication issues rather than oppositional.	*Purpose:* Behavior is often oppositional or noncompliant.
Interventions: These should focus on sensory management and communication.	*Interventions:* These should focus on manipulating the environment.
Key Difference: Outbursts are driven by need to reduce anxiety.	*Key Difference:* Outbursts are driven by manipulation of environment.

Source: Adapted from www.autism-causes.com/the-meltdown.html.

Critical Features of a Meltdown

For the purposes of this book, a meltdown for students with ASD is described in terms of a number of related behavioral characteristics:

- A behavioral outburst that has high intensity, disrupts the environment, and is often unsafe.
- It is typically triggered by sensory overload, social problems, or communication issues (see fuller description in Chapter 3).
- The outburst usually follows a buildup of anxiety and should not be perceived as manipulative or oppositional.
- A student exhibiting a meltdown is usually oblivious to other people in the environment.
- Meltdowns typically run their course and usually cannot be disrupted once they begin.

The most important point to be made at this juncture is that, although meltdowns exhibited by students with ASD may have observable similarities to the acting-out behavior and tantrums of students without disabilities, there are many significant differences. These differences need to be understood and accommodated in behavioral analyses and subsequent interventions (these topics will be addressed in Chapter 3 and Section II).

Need for a New Model

It is one thing to advocate that meltdowns for children with ASD need to be understood as different from the regular tantrums exhibited by children without disabilities. However, it is quite a challenge to use standard behavioral principles and practices for managing problem behaviors that have demonstrated effectiveness with other students. Teachers and parents have often made comments such as "I use interventions that have been effective with other students, but in the case of my student with ASD the situation does not get better and often gets worse when meltdowns occur."

What is needed is a more refined model for describing the cycle of meltdown behavior that addresses the unique needs and characteristics of children with ASD and at the same time is based on sound empirically based principles and practices. There is a need in the field for a new model. The purpose of this book is to present such a model and to use it for designing systematic interventions plans in order to prevent and manage meltdowns and to establish appropriate replacement behavior.

Chapter Summary

Two examples of common problem situations for students with ASD were presented in this chapter. Each incident involved an escalation of behavior leading to a meltdown in which the level of intensity of the students' behavior reached serious and unsafe levels. Such situations can be described in terms of an escalating chain of behavior with observable, discrete stages. The rate of escalation varies from student to student. In Ricky's case the escalation went very fast, whereas in Elena's case the escalation was much slower, involving several successive teacher–student interactions. Several factors were identified as key events that may have significantly contributed to escalating the student's behavior. An important implication is that if these factors had been addressed in different ways, these two students' meltdowns may have been prevented. It was evident with each example that if these situations arise in the future, then further meltdowns would most likely occur. These patterns suggest that meltdown behavior can be represented as a cycle of behavior comprising identifiable steps leading to a meltdown that will recur.

On the surface meltdowns have many features in common with tantrums exhibited by children as part of their developmental growth. Children who do not have disabilities will grow out of these problems. This is not the case for students with ASD. Several important differences are noted between meltdowns and tantrums. The conclusion is that an approach that is different from the standard behavioral approaches for managing tantrums needs to be taken to prevent and manage meltdowns. There is a need for a new model.

A specific model representing the meltdown cycle is described in Chapter 3 and applied to the two examples of meltdown behavior presented in this chapter. In the remaining chapters, the model is used as a framework for assessing and developing systematic interventions for disrupting the meltdown cycle and establishing appropriate behavior.