Table S1

LMM Model Summary for Analysis of Untransformed Response Time in Experiment 1A

Measure	Fixed effect	*b*	*SE*	*z/t*
RT (untransformed)	Intercept	**822.82**	**19.43**	**42.34**
	Central vs. 1° eccentricity	**-131.56**	**16.50**	**-7.97**
	1° vs. 2° eccentricity	**-21.47**	**10.20**	**-2.11**
	Visual field × Central vs. 1°	**-32.35**	**13.07**	**-2.48**
	Visual field × 1° vs. 2°	10.73	12.68	-0.85
	Word frequency (log HAL)	**-54.42**	**6.09**	**-8.93**
	Word length	**5.14**	**2.31**	**2.23**

Experiment 1A Supplementary Analyses

To examine the influence of word frequency and length on task performance, as well as their possible interactions with stimulus position, additional pre-registered analyses were conducted for both lexical decision accuracy and RT [see Table S2 for (G)LMM model summaries]. These analyses showed standard effects of word frequency and length on lexical processing: Participants were more accurate and made faster responses for higher versus lower frequency words and shorter versus longer words. However, interactions with stimulus position revealed differential impacts of these factors in central versus parafoveal vision.

On both accuracy and RT, the word-frequency effect was significantly larger for words presented at central fixation than at 1° eccentricity, and at 1° compared to 2° eccentricity. This pattern did not significantly differ between the LVF and RVF.

In contrast to the impact of eccentricity on the frequency effect, the word-length effect on both accuracy and RT was more pronounced outside of central vision. There was a larger length effect at 1° eccentricity compared to central fixation, but the effect size did not differ significantly between 1° and 2° eccentricity. The word-length effect on RT but not on accuracy was larger for words presented 1° to the left versus the right, but the Visual field × 1° vs. 2° × Length interaction was not significant.

Table S2

(G)LMM Model Summaries for Supplementary Analyses of Lexical Decision Accuracy and Response Time in Experiment 1A

Measure	Fixed effect	*b*	*SE*	*z/t*
Accuracy	Intercept	**0.70**	**0.09**	**7.91**
	Central vs. 1° eccentricity	**1.06**	**0.23**	**4.67**
	1° vs. 2° eccentricity	**0.26**	**0.12**	**2.07**
	Visual field × Central vs. 1°	**0.30**	**0.10**	**3.12**
	Visual field × 1° vs. 2°	-0.03	0.13	-0.24
	Word frequency (log HAL)	**0.82**	**0.13**	**6.42**
	Word length	**-0.09**	**0.04**	**-2.46**
	Central vs. 1° × Frequency	**0.72**	**0.26**	**2.72**
	1° vs. 2°× Frequency	**0.44**	**0.14**	**3.07**
	Visual field × Central vs. 1° × Frequency	0.16	0.11	1.42
	Visual field × 1° vs. 2° × Frequency	-0.12	0.14	-0.85
	Central vs. 1° × Length	**0.31**	**0.10**	**3.09**
	1° vs. 2° × Length	0.01	0.05	0.17
	Visual field × Central vs. 1° × Length	0.05	0.04	1.14
	Visual field × 1° vs. 2° × Length	0.04	0.05	0.74
RT (log)	Intercept	**6.67**	**0.02**	**282.48**
	Central vs. 1° eccentricity	**-0.13**	**0.02**	**-5.61**
	1° vs. 2° eccentricity	0.01	0.02	0.78
	Visual field × Central vs. 1°	0.00	0.01	-0.13
	Visual field × 1° vs. 2°	-0.01	0.02	-0.50
	Word frequency (log HAL)	**-0.06**	**0.01**	**-8.48**
	Word length	**0.01**	**0.00**	**3.11**
	Central vs. 1° × Frequency	**-0.03**	**0.01**	**-2.05**
	1° vs. 2°× Frequency	**-0.04**	**0.01**	**-2.79**
	Visual field × Central vs. 1° × Frequency	-0.01	0.01	-1.18
	Visual field × 1° vs. 2° × Frequency	0.00	0.01	-0.16
	Central vs. 1° × Length	**-0.02**	**0.01**	**-2.94**
	1° vs. 2° × Length	0.00	0.01	-0.81
	Visual field × Central vs. 1° × Length	**-0.01**	**0.00**	**-2.16**
	Visual field × 1° vs. 2° × Length	0.00	0.00	-0.04

Table S3

LMM Model Summary for Analysis of Untransformed Response Time in Experiment 1B

Measure	Fixed effect	*b*	*SE*	*z/t*
RT (untransformed)	Intercept	**849.51**	**23.61**	**35.98**
	Central vs. 1° eccentricity	**56.84**	**13.08**	**4.35**
	1° vs. 2° eccentricity	**32.79**	**9.65**	**3.40**
	2° vs. 3° eccentricity	**55.67**	**10.29**	**5.41**
	3° vs. 4° eccentricity	10.56	11.05	0.96
	4° vs. 5° eccentricity	22.27	15.40	1.45
	Word frequency (log HAL)	**-49.78**	**6.34**	**-7.85**
	Word length	-2.83	2.41	-1.17

Experiment 1B Supplementary Analyses

Pre-registered supplementary analyses tested interactions of stimulus position with word frequency and length [see Table S4 for (G)LMM model summaries]. There was a significant overall effect of word frequency on accuracy and RT. As in Experiment 1A, the word frequency effect was stronger at central fixation than 1° eccentricity on both accuracy and RT. The size of the frequency effect did not differ significantly between 1° and 2° eccentricity on either measure, but the RT effect was stronger at 2° than 3° eccentricity. The word frequency effect did not differ significantly between 3° and 5° eccentricity on accuracy or RT.

Unlike in Experiment 1A, word length did not significantly affect accuracy or RT or yield significant interactions with any of the stimulus eccentricity contrasts.

Table S4

(G)LMM Model Summaries for Supplementary Analyses of Lexical Decision Accuracy and Response Time in Experiment 1B

Measure	Fixed effect	*b*	*SE*	*z/t*
Accuracy	Intercept	**0.36**	**0.13**	**2.68**
	Central vs. 1° eccentricity	-0.10	0.33	-0.29
	1° vs. 2° eccentricity	**-0.60**	**0.22**	**-2.65**
	2° vs. 3° eccentricity	**-0.60**	**0.19**	**-3.15**
	3° vs. 4° eccentricity	-0.08	0.18	-0.43
	4° vs. 5° eccentricity	-0.16	0.18	-0.89
	Word frequency (log HAL)	**0.88**	**0.10**	**8.84**
	Word length	-0.02	0.04	-0.59
	Central vs. 1° × Frequency	**-1.17**	**0.36**	**-3.26**
	1° vs. 2° × Frequency	-0.44	0.23	-1.93
	2° vs. 3° × Frequency	0.00	0.18	0.02
	3° vs. 4° × Frequency	-0.28	0.17	-1.63
	4° vs. 5° × Frequency	-0.11	0.17	-0.67
	Central vs. 1° × Length	-0.23	0.13	-1.76
	1° vs. 2° × Length	-0.07	0.09	-0.77
	2° vs. 3° × Length	0.08	0.07	1.17
	3° vs. 4° × Length	-0.09	0.07	-1.41
	4° vs. 5° × Length	-0.03	0.07	-0.46
RT (log)	Intercept	**6.68**	**0.04**	**179.18**
	Central vs. 1° eccentricity	0.02	0.03	0.63
	1° vs. 2° eccentricity	0.04	0.02	1.83
	2° vs. 3° eccentricity	0.01	0.03	0.50
	3° vs. 4° eccentricity	0.03	0.03	0.89
	4° vs. 5° eccentricity	0.01	0.03	0.33
	Word frequency (log HAL)	**-0.05**	**0.01**	**-5.95**
	Word length	0.00	0.00	-0.36
	Central vs. 1° × Frequency	**0.05**	**0.02**	**2.50**
	1° vs. 2° × Frequency	-0.01	0.02	-0.26
	2° vs. 3° × Frequency	**0.05**	**0.02**	**2.37**
	3° vs. 4° × Frequency	-0.02	0.03	-0.75
	4° vs. 5° × Frequency	0.01	0.03	0.36
	Central vs. 1° × Length	0.00	0.01	-0.21
	1° vs. 2° × Length	0.01	0.01	0.65
	2° vs. 3° × Length	0.00	0.01	0.42
	3° vs. 4° × Length	0.00	0.01	0.08
	4° vs. 5° × Length	0.01	0.01	0.65

Table S5

LMM Model Summary for Analysis of Untransformed Response Time in Experiment 2A

Measure	Fixed effect	*b*	*SE*	*z/t*
RT (untransformed)	Intercept	**732.97**	**19.17**	**38.24**
	Central vs. 1° eccentricity	**-140.46**	**16.30**	**-8.62**
	1° vs. 2° eccentricity	**-89.26**	**6.11**	**-14.62**
	Visual field × Central vs. 1°	**-37.45**	**5.70**	**-6.57**
	Visual field × 1° vs. 2°	-8.58	9.72	-0.88
	Word frequency (log HAL)	**-14.33**	**2.07**	**-6.94**
	Word length	**16.20**	**2.02**	**8.03**

Experiment 2A Supplementary Analyses

Additional pre-registered analyses were conducted to examine interactions between stimulus position and word frequency and length [see Table S6 for (G)LMM model summaries]. There were standard effects of frequency and length on naming accuracy and RT. Participants' responses were both more accurate and faster for higher versus lower frequency words and for shorter versus longer words.

In contrast to Experiment 1A, the word-frequency effect was stronger at 1° than at central fixation on RT but not accuracy. The frequency effect did not differ significantly between 1° and 2° eccentricity on either measure, or between the LVF and RVF. Word length significantly interacted with the Central vs. 1° contrast on both accuracy and RT because the word-length effect was stronger in the parafovea than at central fixation. On RT, but not accuracy, this effect was qualified by a significant Visual field × Central vs. 1° × Length interaction because the impact of word length in the parafovea was stronger in the LVF than the RVF. Word length did not significantly modulate the difference between 1° and 2° eccentricity on either measure, and the Visual field × 1° vs. 2° × Length interaction was also not significant.

Table S6

(G)LMM Model Summaries for Supplementary Analyses of Naming Accuracy and Response Time in Experiment 2A

Measure	Fixed effect	*b*	*SE*	*z/t*
Accuracy	Intercept	**2.19**	**0.11**	**20.22**
	Central vs. 1° eccentricity	**2.77**	**0.24**	**11.65**
	1° vs. 2° eccentricity	**1.59**	**0.07**	**21.39**
	Visual field × Central vs. 1°	**0.70**	**0.08**	**8.78**
	Visual field × 1° vs. 2°	**0.15**	**0.07**	**2.13**
	Word frequency (log HAL)	**0.32**	**0.07**	**4.66**
	Word length	**-0.26**	**0.07**	**-3.65**
	Central vs. 1° × Frequency	0.12	0.19	0.62
	1° vs. 2°× Frequency	0.03	0.06	0.58
	Visual field × Central vs. 1° × Frequency	-0.07	0.05	-1.50
	Visual field × 1° vs. 2° × Frequency	0.02	0.06	0.31
	Central vs. 1° × Length	**0.51**	**0.21**	**2.47**
	1° vs. 2° × Length	-0.08	0.06	-1.37
	Visual field × Central vs. 1° × Length	0.09	0.05	1.76
	Visual field × 1° vs. 2° × Length	0.05	0.06	0.77
RT (log)	Intercept	**6.56**	**0.02**	**276.50**
	Central vs. 1° eccentricity	**-0.20**	**0.00**	**-45.36**
	1° vs. 2° eccentricity	**-0.11**	**0.01**	**-21.97**
	Visual field × Central vs. 1°	**-0.05**	**0.00**	**-19.21**
	Visual field × 1° vs. 2°	-0.01	0.00	-1.43
	Word frequency (log HAL)	**-0.02**	**0.00**	**-7.48**
	Word length	**0.03**	**0.00**	**9.83**
	Central vs. 1° × Frequency	**0.01**	**0.00**	**3.08**
	1° vs. 2°× Frequency	0.00	0.01	0.76
	Visual field × Central vs. 1° × Frequency	0.00	0.00	-0.56
	Visual field × 1° vs. 2° × Frequency	0.00	0.00	-0.78
	Central vs. 1° × Length	**-0.02**	**0.00**	**-4.49**
	1° vs. 2° × Length	0.00	0.01	-0.30
	Visual field × Central vs. 1° × Length	**-0.01**	**0.00**	**-2.89**
	Visual field × 1° vs. 2° × Length	0.00	0.00	-0.03

Table S7

LMM Model Summary for Analysis of Untransformed Response Time in Experiment 2B

Measure	Fixed effect	b	SE	z/t
RT (untransformed)	Intercept	**808.19**	**30.19**	**26.77**
	Central vs. 1° eccentricity	**73.88**	**13.37**	**5.53**
	1° vs. 2° eccentricity	**95.55**	**18.85**	**5.07**
	2° vs. 3° eccentricity	**71.15**	**11.18**	**6.37**
	3° vs. 4° eccentricity	**85.10**	**24.50**	**3.47**
	4° vs. 5° eccentricity	40.46	35.81	1.13
	Word frequency (log HAL)	**-16.13**	**3.79**	**-4.25**
	Word length	**19.22**	**3.74**	**5.13**

Experiment 2B Supplementary Analyses

Pre-registered analyses to examine interactions involving word frequency and length are summarized in Table S8. On accuracy and RT, higher frequency words were named significantly more accurately and rapidly than lower frequency words. Shorter words were named significantly more rapidly than longer words, but length did not significantly affect naming accuracy.

The word-frequency effect did not differ significantly by eccentricity on accuracy. On RT, the effect of word frequency did not differ significantly between central fixation and 4°, but there was a significantly larger frequency effect at 4° than at 5° eccentricity.

On accuracy, there was a significantly larger word-length effect (more accurate naming responses for shorter vs. longer words) at 2° than at 3° eccentricity. No other interactions involving word length were significant on accuracy or RT.

Table S8

(G)LMM Model Summaries for Supplementary Analyses of Naming Accuracy and Response Time in Experiment 2B

Measure	Fixed effect	*b*	*SE*	*z/t*
Accuracy	Intercept	**1.57**	**0.25**	**6.41**
	Central vs. 1° eccentricity	**-2.74**	**0.67**	**-4.07**
	1° vs. 2° eccentricity	**-1.43**	**0.21**	**-6.91**
	2° vs. 3° eccentricity	**-1.24**	**0.15**	**-8.06**
	3° vs. 4° eccentricity	**-1.01**	**0.15**	**-6.82**
	4° vs. 5° eccentricity	**-0.67**	**0.18**	**-3.82**
	Word frequency (log HAL)	**0.34**	**0.11**	**3.21**
	Word length	-0.10	0.11	-0.95
	Central vs. 1° × Frequency	-0.56	0.52	-1.08
	1° vs. 2° × Frequency	0.18	0.18	1.00
	2° vs. 3° × Frequency	-0.04	0.14	-0.30
	3° vs. 4° × Frequency	0.03	0.13	0.20
	4° vs. 5° × Frequency	-0.16	0.13	-1.21
	Central vs. 1° × Length	-0.36	0.54	-0.66
	1° vs. 2° × Length	-0.08	0.19	-0.44
	2° vs. 3° × Length	0.15	0.14	1.12
	3° vs. 4° × Length	0.07	0.12	0.57
	4° vs. 5° × Length	-0.04	0.13	-0.30
RT (log)	Intercept	**6.65**	**0.03**	**190.17**
	Central vs. 1° eccentricity	**0.11**	**0.02**	**5.95**
	1° vs. 2° eccentricity	**0.12**	**0.02**	**5.36**
	2° vs. 3° eccentricity	**0.09**	**0.01**	**6.45**
	3° vs. 4° eccentricity	**0.09**	**0.02**	**4.02**
	4° vs. 5° eccentricity	0.04	0.03	1.41
	Word frequency (log HAL)	**-0.02**	**0.01**	**-3.49**
	Word length	**0.03**	**0.01**	**5.08**
	Central vs. 1° × Frequency	-0.01	0.01	-0.89
	1° vs. 2° × Frequency	-0.01	0.01	-0.69
	2° vs. 3° × Frequency	0.00	0.01	-0.32
	3° vs. 4° × Frequency	0.00	0.01	0.18
	4° vs. 5° × Frequency	0.03	0.02	1.74
	Central vs. 1° × Length	**0.02**	**0.01**	**2.08**
	1° vs. 2° × Length	0.00	0.01	-0.06
	2° vs. 3° × Length	-0.01	0.01	-0.54
	3° vs. 4° × Length	-0.01	0.01	-0.75
	4° vs. 5° × Length	0.01	0.02	0.43

Table S9

(G)LMM Model Summaries for Analyses of Lexical Decision Accuracy and Response Time in Experiments 3A, 3B, & 3C

Measure	Fixed effect	Experiment 3A			Experiment 3B			Experiment 3C		
		b	*SE*	*z/t*	*b*	*SE*	*z/t*	*b*	*SE*	*z/t*
Accuracy	Intercept	**1.04**	**0.12**	**9.01**	**1.64**	**0.07**	**22.68**	**1.86**	**0.06**	**32.33**
	Stimulus duration	**0.79**	**0.08**	**9.58**	**1.12**	**0.08**	**14.36**	**1.26**	**0.07**	**18.80**
	Word frequency (log HAL)	**0.85**	**0.09**	**9.14**	**0.19**	**0.03**	**6.13**	**0.16**	**0.03**	**5.60**
	Word length	-0.05	0.04	-1.26	0.00	0.03	0.11	**-0.11**	**0.03**	**-3.91**
	300 ms: Central vs. 1° eccentricity	**0.41**	**0.10**	**3.95**	**0.34**	**0.10**	**3.55**	**0.44**	**0.08**	**5.22**
	300 ms: 1° vs. 2° eccentricity	0.06	0.07	0.81	0.12	0.07	1.60	**0.28**	**0.06**	**4.27**
	300 ms: Visual field × Central vs. 1°	0.10	0.06	1.63	0.06	0.06	0.96	0.08	0.05	1.45
	300 ms: Visual field × 1° vs. 2°	0.13	0.08	1.73	0.11	0.07	1.66	0.10	0.06	1.78
	100 ms: Central vs. 1° eccentricity	**0.78**	**0.09**	**8.46**	**0.94**	**0.08**	**11.28**	**0.98**	**0.07**	**14.37**
	100 ms: 1° vs. 2° eccentricity	**0.47**	**0.06**	**8.48**	**0.71**	**0.06**	**12.03**	**0.62**	**0.05**	**12.29**
	100 ms: Visual field × Central vs. 1°	**0.23**	**0.05**	**4.39**	**0.31**	**0.05**	**6.04**	**0.26**	**0.04**	**5.89**
	100 ms: Visual field × 1° vs. 2°	**0.13**	**0.07**	**1.99**	-0.01	0.05	-0.20	0.07	0.04	1.71
RT (log)	Intercept	**6.58**	**0.01**	**451.19**	**6.61**	**0.01**	**452.34**	**6.57**	**0.01**	**707.33**
	Stimulus duration	**0.02**	**0.01**	**2.02**	**0.04**	**0.01**	**3.69**	**0.05**	**0.01**	**5.65**
	Word frequency (log HAL)	**-0.08**	**0.01**	**-11.33**	**-0.02**	**0.00**	**-9.51**	**-0.02**	**0.00**	**-10.58**
	Word length	0.00	0.00	1.42	0.00	0.00	-0.99	0.00	0.00	1.38
	300 ms: Central vs. 1° eccentricity	**-0.05**	**0.01**	**-8.41**	**-0.08**	**0.01**	**-13.09**	**-0.06**	**0.00**	**-12.83**
	300 ms: 1° vs. 2° eccentricity	**-0.02**	**0.00**	**-4.63**	**-0.04**	**0.01**	**-6.78**	**-0.04**	**0.00**	**-10.61**
	300 ms: Visual field × Central vs. 1°	**-0.02**	**0.00**	**-4.03**	**-0.02**	**0.00**	**-3.57**	**-0.01**	**0.00**	**-1.98**
	300 ms: Visual field × 1° vs. 2°	0.00	0.00	-0.74	0.00	0.01	-0.33	0.00	0.00	-0.59
	100 ms: Central vs. 1° eccentricity	**-0.07**	**0.01**	**-10.37**	**-0.07**	**0.01**	**-11.26**	**-0.07**	**0.01**	**-13.62**
	100 ms: 1° vs. 2° eccentricity	**-0.04**	**0.01**	**-6.65**	**-0.04**	**0.00**	**-8.45**	**-0.04**	**0.00**	**-10.32**
	100 ms: Visual field × Central vs. 1°	**-0.02**	**0.00**	**-3.36**	**-0.01**	**0.00**	**-2.34**	**-0.01**	**0.00**	**-2.64**
	100 ms: Visual field × 1° vs. 2°	-0.01	0.01	-1.74	0.00	0.01	0.44	0.00	0.00	-0.10

Additional E-Z Reader Simulations

        This additional simulation is related to the effects of word frequency and length observed in our lexical-decision experiments, and more precisely, the patterns of interaction observed between these two variables and eccentricity. In Experiments 1A and 1B, the effect of word frequency was larger in the fovea than parafovea. In Experiment 1A, the effect of word length was more pronounced in the parafovea than fovea. It is not immediately obvious that E-Z Reader or the variant used to simulate Experiment 1A can explain these interactions. Indeed, if one examines Figure 4D, one might reasonably predict the opposite kind of interaction between word frequency and eccentricity in that the size of the word-frequency effects (i.e., the differences between the solid and dashed dark gray lines) actually increase with eccentricity. This conclusion would be premature, however, because it fails to take into consideration other assumptions of the model—most notably, the response deadline represented by the parameter θ_R.

        As Figure 13 shows, responses to stimuli displayed near the center of vision are more likely to be based on information obtained from the stimulus. This situation is depicted by example 1 in the figure. As shown, the response times in such trials will equal to the sum $V + t(L_1) + t(L_2) + DMT$, with the durations of $t(L_1)$ and $t(L_2)$ being modulated by a word's frequency (see Equations 1 and 3). The predicted response latencies on such trials should therefore be modulated by word frequency. And this modulation should be more pronounced than in the situation depicted by the second example in Figure 13, where the rate of lexical processing is slow enough (e.g., due to eccentricity) to exceed the response deadline, θ_R. In this second example, the predicted response latencies will equal the sum $\theta_R + DMT$, and thus *not* be modulated by a word's frequency. Thus, as eccentricity increases, the proportion of responses exceeding the deadline should increase, attenuating any effect of word frequency.

        To test this simple but perhaps non-intuitive account, Simulation 4A was completed. This simulation was of lexical decision at three eccentricities (0, 1, and 2° eccentricity) using the assumptions of Simulation 1, Experiment 1A (i.e., $DMT = 425$ and $\theta_R = 382$). Word length was not manipulated but was instead allowed to vary as per our stimuli (i.e., 4-6 letters), but word frequency was manipulated using the mean values of two groups based on a median split of the words' ranked frequency values: *low frequency* (*LF*) = 2,175 versus *high frequency* (*HF*) = 48,378. The results are presented in Table S10. As indicated, the size of the simulated word-frequency effect decreased with eccentricity, going from 40 ms at 0° down to 17 ms at 2°. And although response accuracy at 0° is at ceiling and thus does not

vary between conditions, the effect of frequency on response accuracy does decline very slightly going from 1° (= -0.096) to 2° (= -0.090) eccentricity. (Because the influence of eccentricity is completely symmetrical without the *IHT* parameter, only the three eccentricities are reported.)

Table S10

Simulated interactions between eccentricity and word frequency (Simulation 4A) and word length (Simulations 4B).

Simulation		Eccentricity					
		0°		1°		2°	
		RT	PrC	RT	PrC	RT	PrC
4A: Word Frequency	LF = 2,175	733	0.978	785	0.741	802	0.567
	HF = 48,378	693	0.999	756	0.936	785	0.751
	Difference	40	-0.021	29	-0.195	17	-0.184
4B: Word Length	Long = 6 Letters	725	0.975	781	0.956	800	0.587
	Short = 4 Letters	716	0.985	766	0.852	790	0.677
	Difference	9	-0.010	15	-0.096	10	-0.090

Finally, what about the interaction between word length and eccentricity? This, too, is at least partially explained by the new eccentricity assumptions of E-Z Reader. Because the effect of eccentricity is modulated by an interaction between (1) the mean absolute deviation between each of a word's letters and the fovea and (2) the lateral interference that is generated from spatially adjacent letters (see Equations 4-6), the word-length effect increases with eccentricity. This can be seen, for example, in Figure 12B, where the divergence between the processing rates for 3- versus 5-letter words increases with eccentricity. The question then becomes: Will such small differences scale to produce meaningful effects of word length that increase with eccentricity?

This question was answered by completing another simulation. The logic of this simulation was identical to Simulation 4A, but with frequency allowed to vary as per our stimuli and the target word lengths being manipulated: *long* = 6 letters versus *short* = 4 letters, corresponding to the long and short stimuli used in our experiments. The results of Simulation 4B are shown in Table S10. As shown, the results are broadly consistent with the interaction observed in Experiment 1A, with word length generating larger effects in both the response latencies and accuracies at 1° (= 15 ms and -0.096, respectively) than at 0° (= 9 ms and -0.010).

Although these effect sizes are small, it is worth emphasizing again that E-Z Reader's assumptions about eccentricity were not designed to provide an account of the interactions between word frequency, word length, and eccentricity that was observed in Experiment 1A. It is also important to note that the analyses involving interactions between frequency, length, and eccentricity were exploratory and that the effects were not consistently observed across all of our experiments, indicating that further research is necessary to confirm these findings.