Why would a child suddenly hit another child without being provoked? Or spit at other children? Or bite them? Or scream? Why would a child pick objects off tables and throw them on the floor? Why would he run away sometimes but lie down on the floor and refuse to get up at other times? If this were a typically developing child, we might think he was a brat or a bully, or even disturbed and in need of counseling. But if this were a child with mental retardation or autism, we would be much more likely to think these behaviors were just a part of his disability. After all, a lot of people with developmental disabilities do those kinds of things. At least that is what we thought for many years.

Today, we take a very different approach, one that assumes that challenging behaviors actually are learned behaviors that occur because they produce desirable consequences, such as attention from other people or escape from unpleasant situations. This approach has important implications for treatment. For instance, take the case of the child who hits others to gain attention. With our old way of thinking, we might have “treated” the hitting by ignoring it altogether or by using a negative consequence, such as loss of privileges or time out, that was intended to eliminate the hitting or reduce its frequency. But if we saw that the hitting actually was an effective way for a child with few social skills to gain attention from others, our “treatment” would focus on teaching this child more socially appropriate ways of getting attention.

One of the most interesting children with whom we have used this approach (called functional assessment) was Reggie, an 11-year-old boy with moderate to severe retardation, seizures, and behavior disorders. Reggie regularly engaged in a variety of challenging behaviors: he hit, spit, bit, threw objects, screamed, ran away, threw himself on the floor and refused to get up. He did these things frequently throughout the day, including at school, which is where Dr. Kwang-Sun Blair and I worked with him and his teachers.

Reggie began school at age 6 and spent the first 3 years in a separate class for students with severe emotional disabilities. During that time, he often hit his classmates and teachers. He was then placed in a cross-categorical classroom for a year and then into an inclusion program. In the year before our study began, Reggie’s challenging behaviors had escalated so much that school district officials were considering removing him from the program. His teachers had attempted a variety of interventions to reduce these problems, including reinforcing alternative behavior, giving choices, time out, physical restraints, and redirection. None of these procedures had been effective.

We began the process of functional assessment by defining Reggie’s challenging behaviors and the appropriate behaviors his teachers wanted him to use instead. Then we conducted structured interviews with 10 people who knew Reggie well (often only two or three people are needed). These people included several of his current and former teachers, the school principal, and both of Reggie’s parents. Next, we conducted structured observations to identify the situations in which each challenging behavior occurred and the consequences it produced. These 15-minute observation sessions were conducted in multiple environments: in the classroom, on the playground, in the lunchroom, in the library. The interviews and observations revealed clear and important patterns in Reggie’s behavior. Specifically, we learned that Reggie displayed one or more challenging behaviors when an activity was something he didn’t like to do, when he was required to engage in an activity (i.e., had no choice in the matter), and when he received little attention from staff. In addition, observational data showed that Reggie’s challenging behaviors produced considerably more attention than his appropriate behaviors did.
We hypothesized that Reggie's behavior would improve if he (1) took part in preferred activities, (2) was allowed to choose activities whenever possible, and (3) received frequent social attention from staff for appropriate behavior. Next, we tested each hypothesis within the context of naturally occurring routines and activities at school. To do this, we conducted a series of assessment sessions, ranging from 8 to 15 minutes long. Some were baseline sessions in which the typical conditions that existed before the study were in place. Baseline sessions were alternated with the hypothesis-testing conditions we expected would improve Reggie's behavior. For example, in one session, he might be required to engage in a non-preferred activity. In the next session, he would be allowed to engage in a preferred activity. Throughout each session, we recorded how often Reggie emitted both challenging and appropriate behaviors. We tested and repeated various combinations of our hypotheses until a clear picture emerged of the situations and consequences that reliably controlled his behavior.

The experimental data supported all three hypotheses: Reggie behaved much better in preferred activities, when he had choices, and when he received frequent attention for appropriate behavior. We used this information to design an intervention package for him consisting of four components. Whenever possible, desired skills were taught through preferred activities that Reggie was allowed to choose, and frequent attention was provided for appropriate behavior. When nonpreferred activities could not be avoided, his teachers tried to give him some choice among these activities and interacted with him frequently when he behaved appropriately.

Instruction in appropriate social and communication skills was included as the fourth component of the intervention because Reggie's teachers and parents told us in the interviews that his limited skills in these areas restricted his ability to interact appropriately with others. This intervention element took two forms. First, the teachers designed a small communication book that included photographs with a written word or phrase related to objects and activities that Reggie encountered during his school day. He carried the book with him wherever he went at school, and his teachers always provided instruction in context (i.e., when the object or activity was encountered naturally). At first, there were only about 10 items in the book, but this number quickly increased to more than 40. Second, the teaching staff was instructed to respond to every occurrence of challenging behavior by immediately teaching Reggie appropriate behavior that he should use instead. For example, he tried to use a computer game in the school's library; but when the game did not boot correctly, he hit the computer screen. Instead of scolding him or using time out, the teacher immediately taught him to ask the school librarian for help, which he got. Thereafter, whenever he needed help, he asked for it independently.

To test the effectiveness of the intervention package, we began with one week of baseline conditions. During the second week, the teachers implemented the intervention only during the afternoon of each day, continuing baseline conditions during the morning. At the end of this week, the afternoon results were very encouraging, so teachers began implementing the intervention throughout the day. They continued to implement the intervention for the remaining 5 months of the school year. Figure A shows the power of an intervention that is based on a clear understanding of why a person is engaging in challenging behaviors.

Although no formal data have been collected since the study ended, we do know that Reggie's improved behavior continued as he transitioned to middle school and, recently, to high school. During this time, the program we developed has been continued, aided greatly by the school district's willingness to let last year's teachers train Reggie's new teachers at the beginning of each new school year. According to the teachers, the training has focused on both how to work with Reggie and why it is important to work with him that way.

Reggie is now nearly 18 years old. He spends part of each day at school and part in a community-based program that targets self-sufficiency and work-skill development. The only time he has significant problems is when he interacts with new staff who have not yet learned how

continues
Small-group instruction provides opportunities for incidental or observation learning from other students. In some instances, small-group instruction may be a more cost-effective use of the teacher's time. The effectiveness of small-group instruction is enhanced when teachers do the following (Kamps et al., 1994; Munk et al., 1998; Snell & Brown, 2000):

- Ensure that students possess basic prerequisite skills such as (1) sitting quietly for a period of time, (2) maintaining eye contact, and (3) following simple instructions or imitating simple responses.

Data from this study (Umbreit & Blair, 1996) and several others like it are teaching us that challenging behaviors of people with developmental disabilities are functional behaviors that, though inappropriate, give them an effective way to influence their world. Functional assessment–based intervention offers us a way to understand these behaviors and to improve the quality of life for students and their families, teachers, and friends.

John Umbreit is a professor in the Special Education Program at the University of Arizona, where he directs the university's participation in the Arizona Behavioral Initiative, a statewide effort to improve schoolwide discipline. His research and teaching focus on applied behavior analysis, functional assessment, and positive behavioral support in natural, community-based environments.