This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

http://www.elsevier.com/copyright

Author's personal copy

134 (2012) 33–41

Contents lists available at SciVerse ScienceDirect

journal homepage: www.elsevier.com/locate/schres

fi -

, , , ,

Author's personal copy

(1/*f* -
f), -
.
fi
“ ” ,
/
(., 1999; ., 2002; ., 2004; .,
2005; ., 2006; ., 2008, 2009),
/ (., 2005;
., 2007), -
(., 2004; ., 2007; ., 2011), -
- (., 2001; .,
2004; , 2007; ., 2007; ,
2009; ., 2010; ., 2011),
( ) (,
1954; fi , 1979; ., 1996; ,
2000; ., 2003; , 2005).
,
-
/ .
(., 2004; ., 2007;
., 2011), ( )
- , -
( ), (
fi)
- .
(
), . . (2004)
, , ,
. , ,
(, 1981, 1992), , -
/ - . , -
.
,
/ .
(1) -
-
/ , (2)
/
, (3)
.
, -
(., 2000), fi -
(., 1998), -
(., 2007; ., 2009; ., 2009;
., 2009). , -
fl (., 2009)
/ (., 2002;
., 2006; , 2008; ., 2008; .,
2009). , -
: fi -
.

2. Materials and methods

2.1. Participants

. -
. (- ; ., 1996).
. (1). , .
254 69 / fi ( ) 611
111 / ( ). .
(2003).
( ) -
(, /
, -
( ) ,
. 6 / , /
18 59). .
, .
.
(-)
. .
fi - -
. .
fi .
12 - -
(-), 22 22 -

Table 1

.

		( )	( )
	9.6422.21512	7( )-7 5.4(557)-292.4(7( )-7 226( )	9..50092.6853

1-309.

Author's personal copy

(-) . 1
125, 256, 512, 1024,
2048 .
( )

2.2. Equipment and materials

(.
824, ,),
(450 97) (
200)
( ) 60
- - ( ):
−8, −4, 0 4 .
,
.
(1997). , “ ” ( ). 12 (12)
. (2007).
(,). ,
( )
10
(., 2004).
.
(., 2007). 47-
( ) ( ) (.,
2007).

2.3. Procedures

( ) (., 2004),
( ) (., 2005; , 2006),
.
, ,
fi - -
.
: (1) (,), (2)
(- ,), (3) (−8, −4, 0 4).
, 16 12 (12)
.
( )
,
. - /
-

Author's personal copy

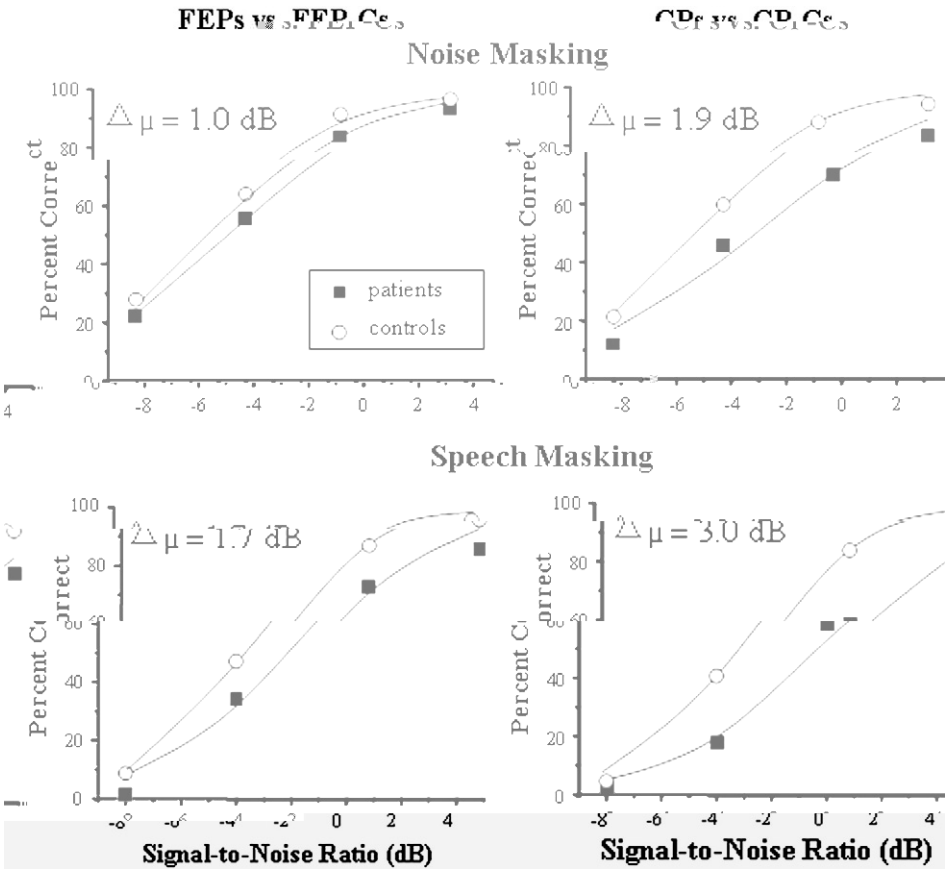

Fig. 1.

. 1. , ; fi (*p*<0.01), fi (*p*<0.01), ( ) fi (*p*<0.01), (-) 4 (: , - , , -) 2 (: ,) - μ fi (3,128 = 26.366, *p*<0.01), - fi (1,128 = 46.060, *p*<0.01), fi (3,128 = 0.549, *p* = 0.650).

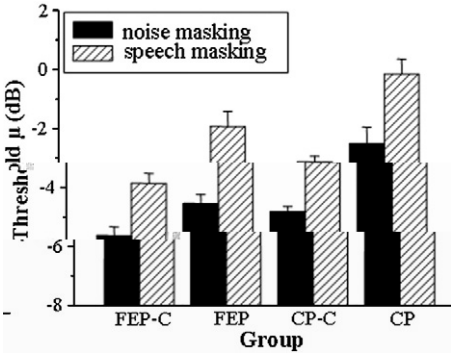

Fig. 2. - (μ) - , fi - ; - , fi - - ; , - .

fi (*p* = 0.084).

3.2. Recognition of the prime keywords under the priming condition

. 3 - - (fi) - -fi , ( ) ( ). , , - (-) - , fi . , - fi . - - , - , - . - fi . , 2 ( ) 2 ( ) 4 ( ) - , fi (1, 176 = 7.875, *p* = 0.006). , , fi (*p*>0.800). 2 ( ) 4 ( ) - ,

Author's personal copy

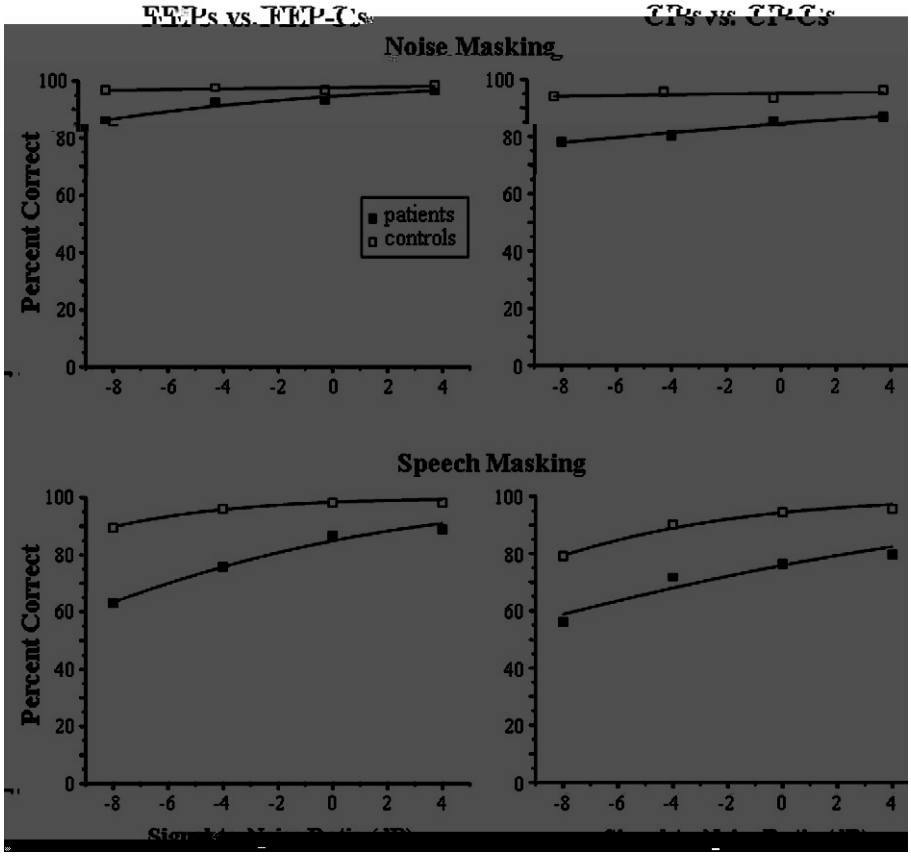

Fig. 3. - - (fi) - - - fi ( ) (fi) - - ( ) , ( ) ( ). . 2.

fi (−3,88 = 1.961, p = 0.126), fi (−1,88 = 7.602, p = 0.001), fi (−3,88 = 1.027, p = 0.385). , fi (−3,88 = 4.590, p = 0.005), - fi (−3,88 = 20.854, p < 0.001), fi (−3,88 = 1.143, p = 0.336). (1) - , (2) , - fi - . - - “ - ” (1). - fi , 2 ( ) 2 ( ) 4 ( ) - fi (−3, 335 = 4.982, p = 0.002) - (−1, 335 = 4.878, p = 0.023). , - fi (p > 0.3). 2 ( ) 4 ( ) - , fi (−3, 168 = 1.743, p = 0.160), fi (−1, 168 = 47.891, p = 0.001), - fi (−3, 168 = 1.219, p = 0.304). , fi (−3, 168 = 12.617, p < 0.001), fi (−3, 168 = 56.463, p < 0.001), - (−3, 168 = 0.409, p = 0.746). (1) - , (2) , , - . - - , - - . - “ - ” , (1).

3.3. Priming effect on recognition of the last (third) keyword

. 4 5 - - ( ) - -fi - (-) - (-) , , - , ( ) ( ). . 6 - . , - 2 ( ) 4 ( ) 2 ( ) - - μ fi (−3, 256 = 39.564, p < 0.001), fi (−1, 256 = 59.588, p < 0.001), fi (−1, 256 = 20.337, p < 0.001). , - - fi (, p > 0.100).

Author's personal copy

- fi ($p=0.003$),
- fi ($p<0.001$),
fi ($p<0.001$),
- fi ($p=0.235$).

4. Discussion

4.1. Recognition of target-speech keywords under the no-priming condition

, , , ,

Author's personal copy

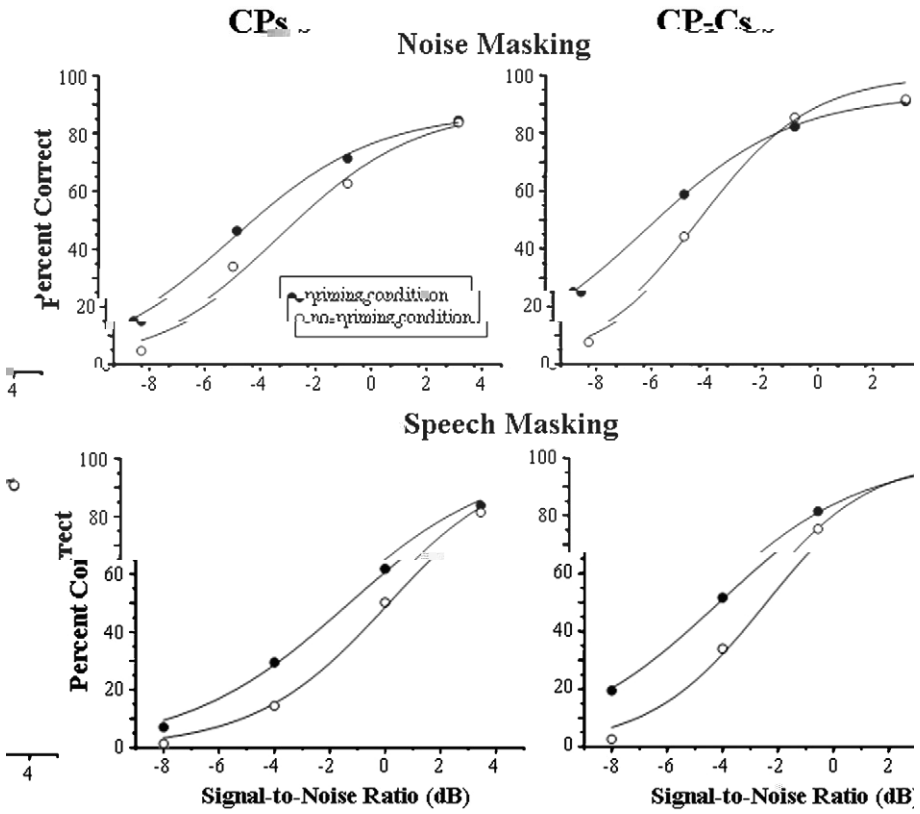

Fig. 5. -fi ( ) ( ), ( ) ( ). . 2.

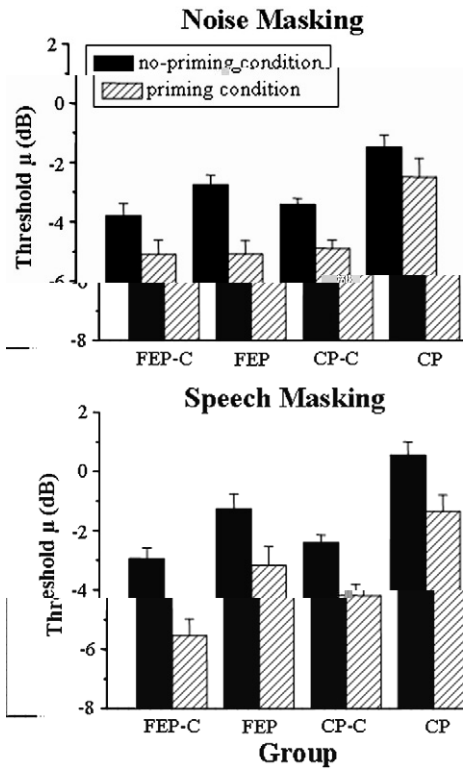

Fig. 6. (μ) . 2.

, , , ,

Author's personal copy

(-) - -
(-) fi

4.3. Using the prime to unmask the last keyword in target speech

fi

fi

/

/

(., 2004; ., 2007; ., 2010; ., 2011),

fi

/

5. Conclusions

fi

/

Role of funding source

“973” (2011 707805), fi (2007 17 04), (20090001110050), “985” ;

;

;

Contributors

fi

fi

Conflict of interests

fl

Acknowledgments

“973” (2011 707805), fi (2007 17 04), (20090001110050), “985”

References

., J., ., ., ., ., ., 2002. fi 39, 599–606.
., ., J. ., 2002. . J. . . . 112, 2086–2098.
., 1981. — 10, 17–23.
., 1992. 255, 556–559.
., J., ., 2007. fi .J. 8, 294–304.
., ., J. ., ., ., ., ., 2009. : . 356, 1065–1077.
., ., ., ., ., 2001. . J. . 110, 2527–2538.
., ., ., 1974. . J. 125, 350–354.
., ., 1953. . J. . 25, 975–979.
., ., 2005. . 73, 5–20.
., ., ., ., ., ., 2002. : . 28, 475–490.
., ., 2001. : 27, 481–496.
., ., 2008. : . 34, 312–321.
., ., ., ., ., 2011. . 32, 84–96.
., ., ., ., ., ., ., ., 2006. fi . 22, 702–709.
., ., ., ., J., 1996. ( ), .
., ., ., ., ., 2009. : . 39, 889–905.
., ., ., ., ., 1999. . J. . 10, 3578–3588.
., ., ., ., ., 2004. . J. . 115, 2246–2256.
., ., ., ., ., ., ., J., ., ., 2008. fi fi . J. 165, 1024–1032.
., ., ., ., ., ., ., ., ., 2009. fi . 108, 41–48.
., ., ., 2000. . J. . 108, 1197–1208.
., ., ., ., J., 1999. : fl . J. 156, 1367–1373.
., ., 1997. . J. . 40, 432–443.
., ., ., ., 2005. . J. . 117, 842–849.
., ., ., ., 2009. . J. . 125, 447–456.
., ., ., J., ., ., ., 1999. “ ”. . J. 156, 393–399.
., ., ., ., ., ., ., ., ., 2008. fl . 244, 51–65.
., ., ., ., ., ., ., 2009. . J. . 35, 1618–1628.
., ., J., ., ., ., 2010. . 31, 579–583.
J., ., ., ., ., ., ., 1997. (“ ”) . J. . 106, 315–324.
J., ., ., ., ., J. ., 2000. fi — fi . 57, 1131–1137.
., J., ., ., ., ., 2002. . 113, 115–125.
., ., ., ., ., 2009. ?: fi - 33, 410–415.

Author's personal copy

., 2002. : . J. 159, 546–555.
2002 . . 59, 159–172.
., J., 2005. . J. . 118, 3804–3815.
., J. ., ., 2004. . 163, 154–159.
., J. ., 2004.
J. . 30, 1077–1091.
., 2001.
J. . 42, 177–194.
., 2007.
J. . 35, 85–103.
., 2007.
fi : . J. . 41, 625–634.
., 1998.
: . 24, 643–652.
., ., 2002.
. 252, 120–123.
., J., fi ., 2009. fi : . 112, 104–113.
., 2000.
— 57, 1149–1155.
., 2006. . J. 119, 1597–1605.
., J ., J. ., 1996. . J. . 39, 1159–1170.
., J. ., 2007. : fi . 97, 173–183.
., J. ., 2003. 45, 329–336.
., 2007. . J. . 18, 559–572.
., 2005. +/ J. 19, 343–346.
., J. ., 2004. ( ), J. 18, 45–47.
., ., 1954. J. . 26, 212–215.
fi ., 1979. 36, 314–331.
., 2004. fi . 68, 75–85.
., 2006. ( ). 21, 53–76.
., 1991. : , .
., 2003. . J. 64, 663–667.
., J., 2005. . 199, 1–10.
., J., 2007. 49, 892–904.
., 2009. fi . 165, 10–18.