Short sentences typically promote readability, and therefore inclusiveness [1].

Writers can optimize readability via visual search (finding their long sentences among their short ones) and numerosity judgments (comparing their sentence length to a desired word count).

Visual search can depend on scene syntax [2-5].

Does the scene syntax of a typical text page influence sentence length perception?

Participants, Stimuli & Task

88 Participants from Prolific ran on Pavlovia.

Stimuli: 2-second presentations of a standard, mirror reversed, or upside down text page.

Task: Participants judged whether the bolded sentence had fewer vs more than 17 words?

Hint: “17 words typically span ~1.5 lines of text.”

Results

Precision & Speed

Bias & Lapses

Strategy

Mischief!

Discussion

Naive participants perceived sentence length precisely and quickly.

Flipped text generated no loss in the speed and nearly no loss in the precision of sentence length perception (SLP), unlike the large inversion effects for face recognition [6], body-position recognition [7], and reading [8].

Participants achieved high SLP precision and speed by counting lines, not words (see “Mischief!”).

Lapse analyses showed that participants significantly underestimated the length of mirror reversed – but not upside down, nor standard – sentences. These underestimates provide novel evidence for a left-laterally anchored scene syntax in visual search [2-5], i.e., spatial mismatches between guided-search “heatmaps” [5] and mirror reversed text.

References


Stimuli & data available on the Open Science Framework: https://osf.io/3k5cn/