



SPECIAL TIMES

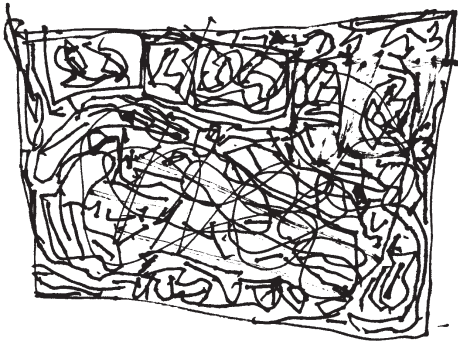
Community Therapeutic Day School (CTDS)

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NEUROPSYCHOLOGICAL EVALUATIONS & INTERVENTION

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Billy was suffering. Upon a casual encounter with this precocious 8 year old, most people found him charming and entertaining. Despite this pleasant demeanor at home and school, however, he struggled with peers, teachers and family members. Billy would not do his homework. In the classroom, he could hardly stay in his seat, frequently spoke out of turn and would pontificate lengthily on unrelated topics. This behavior annoyed teachers and peers, isolating Billy socially. As a result, Billy's grades plummeted, he was easily frustrated and increasingly acted out at school. At home, he argued with his parents and fought with his siblings. He couldn't complete chores and would refuse to bathe. Every social activity became a nightmare. Not only was Billy suffering, but so were those around him.

In spite of appearances, Billy was not a "bad" kid. Children like Billy often have a very unique neurological profile of strengths and vulnerabilities. Because of his unusual profile, Billy was struggling to manage the demands of home and school. In order to access his strengths, Billy needed someone to first understand why he was struggling so. A Neuropsychological evaluation provided a better understanding of his specific relative strengths and weaknesses. It explained his behaviors as a reaction to his difficulty meeting the expectations of the environment. It further informed those working with him about potential curriculum modifications and strategies to use at home. Ultimately it provided relief for both Billy and his caregivers.

The application of neuropsychological theory and methodology to the clinical assessment of children like Billy, is a relatively recent development. The purpose, as described by Holmes- Bernstein and Waber (1990), is to understand a child's cognitive strengths and struggles. Different functional abilities, reading, writing, counting, self-care and coordination, can be attributed to specific structures within the brain, structures connected by a variety of discrete pathways, that if disrupted, disrupt functionality. This complex system relies on redundancy and interconnectedness which allows for plasticity; the opportunity for alternate pathways to develop or strengthen. This is particularly true for a nervous system that is changing in a very dynamic way. In the developing nervous system of a child like Billy, assessment must then take into consideration the fact that his nervous system is undergoing rapid change and is therefore more amenable to intervention. Thus, intervention must take advantage of this developmental window of opportunity during which the brain's plasticity, redundancy and ability to integrate are optimized.

Given current neuropsychological theory, testing must consider not only the performance of the child on individual tests designed to measure specific functionality, but also the overlap and interaction of a variety of functional behaviors measured by those tests. This must be done while also taking into account the child's behavior in a variety of contexts. Because the neurological profile of an individual may limit responses to environmental demands, alterations in the environment may be necessary to promote compensatory strategies and the development of alternate skills. In doing so, a construction of a Child-World System (Holmes-Bernstein and Weiler, 2000) is developed that highlights areas of 'match' and 'mismatch' between a child's skill set and the environmental demands made on them. Billy needed a better "match" with his environment.

"Every human being given a facilitating environment intrinsically contains the momentum for growth towards emotional as well as physical maturity and towards a positive contribution to society."

D.W. Winnicott



Matching the Child and the Environment

In order to construct a better match between the child and their environment, the neuropsychological assessment should examine three primary areas of functioning: cognition, executive functions and emotionality. Armed with this information, parents, teachers and other professionals can begin to construct an environment and provide interactions that facilitate the development of useful alternate or compensatory skills. The caregivers of individual children must have an awareness of the unique Child-World System presented in a neuropsychological assessment and develop an environment, curriculum and relationships that foster this growth. Translating information revealed in an assessment into a classroom or home, as a means to better match a child, is not only possible but crucial. The following chart outlines functional realms considered during the evaluation (Lezak, 1995) and how these realms relate to academic and life skills.

Functional Realm	Academic and Life Skill
<p><u>Cognition</u></p> <ul style="list-style-type: none"> • Memory and Learning – storage and retrieval of semantic information and life events • Receptive Functions – sensory stimulation, perception of the environment • Thinking – abstract thinking, organizing, concept formation, computation • Expressive Functions – speaking, writing, physical gestures, facial expressions • Mental Activities – attention, processing speed 	<p><u>Cognition</u></p> <ul style="list-style-type: none"> • Remembering facts, events that have occurred, vocabulary, steps to a math problem • Making sense of a crowd, such as at a birthday party or the school auditorium • Understanding concepts like time and money or extrapolating meaning from metaphors • Writing a sentence or essay, understanding and making appropriate gestures • Being able to quickly understand novel situations
<p><u>Executive Functions</u></p> <ul style="list-style-type: none"> • Sequence Activities • Organization • Change cognitive sets • Sustain attention • Self-monitoring 	<p><u>Executive Functions</u></p> <ul style="list-style-type: none"> • Following morning routines in a classroom or getting ready for bed • Track materials necessary for completing assignments • Transition from one learning activity to another, go from practicing piano to dinner • Work on academic work for a long period of time • Notice spelling errors or when they have not followed directions
<p><u>Emotionality</u></p> <ul style="list-style-type: none"> • Difficulty regulating behavior or emotions when overwhelmed • Poor self-esteem 	<p><u>Emotionality</u></p> <ul style="list-style-type: none"> • Unaware or unable to calm down when upset or having a tantrum • Poor feelings and thoughts about their ability to perform academic task that impinge on cognitive difficulties

1 Holmes-Bernstein and Weiler, (2000). Pediatric Neuropsychological Assessment Examined, in Handbook of Psychological Assessment 3rd Ed. Goldstein and Hersen (Eds) Pergamon pg. 269.

2 Holmes-Bernstein and Waber, (1990) Developmental Neuropsychological Assessments in Neuromethods, Boulton, Baker, & Hiscock (Eds) Hamana Press pg 312.

3 Ibid. pg 327

4 Lezak, M. (1995). Neuropsychological Assessment, 3rd Ed. Oxford U. Press. Pg 29.

The Neuropsychological Testing Process at CTDS

Neuropsychological assessment of a child must be a multifaceted process, involving the collection of information from a variety of sources. Once the assessment is completed, a feedback session with parents ensures their understanding of their child's unique neurological profile. Also available, is a consultation program in which the parents or school districts have the opportunity to work closely with a consultant to implement recommendations and develop specific interventions or curriculum tailored to the child's needs. An approach integrating the cognitive, emotional and behavioral abilities within the home and school environment increases the opportunity for success, positive experiences and deeper interpersonal relationships.

The following is a hypothetical battery that attempts to represent the process of the evaluation. While certain aspects are somewhat fixed the selection of particular tests must be tailored to the specific child and the questions one is asking about that child. What follows below, therefore, is meant to be merely descriptive and certainly not comprehensive.

1. History

- Interview
- Medical History
- Parent Behavioral Checklist
- Teacher Behavioral Checklist
- Previous Evaluation Reports

3. Neuropsychological Testing

- Wechsler Intelligence Scale for Children -Fourth Edition (WISC-IV)
- The California Verbal Learning Test (CVLT)
- Beery-Buktenica Developmental Test of Visual Motor Integration (VMI)
- Rey Osterreith Complex Figure Test
- Children's Memory Scale
- Delis-Kaplan Executive Functioning System

6. Report

- Sent to parents- includes History, Results from all testing and Recommendations. The goal is to specify interventions that will improve the match between the child and the world.

7. School Consultation (optional)

- As a means to help implement recommendations from the testing, a staff member would be available to consult to school systems and parents. Consultation might include meeting with the team to further elucidate the report and its recommendations, but could also include ongoing consultation to the school to train staff and help monitor implementation of specific services and strategies.

2. Academic Testing

- Language
- Reading
- Written Expression
- Math

4. Projective Testing

- Roberts Apperception Test
- The Rorschach Inkblot Test
- The Conger Sentence Completion Test
- House-Tree-Person
- Kinetic Family Drawing (KFD)

5. Feedback Session

- Meeting with parents to present the results of testing to reframe context of the child and the environment.
- To create a better match for the child and the environment



Daniel Reinstein, Ph.D.

Daniel completed his doctorate in psychology and neurosciences at Binghamton University in 1980. He was a postdoctoral fellow at MIT's Center for Brain Research from 1980-1986 and completed a Harvard fellowship in Clinical Neuropsychology in 2003. He holds an adjunct faculty position in the Department of Psychiatry at UMass Medical School. He has worked at CTDS for the last thirty years and is currently the Clinical Director and Director of Research. He has been conducting Neuropsychological Evaluations over the last ten years and his book, *To Hold and Be Held: The Therapeutic School as a Holding Environment* was published by Routledge in May, 2006.

Dawn Burau, LMHC, SpEd

Dawn received a master's degree in Mental Health Counseling from Lesley University in 2004. She has been working at CTDS as a therapeutic teacher, inclusion therapist and consultant for 9 years. During this time, she has worked with numerous children with unique neurological profiles and adapted curriculum and therapeutic interventions to meet their needs. In addition, she has completed coursework in neurology and neuropsychology at the Harvard Extension School. Dawn is available to consult with families and schools to help foster better understanding of a child's unique neuropsychological profile and implement strategies. She also teaches Human Development in Lesley University's Expressive Therapies graduate program.



Special Times Editor:

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“Since learning of Brian’s learning/developmental disabilities (LD), we were frightened for his future. What would his ultimate fate be when we were no longer around to protect him? We desperately wanted our son to have a safe, happy, healthy life.

Despite every conceivable effort, it took many disastrous failures before finding the appropriate educational and emotional support systems for Brian. It felt like wandering through a horrible, dark maze until the professionals at the CTDS outreach team turned on the lights. Brian’s future is now brighter than we had ever hoped for.

A cornerstone of Brian’s current success was established by the thorough, sophisticated evaluation of Brian’s strengths and weaknesses by Dr. Daniel Reinstein, Neuropsychologist. This encompassed not only assessment of Brian’s neurological LD deficits but also provided indicators of the resulting psychological issues.

Dr. Reinstein’s Neuropsychological/Psychological Evaluation contained key features that are not often found elsewhere.

- Insightful behavioral observations were made throughout the process which were guided by a deep understanding of complex learning/developmental disabilities.
- Tests were individually selected to yield the most relevant information on Brian’s weaknesses and strengths.
- Brian was allowed to work at a suitable pace; fatigue and stress were avoided whenever possible. Thus, Brian’s abilities were also fully assessed.
- Observations made by parents, teachers and therapists were gathered and assessed as part of the evaluation process.
- Based on a sensitive, integrated interpretation of observational and testing results, thoughtful, individualized, specific recommendations were made to meet Brian’s particular needs.
- Dr. Reinstein met with us, Brian’s therapists and SPED teacher and presented his findings. We all gained a richer appreciation of Brian’s neurological/psychological profile which helped point the way toward Brian’s further development.
- Dr. Reinstein’s written report thoroughly described all aspects of his findings and recommendations. Such a document is essential to the development of a truly effective IEP; it confers the clarity needed for parents, therapists and the school system’s SPED officials to devise concrete action plans designed to meet the student’s specific needs.

Daniel Reinstein, Ph.D. is the most insightful Neuropsychologist ever to evaluate our son. He is able to keep our son on task while respecting his need to avoid overload. Dr. Reinstein has uncovered deeper levels of complexity than we previously understood. His discussion of testing results, and their implications, are delivered clearly, yet with a sympathetic, gentle awareness of the consternation parents and others experience when faced with difficult information.”

*Susan Booth
parent*