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1. Introduction

H . T (D & S , 2003; G , 2000; V & F , 2003). S - . N - , (K & L , 1988; K , R , & C , 2002; R , K , & K , 1977). T . T - (SRE), (K & O , 2010; K & J , 2012; S , H , & H , 2012; T ., 2011; T , C , & M , 2008). C , (MPFC) (H ., 2008; H ., 2006; J & M , 2011;

* C . A : D P K L M P (M E), P U 5 R , B 100871, C . F : + 86 10 6275 5508.
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K ., 2002; L ., 2010; M , H , & K 2009; , , H , M , & , 2010; , , F , & H , 2007).

A - (K & L , 1988; M & H , 2010; S & J , 1997; , , & S , 2011). M

(N & N , 1983; R & S , 1993; R & D 2004; R ., 2009; V ., 2004). S - (V & F , 2003; V ., 2004; ., 2011). F , V F (2003) - (1PP) 1PP , C , . (2011) - (3PP) - . I - ; 1000 . . 3PP. T - 1PP. A - 1PP, 3PP (, R , G , T & G , 1999). F 3PP . M , ; (. ., -) . M , - (. ., -) (. ., - ,). A (J & M , 2011), - (D & B , 2011; G & F , 2005; V M , C , A , & D , 2010). T , - SRE - . A 1PP - 3PP - . C , , - , , (B -C , 1997). I , - (D'A ., 2007; O ., 2005; R ., 2009). H , - . F - : O . (2005) (,) ; D'A . (2007) . D'A . (2007) MPFC - 3PP - MPFC MRI . T - - I - ; 3PP - SRE. - , (., 1PP 3PP). T 3PP, (T ., 2012). B . F 3PP , ; ; . ., . M , 3PP (M). S . F , : A T (,), C (,) ?, A T (,), ?, U . F , 3PP I , 1PP (B , D , M A , & T , 2009). I 1PP , SRE 3PP. A 1PP - , SRE .

2. Method

2.1. Participants and design

A 42 C (26 16 ; 22 2) . H 1PP (13 8 ; 22 2), 3PP (13 8 ; 22 2). T - N . A P U ' P E C . T 2 (: 1PP 3PP) × 3 (: , ,) , .

2.2. Procedure and stimulus materials

T 1PP 3PP . I 1PP ,

3PP , $t(40) = -.735$; $p = .467$. T , 1PP ($M = 23.1$; SD

$F(2,40) = 18.57$; $p < .001$ $F(2,40) = 3.41$; $p < .05$. H , $F(1,40) = 1.02$, *ns*, $F(1,40) = .12$, *ns* $F(1,40) = 1.62$, *ns*, .

3.3. Corrected "remember" recognition scores

F ( ) (T 1) 2 (: 1PP 3PP) × 3 (: , ,) - ANOVA, - . B , - $F(2,40) = 40.54$; $p < .001$. M × $F(2,40) = 21.27$; $p < .001$. T , 1PP $F(2,40) = 43.10$; $p < .001$ 3PP $F(2,40) = 18.71$; $p < .001$. T *t*- 1PP , - (, .64) - (, .47; $t(20) = 6.33$; $p < .001$, -). H , 3PP , - (, .55) - (: .50; (20) = 2.298; $p < .05$, -). T - $F(1,40) = 11.40$; $p = .002$ - $F(1,40) = 4.24$; $p < .05$. T - 3PP 1PP , - 3PP 1PP (F . 1B). F *t*- , 3PP (, .60) 1PP (, .74; $t(40) = -2.77$; $p = .009$, -); - , 3PP (, .65) 1PP (, .55; $t(40) = 1.85$; $p = .072$, -); , 3PP - (, .10) 1PP (, .09; $t(40) = .31$; $p = .757$, -). T - - , - . N $F(1,40) = 0.505$, *ns* .

C , - , - ANOVA. I , $F(2,40) = 38.09$; $p < .001$ $F(2,40) = 12.42$; $p < .001$. H , $F(1,40) = 2.67$, *ns*; $F(1,40) = .14$, *ns*; $F(1,40) = 3.28$, *ns*, .

3.4. Corrected "know" recognition scores

F ( ) (T 1) 2 (: 1PP 3PP) × 3 (: , ,) - ANOVA. T $F(2,40) = 3.12$; $p = .05$, - (, .06) (, .09; $t(41) = -2.19$; $p < .05$) . × $F(2,40) = 17.37$; $p < .001$. T 1PP $F(2,40) = 15.90$; $p < .001$ 3PP $F(2,40) = 4.58$; $p < .05$. T *t*- 1PP , - - (, .03) (, .12; $t(20) = -5.97$; $p < .001$, -) (, .10; $t(20) = -4.16$; $p < .001$, -) . H , 3PP , - (, .04) (, .09; $t(20) = -2.23$; $p < .05$, -) (, .08; $t(20) = -2.38$; $p < .05$, -) . A - $F(1,40) = 7.62$; $p < .01$. T , - 3PP 1PP (F . 1C). N $F(1,40) = 0.279$, *ns* .

F , - , - ANOVA. I , $F(2,40) = 6.91$; $p < .01$ $F(2,40) = 6.28$,

$p < .01$. H , , , , , , , - $F(1,40) = .76$, *ns*, $F(1,40) = 1.28$, *ns* $F(1,40) = 1.21$, *ns*, .

4. Discussion

T 1PP, 3PP - . C (K & L , 1988; K ., 2002; R ., 1977; ., 2007), 1PP , ( ). M , . T SRE 1PP ; ,

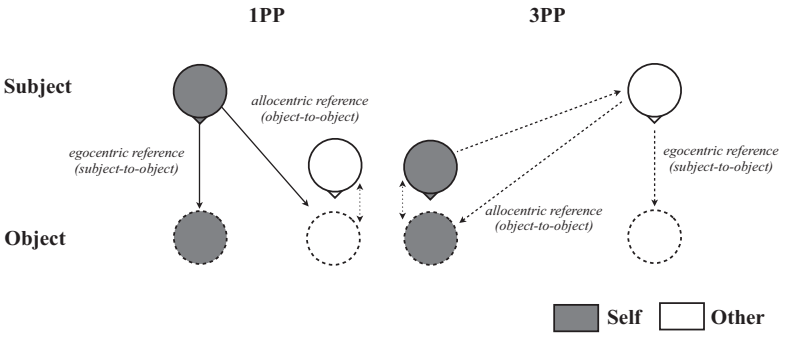

Fig. 2. A I 1PP (- -) - (- -) - . I 3PP -

3PP . T ,

I - 3PP - ? M , 1PP - ? B ,

(V & F , 2003; V ., 2004),

. I 1PP ,

(- -) - (- -) - . O 3PP ,

. A , , , , (K 1998; V & F , 2003).

T - (F . 2). P ;

, , (A & B , 2002; C , , M ,

& F , 2012; C & A , 2002; J ., 2002). B

(2003)' (. ., , , -)

O . S ; , E A

(H , 2001; M & K , 1991). S (C ., 2009; R

., 2009; V , H , G , C , & S , 2008; ., 2007). F

SRE . I (,),

SRE ; -

, - ( ) ( ) H -

(S & H , 2007);

B , (-) SRE. N . F

I . A SRE 1PP , SRE

3PP . O 1PP ( ) -

1PP - (G , 2000; V & F , 2003).

Acknowledgments

P . M P . R ,

D . D . Q C . T O R F S

K L C N L (CNL B1316), N S F C (31371054), N S S F C (12A D116).

References

A , R. A., & B , C. A. (2002). I . *Annual Review of Neuroscience, 25*, 189 220.
B -C , S. (1997). *Mindblindness*. MIT P .
B -C , S., R , H. A., B , E. T., , S., A , C., & , S. C. R. (2000). T . *Neuroscience & Biobehavioral Reviews, 24*, 355 364.
B , T. T., D , T., M C. R., A , J. S., & T , H. A. (2009). I : P . *Psychological Science, 20*, 27 32.
C , Q., , R., , P. H., M , J. C., & F , G. R. (2012). N . *Journal of Cognitive Neuroscience, 24*, 2223 2236.
C , J. , H , T., K , H., L , ., M , , S , D., (2009). N . *Human Brain Mapping, 30*, 2813 2820.
C , E., & A , R. A. (2002). A . *Nature Reviews Neuroscience, 3*, 553 562.
C M. A., & P -P , C. . (2000). T - . *Psychological Review, 107*, 261 288.
C , S. J., T , D. J., M , L. M., & N M , C. (2008). ? O . *Consciousness and Cognition, 17*, 312 318.
D'A , A., R P., C , F., D , C., B , E., L , A., (2007). D . *Journal of Cognitive Neuroscience, 19*, 935 944.
D J., & S , J. A. (2003). S : A . *Trends in Cognitive Sciences, 7*, 527 533.
D , C., & B , S. (2011). T - . *Consciousness and Cognition, 20*, 40 51.
G , S. (2000). P : I . *Trends in Cognitive Sciences, 4*, 14 21.
G , S. J., & F , M. J. (2005). I ? A . *Psychological Bulletin, 131*, 76 97.
H , S., M , L., G , ., , G , J., & M , (2008). N - . *Social Neuroscience, 3*, 1 15.
H , T. F., , C. L., M , C. N., D , K. E., D B. T., & K . M. (2006). M . *Social Cognitive and Affective Neuroscience, 1*, 18 25.
H , S. J. (2001). S : A E A N A . *Journal of Personality, 69*, 881 905.
J , T. ., H G. K., G , J. S., S , P., M , R. S., & G , M. A. (2002). H - . *Neuropsychologia, 40*, 1706 1714.
J , A. C., & M , J. P. (2011). M - . *Social Neuroscience, 6*, 211 218.
K . M., M , C. N., , C. L., C , S., I , S., & H , T. F. (2002). F ? A - MRI *Journal of Cognitive Neuroscience, 14*, 785 794.
K , S., & O , S. (2010). A - *Psychological Science, 21*, 1525 1531.
K , K., & J , M. K. (2012). E : M . *Social Cognitive and Affective Neuroscience, 7*, 199 207.
K R. L. (1998). A : D , , , , . I. *Spatial cognition* (. 1 17). < :// . . / /10.1007/3-540-69342-4 1> R .
K , S., & L , J. (1988). T - : T . *Journal of Personality and Social Psychology, 55*, 5 11.
K , S., R , K., & C , L. (2002). A - . *Social Cognition, 20*, 105 135.
L , M. V., C , B., B , E. T., S , S. A., P , G., , S. J., (2010). A - . *Brain, 133*, 611 624.
M , , & H , S. (2010). ? A - . *Journal of Experimental Psychology: Human Perception and Performance, 36*, 619 633.
M , H. R., & K , S. (1991). C : I . *Psychological Review, 98*, 224 253.
M , J. M., H , T. F., & K . M. (2009). M - - . *Social Neuroscience, 4*, 197 211.
N , G., & N , U. (1983). P . *Cognitive Psychology, 15*, 467 482.
O , K. N., B , J. S., R , E. R., C , J. C., G , J. D., K , J. F., (2005). T - . *Neuroimage, 28*, 797 814.
R R. D., S , A. L., H , N. G., M , D., F , C. B., G , J. J., (2009). I - . *Social Cognitive and Affective Neuroscience, 5*, 318 323.
R , J. A., & S , K. L. (1993). F . *Memory, 1*, 169 184.
R , T. B., K , N. A., & K , . S. (1977). S - . *Journal of Personality and Social Psychology, 35*, 677 688.
R P., C , F., D'A , A., P , F., D , C., B , E., (2009). P - : ' A ' ? *Neurobiology of Aging, 30*, 1637 1651.
R P., & D J. (2004). H ? A - . *Journal of Cognitive Neuroscience, 16*, 988 999.
S , J., & H , S. (2007). S - . *Psychological Science, 18*, 861 866.
S , J., H , ., & H , G. . (2012). P : E - . *Journal of Experimental Psychology: Human Perception and Performance, 38*, 1105 1117.
S , C. S., & J , B. T. (1997). T - : A - . *Psychological Bulletin, 121*, 371 394.
T , E. (1985). M . *Canadian Psychology/Psychologie Canadienne, 26*, 1 12.
T , D. J., B , M., C , P., G -S , K., C M. A., & C , S. J. (2012). D - . *Memory & Cognition, 41*, 503 510.
T , D. J., C , S. J., & M , C. N. (2008). S - . *Consciousness and Cognition, 17*, 1040 1045.
T , D. J., B , K., B , J. L., T , A. S., K , O., & H T. C. (2011). : A . *Journal of Cognitive Neuroscience, 23*, 3725 3733.
V B , M., C , S. J., C M. A., & T , D. J. (2010). M : T . *The Quarterly Journal of Experimental Psychology, 63*, 1065 1071.

V M , L., C , S., A , A., & D , A. S. (2010). S - : A - . *Neuroscience & Biobehavioral Reviews, 34*, 935 946.
V , T., H , E., G , D. , C , C. M., & S , R. T. (2008). S , : A MRI . *Neuroimage, 41*, 1437 1446.
V K., & F , G. R. (2003). N - - . *Trends in Cognitive Sciences, 7*, 38 42.
V K., M M., R , A., F , P., , K., & F , G. R. (2004). N - - . *Journal of Cognitive Neuroscience, 16*, 817 827.
, L., , M., & S , J. (2011). S - - . *Acta Psychologica Sinica, 43*, 494 499.
, H. L., C M. A., & M , C. J. A. (2013). R K : U . *Consciousness and Cognition, 22*, 572 588.
, , , C., H , ., M , L., & , L. (2010). R - T . *Social Cognitive and Affective Neuroscience, 5*, 324 331.
, J., R , B., G , J. D. E., T B., & G , G. H. (1999). I : A MRI . *Neuropsychologia, 37*, 1029 1040.
, , , L., F , J., & H , S. (2007). N - . *NeuroImage, 34*, 1310 1316.