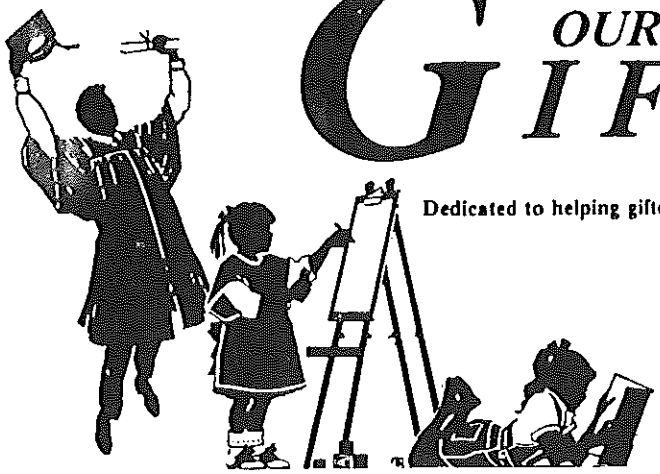

UNDERSTANDING OUR GIFTED®

Dedicated to helping gifted children reach their full potential

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The Gift of Vision

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What are the most common symptoms and complaints of visual problems? Typical symptoms and complaints include:

- Blurriness
- Double vision
- Fatigue
  (especially with sustained near work)
- Loss of place with reading
- Rubbing and/or closing an eye
- Omitting letters or words
- Needing a finger or marker
- Difficulty with writing
  (sizing, spacing, copying)
- Difficulty with spelling
  (often spells more phonetically)
- Poor gross and/or fine motor coordination.

This list contains just some of the more obvious symptoms. A more complete list can be obtained from the Optometric Extension Program (1985). Many gifted children only exhibit some of the symptoms but not all. These children often have strengths in creative thinking, verbalization, and high abstract reasoning. On IQ testing, there is often a significant disparity, where the Performance section is much lower than the Verbal section, typically indicating some type of visual perceptual motor problem. To demonstrate the types of visual problems found in this population, three students, **Geoff, Mark, and Lisa**, are presented to show the different types of visual difficulties and how each child compensated.

GEOFF

Geoff was three years old when his mother brought him in for an evaluation because she saw his eyes cross occasionally. He was quite verbal, very "active," distracting, and often showed frustration. He was already reading and played the piano exceptionally well. Vision evaluation revealed a significant amount of hyperopia (farsightedness), amblyopia (lazy eye), and esotropia (crossed eyes). So here we have a top performer despite significant visual problems. Treatment included glasses full time to compensate for the farsightedness, part-time patching (only two hours per day) for the lazy eye and vision therapy to help teach Geoff how to use his two eyes together more efficiently. Vision therapy was quite successful in that Geoff's vision in the "lazy eye" improved dramatically. In addition, his eyes were motorically aligned (straight, not crossed), but there was also improvement in sensory fusion (use of the two eyes together).

Geoff's parents and my staff observed behavioral changes throughout therapy, as Geoff became less distractible and much calmer. Even at the young age of three years old, the frustration and tension were there.

MARK

Mark was twelve years old, attending a school for the gifted, when he was referred to this office by his teacher. He was significantly below age level in reading, spelling and writing. He complained of blurriness, intermittent double vision, words "moving" on the page and fatigue with near work. Vision testing revealed a significant accommodative (focusing) and binocular (eye teaming) problem as well as deficiencies in visual motor integration, visual memory for symbols, and auditory discrimination. Previous psychological testing on the WISC indicated a Verbal IQ of 155 with the Performance IQ 30 points lower - a significant spread! Vision therapy was initiated to improve the deficient areas as well as to emphasize visualization strategies. After a year of treatment, Mark showed tremendous improvement in all visual areas. Focus flexibility, sustenance, eye teaming skills, and visual perceptual motor performance had all improved. He was no longer symptomatic. He made great strides in his academics. Self esteem had greatly been enhanced as he now knew he could perform and be successful.

LISA

Lisa was nine years old when she was referred by her teacher. She had no visual symptoms and was an excellent reader. Her main difficulty was handwriting. She had wonderful ideas for stories but would do anything to avoid paper/pencil tasks. She would dictate her stories to her mother to type, but showed much frustration if asked to write herself. Her writing was slow and laborious. Sizing and spacing of letters were variable. Vision testing revealed adequate visual skills and perceptual abilities. The only area of concern was in visual motor integration (copying shapes and forms). She scored only six months below age level, but all of her other testing was significantly above age level. The "gap" in her performance, compared to her potential, was more of a concern than the actual test score. A short term vision therapy program was initiated to improve visual motor integration and fluency. Visualization strategies were emphasized.

At the end of four months, Lisa's handwriting had improved, but most important, she was much less frustrated by paper/pencil tasks. Eventually, a computer for word processing will still be more efficient for her as "her mind still thinks faster than her hand writes"; however, she has developed strategies to compensate for the discrepancy and now will attempt the tasks.

All three gifted youngsters demonstrated different types of visual processing problems, different compensatory abilities and different therapeutic solutions. However, all three benefited from glasses or vision therapy. Vision therapy is not a program just for children, as many adults can and do benefit from it. Although this article speaks to the child's needs, these difficulties, which usually start in childhood, may plague a person through his or her adult life.

Learning problems are often masked in gifted children; many compensate or avoid certain tasks, thereby often showing the profile of an "average" student. Whether the child is labelled as having a learning disability often depends on the tester's ability to observe the frustration or compensatory actions. Of more concern than the actual label is whether or not there are significant gaps in abilities which could reduce overall performance. Learning disabled gifted children can be so frustrated that they will not attempt to do the schoolwork, or they can be straight A students who have to work extremely hard to get the grade. Self-esteem is often compromised when children struggle, thereby complicating the emotional and behavioral picture. Children who are not performing to their potential should be thoroughly evaluated to determine their strengths and weaknesses. This testing should include a psychological-educational battery as well as an auditory and vision evaluation. Dr. Mary Meeker, Director of the SOI Institute in California writes, "There are many reasons why gifted children do not or will not perform adequately, but poor vision function tops the list. There are a multitude of youngsters whose giftedness will go unnoticed, remain undeveloped or be suppressed because of undetected visual problems" (1985, p.17).

An estimated 75% of all classroom learning comes to the student via the visual pathways (Heinke & Greenburg, 1981). Vision is our dominant learning sense. Any interference in these pathways can cause difficulty with learning. Most children are born with healthy eyes and brain. However, vision is a learned process, and something more than 20/20 visual acuity. Visual performance is dependent on the relationships between visual movement skills and body movement skills. The process of vision is not the only means of receiving information, yet it happens to be the dominant sensory system in learning. A properly functioning visual system allows an individual to quickly and accurately localize and identify objects that move in space and to project touching, smelling, and feeling beyond the limit of the body. Vision affects and is affected by posture and balance. If there are disturbances structurally, functionally, or perceptually in vision or motor areas, these disturbances may be reflected in the ability of the person to perform in areas of higher level academics and sports. Even with 20/20 acuity, overall comfort and efficiency may be compromised. Vision disorders may not be the only cause of problems, but may be factors and, thus, needs to be thoroughly investigated by a professional, since many of these children pass the school screenings or other cursory eye examinations.

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IDENTIFICATION

How are these children identified? Observations by teachers and parents are always among the most reliable methods. Most school systems offer visual screenings; however, they are frequently inadequate. The screening usually consists of the Snellen 20/20 chart, which still might pick up a child with a lazy eye or nearsightedness. However, this test is given at 20 feet. How much learning takes place at 20 feet? Very little. A child could actually see double and still pass the screening!

Behavioral optometrists have recommended that the following areas be evaluated in an adequate vision evaluation.

1) Eye health. Inspection of the exterior of the child's eyes and surrounding areas, as well as interior inspection for detection of eye or systemic diseases, is always necessary.

2) Refractive status. The evaluation can determine if nearsightedness, farsightedness, or astigmatism prescriptions may need to be given to help the child see clearly and more efficiently.

3) Ocular motilities (eye movement skills). Following an object as well as being able to fixate accurately and quickly is essential in reading, copying, or ball sports. If eye movements are uncoordinated, this could cause the child to lose his or her place, skip words, miss the ball, etc.

4) Binocularity (eye teaming skills). Judgments of spatial orientation, relationships, depth perception, and accuracy of clear, single vision depend on the accuracy of pointing and focusing the two eyes together. Included is in-depth testing into the accommodative (focusing) system for sustenance and flexibility. Eye teaming

and focus problems create fatigue, discomfort, blurriness, inconsistency or avoidance of tasks.

5) Eye-hand coordination skills. Skill in eye-hand coordination is essential to the accurate production of written language as well as efficient and successful sports performance. If significant fine or gross motor problems are detected, then an occupational therapy consult is often requested to perform a more in-depth sensory-motor analysis.

6) Visual perceptual abilities. Being able to recognize differences and similarities between letters and words is essential for learning. Object size, shape, texture, and location need to be immediately and accurately discriminated so that comprehension can be followed by appropriate actions. Included in perceptual abilities is the child's strength in utilizing visualization (visual imagery), which is important in reading comprehension, spelling and other academics and sports.

A behavioral vision evaluation will reveal the necessity for glasses for compensation, prevention, or stress relief. In addition, vision therapy options would also be discussed. Vision therapy is the art and science of developing visual abilities to achieve optimal visual performance and comfort. It is a program of arranged conditions to permit a patient the opportunity to prevent the development of some vision problems (such as nearsightedness), help remediate existing vision problems (eye teaming problems), or enhance the efficiency and comfort of visual functioning (e.g., sports vision helps enhance ones' eye hand coordination, concentration, visualization, etc.).

HELPFUL STRATEGIES

What can teachers and parents do to help gifted children with visual disorders?

- Understanding the gap in performance the physical difficulties as well as emotional overlays, can frequently help the child reduce some of the stress surrounding the problem.
- Allowing the child to do more oral work and less written, busy work can also be beneficial.
- The computer has been a real blessing for many of these children. Even when they struggle with the keyboard, they know the end result always looks better, and that editing is not nearly such a chore, as mistakes do not mean a total rewriting of the paper.
- Visualization strategies are powerful – especially for spelling, reading comprehension, creative writing, relaxation, and preparation for sports or tests. In spelling, teaching the child to "see" the words in his or her head often helps break the "phonetic, creative" spelling pattern. With writing, give instructions such as: "Write easy," "Pretend your arm is a paint brush and paint from your shoulder," "Create a scene in your mind, full of detail, color, warmth, space, movement, etc., then write from your picture." If children get stuck on a word or lose their thought, gently remind them to look up and "see" what's up there. Remember, many of these children are already good visualizers; they just don't always realize when they can use the strategies.
- Most importantly, a referral for good vision care is necessary when symptoms and frustrations persist.

VISION CARE SPECIALISTS

To find a behavioral optometrist, write to the College of Optometry in Vision Development, P.O. Box 285, Chula Vista, CA 92012. Further information regarding vision, types of problems, efficacy of vision therapy, and the names and locations of behavioral optometrists can also be obtained from the Optometric Extension Program, 2912 S. Daimler St., Santa Ana, CA 92705 or the American Optometric Association, 243 N. Lindbergh Blvd., St. Louis, MO 63141. When making an appointment, in order to insure an adequate visual evaluation is done, the parent should ask the following questions:

1) Do you give a full series of near point visual tests?

2) Do you give academically related visual perception tests?

3) Do you provide vision therapy in your office? If not, do you refer to a doctor who does?

4) Will you send a written report that all adults concerned can understand and apply to assist this child?

Parents and professionals need to recognize how a child can be so bright and have such gifts in some areas, but still suffer from learning difficulties which can hinder classroom performance as well as affect emotions and behavior. Encouragement, praise, nurturing, and special help enable the to child be happy, successful, and gain confidence in reaching his or her potential. William C. Lee, O.D. (1989) writes of the gift of vision:

In LIGHT *there is* SIGHT

In SIGHT *there is* VISION

In VISION *there is* SUCCESS

In SUCCESS there is HAPPINESS

The gift of vision is one gift all children deserve.

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