

P L f W N+1 M P E Eff Q f  
 W N+2 C R

P. M. Y. f P. M.

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B. N. U.

X  $\overset{f}{\rightarrow}$  Z

## Experimental Evidence for and Against Processing of Word N + 2

C. 24-25, 14476 P. Q. S. 24-25, 14476 P. Q. R.  
K. L. D. f P. Q. U. f P. Q. K. L. b. Q.  
S. 24-25, 14476 P. Q. G. E. m. @. S. 24-25, 14476 P. Q.

(Ranft, 1975). I f w N + 1 (Ranft, 1975; N + 2) w f w N  
(Ranft, 1975). I f w Q f w Q f w Q f w Q  
f w w w w w w w w w w w w w w w w w w  
w w w w w w w w w w w w w w w w w w w  
w w w w w w w w w w w w w w w w w w w  
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S S S S S S S S S S S S S S S S S S S  
f f f f f f f f f f f f f f f f f f f  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
(PB), PB  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
N + 1 f N + 1 f N + 1 f N + 1 f N + 1 f  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
f w f w f w f w f w f w f w f w f w  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q Q  
Ranft, 1998 f f f f f f f f f f f f f f  
f w f w f w f w f w f w f w f w f w  
C C C C C C C C C C C C C C C C C C C  
b Y , R Q , S , & K , 2009;  
Y , W , X , & R , 2009; Y , R Q , T , H , &  
T , 2009);  
I Q I Q I Q I Q I Q I Q I Q I Q I Q I Q  
PB f w N + 1, PB f w N + 2, R  
(2007); A (2008) f f f f f f f f f f  
N



$T_f = 40 \text{ w}$ ,  $\omega = 2.8 \text{ GH}$ ,  $A = 1$ ,  $w = 7 \mu$ ,  $l = 25 \mu$ ,  $P_4 = 0.9$ ,  $W_{XP} = 80$

## Procedure

S b Q w b w f b  
 T w f Q u f Q u f  
 f b Q u f Q u f A w  
 F 1, b f b b f b  
 w N w N + 1, f f w  
 f w N + 2. D Q Q  
 f w w b b w w O 26  
 Q w f w b b S b Q Q  
 Q w 91% f (= 7%). F  
 f f f f f f f f  
 Q Q A b Q f f w  
 Q b w f w w  
 f A b Q 131 Q (= 96)  
 f 35 f A b Q w  
 f f f f f w w  
 3) b Q f f w w

## Data Analysis

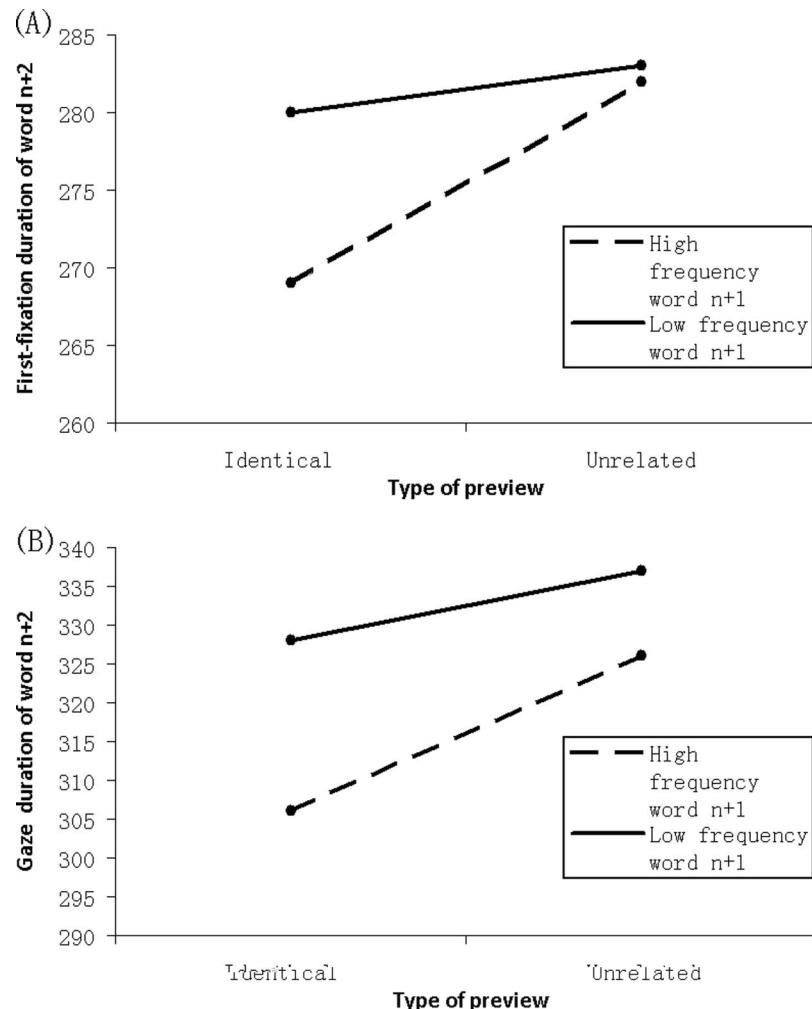
## Results

## Word N + 2 Region-Preview Benefits

Table 1

		T	f	P	w
F	E	O	S	M	C
(a) W <sup>+</sup> N + 2					
FFD-HF	269 (49)	284 (51)	278 (45)	282 (43)	
FFD-LF	280 (46)	285 (53)	288 (49)	283 (50)	
GD-HF	306 (63)	329 (66)	321 (70)	326 (60)	
GD-LF	328 (77)	335 (82)	333 (75)	337 (75)	
S -HF	.13 (.14)	.11 (.12)	.11 (.13)	.10 (.12)	
S -LF	.13 (.13)	.14 (.12)	.14 (.14)	.12 (.14)	
(b) W <sup>+</sup> N + 1					
FFD-HF	246 (48)	261 (59)	252 (55)	260 (83)	
FFD-LF	290 (62)	297 (61)	296 (66)	301 (63)	
GD-HF	249 (53)	263 (60)	253 (55)	264 (86)	
GD-LF	293 (63)	303 (62)	300 (66)	307 (63)	
S -HF	.58 (.18)	.63 (.17)	.61 (.17)	.60 (.16)	
S -LF	.50 (.18)	.50 (.17)	.43 (.18)	.46 (.19)	
(c) W <sup>+</sup> N					
FFD-HF	263 (46)	257 (42)	258 (39)	261 (46)	
FFD-LF	264 (45)	261 (42)	263 (43)	268 (44)	
GD-HF	289 (71)	287 (60)	291 (58)	288 (60)	
GD-LF	303 (71)	295 (64)	305 (69)	306 (75)	
S -HF	.18 (.18)	.14 (.14)	.15 (.14)	.14 (.14)	
S -LF	.14 (.13)	.13 (.13)	.15 (.15)	.13 (.12)	

$$HE = \frac{f}{w} \cdot Q \cdot w \cdot x; LH = \frac{w-f}{w} \cdot Q \cdot w \cdot x \cdot M$$



$$2. \quad Df^N = f^{N+1} - f^N \quad N+1 \quad Df^N = f^{N+1} - f^N \quad N+$$

T 2

	F	Q	S	C
(A)				
FFD-HF	276 (39)	302 (43)	289 (30)	287 (29)
FFD-LF	284 (33)	296 (43)	307 (54)	289 (33)
GD-HF	326 (61)	347 (68)	353 (85)	342 (57)
GD-LF	332 (69)	363 (62)	365 (81)	353 (66)
(B)				
FFD-HF	264 (41)	276 (46)	274 (42)	276 (40)
FFD-LF	270 (38)	279 (42)	281 (47)	272 (42)
GD-HF	301 (59)	325 (69)	322 (75)	323 (59)
GD-LF	320 (72)	334 (76)	332 (75)	328 (75)
(C)				
FFD-HF	265 (41)	278 (45)	274 (41)	277 (39)
FFD-LF	273 (40)	278 (43)	281 (46)	276 (42)
GD-HF	302 (57)	323 (63)	316 (68)	320 (57)
GD-LF	321 (69)	328 (73)	325 (71)	329 (71)

HE =  $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot Q \cdot w \cdot x$ ; LH =  $\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot Q \cdot w \cdot x \cdot M$

$f$  ( = .035,  $E$  = .013,  $\alpha$  = 2.7,  $\beta$  = .046,  $E$  = .019,  $\alpha$  = 2.4,  $f$  FFD GD,  $\beta$  )  
 $f$  PB w N + 1 f  $\beta$  ( = .019,  $E$  = .008,  $\alpha$  = 2.5,  $\beta$  = .019,  $E$  = .011,  $\alpha$  = 1.8,  $f$  FFD GD,  $\beta$  ).

## Word N + 1 Region

**Frequency effect.** The mean frequency of FFD, GD, and D was  $N + 1$  (54%).

3105 b T f f Q f f Q 3 f -  
 FFD (39  $\mu$ ;  $t = .037$ ,  $E = .007$ ,  $F = 5.3$ ),  
 GD (41  $\mu$ ;  $t = .037$ ,  $E = .008$ ,  $F = 4.5$ ),  
 $t = .017$ ,  $E = .004$ ,  $F = 4.2$ ,  $< .01$ ). T f f Q

**Relatedness effect.** While  $b_1$  was significant ( $t = 2.1$ ,  $p < .05$ ),  $b_2$  was not ( $t = 1.9$ ,  $p > .05$ ).

**Preview benefit.** O w<sup>+</sup> N + 1, FFD (13) ; = .024, E = .014, = 1.8) GD f Q (14) ; = .029, E = .014, = 2.1), f Q f Q w<sup>+</sup> N + 2, w. T f Q f Q w f Q K (2007).

## Word N Region-Parafoveal-on-Foveal Effects

**Fixation durations.** W N w f Q -  
 T ( ) f FFD GD 5752  
 b w N w T 1Q  
 T w f w N + 1-f Q f FFD (5  
 $\mu$ ; = .006, E = .002, = 2.9) GD (14  $\mu$ ; = .011,  
 E = .004, = 2.6) w N H w f w  
 Q w w w f (  $\mu$ ; < 1.7).

## Discussion

## Preview Benefit for Word N + 2

W f w Q f w b f w N + 2.  
P f w C f w Q f w N + 1. S f w C f w  
N + 1. S f w C f w GD (L  
2002; T 2004; Y 2009), w PB f  
H w f  
f w N + 2. A f C  
f w w w w w  
T f w PB f w N + 2 w  
Q f w f Q f Q f w f  
R f w Q PB f w N + 2  
f w f (R 2007; SAS E-Z  
R 1998; H w f f f f f f  
Q f w f f f f f f f  
Q f w f f f f f f f  
w N. I f w N + 2 w  
PB f w N + 2 f f f f f f f  
SAS f Q w N + 1 f w  
w N + 2 PB f f f f f GAG  
SWIFT f f f f f

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