# Eye Movements and Perceptual Span in Reading

Based on Rayner, K., 1998. "Eye movements in reading and information processing." *Psychological Bulletin*, 85(3), pp.618–66.

*When reading, the eyes do not move along a line of text in a smooth motion, but in a combination of extremely quick motions, called saccades, and stops, called fixations. It is only during fixations that we retrieve information. The saccades are extremely fast (500°/s) so that any vision during them would be perceived as a blur. This is however filtered out by the brain so that during saccades we are effectively blind. The text is thus taken in as a sequence of windows around each fixation. This is called the perceptual span. The perceptual span is asymmetric. In English it reaches 14–15 letters to the right of the fixation and 4–5 letters to the left. Words are only identifiable 7–8 letters to right. Further to the right we primarily get information on word length which is used to plan the next saccade. For languages that are read from left to right the asymmetry of the perceptual span is mirrored. In languages with denser writing systems it is narrower, making saccades shorter (2–3 characters in Chinese, 5–6 letters in Hebrew), but fixation times remain the same.*