

STRAIGHT TALK

About *Autism*

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The Power of Emotional Memory

Memory processing and recall is a relative strength of many people with ASD, especially concerning rote or episodic memory. This was a consistent finding in early seminal research on cognitive processing in autism in the early 1970s and has been replicated over the years. In everyday situations, parents and professionals often marvel at feats of memory demonstrated by their children or students. Remarkable memory is observed in its most extreme form in about 10% of people with ASD known as savants, as depicted in the classic film, *Rainman*. Such strengths may also present challenges, however, resulting in patterns of behavior that are confusing or problematic. This Straight Talk column explores one dimension of memory processing: the complex issue of emotional memory (EM).

EM is the affective, rather than the factual or propositional component of memory. It involves feelings experienced and associated with a person (e.g., joyful, stressful); a place (e.g., safe, threatening); or an activity or experience (e.g., fun, interesting, challenging, or boring) (Prizant & Laurent, 2012). EM can have a great impact on everyday functioning for people with ASD, and is an important consideration in understanding unexpected or perplexing reactions to people, places, and activities. A greater understanding of EM may enable service providers and parents to help persons with ASD participate successfully in everyday activities across a variety of people and settings.

Through the Lens of Personal Experience

Vignette #1 – Josh was a four-year-old, nonverbal boy with autism who demonstrated a peculiar and extreme reaction that distressed and baffled his parents. Whenever they drove

up to a specific stop sign on the regular driving route to their home, Josh became extremely distressed, screaming and hitting himself in the head with his fists. After sharing their story with me and determining that indeed, it was only that

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stop sign on that particular corner that triggered this reaction, his parents came up with a hypothesis. They remembered that when Josh was two he developed a high fever late at night and had to be brought to a walk-in medical clinic. Josh reacted to being held down by clinic staff during the insertion of an IV with overwhelming fear and panic. After considerable reflection, his parents determined that the white stucco building on the corner by the stop sign looked very similar to the walk-in medical clinic

building. Apparently, the strong emotional memory of that experience was triggered by the sight of this building, and resulted in their son's extreme distress.

Vignette # 2 – During an elementary school consultation, an SLP shared the following: Twice a week, she ran a “lunch bunch” group in her office attended by four children, one of whom—a child named Sarah—had ASD. One month prior to my visit, Sarah was asked to open the door, and she immediately received a shock and recoiled in pain. Since that time, even if just passing in the hallway, Sarah would become quite anxious and avoid going near the door. Any attempt to gently encourage her to approach the door resulted in her dropping to the floor and tearfully screaming, “No door! Door bites!”

Vignette # 3 – Almost three decades ago, I visited some high school students, a few of whom I had worked with as a graduate student 12 years earlier when they were of kindergarten age. As I was brought into their life skills classroom,

one of my former students named Bernie locked his gaze on me from across the room. He began to jump up on his toes and break out into a broad smile while rocking and engaging in self-talk (scripting). His surprised teacher explained that Bernie usually ignored visitors. She brought him over to me asking, “Bernie, do you know this man?” With extended arms, and a high degree of excitement and arousal, Bernie clamped his arms around my chest exclaiming three times in rapid succession, “It’s Barry! Now let’s sit down so we can tie our shoes!” Indeed, one of my responsibilities, years earlier, was to teach Bernie how to put on his shoes! For a few moments, he continued to repeat things I had said to him 12 years earlier, clearly mimicking my Brooklyn accent. In fact, as a youngster, much of Bernie’s speech reflected phonetic and syntactic characteristics of the regional or ethnic dialect of the person whose speech he was imitating: “Black English,” when repeating things his mother said to him; Midwestern nasally-intoned speech from his teacher; and “Brooklynese” from me. It was evident by his joyful reaction that my presence unleashed a torrent of positive emotional memories, as we had had a very good relationship and much fun many years earlier.

The Impact of Emotional Memory

EM plays an important role in all of our lives. For some of us, hearing a song from the distant past can result in a flood of strong memories whether positive, sad, or stressful. For example, almost five decades later, I am still flooded with sad feelings when I hear my mother’s favorite song, *Moon River*, as I associate it with her untimely passing when I was 12 years old. Many of us are familiar with the experience of attending a high school or college reunion and not remembering the name of a particular classmate even as we remember whether we liked them or disliked them. That’s because while facts such as names may be elusive, the feelings associated with them are clear.

It is rare that such memories overwhelm or dysregulate us emotionally to the extent that we are not able to function. In those cases in which emotional memories are persistently intrusive and incapacitating, a person may be considered to be suffering from posttraumatic stress disorder (PTSD) or severe anxiety disorder. PTSD is an unfortunate outcome when a person has experienced extreme trauma (e.g., violence, sexual, or physical abuse). Memory researchers believe that EM is processed in the amygdala, a subcortical structure within



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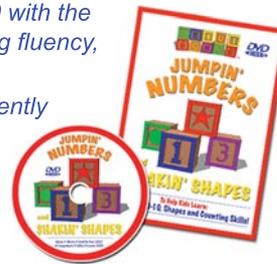
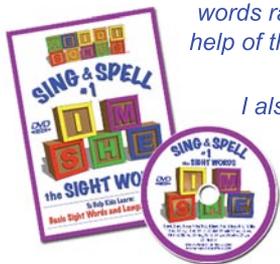
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Special Ed Teacher of K-4 grade students and 17 years experience with autism & multiple disabilities.



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the limbic system, and situations that remind an individual of a traumatic event or events can trigger excessive release of stress hormones and over-activation of the amygdala which further augments stress-hormone release. The result is severe emotional distress—“racing thoughts, anger, and hyper-vigilance” (Barry, 2011).

Over many decades, I have come to believe that EM must be recognized as a major factor when we attempt to understand the experience of individuals with ASD. First, as noted, memory processing, especially rote memory, is a strength of persons with ASD, and second, there are many sources of stress, anxiety, and even trauma for persons with ASD in daily life including sensory challenges, language processing difficulties, and social confusion and anxiety. Clearly, EM has a profound impact on the lives of persons with ASD, as it is now understood that emotionally-charged events produce our most powerful and intrusive memories. As noted, we all are influenced by EM; however, persons with ASD are particularly challenged because 1) they may not be able to understand, reflect on, or distance themselves from the feelings or sensations that they are experiencing; 2) they may not be able to deal with the sudden escalation of emotional arousal triggered by such memories which, in its most extreme form may result in “fight or flight” reactions; and 3) explanations or attempts to support a person with ASD “in the heat of the moment” may not be effective, especially when memories are associated with high emotional arousal such as fear and high anxiety.

Impact of Positive and Negative Emotional Memories (PEMs and NEMs)

As noted, EM may be triggered by people, places, and activities, or even specific stimuli such as sights, sounds, and smells. With PEMs of specific people, a person with ASD is more likely to seek out and be excited to engage with those individuals, despite the challenges inherent in social engagement and social communication. However, with NEMs, certain people may be viewed as the source of stress, and therefore must be avoided. (One young friend of mine with ASD used to comment that people who caused him stress “must be subtracted!”). It is not uncommon to observe clear patterns in which children with ASD avoid some individuals while seeking interaction and even comfort from others.

In a similar manner, places or activities associated with PEMs may be anticipated with great enthusiasm. In contrast, places or activities associated with NEMs (caused by sensory challenges, developmentally inappropriate demands, or negative reactions from others) may be met with anticipatory avoidance; that is,

Emotionally-charged events produce our most powerful and intrusive memories.

refusals and protests expressed in socially challenging ways (e.g., dropping to the ground in front of a noisy gym); verbal arguments (“No work.” “Can’t do it!!”); shutdowns; and in more extreme cases, high anxiety, destructive, or self-injurious behavior. Refusing to go to school is one example of the impact of emotional memory when school is perceived as overwhelmingly stressful. In such cases, it is important to understand that reactions are a result of the emotional dysregulation triggered by NEMs. In the most extreme cases—when reactions are persistent and debilitating over time—they may be viewed as symptoms of Post Traumatic Stress Disorder.

Addressing Emotional Memory in Practice

There is no simple “prescription” to address issues of emotional memory, as each person’s life experience and his or her ability to cope is unique. However, the following are some general guidelines:

When a person’s strong behavioral reaction requires attention, it is important to try to determine whether it is based on EM. EM may be the issue when: 1) a reaction is not due to an immediately observable event but appears to be triggered by some stimulus or in anticipation of confronting a person, place, or activity; 2) a person persistently expresses fear or anxiety specific to a person, place, or activity; and/or 3) echolalia or scripted phrases are produced in relation to specific persons, places, or activities that have been experienced.

Always strive to create positive emotional memories in activities, especially when associated with potentially stressful activities, events, or places. The following strategies can help: 1) Build in fun and use activities already associated with PEMs. 2) Offer choices to help a person to perceive a sense of control, and offer breaks to support emotional regulation if activities cause stress. 3) Capitalize on and use a person’s interests and strengths in activities. 4) Associate learning environments with pleasurable and regulating elements such as music and movement. 5) Make sure that activities are developmentally appropriate.

Pay attention to YOUR behavior—Make sure that your reactions and behavior are not the source of stress resulting in NEMs. Try to: 1) use a sense of humor and be playful

(when appropriate); 2) be consistent, clear, simple, direct, and maximally understandable; 3) be positive—avoid reprimands and “trigger words” such as *No*, and 4) use affirmative comments, especially when dysregulation is observed to be escalating (“We can do it. I can help.”).

When activities are inherently stressful, consider the following: 1) End demanding or stressful activities on a positive note. Simplify tasks when a person is having obvious difficulty, or offer breaks. 2) Introduce activities in “bite-size” chunks, clearly marking beginnings and endings. 3) Provide appropriate levels of support when and if needed. 4) Have positive emotional experience as a stated goal for activities and provide appropriate emotional regulatory supports (Prizant & Laurent, 2009).

Address Negative Emotional Memories that have already “Gained Traction”

It is now believed that the amygdala’s memory system retains extreme NEMs permanently. However, NEMs can be dampened or overlaid by positive or neutral associations. When appropriate: 1) use strategies to “overlay” NEMs with

positive associations in activities, places, and with people; 2) use desensitization strategies by providing practice opportunities, role-playing, and by teaching coping strategies (e.g., see “Replays” by Levine and Chedd, 2006); 3) use Social Stories® (C. Gray) to discuss both NEMS and PEMS, and work on social understanding when NEMS are based on social misunderstanding; 4) embed positive activities and successful experiences in situations associated with NEMS to modify perceptions of difficult situations; 5) “pick your battles” and put things in perspective. Avoid or change situations that are challenging, or change your reactions to those situation.

Conclusion

It has been said that to enhance our quality of life, we must accept the things we can’t control, but change the things we can control. Due to the neurological differences underlying ASDs, there are vulnerabilities and challenges that remain beyond one’s control. It is our obligation as service providers and parents to do our best to maximize positive emotional memories and to prevent and seek to reduce negative emotional memories that have become established. 

References and Resources

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BIO



Dr. Barry Prizant has more than 40 years experience as a clinical scholar, researcher and international consultant to children and adults with ASD and their families. He is an Adjunct Professor, Brown University, and Director of Childhood Communication Services, a private practice. Barry is co-author of *The SCERTS Model: A comprehensive educational approach for children with ASD* (Prizant, Wetherby, Rubin, Laurent & Rydell, 2006) and the assessment instruments, CSBS, and CSBS-DP (Wetherby & Prizant, 1993, 2002). He has published more than 100 articles and chapters and has presented more than 700 seminars and keynote addresses in the US and internationally. Barry developed and co-facilitates an annual weekend retreat for parents of children with ASD, and is the recipient of the 2005 Princeton University-Eden Foundation Career Award for “improving the quality of life for individuals with autism.” For further information, go to www.barryprizant.com, or contact Barry at Bprizant@gmail.com.