

Our Brains Were Not Built For Reading: Why we confuse b, d, p, and q

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Why do we confuse b, d, p and q anyway? Most of us know that this is a normal part of learning to read. Anyone who has watched a preschooler learn to read has seen him or her wonder out loud if that is a b or d they are trying to read. We have also seen this same preschooler become a first grader and figure it out after awhile when they just 'get it.' And then there are those who continue to mix up these letters past 2nd grade, when it becomes a red flag. The interesting, and often not answered very well, question is: why? Stanislaus Dehaene, the author of [Reading in the Brain](#), does a great job of explaining in this in an chapter in [Dyslexia Across Languages](#). I am going to do my best to paraphrase because I think it is important to understand how the brain has adapted to fit reading in to a space that was originally meant for other skills.

OK, so we know the brain has adapted to allow us to read. We know from [Maryanne Wolf](#) and Stanislaus Dehaene that the written language was not created arbitrarily but it was created in a way that our brains could understand. Most letters are less than three lines. They were not made with more than that, because our brains could not process those configurations due to the fact that the reading part of our brains were originally wired to do things like recognize faces. Our brains were not built for reading, we had to fit reading into our brains. So back to the mixing up of b, d, p and q. It just so happens that our brain is naturally wired to be able to determine that a cow is a cow no matter how we see it. If we see it facing left, it's a cow. If we see it facing right, it's still a cow. So, when we introduce letters like and b and d to the preschooler, he has to UNLEARN this mirror image ability that is build in to the brain. When our preschoolers and kindergarteners are reading was for saw, they are just in the process of unlearning the mirror image. It has nothing to do with dyslexia and there is nothing to worry about until after the second grade when that unlearning should have happened.