

# *Dyslexia and Creativity*

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OS24



*"Dyslexia is not a sickness, but a different arrangement of the brain's circuits. In pre-literate times, people with dyslexia were the heroes, the builders. In contemporary times, the child who cannot read feels like they are totally different than the rest of the world."*

- Dr. Maryanne Wolf.<sup>1</sup>

Leonardo daVinci, Jackson Pollock, Chuck Close, Andy Warhol, and Robert Rauschenberg all have something in common – yes they are all artists, pretty famous artists for that matter. But similarly, all of these artists are also known to have suffered from a learning disability called dyslexia. It is believed that dyslexic people are often highly visual, able to quickly process and integrate high-quality visual and spatial information. It is believed that people with dyslexia seem to problem-solve in unusual ways, perhaps working from the inside out or from the back to the front of the brain. Does this mean that they are more prone to be successful in today's society? Some say that society is shifting, with far more demand for artistic skill rather than for more mechanical skills such as math and science. But is there a link between dyslexia and heightened creativity? Most would assume so, since artists like Robert Rauschenberg and Jackson Pollock were able to break through the barriers formerly set in the art world, and bring about a completely new realization of making and viewing contemporary art. If dyslexia is really a physical condition of the brain that inclines people to think more artistically, does that mean the whole concept of dyslexia being a learning "disorder" is incorrect?

Dyslexia is a complex reading disability that affects one in five children.<sup>2</sup> As a child, I was diagnosed with dyslexia. I was lucky, because according to Oliver Sacks, 38% of dyslexia goes undiagnosed.<sup>3</sup> Some dyslexics end up living their whole lives being told they are stupid and simply don't measure up, when in actuality it was the way the child was being taught that was inadequate. Sadly, these children end up growing up with social and behavioral problems, acting out in response to a destroyed self-esteem. In kindergarten, I used to pretend that I was reading along inside my head during class, rather than facing the challenge of reading out loud. My teacher first noticed something was up when I would sit down with my book and draw the characters in the story, rather than reading the text out loud during reading circles. Mrs. Hatfield, my teacher, was the first to bring the obscurity to my parent's attention. At first, my mother was upset and confused. She didn't understand why they said I had a "disability." In her eyes, I was perfect. It wasn't until she was confronted by a friend and given the book The Gift of Dyslexia that her opinions on the so-called "disability" started to change. Two other children in my class were showing signs of dyslexia as well, but one child's parents, angry at the thought of their child struggling, refused to believe that their kid had a reading disability. Sadly, I learned that years later the same student still resorted to hiding in the bathroom when the class ever started to read aloud in their textbooks.

Dyslexia is a learning disability that roots itself in the cognitive brain process. It is caused by a disruption in our fundamental neural circuits for processing language and symbols. This disruption is the origin of challenges that someone with dyslexia encounters when trying to learn how to read and write. Yet, since dyslexia has been defined as a disruption in the fundamental process of the brain, scientists have now come to realize that its effects are far vaster than simply

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<sup>1</sup> Millrood, Michaelann. "Breaking Down Barriers." Editorial. *Tufts University*. Tufts University, 16 Oct. 2006. Web. 7 May 2011. <<http://www.tufts.edu/home/feature/?p=wolf>>.

<sup>2</sup> Sacks, Oliver. *The Mind's Eye*. New York: Alfred A. Knopf Canada, 2010. Print.

<sup>3</sup> Shaywitz, Sally, M.D. *Overcoming Dyslexia*. New York: Random House Inc., 2003. Print.

just an inability to read. Dyslexia impacts a range of other important functions as well, such as the ability to spell words, to retrieve words, to articulate words, and to remember certain facts.<sup>4</sup> Though dyslexia cannot be easily defined. Everyone's brain is different and we all learn best in a different way; this is especially true for dyslexics. Many people who are diagnosed with dyslexia experience a range of different effects, from problems with hand-eye coordination, to challenges with time management. Yet, many people tend to misinterpret the diagnosis of dyslexia, figuring it to be a condition where one simply "reads backwards." The most common misconception among dyslexics is that their diagnosis deems them incapable or stupid; this is not the case.

For a while people used to believe that dyslexia occurred more frequently in boys. Some statistics have shown that dyslexia has affected anywhere from 4 to 6 times as many boys as girls.<sup>5</sup> There were even studies done that tested the possibility of it being a sex-linked gene. Yet, when those studies came back inconclusive, people started to look deeper. Over spring break, I conducted an interview with Ms. Gena Calloway, headmaster of the Schenck School in Atlanta, Georgia. Schenck, an elementary school committed to educating young children with dyslexia, used to be my elementary school. During my visit to Schenck, I noticed that the school had increasingly more male students than female. When I asked Ms. Gena about this observation she mentioned the former idea of dyslexia being a sex-linked gene, but then after replied that, "after the studies came back inconclusive, people started realizing that the reason more boys were being diagnosed with dyslexia had nothing to do with genetics, but all the more to do with the behavioral differences between boys and girls." She went on to explain that, when a boy doesn't understand a concept he acts out in class. In most cases, their disruptive behavior is an automatic signal to the teacher that the child is struggling with something and then they begin to look further for the problem. Yet, when a girl doesn't understand something, she tries to hide it, finding little ways to conceal her problem, like being the teacher's little helper during story time, or pretending to follow along silently. She is much more embarrassed and tends to be less vocal about the issue. That's why dyslexia is often harder to spot in girls. Although dyslexia was not deemed a sex-linked gene, it has been proven that dyslexia is often a genetically inherited trait. Over 80 percent of dyslexics have a family member who is also dyslexic, or has experienced some type of learning disability.<sup>6</sup>

Until recently, explanations of dyslexia were rooted in the visual systems. Most believed that the reason dyslexics reversed letters or words used to be due to a defect in how they were seeing the text, but this is not the case. The main cause of a dyslexic's reversal of words or letters lies in the linguistic process.<sup>7</sup> It was not until recently that people started coming to understand dyslexia as a language problem and not a visual or intellectual weakness. Comprehending spoken language, however, is not the problem for dyslexics. Although dyslexia is a disability that resides in language processing, it results strictly from a specific problem with the phonologic module, or the part of the brain where the sounds of language are put together to form words, and where words are broken down into sounds; it does not affect all language related processes residing in the brain.

Dyslexia is a weakness that is specifically related to the phonological module. In language, the phoneme is the basic element of the language process. A phoneme is the smallest unit of speech that distinguishes one word from another. For example, the "kk" sound, the "aaa"

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<sup>4</sup> Shaywitz, Sally, M.D. *Overcoming Dyslexia*. New York: Random House Inc., 2003. Print.

<sup>5</sup> Shaywitz, *Overcoming Dyslexia*, pg. 15-23,

<sup>6</sup> Shaywitz, *Overcoming Dyslexia*, pg. 42

<sup>7</sup> Shaywitz, *Overcoming Dyslexia*, pg. 53

sound, and the “ttt” sound are all phonemes, that when put together form the word “cat.” In dyslexics, the ability to recognize a phoneme is challenged and less developed. Therefore they often misspeak, unable to differentiate between similar phonemes, saying something similar to that which they are trying to say. For example, a dyslexic child may mix up similar sounding words such as “lotion” and “ocean” when speaking. The same problem affects a dyslexic child’s ability to read. Yet, most dyslexic children struggle more frequently with the issue of reading and recognizing words due to the simple fact that our minds have never evolved to fit the purpose of learning how to read. According to Dr. Maryanne Wolf, the brain simply "rearranges older structures devoted to linguistic, perceptual and cognitive regions" in order to compensate for the act of reading. Speaking, on the other hand, is an act that the brain has evolved to naturally do effortlessly. We are born with a natural adherence for language. Everyone learns how to communicate in some way, yet we have to teach our brains how to read; reading was never something we were born with the ability to do. When a child with dyslexia looks at a word it is almost as if all the letters blur together, for they cannot easily recognize the phonemes or sounds that are associated with the letters. They then subsequently have trouble putting those sounds together to make up a word.<sup>8</sup>

Phonological abilities are not related to intelligence. In fact, they are quite independent of intelligence. Many children with superior intelligence develop dyslexia, while other children with much lower levels of intelligence catch on to reading with relative ease. It is phonemic awareness and not intelligence that best predicts ease of learning to read. Dyslexics may not be able to easily decode language, but this weakness is often surrounded by strengths such as reasoning, problem solving, comprehension, concept formation, critical thinking, general knowledge, and vocabulary. The phonologic weakness in dyslexics usually masks what are often excellent comprehension skills. Dyslexics learn best when they are taught the main ideas, or the “big picture” of theories, models, and ideas as the framework to help them remember specific details. This is why dyslexics tend to have problems with memorizing specific details, or long lists, when they are not associated with bigger ideas. Plain memorization and rapid word retrieval are particularly difficult for most dyslexics. Since they cannot simply memorize plain facts easily, dyslexics usually cope by deepening their understanding of the concept until they fully understand it at a fundamental level. This usually leads to a greater comprehension and perspective on such a topic versus someone who simply memorized the facts.

Although most people refer to dyslexia as a learning disability, the idea that dyslexia has a whole lot more advantages than disadvantages seems to be more prevalent among learning specialists today. Even though dyslexia is a condition that is a life-long struggle, some observe that dyslexic people seem unusually gifted in spatial and visual skills and fields. Art, computers, and design appear to be areas in which dyslexic people often excel. According to Dr. Sally Shaywitz, research supports the ideas that people with dyslexia are more creative. She speculates that they are using the areas of the brain that other people use for reading for their creative endeavors. It is evident that whether by way of “compensation” or simply because of their different neurological makeup, many dyslexic people have exceptional talents in other areas, including all forms of pattern-finding, art, and architecture. Shaywitz points out that many successful artists, sculptors, radiologists and entrepreneurs have a history of dyslexia. Some believe that since children and adults with dyslexia often grow up thinking "outside the box" in order to overcome their dyslexia, they are often more apt to have heightened creative skills.

During my visit to the Schenck School, I interviewed Steve Shaw, the art teacher there. I

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<sup>8</sup> Shaywitz, *Overcoming Dyslexia*, pg. 60-73

asked him if he had ever found any of his students to be especially visual or creative. In response he told me that although there are always one or two children in each class that appear to be extremely artistic, it is nothing out of the ordinary. Though he does believe that dyslexics are extremely creative by nature, this does not mean that all dyslexics are unusually artistic or visual. He then started to give me an example of just how creative his students were. One day after class, he was telling his students to clean up. One of the little girls then picked up some tape, turned it inside out, wrapped it around her feet, and then started to stomp around the classroom, picking up little bits of scrap paper on the floor. I then asked him why he thought so many dyslexic children end up working in creative or visual fields. His response summed up everything so well:

“One of the reasons I believe dyslexics make great artists is because they have learned to persevere. Learning to read and write is a huge challenge and a successful dyslexic learns to work harder and never give up. That willingness to keep trying, even after a string of failures, is what hurdles many dyslexics to succeed when others fail and as an artist, you have to know the value of perseverance. Who cares if the first painting didn’t work out the way you wanted (or the first 10!). Learn from your failures and keep at it until you are happy with what you’ve created.”

In other words, what sets dyslexics apart in the artistic world, or even in the professional world for that matter, is their ability to persevere. It is because dyslexic children have such a hard time learning how to read at such a young age that they learn the importance of perseverance. They have to be creative in order to deal with their dyslexia. Mr. Steve then went on to mention that his son, who was also dyslexic, grew to be extremely perceptive in order to overcome his dyslexia. Mr. Steve explained that his son “would start to pronounce the words while reading, then wait and study his teachers mouth, in order to look out for what letters the teacher were beginning to sound out” and then “make an educated guess about what the word might be based on the teacher’s coaching.” Mr. Steve said that reading was a guessing game to his son, yet his daughter, who did not have dyslexia, learned how to read with ease. She had no difficulty with it, so she did not learn as much from the experience.

During my interview with Mrs. Gena Calloway, she explained the same kind of similarity between all of her dyslexic students. She said that the dyslexic child is often more successful in life because they have to learn to be creative in order to learn how to read and study in different ways. She mentioned that the Orton Gillingham method, or the multisensory method of teaching that is used at the Schenck School, is often the most effective because it employs several different senses. She said that many dyslexics are often very intellectual, with Intelligence Quotients or IQs ranking unexpectedly high for the average person, yet their dyslexia holds them back when interpreting mechanical processes. This is one reason behind the success most dyslexics encounter in life after they have finished school. The CEO complex, or the rise of CEO’s and hedge fund managers who are dyslexic, can be explained by the simply matter of fact that since dyslexics have learned to think creatively in order to overcome their challenges with reading and writing in school, they often have great strengths in problem solving and the ability to persevere throughout their lives, making them continuously successful. When I asked her opinion on dyslexia being labeled a learning “disability” she responded with laughter, “dyslexia is definitely not a disability. If it was then why are so many dyslexics incredibly successful? I think dyslexia should be seen as a gift, rather than a disability. We all tend to think a little

differently, no brain is alike. Yet, it is those that continue to think outside the box that tend to always be the most successful.”

## Works Cited

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