

# New Font Helps Dyslexics Read

Dutch researcher designs distinct characters into “Dyslexie” to make it more difficult for dyslexics to rotate, swap and mirror letters and numbers

By Jennifer Nalewicki

After years of fumbling while reading the written word, Christian Boer, a graphic designer from the Netherlands, has developed a way to help tackle his dyslexia. The 30-year-old created a font called Dyslexie that has proved to decrease the number of errors made by dyslexics while reading. The font works by tweaking the appearance of certain letters of the alphabet that dyslexics commonly misconstrue, such as “d” and “b,” to make them more recognizable. This month Boer released the font in English for U.S. users to purchase online.

Boer began designing the font in 2008 while studying at the University of Twente in the Netherlands. It eventually became his graduate school project. In December 2010 a fellow student conducted an independent study on the font as part of a master’s thesis and discovered a significant reduction in reading errors by dyslexics when reading Dutch text typed in Dyslexie as opposed to the Arial font.

Boer’s research could likewise have a big impact on English speakers, given the prevalence of dyslexia when reading that language, as compared with Italian, whose words are pronounced more closely to how they are spelled. In the U.S. one out of every five persons is dyslexic, according to the National Institutes of Health.

Unlike other readers, dyslexics have a tendency to rotate, swap and mirror letters, making it difficult for them to comprehend what they’re reading. For years it was thought that dyslexia was a vision problem, but scientists now know that the condition stems from the brain. Scans of dyslexic brains show that there are structural differences—including in the thalamus, which serves an information way station—when compared with other brains. Some dyslexics even see letters as suspended 3-D animations that twist before their eyes. “I perceived letters floating like balloons in my head,” Boer says. As a means to finally “tie down” these balloons, Boer dedicated his time and graphic design skills to come up with Dyslexie.

Whereas the majority of typography designers want their fonts to be aesthetically pleasing (think of the flowing serifs of Lucida Calligraphy or the chiseled lines of Arial), Boer was more concerned with reading comprehension. He estimates that the time he spent designing his font added up to 15 hours per letter. He even recruited dyslexic college pals for feedback.

One of the first things he did was increase the boldness of letters at their bases, to make them appear weighted, causing readers' brains to know not to flip them upside down, as can occur with "p" and "d." Boer also enlarged the openings of various letters, such as "a" and "c," to make them more distinguishable from one another, and increased the length of "the tail" of other letters, like the "g" and y." He also put certain letters at a slant so that they would appear to be in italics, like the "j," a tactic to increase the brain's ability to distinguish it from the letter "i." Finally, he boldfaced capital letters and punctuation, and provided ample space between letters and words, to allow the brain more time to compute the letters and begin forming them into words and sentences.

Although Dyslexie is not the first font out there to help aid dyslexics, it has received much fanfare from sufferers thus far, including participants from the aforementioned University of Twente study, who commented that the font allowed them to read with improved accuracy, and for a longer time before tiring. Boer does not tout his font as a cure for dyslexia—there is none known—but he says, "it's like a wheelchair" that can help them. Given the different levels of the disability, it is difficult for one font to aid all dyslexics. He remains hopeful, however, that Dyslexie is a step in the right direction to help others who have suffered as he has all these years. In the meantime Boer has released Dyslexie for purchase in both English and Dutch on his Web site.

dyslexie font size 10

