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 the line 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, but this is filtered out by the brain. In effect the text is presented to the brain as a sequence of windows around each fixation, perceptual span. This window is asymmetric. In English it reaches 14–15 letters to the right of the fixation and 4–5 letters to the left, but words are only identifiable 7–8 letters to right. Further to the right we primarily get information on word length used to plan the next saccade. For languages that are read from left to right the asymmetry of the perceptual span is mirrored. It is in denser writing systems, for Chinese only 3–4 characters wide, makin saccades shorter.