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### Creating a Positive Home Environment for a Child With Sensory Processing

Jean E. Bross-Judge  
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Creating a Positive Home Environment for a Child With Sensory Processing  
Disorder

by

Jean E. Bross-Judge

An Abstract of a Project  
in  
Creative Studies

Submitted in Partial Fulfillment  
of the Requirements  
for the Degree of

Master of Science

December 2005

Buffalo State College  
State University of New York  
Department of Creative Studies

### ABSTRACT OF PROJECT

#### Creating a Positive Home Environment for a Child With Sensory Processing Disorder

This project focused on identifying and working with the unique needs of a child with Sensory Processing Disorder (SPD). Using the Creative Problem Solving (CPS) model, strategies and tools, the author designed and developed a home environment that promoted successful living for a child with SPD as well as positive interactions with family members. The project contains a description of the practical adaptations to everyday living in a physical space, as well as resources for parents, caregivers, educators and other professionals.

Signature

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Date

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State University of New York  
Department of Creative Studies

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Dates of Approval:

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Dr. Mary C. Murdock  
Professor of Creative Studies, Advisor

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Jean E. Bross-Judge  
Student

## ACKNOWLEDGEMENTS

I am always amazed at the number of people who seem to rally around me when I say “I have an idea!” Truth be told, when I utter those words, some people do scatter like cock roaches when a light is turned on. There is, however, a core group people in my life put up with my process. In the case of this project, many people put up with a process that lasted far longer than any of us had anticipated. My gratitude goes out to the following:

- Family members and friends who never let me forget that this project needed to be completed, especially Nini, Katie, Abbey, Kathi and Carmil.

- My Buffalo State Cohort. You were and are a great group of people with whom I so enjoy exploring creativity.

- Susan Tew. You introduced me to the phrase by which I now live: “Breakdowns Precede Breakthroughs.”

- The moms who, by sharing their stories and struggles with me, have inspired me. They include: Leslie Bonshire, Renée Bross, Erica DePass, Mary Emrich and Mary Pearson.

- The caregivers for my son, Danny. Each of them - especially Jennifer Britton, Dr. Allison Holt, Grandma Meg, Laurel Murry, Jessica Kestner, Missy Berg, Ellen Glover, Lauren Caton and Colleen Kane-Rood - constantly remind me of my son’s giftedness as well as the gift I am to him as his mother. Because of them, I remind myself that small steps are actually big steps toward progress.

- My parents, Bill and Mary Bross. Mom, you fostered my creativity from the beginning and always seemed to enjoy watching that creativity flourish (well, except when I started to try on my third outfit for the day). Dad, I really did come to like the part of nearly every phone call for about two years during which you said, "Are you finished with your master's yet?" By the time you read this, you'll know I'm finished!

- Dr. Mary Murdock, my project advisor. You were my first teacher in the Buffalo State program and, as I watched you navigate your classroom and students, I thought, "Someday I want to be a teacher like her." Thanks to you, I am on my way. I am grateful to call you colleague and friend.

- My Ya Ya Sisters: Kate Cuddy and Marilee Mahler. Kate, your summer excursions to visit me in Buffalo were just what I needed to keep me sane. I love to work on creative endeavors with you. Marilee, I could not have gone through the program without you. From your initial "Sure, I'll do that master's program with you" to your final words about this project, "Press the print button – you're finished" I always knew I could count on you. Thanks for your patience and your patience and your patience!

- The Birth Mother of my sons. Thank you for the two wonderful gifts of life you entrusted to my care.

- Nico, Danny and Clare. I hope someday you will read this paper and understand just how important you are to me. One of my greatest hopes as your mother is that you grow up to be loving, creative and unique individuals who show compassion to the world.

- My husband, Jeff. Without you, I wouldn't be the parent that I am.

Somehow, I hope the constant creative ideas that I introduce into our family's life provide minimal stress and a lot of laughs. I'm so glad that I have learned what it means to be loved as a result of your understanding and undying support for me. I love you and promise I will never do another Master's project as long as we are married (notice I didn't say PhD)!



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## BACKGROUND TO THE PROJECT

On May 15, 2000 at 9:37 am, my husband, Jeff, and I embraced our 15 ½ month old and 4 ½ month sons for the first time. We officially became parents in Bogota, Colombia, just four months after beginning our adoption process. As the orphanage director presented our older son to Jeff and then our younger son to me, my heart leapt with joy and my eyes filled with tears. Nico immediately pulled Jeff's glasses from his face and Danny blew spit bubbles while smiling at me. Our journey of parenthood had begun.

In the first several weeks, the boys brought us much joy, although the stress of becoming parents of two babies simultaneously was a bit overwhelming. Shortly after we returned from Colombia, we were awakened one evening to the sound of a very loud stereo, presumably in a car on the street outside our home. I mumbled something like "that driver better not wake up my sleeping babies." Moments later, my husband said, "Wait, that's *our* stereo!" As he opened our bedroom door, music swelled from our living room. We heard an all-too-familiar tune: "IF YOU'RE HAPPY AND YOU KNOW IT CLAP YOUR HANDS!" Our 16-month old was a technical genius. He had programmed the stereo to play this inspiring song at exactly 3:12 am! We realized that night that parenting would likely bring us a combination of laughter, stress and surprise.

Shortly after that night, I began to feel increasingly exhausted and attributed it to sleep deprivation. I realized soon after that I was pregnant and we were becoming parents to a *third* child in just less than ten months. As my husband and I look back on those early days – three children in diapers and three

children needing constant supervision—we wonder how we kept our sanity. In retrospect, I know now that we both possess an incredible capacity to laugh and respond positively to change. What a gift that has been for our marriage and our three children: Nico, Danny and Clare.

### Making Sense of the Senseless

Family and friends helped us by offering to watch a baby or two so that we could give each child individualized attention. On one such occasion, we decided to take our two and a half-year old, Danny, to an out of town family gathering. We had been noticing some changes in his behavior and hoped that he would benefit from some time out of his environment. We thought that having only one child would make for an easy travel experience, however, that experience still stands out in my mind as one of my most difficult as a parent.

Danny had been a great air traveler as an infant but on this trip he seemed agitated from the beginning. I had a hunch that something was not developing quite right in Danny, although he reached most developmental milestones. By having him alone – without his siblings – for a weekend, I was able to identify some of his behaviors that seemed unusual.

He was very perceptive and his hearing was acute. He could identify individual instruments on the radio by the age of two. He didn't like the noise on the airplane or the unfamiliar smells in our hotel room. He moved at lightening speed, had repetitive movements and seemingly couldn't control his "engine." He struggled with the textures of foods that most children typically liked. He

couldn't stand to have messy fingers. His vocabulary was age-appropriate but his speech was difficult to understand. Although I thought time away from his environment would help, it seemed that he craved the familiar to the point that he could not function away from home.

Many people tried to allay our fears, describing his behavior as normal or that of a child in the "terrible two's." For months after our trip with Danny, Jeff and I tried to believe that age was defining his behavior. But when he turned three and then four and the behavior became more problematic, we knew we needed help.

During the pre-school screening mandated by our school district, an early childhood specialist sensed that something was not right but couldn't put a finger on it. We spoke with our pediatrician and spent the next several months trying to gain as much information as possible about our now four-year old son.

By September of 2004, we received a vague diagnosis. Professionals conveyed that our son was too young to obtain a clear diagnosis, but they suggested that he fell into several clinical categories: Autism/Pervasive Developmental Disorder, Mood Disorder NOS (not otherwise specified) and Sensory Integration Dysfunction. It was thought that he would benefit from occupational therapy and the routine of a preschool. We followed up on both immediately and noticed minimal changes in Danny.

Throughout the next year, we tried everything we could think of to help our son. He continued preschool and occupational therapy, played soccer and drums and began to meet with a psychiatric nurse practitioner. Because he had

been adopted at four months of age, we constantly struggled with not having the benefit of birth family medical history to guide us. As a last resort, we opted to try medication, although nothing really seemed to help him.

By September 2005, Jeff and I knew that our family was experiencing tremendous stress and not responding well to the constant changes resulting from Danny's behavior. Our other two children did not understand why their brother hit them, had major tantrums, cried uncontrollably for seemingly no reason, spit out his food and could not tolerate loud noises. Although both of us were avid cleaners, we found that our home environment was in constant disarray. The physical environment needed attention as did the emotional tenor of our family. As parents, we felt as though we were failing not only Danny but his siblings as well.

### Turning Chaos into Creativity

Throughout my graduate coursework in Creative Studies at Buffalo State College, I had witnessed firsthand the power of the Creative Problem Solving (CPS) process, and realized the insight that could be gained from research and assessment in the fields of creativity and education (Miller, Vehar & Firestein, 2001). I had an intense desire to apply concepts of creativity, problem solving and change management to address the turmoil in my family environment.

The underlying purpose for the project was to apply theories of creative problem solving to meet the needs of a real family situation. My initial goals were: to develop an environment that decreased stress and increased creativity in a family with a child with special needs; to develop a long-term plan

that would meet the changing needs of my family, especially Danny; and to share what I learned with relatives, caregivers, educators and other families struggling with similar issues (Bross-Judge, 2005). As I moved through the project, I had to continually remind myself that these goals existed to guide but not restrict me.

The outcomes of the project were: a physical restructuring of the lower level of our family's home that accommodated my son's developmental needs; a long-term plan that reduced stress and supported positive family interactions; and a training session for friends and family that exposed them to theories and practices of creativity, leadership, problem solving, and change within a family environment. What follows is a chronicle of my research, creative process, outcomes and learning.

## PERTINENT LITERATURE

Perhaps the most difficult aspect of this project was the isolation of just *one* of my son's needs. My husband and I consulted with doctors, therapists, educators, literature, other families and our own instincts in order to obtain a clear picture of Danny's situation. This process yielded a myriad of diagnoses including Attention Deficit Hyperactive Disorder (ADHD) (Cleve, 2004), Tourette's Syndrome (Marsh, 2007), Asperger's Syndrome (Sicile-Kira, 2004), and Sensory Integration/Processing Disorder (Kranowitz, 1998).

As I sifted through literature to make sense of the menagerie, I learned not only about each individual disorder or syndrome, but also about the overlap of symptoms and interconnectedness that exists among them. This overlap sometimes makes the declaration of an absolute diagnosis extremely challenging, especially for children who lack the verbal and cognitive skills necessary to assist with diagnosis. Although Danny exhibited symptoms of many disorders, the one theme that continued to emerge was his inability to integrate and process the sensory and motor input that his body delivered to his brain. I elected to focus my project work on gaining a clear understand of Sensory Processing Disorder and the practical interventions that would assist Danny as he navigated his environment (Kranowitz, 1998). This section contains a basic overview of Sensory Processing Disorder and recommendations for additional reading.

### *What is Sensory Processing Disorder?*

Dr. Anna Jean Ayers is regarded as the pioneering force in the field of Sensory Integration Disorder. Born in 1923, Dr. Ayers completed both her BA and MA in occupational therapy studies and her PhD. in educational psychology, all at the University of Southern California. Her research focused on how the brain integrates the sensory information it receives and how dysfunctions in this process can affect a child's learning. Although she died in 1989, she inspired occupational therapists, educators, doctors and parents to carry on her legacy in what is now known as Sensory Processing Disorder (Ayers, 2005).

Most of us learned at an early age that we have five senses: seeing, tasting, smelling, touching and hearing. Ayers (2005) broadened our sensory understanding and highlighted two additional senses: vestibular and proprioceptive senses. A person's vestibular sense focuses on the position of the head in relation to gravity and movement (p. 202). Proprioception refers to the information sent to the brain from one's muscles and joints and the brain's ability to know where individual parts of the body are and how they are moving through space (p. 201).

Taking into consideration the seven senses, Ayers defined sensory integration:

Sensory integration is the organization of sensory input for use. The 'use' may be a perception of the body or the world, an adaptive response, a learning process, or the development of some neural function. Through sensory integration, the many parts of the nervous system work together so that a person can interact with the environment effectively and experience appropriate satisfaction (p. 201).



This unconscious process allows a person to experience and respond to situations based on sensory input that is provided to and organized by the brain.

For a person who has poor sensory integration, this process of organizing sensory information by the brain is dysfunctional. The input from the body is not processed accurately and, thus, can cause an inappropriate response from a person. Dr. Lucy Jane Miller, Director of Sensory Therapies and Research (STAR) in Denver, CO, illustrated three classic forms of Sensory Processing Disorder (SPD) and their subtypes. Miller (2006) described the first form as Sensory Modulation Disorder (SMD) which refers to difficulty in turning sensory information into behaviors that correspond appropriately to the nature and intensity of the sensory input. Within this form, we see individuals both over-respond and under-respond to sensory information. Still others seem to seek additional sensory input in ways that are often inappropriate (i.e. bumping into others, seeking thrilling or dangerous situations for one's age, craving extremely spicy foods and playing music at decibels beyond most people's tolerance level).

According to Miller, the second form of SPD, known as Sensory-Based Motor Disorder (SBMD), refers to impairment of proprioceptive and vestibular senses. Two subtypes exist within SBMD: dyspraxia and postural disorder. Dyspraxia shows itself in dysfunctions of gross, fine, and/or oral motor movements, often with respect to translating sensory information into physical, unfamiliar or multi-step movements. The planning required for such movement does not occur

effectively. A person with postural disorder has difficulty controlling his/her body during a motor-task. Often seen in combination with other SPD subtypes including dyspraxia, postural disorder can include an inability to sit on a chair or write legibly due to muscle weakness.

The final form of SPD that Miller discusses is Sensory Discrimination Disorder (SDD). In this pattern of SPD, a person's ability to interpret and differentiate between similar sensations is impaired. This form of SPD can occur with input from any and all of the seven senses and often results in a person's needing additional time to complete a task that seems natural to those who integrate the input more quickly.

Miller offers excellent checklists for parents, educators, caregivers and medical professionals to help in the uncovering of sensory processing issues. Regardless of the specific type of dysfunction, it's clear that a lack of sensory integration disrupts daily life, manifests itself in behavior issues and contributes to learning challenges. Experts in the field, including Ayers and Miller, point to occupational therapy as a means for helping a person with SPD successfully navigate his/her environment. Since the "occupation" of a child is to learn to play and move through a daily routine (i.e. dressing, eating, schooling), the role of an occupational therapist is to help the child learn the skills necessary to live successfully within his/her environment(s).

### Recommended Reading

Arwine, B. (2007). *Starting sensory integration therapy: Fun activities that*

- won't destroy your home or classroom!* Arlington, TX: Future Horizons, Inc.
- Auer, C. R. (with Blumberg, S. L. (2006). *Parenting a child with sensory processing disorder*. Oakland, CA: New Harbinger Publications, Inc.
- Ayres, A.J. (2005) *Sensory integration and the child: Understanding hidden sensory challenges*. Los Angeles: Western Psychological Resources.
- Biel, L. & Peske, N. (2005) *Raising a sensory smart child: The definitive handbook for helping your child with sensory integration issues*. New York: Penguin Group.
- Dunn, W. (2008) *Living sensorially: Understanding your senses*. London: Jessica Kingsley Publishers.
- Heller, S. (2003). *Too loud too bright too fast too tight: What to do if you are sensory defensive in an overstimulating world*. New York: Quill.
- Koomar, J., Kranowitz, C., & Szklut, S. (2005). *Answers to questions teachers ask about sensory integration*. Las Vegas: Sensory Resources.
- Kranowitz, C. S. (1998). *The out-of-sync child: Recognizing and coping with sensory integration dysfunction*. New York: Berkley Publishing Group.
- Kranowitz, C. S. (2004) *The goodenoughs get in sync*. Las Vegas: Sensory Resources.
- Kranowitz, C. S. (2006). *The out-of-sync child has fun: Activities for kids with sensory processing disorder*. New York: Penguin Group.
- Kurcinka, M.S. (1998). *Raising your spirited child: A guide for parents whose child is more intense, sensitive, perceptive, persistent, energetic*. New York: HarperPerennial.

- Miller, L. J. (2006) *Sensational kids: Hope and help for children with sensory processing disorders*. New York: Penguin Group.
- Sicile-Kira, C. (2004). *Autism Spectrum Disorders: The complete guide to understanding autism, Asperger's Syndrome, pervasive developmental disorder, and other ASDs*. New York: Berkeley Publishing Group.
- Smith, K. A., & Gouze, K. R. (2005). *The sensory-sensitive child: Practical solutions for out-of-bounds behavior*. New York: HarperCollins.
- Strohm, K. (2002). *Being the other one: Growing up with a brother or sister who has special needs*. Boston: Shambhala Publications, Inc.

## PROCESS PLAN

In order to accomplish this project, I wanted to follow a process that included assessment, research, concrete activities, evaluation and dissemination of learning. Although my husband and I were aware that we were experiencing tremendous stress, we had not examined the origins and ongoing contributors to that stress. Using the Creative Problem Solving process as a springboard, we quickly identified the following major stressors: our vague understanding of our son's disability, balancing job and home responsibilities, finances, and the disarray of our home environment. As we discussed each of these, we began to see that a significant amount of stress stemmed from our son's disability. Furthermore, we had a hunch that if we focused on that issue, the other stressors would probably be addressed, as well.

### Exploring the Challenge

Beginning in September 2006, I set out to dig deeper into the mystery of Danny's behavior. My goals were to: interview medical and educational professionals, observe Danny at home and at school, and research Pervasive Developmental Disorder and Sensory Processing Disorder. Through this exploration, I hoped to gain a better understanding of Danny's issues and develop a response plan to meet his needs.

First, I met with our pediatrician, Dr. Mary Blomberg, M.D., who recommended that we have Danny assessed again by the Alexander Center for Child Development and Behavior in Eden Prairie, MN. She noted progress since his September 2004 evaluation and believed that his growth and maturity could

provide additional clarity in his diagnosis. I scheduled the assessment immediately; however, the team was not able to meet with him until early December 2005.

Next, I met with Danny's teacher, Faith Connors, and observed him in his Kindergarten classroom. Knowing that he had Sensory Integration issues, I immediately noticed several ways that Danny could be helped. For example, Faith mentioned that Danny struggled to settle down during quiet time. Each child was asked to bring a "nap mat" at the beginning of the year and parents were told they could be purchased at a local department store. I dutifully purchased the minimally padded vinyl mat and sent it to school with my son. When I observed nap time, I saw that other children had blankets and quilts on which to rest but my son was trying to relax on a vinyl mat! I sent his favorite quilt the next day and the teacher has since reported that Danny no longer has difficulty calming himself at quiet time.

There were several other ideas that emerged from my one hour observation at the school, most notably that the more consistent we could make home to school and school to home transitions, the easier Danny would adapt to change. We worked on teaching Danny about his personal space bubble at home and the school used hula hoops to teach the entire Kindergarten class about personal boundaries. We had observed dry-mouth as a side-effect of Danny's medication. While liquids were readily available at home, we started sending a water bottle to school so Danny did not have to leave the classroom each time he was thirsty. We reviewed Danny's school schedule with him daily

and communicated schedule changes at home (i.e. business travel) to his teacher.

Because Faith was going on maternity leave at the end of October, I met with her and the long-term substitute, Kathy Korus, to discuss the transition. This coincided with the release of his first report card. I was devastated to hear about the multiple struggles that Danny was experiencing academically: fine motor skills were lacking, letter and number recognition was delayed, behavior issues were becoming more significant and socialization was difficult. Together with the school's Learning Specialist, Lauren Caton, we developed a communication plan as well as a plan for obtaining an in-school para-professional to assist Danny.

Although things at school seemed to improve, Danny's behavior at home was a different story. I met with his psychotherapist, Anganette McBryde, CNP, who recommended medication changes as well as behavior therapy. My husband and I agreed to incorporate both into our care plan for Danny.

Finally, I met with Danny's occupational therapist, Heather Godschall, at the Park Nicollet Rehabilitation Clinic in Shorewood, MN. It was this meeting that unlocked an avalanche of ideas for helping Danny at home. The resulting changes in our home environment and in Danny's routine helped my family take a giant step forward in understanding and positively impacting Danny's behavior.

In December 2005, Danny was evaluated for a second time by a multi-disciplinary team at the Alexander Center including practitioners trained in

Speech/Language Pathology, Developmental/Behavioral Pediatrics and Pediatric Clinical Psychology. Jeff and I presented the following concerns to the team: difficult behavior, aggression, lack of self-control, immature social skills, delayed cognitive ability and overall emotional well-being.

The assessment process at the Alexander Center focused on three areas: medical, psychological and speech-language. The medical portion included review of medical records and history, physical and neuron-developmental examinations and behavioral observations. Tools used for psychological assessment were: Adaptive Behavior Assessment System – Second Edition (ABAS-II); Autism Diagnostic Observation Schedule (ADOS); Child Behavior Check List (CBCL); Differential Abilities Scale (DAS); and Social Communication Questionnaire (SCQ) (American Psychological Association, 2000). Danny's speech and language development was assessed using the Clinical Evaluation of Language Fundamentals – Preschool-Second Edition (CELF-P2), Comprehensive Assessment of Spoken Language (CASL); and Goldman-Fristoe Test of Articulation-2 (GFTA-2) (American Psychological Association, 2000).

The results of the assessment were similar to the 2003 results with a few significant differences. The assessment team no longer felt that Danny belonged on the Autism Spectrum. They continued to see signs of a mood disorder (again, not specified) and more clearly diagnosed Danny with Attention Deficit Hyperactive Disorder (ADHD – Combined Type). Sensory sensitivities, weak fine-motor skills, a non-specified tic disorder and a possible vision



problem were observed. The team recommended continued dialogue with the school, ongoing occupational and psychotherapy therapy and a few blood tests to rule out thyroid issues. It was also recommended that Danny's family engage in the process of family therapy so we could learn strategies to deal with his complex diagnosis.

As we clarified the problem we were facing, Jeff and I identified three areas of focus: working to understand and provide interventions for Danny's diagnosis of "Sensory Processing Disorder;" providing strategies for family support; and developing a cohesive plan for parenting. Although all three were important, I made the decision to focus this project on re-structuring the physical environment of our home to meet Danny's needs. Not totally willing to dismiss the needs of his siblings, I kept their needs in mind during the renovation of our home environment. I wanted to find ways to use the lower level of our home to reduce family stress and meet Danny's sensory needs.

Using several tools and techniques for creative problem solving, my husband and I identified the following purposes for which we would use the lower level of our home to accommodate the needs of our family: play, relaxation and balance, fine and gross motor development, occupational and massage therapy, creative expression, exercise, laundry, storage, and family TV viewing. We then set out to purge the excess "stuff" from the environment, develop a floor plan, create the physical space and purchase necessary therapeutic equipment.

## OUTCOMES

The outcomes of the project were greater than I could have imagined. First and foremost, I gained the most accurate medical, cognitive and behavioral diagnosis available for my son. Although I knew that this diagnosis would change as he developed, it allowed me to identify ways that I could meet his current needs.

Going into the project, I knew very little about Sensory Processing Disorder. Through meetings with and observations of therapists as well as reading as much information as I could get my hands on, I learned to recognize the signs of symptoms of SPD in my son. I also discovered effective methods for helping Danny through at-home therapy interventions.

### Spatial Redesign

The greatest tangible and visible result was the re-design of our home environment. Appendix B visually documents these environmental changes to our home that were made to honor the sensory needs of our son while, at the same time, recognizing the needs of siblings of a child with special needs.

The lower level of our home was divided into six areas, each of which I identified for specific therapeutic functions. What follows are descriptions of the before and after uses of those six spaces.

Prior to the project, Area One was a multi-purpose area used for doing homework, scrapbooking, exercising and playing. Area One was cleared, and the resulting space was designed for occupational and massage therapies. A

massage table was the central focus of the area and served two purposes.

First, I used my training in medical massage therapy to provide all three children with an opportunity for relaxation through deep tissue massage and the use of aromatherapy. I also purchased a large balance/therapy ball from a local sporting goods store that was great for developing balance, strength and coordination. The exercises that I introduced not only helped to engage Danny's vestibular and tactile senses but also served as fun ways for all three children to interact.

Having completed the first area, I moved on to Area Two which was serving as a place for toy storage, general play, music and indoor basketball. The transformed Area Two now focused on the development of gross/large motor, vestibular stimulation, equipment storage and cooperative play. My first step was to purchase several pieces of therapeutic equipment from Southpaw Enterprises, a company that specializes in providing tools for children with SPD.

The "Walrus" is a large inflatable pillow upon which a child can lay (with absolute adult supervision) and focus on vestibular and proprioceptive input. The kids loved it but realized it was harder than it looked. Tactile balance beams featured raised bumps that provided comfortable sensory stimulation as well as balance control. I like that the beams came in sections and, therefore, could be easily stored when not in use. Finally, we added several swings to the therapeutic "toy box." The "Child Sling Swing" provides vestibular stimulation in prone and seated positions. Because sibling interaction was one of our goals, we also added the "Interaction Dual Swing" that provides rotational and

orbital stimulation and requires children to make postural adjustments. I also found a cocoon-type swing at IKEA that included the added component of receiving deep pressure while being in an enclosed space. Many kids with SPD find enclosed spaces to be a helpful way to manage sensory input. All swings were mounted to a ceiling beam with hardware from Southpaw to ensure safety. The swings are easily interchangeable and collapsed for easy storage. As an extra bonus, we added a “Dart Ball” target to the wall to encourage Danny to plan motor movements while swinging.

Area Three was a bridge between Areas One and Two. After the renovation, this area was defined to host a variety of both large and fine motor skill activities while maintaining a sense of openness. A “Play Tunnel” (Southpaw) encouraged body awareness, left and right discrimination, and motor planning. Similar to the cocoon swing in Area Two, it also provided an enclosed place for managing sensory input. In order to provide a place for fine motor skill work, I purchased a collapsible table from IKEA. I stored supplies in the drawers and we only opened the table when we were ready to exercise tiny hand muscles.

The area that needed the least amount of redesign was Area Four, but the small changes made a big difference. Once a cluttered family room with a major focus on the TV, the area now was more intimate and served as a place for exercise, TV and family reading. We did not need to purchase anything new; we just needed to de-clutter the room.

Area Five won my vote for “Most Transformed.” Prior to the project, this room was a chaotic catch-all. After clearing the space and eliminating excess junk,

we transformed the area into a space for artistic expression. Color, lighting, and an art easel were added to set the tone. One half of the area was used for visual arts and the other half for musical expression. A parachute in the music area doubled as room décor and as a piece of equipment that provided social participation while developing gross motor skills. Danny already shows tremendous talent as a percussionist and the rhythm seems to calm him. The kids now feel as though they have their own “garage” band, and I like to see them working together in a positive manner.

The final area we tackled was Area Six. Similar to Area Four, this space didn’t require purchasing anything new but needed organization. After purging the entire lower level, we organized what remained into cabinets and cubby holes that we already owned. By hanging a variety of brightly colored kites (that we already had), we built a soft barrier between Areas Five and Six. I think this helped both the adults and kids in our family to focus on the tasks at hand.

At the beginning of the project, I was not sure if it would produce major results. In the end, I marveled at the transformation. I knew that I had incorporated creative problem solving skills to create something new and useful for my family. The resulting reward was a less-stressed family, positive sibling interaction and therapeutic support for Danny.

#### Feedback from the Family

Before and after the project, I interviewed each member of my family regarding how they felt about the physical environment of the lower level of our home.

Danny is a child of few words, but those words often run deep. Before the project, Danny described the basement as “bad and gloomy.” When the “new” basement was revealed, he said, “This is happy land!” His response reminded me of something that I read from Dr. Jean Ayers (2005):

When the sensory integrative capacity of the brain is sufficient to meet the demands of the environment, the child’s response is efficient, creative, and satisfying. When the child experiences challenges to which he can respond effectively, he “has fun.” To some extent, “fun” is the child’s word for sensory integration. It gives us a great deal of satisfaction to organize sensations, and even more satisfaction to respond to those sensations with adaptive responses that are more mature or more complex than anything we have done before. This is what growing up is all about (p. 8).

Because I knew that the siblings of a child with special needs take on additional struggles, I wanted to make certain that I included my two other children in the project. Prior to the project, my oldest son, Nico, didn’t like the basement. “I always feel like I just have to throw everything away because it is very, very, very messy.” His post-project thoughts included this statement: “Now is like a very, very, very clean basement - like a flower just bloomed. Before, it was like a flower that was dead – but then it got watered which cleaned it and then it bloomed and it made a new flower.”

My youngest child, Clare, only used one word to describe the space before the project: “Messy!” After the project, I asked her what she would tell her friends about the new space and she said, “It’s cool and fun and I like it. It makes me be happy. Now I want a slide to come down the steps into this fun place.” This reaffirms what Ayers said about how people feel when healthy sensory integration takes place.

As parents, Jeff and I knew that our home environment was affecting our family's stress level. Jeff felt that the lower level was "scattered, disorienting, stressful, cluttered and undefined." I couldn't have said it better. Jeff's post-project comment was this: "I think it makes me feel less overwhelmed. It is a more inviting space. It is calmer. It is more thought-provoking because there are defined areas of interest. It opens doors to potential future projects."

For me, the renovation of our space and the clearing of clutter made me feel like we got a whole new house. The Creative Problem Solving process yielded an outcome far beyond my expectations. Now that we've worked together to create a space, our family enjoys spending more time together in that environment."

## KEY LEARNINGS

Throughout the process of developing and implementing this Master's project, I learned a tremendous amount about my family's needs and gained insight into my own creative process. Both have changed the ways in which I live daily with my family.

Having seen the emotional and behavioral changes in Danny that resulted from the positive steps we took to adapt our home, I learned that Danny's home environment is an essential launch pad for all that he does in his daily life. When things were chaotic and disorganized in our home, Danny's behavior both inside and outside of our home was often reflective of that. When he experienced calm at home, his anxiety lessened. His senses can depend on a degree of certainty within our home, and therefore it is the place where he feels most safe and balanced. I know that the reality of most homes is that change occurs daily. My job is to help Danny navigate that change using the knowledge that I have of SPD and creative problem solving.

Beyond learning about Sensory Processing Disorder (SPD) theory, I learned what it meant to have child with SPD. More clearly, I learned about Danny's individual sensory needs and specific strategies that I could implement to address those needs. Although taking him to an occupational therapist once or twice a week was very helpful, actually implementing the occupational therapy at home was even more helpful. What he does with his occupational therapist, he must also to *every day* at home and in school in order to be successful. For



my child with SPD, occupational therapy in and out of the home is not optional but essential.

As Danny grows, his needs will change. By the end of the project, Danny had already outgrown some of the occupational therapy interventions that I implemented at the beginning of the project. SPD is not a linear process and I need to constantly adapt my responses to Danny's growing needs. It is my greatest desire to teach Danny about creative problem solving so that he will begin to recognize his own needs and discover ways to respond. In the end, I think this will empower him to embrace who he is and how he can take charge of his success.

The project also taught me that I must be keenly aware of the needs of my other two children. They exist in relation to their brother and his demanding needs. They also exist, however, as little individuals who have their own unique needs. While we tried to make the sensory areas in our home available for all three children, Nico and Clare knew that there was a level of energy being directed specifically toward Danny. Although Danny feels most secure at home, sometimes the best thing we could do for the other two was to get them away from our home. I think this will always be a very delicate issue to balance.

Finally, I gained significant insight into how I approach creative endeavors, especially those that carry a high level of emotional attachment. My personality type wants to keep things as open-ended as possible for as long as possible. I can readily come up with a plethora of new ideas very quickly. This is benefit when dealing with a child whose needs change rapidly.

During the process of documenting this project, however, I got very stuck! At times, it was difficult for me to “end” a project that seemed to be ongoing. I wanted to keep adding the knowledge and ideas that I was acquiring to the final write-up. It was the work that I did at the front end of the project that eventually allowed me to complete it. By going back to my concept paper and examining what I had set out to do and the timeframe in which I had to accomplish the goals, I was able to isolate and focus tightly on a portion of my learning. This project is a mere slice of what I’ve learned about SPD and my son and I’ve come to understand it as a piece of the whole.

## CONCLUSION

I started my Master's Project in 2005 and finished it in 2006. It is now 2008 and I have completed the write-up. Much has changed in two and a half years.

In spite of all my effort and because of that effort, Danny has spent more than two and a half months in hospitals during the last few years. His diagnosis has expanded to include Tourette Syndrome and Obsessive Compulsive Disorder. He continues to struggle with daily living and I continue to create ways to make that struggle as easy as possible. Each day brings with it a surprise of challenges. Sometimes I recognize his needs as familiar and have a solution waiting. Other times, I spend weeks or months trying to come up with ideas for addressing a new problem. If I am lucky, I actually find something that works. Every once in a while, I can't solve the issue and it continues to linger. For me as a parent, the beauty of blending creative problem solving with my son's needs is that I can always keep generating ideas and then select, refine and implement the most promising ideas. As I say to Danny every night when I put him to bed, "As long as I live and breathe, I will never stop trying to think of ways to help you and teach you ways to discover for yourself how to have fun in this world."

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## Appendix A:

### Concept Paper

# A Family-Centered Approach to Creativity, Change and Leadership

Jean E. Bross-Judge

September 24, 2005

**Project Type: Use a Skill/Talent to Improve the Quality of Life for Others:**

## What Is This Project About?

This project is about applying concepts of creativity, problem solving, change and leadership to minimize stress and maximize creativity in a family environment. By examining the leadership and response to change of parents as well as the problem solving skills and creativity of all family members, a plan for minimizing stress and maximizing creativity will result. While initially, one family will be involved, the goal is to arrive at concepts that could be applied to multiple family environments.

## Rationale for Choice:

*"You will recognize your own path when you come upon it, because you will suddenly have all the energy and imagination you will ever need."* Jerry Gillies

After completing a previous concept paper and beginning *The Artist's Way* (Cameron, 2002), I felt unsettled about my project selection. While I mentioned in the initial concept paper that I wanted to "give back to my family for supporting me through graduate school," I felt that my original project would have fallen short of that goal.

In addition, I was inspired by *The Artist's Way* to read personal journals that I had written nearly 10-20 years ago. In reading my own words, I re-lived a time in my life when I felt confident, creative, physically and emotionally fit and adaptable to change. As I read, I began to examine my current creativity, leadership, problem solving and response to change. Ironically, the last 10 years, of which I have very little written record, represent the most significant changes in my life. Among those changes was marriage, parenthood, serious physical injury, relocation, a return to academia and career change. I believe that my current lifestyle is not one which embraces the concepts, theories and practices of effective creativity, change, problem solving and leadership. These changes have left quite a trail of stress that affects my family and me on a daily basis.

I have a strong motivation to create a better home environment for my family and to reduce my stress and increase my personal creativity. I believe that I possess the knowledge and skills to do this – I just need the opportunity. Through this project, I hope to become a better mother and wife as well as a more creatively expressive individual. By taking time to research, observe and focus on changing the quality of my life and that of my family will not only result in one family living differently, but also in the creation of information that can be shared with other families experiencing similar stress.

## **What will be the Tangible Product(s) or Outcomes?**

The tangible outcomes of this project will include:

1. A written assessment and long-term plan for a less-stressed Judge family
2. Physical re-structuring of the lower-level of the Judge house to meet the family's needs for stress-reduction.
3. An informal session for friends and family that exposes them to theories and practices of creativity, leadership, problem solving and change within a family environment.

## **What Criteria Will You Use To Measure The Effectiveness Of Your Achievement?**

Because stress-reduction is a long-term issue, it will be measured using short- and long-term methods. The following will be used as benchmarks: completion of family assessment of stress; implementation of ideas for the creation of an environment in the lower level of my home that will minimize stress and maximize creativity; and communication of my research and practice to others. Ultimately, the effectiveness will be measured by observing whether or not project outcomes actually reduce stress and increase creativity, as reported and observed by family members and child care providers. While the project will continue after this academic semester, the benchmarks listed above will serve as stopping points on the larger journey.

## **Who Will Be Involved or Influenced; What Will Your Role Be?**

The primary groups that will be influence by this project are: my family, childcare providers and others (once the project results are published). My family, as described in this project consists of my husband, Jeff, and my three children – Nico (6), Danny (5) and Clare (4). Childcare providers include our primary nanny, Laurel Murry, and in-home childcare providers – Jessica Kestner, Ellen Glover, Missy Berg, and Melissa Cuddy. In addition, I will make the information available for other families through publication.

## **When Will This Project Take Place?**

This project will initiate a long-term project of stress-management within my family. As my family grows, different stressors will demand creative solutions. During this semester, I will lay groundwork and produce a long-term plan for my family's stress reduction. A portion of that plan will be implemented during the semester. The remainder of the plan (and subsequent plans) will be implemented in the months and years that follow.

## **Where Will This Project Occur?**

This project will occur in my home in Minnetonka, Minnesota, as my family will be used as the focus.

## **Why Is It Important to Do This?**

While this project is certainly important for my family and me, the results can be made available to others to reduce stress and increase creativity. Stress can manifest itself in a myriad of ways

in individuals and families. Unless stress is dealt with using effective and creative strategies, it can spiral into physical, emotional and spiritual struggles. Untreated stress can contribute to poor performance at work and school, family division, self-doubt, financial struggles and other challenges. Through the implementation of creative problem solving, I believe that individual and communal solutions can be brought to life to result in healthier individuals and communities.

### Personal Learning Goals:

- To creatively give back to my family in appreciation for their support of my work in Creative Studies.
- To assess and reduce personal and family stress.
- To use my creativity to re-structure a portion of my home into a space that will minimize stress and maximize creativity.
- To continue to develop my research and scholarly skills within the areas of creativity and problem-solving.

### How Do You Plan to Achieve Your Goals and Outcomes?

The process plan will include: assessment, research, concrete activities and evaluation. In order to assess the current situation, I will ask a facilitator to conduct a session with my family to determine key areas of stress. I will then take that list and, with my husband, converge and select the top 1-3 areas of stress. Once determined, I will research the topics and select one to implement creative problem solving strategies. Finally, I will seek 360 evaluations to determine the effectiveness of the process and end product(s).

### Evaluation:

Evaluation of this project will be conducted as follows:

1. Self-evaluation: Using the PPCO model, I will evaluate both process and product.
2. Family: I will prepare an evaluation form to be filled out by my husband. In addition, I will collect verbal feedback from my children.
3. Friends: Similar to the written evaluation described in #2 above, I will ask friends who visit my home on a regular basis to evaluate the changes made and perceived effects on my family.
4. Child-care: I will invite people who care for our children to evaluate the process and product. These are people who spend significant time in my home and are aware of current stress level.

### Project Timeline:

#### September

- CPS Session with family (2 hours)
- Meetings with professionals (therapists, teachers, etc) 10 hours

#### October

- Research: 10 hours
- Brainstorm possible activities: 10 hours

#### November

- Re-structure home environment: 25 hours
- Research: 10 hours
- Presentation of Results (including prep time): 6 hours



- Evaluation: 5 hours
- Writing: 10 hours

December

- Writing, Editing, Binding: 10 hours

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## APPENDIX B:

A Home Environment Designed for a Child with Sensory Processing Disorder:  
Photos and Documentation

## Figures B1 and B2: Transformation of Area 1

Figure B1: Multi-purpose area before transformation. Used for play, scrapbooking, exercise and homework.



Figure B2: Area 1 after the project. Relaxation area designed for occupational and massage therapies and balance. Massage table purchased at Sam's Club; therapy balls found at local sports store.



Figure B3: Prior to the project, Area 2 was used for toy storage, basketball, general play and music.



Figures B4-B7: Transformed Area 2 focuses on the development of gross/large motor, vestibular stimulation, equipment storage and cooperative play.

Figure B4: “The Walrus” (Southpaw Enterprises, Inc.) used to work on vestibular and proprioceptive senses.





Figure B5: Tactile balance beams (Southpaw Enterprises) with raised bumps to provide comfortable sensory stimulation while achieving a sense of balance.



Figure B6: Interaction Dual Swing (Southpaw Enterprises) promotes sibling interaction, provides rotational and orbital stimulation and requires the child to make postural adjustments. The Dart Ball (Southpaw) target on the wall also encourages children to plan motor movement while swinging.

Figure B7: Ekorre Swing (IKEA of Sweden) provides limited deep pressure and vestibular stimulation.



Figure B8: Child Sling Swing (Southpaw Enterprises) provides vestibular stimulation in prone or seated positions.



Figure B9: Area 3 was used for music and cooperative play.

Figures B10 – B11: After the renovation, Area 3 was defined for both large and fine motor skill activities.

Figure B10: Play Tunnel (Southpaw) promotes body awareness, left and right discrimination and motor planning. Folds for easy storage.

Figure B11: Collapsible table (IKEA) allows for storage of supplies with minimal space requirements.



Figure B12: Area 4 was a family room focused mainly on a TV.



Figure B13: Area 4 was adapted to provide a more intimate feeling and an adult exercise area.





Figure B14: Prior to the project, Area 5 was used as a catch-all room and had minimal lighting.



Figure B15: Area 5 was cleared to provide a place for artistic expression. Color and lighting were added to enhance the space.



Figure B16: Part of Area 5 was defined as a music area. The parachute (Southpaw Enterprises) doubled as room décor and as equipment that encouraged social participation and developed gross motor skills



Figure B17: Area 6, the laundry room, before the project.



Figure B18: The post-project laundry room also allowed for storage of toys and household items. Kites added visual appeal and also provided a visual barrier between the two rooms. The toy storage unit and bins (IKEA) allowed for extreme organization and easy clean-up!



## APPENDIX C:

### Resources for Sensory Processing Disorder



## Resources for Sensory Processing Disorder

*Creative Kidstuff*

[www.creativekidstuff.com](http://www.creativekidstuff.com)

*Gopher*

[www.gophersport.com](http://www.gophersport.com)

*IKEA*

[www.IKEA.com](http://www.IKEA.com)

*Lakeshore Learning*

[www.lakeshorelearning.com](http://www.lakeshorelearning.com)

*Southpaw Enterprises, Inc.*

<http://southpawenterprises.com>

*Sports Authority*

[www.sportsauthority.com](http://www.sportsauthority.com)