P L W N+1 M , P E W N+2 C R

M Y
P U U P

R K
U P

H S , J P
B N U

X Z
P U

P w (PB) w w (. ., w N + 2)
- - . T
C ,
N + 2-w w w w- - , w N + 1. T w ( )
PB w N + 2 w ( ) w w N + 1 w (. .,
w , w N + 1 PB w N + 2), ( ) - -
, w N + 1 , w N. W ,
w ,
, C , w - -

T w . I
- ,
, w (R & B , 1979). S ,
w ,
3 4 14 15
, (M C & R ,
1975); - , w , 10 11
(M C & R , 1975) 7 8
(R , W , P , & B , 1982) .
D C , , 1
2 3 ,
C (T & M C , 1995; I & L , 1998). I -
, w w
N, w (. .,
w N + 2) , . M ,
, w ,
. (H & F , 1990). H w ,

, , w N + 1 , C .
R N + 2 w R , J , B w
(2007) w w w w
, -
(SAS)
E-Z R (R , P , F , & R , 1998; E
& K , 2001, SAS , R , L, &
P , 2007 , C) ,
, w
w . T ,
w N + 2
w w N + 1
w N + 2 w w
N. I , w N + 1
- w N + 2. O , ,
(GAG) , SWIFT (E , N -
, R , & K , 2005) G (R & R , 2006)
, , . A
, GAG w -
w N + 1 w
, . F , , w , -
: N N + 2 w w
SAS N + 2 w
w GAG (. ., A , S , Y , K . .,
& R , 2008; D ,). B
, w
N + 2 .

Experimental Evidence for and Against Processing of Word N + 2

E -
w ,

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

C . . . . T , w . . . .
C . . . . w N + 2.

Method

Subjects

S - , [1] , ... B . . N . U . . w . .
C , w w
C . . . . , w w .

Material

Word N + 2. F - . . . . w
. . . . w- . . . . w N + 2 . . . . F
, ... w . . . . -
, . . . / . . . . T
w . . . . w , ... w . . . w . . . .
, ... [. ., , . . . ; . . . : 5.0, 4.8,
5.5 4.9, ... , ...
> .1] , (B L , I P ,
1986) [. . . , . . . : 1150, 1154, 1164, 1163, -
, ... ; $(3, 188) < 1$]. I
. . . (= 18 ,) . . . (= 16)
w . . . . w w
. E . . . w 4.1
, ... 5- . . . . w w
3.8 . . . . 1.7.

Word N + 1. T . . . - . . . . 32 w- ,
. . . . w w . . . . . . N + 1 , .
. . . . , ... w . . . .
. . . . w , . . . 48 w .
T w , . . w . . . . . , . [. . . , . . . :
38657 1451, . . . w . . w N + 1, -
. . . . ; $(1, 94) = 550.6$, $< .001$] , ...
[. . . : 7.5 7.1, . . . w , . . . w N +
1, ... ; $(1, 94) = 1.8$, $> .1$].

Sentence frames. T w . . w . . . , . . .
. . . . N + 1 N + 2 w . . . . S
. . . w . . w 20 29
(M = 23.9, = 2.4). T . . . . w . . . . .
. . . . w . T . . . .
. . . . w . . . .
. . . w N + 1. W . . . . . . , . . . (w N) -
w . . . w . . . w- . . . . E . . . . w . .
, . . A . . . . w F . 1.

Apparatus

E . . . w . . . . w . . . E L II . . .
(500 H). S . . . . w

Low parafoveal load, identical preview
他建议当地政府应注意的户籍管理方面的问题已经得到解决
*

Low parafoveal load, orthographically related preview
他建议当地政府应注意的广籍管理方面的问题已经得到解决
*

Low parafoveal load, semantically related preview
他建议当地政府应注意的门籍管理方面的问题已经得到解决
*

Low parafoveal load, unrelated preview
他建议当地政府应注意的丹籍管理方面的问题已经得到解决
*

Low parafoveal load, target
他建议当地政府应注意的户籍管理方面的问题已经得到解决
*

N   N+1   N+2

High parafoveal load, identical preview
他建议当地政府应注意非户籍学生接受义务教育的权利
*

High parafoveal load, orthographically related preview
他建议当地政府应注意非广籍学生接受义务教育的权利
*

High parafoveal load, semantically related preview
他建议当地政府应注意非门籍学生接受义务教育的权利
*

High parafoveal load, unrelated preview
他建议当地政府应注意非丹籍学生接受义务教育的权利
*

High parafoveal load, target
他建议当地政府应注意非户籍学生接受义务教育的权利
*

N   N+1   N+2

_. . 1._ A . . . . C . . . .
T . . w . . . . -
. . . .
. . . . T . . . w . .
(广, 门 丹)
(户)
. . . . w N (注意) .
w N + 1 (的) . . . w- . . . w N + 1 (非).

21- . . D T . M . . . . (1280 × 1024 , . . . ; . . .
100 H). T , ... 16 . . . .
. . . . T . . . .

(= 25 ___; = 7 ___)

T___ S___. 40 w___, w_____ 0.9
T_____ w_____ P4
___, 2.8 GH_, W___ w XP
. S_ w_____ 80
. A w___

Procedure

A w___
F___, 1,
w___ N w___ N + 1,
w___ N + 2. D_____
O 26
w 91% (= 7%). F_

A 131 (___, 96 ___
35). A ___, w
w (= 4, =
3), w w.

Data Analysis

D___ w 74 ,
(E___ & K___, 2003). S
___ w (5%). A w
F___ ,
w GD w FFD 60 ___ 600 ___
w (2%). F___,
w ; GD
___ w ___
w .
I w ___
w
w . E___ ___ (LMM)
___ (GLMM)
___ w ___
___ *4* (B___, M___, & D___,
2008) R ___
(R-C D___ T___, 2008). W , ___
A ___

Results

Word N + 2 Region-Preview Benefits

Tw ___, w ( ) w
C___, ___
w N + 2 ( ) w ___
___, . A 5903
w . R , w , w
w 7 ___ (= .029, = .010, = 2.9)
FFD 12 ___ (= .040, = .013, = 3.0) GD w
N + 2. T w N + 2,
w w w (= 0.22, =
0.11, = 2.0, < .05). W w
w N + 2 . H w , ,
___
w ___
(- , < 1).
A , w (
- , < 1.2), w w ,
w N + 1 FFD (= .013,
= .006, = 2.3). D w N + 1
w N + 2 -
___ w ___ ___, (T 1
F___ 2). S , - , I
w N + 1 w w , (12
___ ; = .042, = .013, = 3.2) , w w w
, (3 ___ ; = .016, = .015, = 1.1). T ___ , ___

T___ 1

*___, (___) ___ ___ ( ),
___ ( ) ___ ___ ( ). ___
+ 2, ___ + 1, ___ ___
● ___ (+ 2) ___ + 1*

F___	T___ P___ w___			
	I___	O___	S___ ___	C___
( ) W___ 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)
( ) W___ 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)
( ) W___ 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)

*___. HF = ___, w___; LH = w- , w___. M
___ .*

(A)

First-fixation duration of word n+2

High frequency word n+1
Low frequency word n+1

Type of preview

(B)

Gaze duration of word n+2

High frequency word n+1
Low frequency word n+1

Type of preview
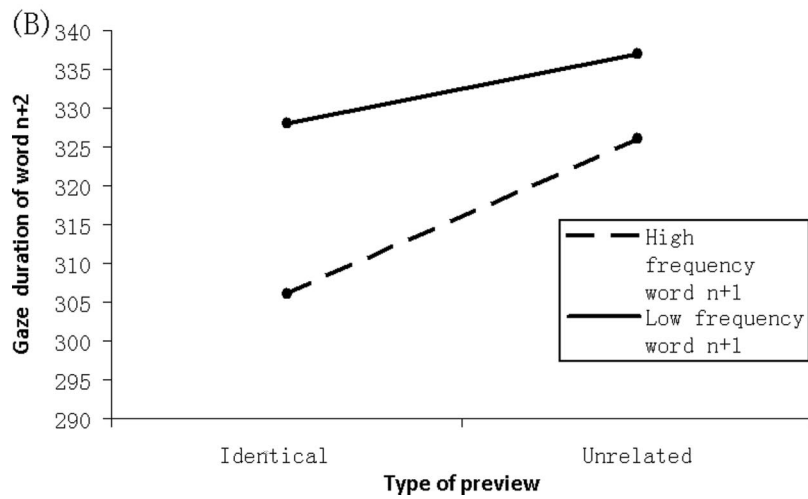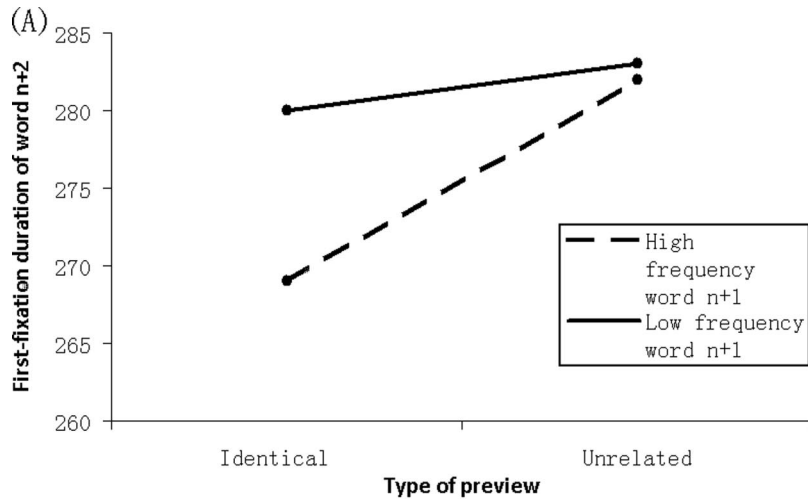
Figure 2. D_____ w___ N + 1 _____ w___ N + 2 ____-_____ (A) _____ (B).

GD   PB_____-___ (18 __; __ = (__ = .033, __ = .029, __ = 1.2   __ = .066, __ = .039, __ = 1.7, .059, __ = .019, __ = 3.2)   w-___ (6 __; __ = .024, __ =   FFD   GD   ____, ____).
.020, __ = 1.2) _____ w___ N + 1, _____ w___   S___, w_____ w__ _____ (__ = 1.7).   (___, ____
T_____ w__ ____, ____, _____ - 20% _____ ____), ____, ____, __
_____, _____. T___ 2 ___ _____ __. A___, __ (_____) FFD   GD _____ ___, ___, ___ ___ w __, ___ w __ w_____ ___, ____, __, w _____ __ w___ N + 1.   4700 ___. T___ w __ _____ PB
F__, __ ___, (89%) ' ' _____ w___ N + 2 (__ = .029, __ = .011, __ = 2.5   __ = .049, ___, _ 22 _____, ___ = .015, __ = 3.2, FFD   GD ____, ____), .D_____ w __ _____ ___ PB w___ ___ w___ w___ N + 1 w___ __ _____ w__, ___ 22 ____ _____ __, (__ = .041, __ = .015, __ = 2.7   __ = .072, __ = __ . F __, __ w__ ___ PB w __ .020, __ = 3.6, FFD   GD ____, ____), _ N + 2 (__ = .037, __ = .019, __ = 2.0   __ = .065, __ = .026, w___ w___ w___ ___ (__ = .018, __ = .017, __ = 1.1 __ = 2.5, FFD   GD ____, ____), PB w ___ __ = .030, __ = .023, __ = 1.3, FFD   GD ___, __ w___ w___ N + 1 w __ ____ (__ = .045, __ = .024, __ = 1.9   __ = .066, __ = .034, __ = 2.0, FFD   GD   F__, ___ ___ w___ w __, ___) __ w___ w___ w___, ____ ____ w, ____ w

T   2

F	I	O	S	C
		T	P w	
	I	O	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)

HF = ; LH = w- , w . M

D (3461 5903), w , . PB w N + 2 ($= .035$, $= .013$, $= 2.7$ $= .046$, $= .019$, $= 2.4$, FFD GD ,) PB w N + 1 , ($= .019$, $= .008$, $= 2.5$ $= .019$, $= .011$, $= 1.8$, FFD GD ,).

Word N + 1 Region

Frequency effect. T FFD, GD, w N + 1 w T 1 . D (54%) 3105 . T FFD (39 ; $= .037$, $= .007$, $= 5.3$), GD (41 ; $= .037$, $= .008$, $= 4.5$), ($= 0.17$, $= 0.04$, $= 4.2$, $< .01$). T

Relatedness effect. W ($= 0.15$, $= 0.07$, $= 2.1$, $< .05$), w w w (- , < 2).

Preview benefit. O w N + 1, FFD (13 ; $= .024$, $= .014$, $= 1.8$) GD (14 ; $= .029$, $= .014$, $= 2.1$), w N + 2 w . T w K . (2007).

Word N Region-Parafoveal-on-Foveal Effects

A w N + 2 , w N.

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

First-fixation landing position. P - w N + 1 (., D , R , & P , 2008, W , I , & R , 2009). I , POF , w , w w N w N + 1. U , w 0.9 w (., w , w N w w - w), (- , < 1.3).

Discussion

T w w w w w (w N + 2) , C . T w ( ) PB w N + 2 w ( ) w w N + 1 w , (., w , w N + 1 PB w N + 2), ( ) - , w N + 1 w N. T , w N. T , w (Y ., 2009). M , , , , , w . W , , . .

Preview Benefit for Word N + 2

T PB w N + 2 w (A ., 2008; K ., 2007; M D , 2006; R ., 2007). W w PB w N + 2 , , - C . P , N + 2- w . P , C , PB w N + 1 (L ., 2002; T ., 2004; Y ., 2009; Y ., 2009). Y . (2009) w N + 2 w (., FFD GD) PB w N + 2. T , , C /w N + 2 .

W   w   ⋀   ⋀ w   N + 2.
P   ,   ,   w   C   ⋀   -
             ,   ,   ⋀   ⋀   ⋀ W
N + 1. S   ,   C
              w   ⋀   GD (L
  ., 2002; T   ., 2004; Y   ., 2009), w   PB
          ,   ⋀   . H   w   ,
        ⋀   w   ,
              w   N + 2. A   ,.   C
                  ⋀   ⋀ W   w   w   ,   ⋀   -
          ,   ⋀   W   ,.
                                                      , .

      T   PB   w   N + 2 w   ,
                ⋀,   ,   ⋀ ,   ⋀   -
⋀   ⋀   (R   ., 2007). SAS ⋀   E-Z
R   PB   w   N + 2 ,
          .   , ⋀   (R   ., 2007 ; R
  ., 1998). H   w   ,   (. .,   w
        ,   w   ⋀
        ),   ⋀   ⋀   w   N   w   N +
1   , . . ,   ⋀   w   N + 2 w
w   N. I   ⋀   ⋀   ⋀,
PB   w   N + 2   . -   ,   w   N + 1   w
                    SAS   . O   ,
w   N + 2 PB   GAG ⋀   ,   ⋀,   ⋀
        ⋀,   ⋀   SWIFT ⋀   ⋀   -

1, 1239 1249.

E , R., & K , R. (2001). M
: A , . -
, , 77 87.

E , R., N , A., R E., & K , R. (2005). SWIFT: A
,
112, 777 813.

H , J. M., & F , F. (1990). E
: I
, , . -
, , . *1* , 417 429.

I , A. W., & L , W. (1998). T ,
C ,
, , *24,* 20 34.

I , A. W., & R , K. (1986). P
: E w , . & -
, , *40,* 431 439.

J , B. J., W , S. J., L , S. P., & R , K. (2008). E
w -
, *34,* 1560 1579.

K , A. R., & P J. (2005). P - -
, *4* , 153 168.

K , R. (2007). T w -
: A R , P , D , S , R (2007).
, , *13* , 530 537.

K , R., N , A., & E , R. (2006). T
: T , , w
, *13* , 12 35.

K , R., R , S., & L , J. (2007). P w
- - w + 2.
, *33,* 1250 1255.

L , W., I , A. W., Y , Y., & W , C. (2002). U
C
, *2* , 1213 1227.

M C , G. W., & R , K. (1975). T ,
, & , *1* , 578 586.

M D , S. A. (2006). P w
, *4* , 4416 4424.

N , A., E , R., & K , R. (2005). M
, -
, *4* , 2201 2217.

R , K. (1975). T ,
, 65 81.

R , K. (1986). E
, *41,* 211 236.

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20 , *124,* 372 422.

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468 469.

R , K., J , B. J., & B w , S. J. (2007). D
w w + 2? A ,
, -
& , *33,* 230 245.

R , K., L , X., & P , A. (2007). E E-Z R
C , *31,* 1021 1034.

R , K., W , A. D., P , A., & B , J. H. (1982). T
, & , *31,* 537 550.

R , K., W , S. J., K , G., M B., & L , S. P. (2003).
O
. I J. H , R. R , & H. D (E .),
(. 213 234). A -
: E S .

R D C T (2008).
. R F S C , V ,
A . ISBN 3 900051-07 0, URL ://www.R-

R , E. D., P , A., F , D. L., & R , K. (1998). T w
, *10* , 125 157.

R , R., & R , R. (2006). S
, 34 55.

R , S., E , R., & K , R. (2008). E -
: E , -
. I R , K., S , D., B , X., & Y , G. (E .),
(. 65 91). T
P P H .

S , W., V , F., B , M., & 'Y w , G. (1999). E
: F
, 2A, 1021 1046.

S , H., C , X., A , R. C., W , N., & X , Y. (2003). P
C : I . , *4,*
27 47.

T , C. H., & M C , G. W. (1995).
. P S
I C C P C
O A L , H K .

T , J. L., L , C. Y., T , O. J. , H , D. L., & Y , N. S. (2004).
U C : E
w w
, *1,* 235 244.

W , C., I , A. W., & R , R. (2009). I
w ? T w
, & , *1,* 1487 1494.

W , S. J., R , K., & L , S. P. (2005). T
w , ,
w & , *12,* 466 471.

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w
, & , *1* , 561 566.

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w w + 2? E -
, *1* , 1192 1204.

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E C ,
, *131,* 24 33.

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STM C E &
, *13,* 202 207.

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C
, *41,* 579 606.

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C .
, , *2* , 1245
1265.