



2011; (D & , 2011; C & , 2011; & , 2009; & , 2006; , 2009; , 2009; , 2017; , & , 2011).

(A , C , & , 2012; C. & , 2016; D & D , 2004; & , 2009; & , 2007)

(, 2014; & , 2012; , C , & , 2013).

A

(C. & , 2016; , & , 2015, 2017; , & , 2014; , 2016; & , 2012). (2016)

(A , , 2012; C. & , 2016; & , 2007). (& , 2009).

(& -B , 2012; & C , 2006).

(, A , , & , 2012) (& -B , 2016; , 2011).

(, , & , 2017). D

1,

2 3,

1,

Experiment 1

1,

(1.6 1.6).

3

2.

Method

Participants

(11 ; : 19–26

; : 22.4 ;)

.A

(. (0.2 0.2)

(. (0.2)

(. (0.2)

, & B. , 2007),

0.25 (

90% (

)

80%,

),

(

2 3). A

10% (

28,

),

150

(0.8)

25

(C

&

, 2016;

100

&

, 2009)

500 . D

(. , 28)

2 3.

. A

(0.4 0.4)

Stimuli and apparatus

(B , 1997; , 2007) A AB

(, , A, A)

C

100

70

1,024

768

(, ,)

C AB (

28.5 / ²

32.2 / ²,

78.4 / ²)

(20%

(: 1.4 1.4 ; : ()

()

1.6 1.6 ; : 1.4 1.4).

(20%

(20%

Procedure

(2015, 2017)

.A

.1 ,

500 .B

100

(0.4 0.4)

500 ,

()

. C

10

. A

1-

150

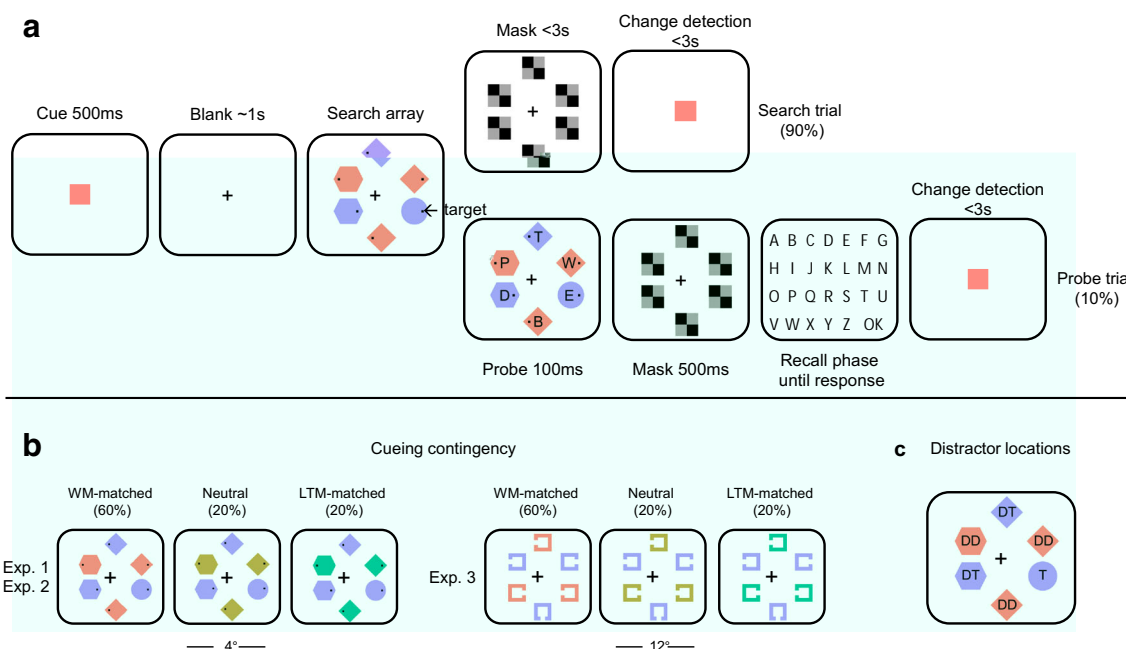


Fig. 1

(a) A 1 2. 1 (), 2 3 (). 3. (b) DT, DD. (c) DT, DD.

Data analysis

($p < .001$) 18.06% (C. & , 2016; , 2016). 200 2.5 (& , 1994). 4.33% 5.90% A B (. . , 20, 40, 60, 80, 100) (. 2).

Results

Search trials

A . 2 , A A (F (2, 48) = 10.572, $p < .001$, $\eta^2 = 0.306$). (F (4, 96) = 192.805, $p < .001$, $\eta^2 = 0.889$), (F (2, 48) = 10.415, $p < .001$, $\eta^2 = 0.303$), (F (8, 192) = 4.023, $p = .016$, $\eta^2 = 0.144$). ($ps < .05$).



Condition

A
 (: F (2, 48) = 1.649, p = .203;
 : F (2, 48) = 2.116, p = .132,
 1).

Probe trials

1.98
 (F (2, 48) = 1.549, p = .223, 2).
 (. 1):
 (. D), (.
 DD). 2
 (, D , DD)
 (- , -)
 A A.
 (F (2, 48) = 190.802, p < .001, $\eta^2 =$
 .888) (F (2, 48) = 0.569, p =
 .570). C (F
 (4, 96) = 4.103, p = .011, $\eta^2 = .146$).
 (F (2, 48) = .04, p = .963),
 D (F (2, 48) = 7.85, p < .001, $\eta^2 = .258$) (F
 (2, 48) = 9.63, p < .001, $\eta^2 = .300$). A D ,
 (p = .010)
 (p = .009) . A DD,
 (p < .001) (p = .043)
 (F (2, 48) = 0.264, p =
 .715, F (2, 48) = 1.687, p = .196,).

Discussion

C
 (F (2, 48) = 7.587, p = .001, $\eta^2 = .240$). C
 (p < .001) (p = .049)
 (p = .869).
 (

(2015),
 DD

Table 1

		Condition 1			Condition 2		
		ACC	C	C	ACC	C	ACC
1		666 (83)	0.83 (0.09)	626 (105)	0.98 (0.02)	1074 (217)	0.96 (0.04)
		687 (85)	0.85 (0.08)	648 (110)	0.97 (0.02)	1122 (230)	0.97 (0.05)
		660 (87)	0.84 (0.09)	641 (102)	0.97 (0.02)	1083 (222)	0.96 (0.08)
2		690 (115)	0.77 (0.06)	541 (77)	0.94 (0.04)	935 (217)	0.79 (0.11)
		708 (127)	0.76 (0.06)	575 (85)	0.91 (0.06)	977 (224)	0.65 (0.18)
		703 (120)	0.77 (0.05)	588 (107)	0.90 (0.07)	973 (251)	0.68 (0.17)
3		813 (153)	0.74 (0.05)	532 (90)	0.95 (0.04)		
		822 (170)	0.74 (0.06)	543 (93)	0.91 (0.07)		
		828 (165)	0.73 (0.06)	570(115)	0.92 (0.08)		

D. ... (...)

Stimuli and apparatus

Experiment 2

2

Procedure

1 2

1

(D & D, 2004; & , 2006; & , 2007).

Method

Participants

(10 ; : 18–28 ; : 22.3 ;) . A

500

1- /2-

Table 2

		Condition 1		Condition 2	
		D (D)	D (DD)	D (D)	D (DD)
1		0.67 (0.15)	0.25 (0.09)	0.28 (0.11)	
		0.68 (0.19)	0.32 (0.12)	0.22 (0.11)	
		0.67 (0.19)	0.24 (0.11)	0.26 (0.11)	
2		0.47 (0.16)	0.20 (0.11)	0.20(0.11)	
		0.46 (0.18)	0.21 (0.12)	0.20 (0.11)	
		0.50 (0.21)	0.24 (0.15)	0.18 (0.12)	

1

(F (5, 120) = 7.716, p < .001, $\eta^2 = .243$).

(& , 2007; , -B , C , & , 2008),

100 200

137

(39%)

1.

Data analysis

1,

28.4%

, 4.81%

4.72%

Results

Search trials

$F(2, 54) = 1.845$, $p = .168$, $\eta^2 = .03$ (3). $F(2, 54) = 0.936$, $p = .398$. A

1,

(.3).

$F(4, 108) = 149.413$, $p < .001$, $\eta^2 = 0.847$,

$F(2, 54) = 1.876$, $p = .163$.

$F(8, 216) = 6.707$, $p = .001$, $\eta^2 = 0.199$,

$F(2, 54) = 5.04$, $p = .010$, $\eta^2 = 0.157$ (F (2, 54) = 6.15, $p = .004$, $\eta^2 = 0.186$)

($p = .016$).

($p = .006$)

($p = .027$)

C

1,

$F(2, 54) = 18.836$, $p < .001$, $\eta^2 = 0.411$.

Probe trials

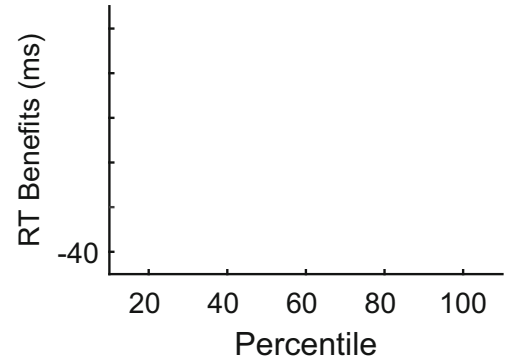
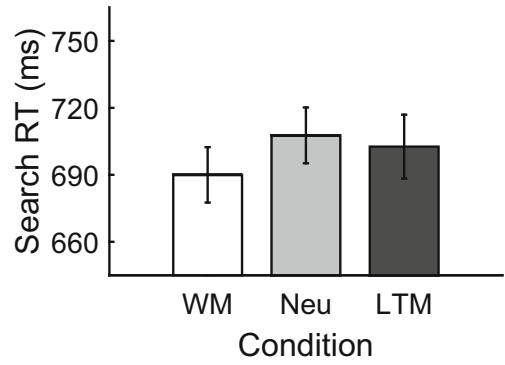
($p < .001$). $F(2, 54) = 14.192$, $p < .001$, $\eta^2 = 0.345$

($p < .001$)

$F(2, 54) =$

($p < .001$).

($p < .001$)



1.49

$F(2, 54) = 0.332$, $p = .719$.

.3 . A

A

A (

($F(2, 54) = 91.432, p < .001, \eta^2 = .772$),
 ($F(2, 54) = 1.989, p = .147$)
 ($F(4, 108) = 1.627, p = .188$).
 ($p < .001$). A
 ($F(2, 54) = 0.936, p = 0.378$),
 ($F(2, 54) = 11.197, p < .001, \eta^2 = 0.293$).
 ($p < .001$) ($p = .002$)

Discussion

(C. & B., 2016; & B., 2016; C. & B., 2016).
 A
 A
 (& , 2017).

2

Experiment 3

3,
 4 4 1 2) (., & (12 12
 , 2005; & , 2007). , 2009;
 (D & D. , 1995).

Method

Participants

(; : 18–27
 ; : 21.3 ;) A

Stimuli and apparatus

2,
 (0.6 0.6)

Procedure

A , 1-
 (0.12 0.12) D
 6
 8 () 0
 () ,
 2,

500
 2.
 115 414

280 . C
 1000 (1,000⁺ ,)
 100
 .) ()
 .) ()
).) () 3.

Data analysis

1, 30.30%
 , 2.20% 4.06%

Results

D
 (F (2, 54) = 0.681, p = .462, $\eta^2 = .04$) (F (2, 54) = 1.403, p = .255). A
 (F (4, 108) = 220.957, p < .001, $\eta^2 = .891$),
 (F (8, 216) = 2.919, p = .051, $\eta^2 = 0.098$), (F (2, 54) = 0.680, p = .463).
 (p = .040) . A
 (F (2, 54) = 8.797, p < .001, $\eta^2 = 0.246$) (F (2, 54) = 13.835, p < .001, $\eta^2 = 0.339$). C
 (p = .001) (p = .033)
 . C
 (ps <= .001).

Discussion

2
 . A
 2

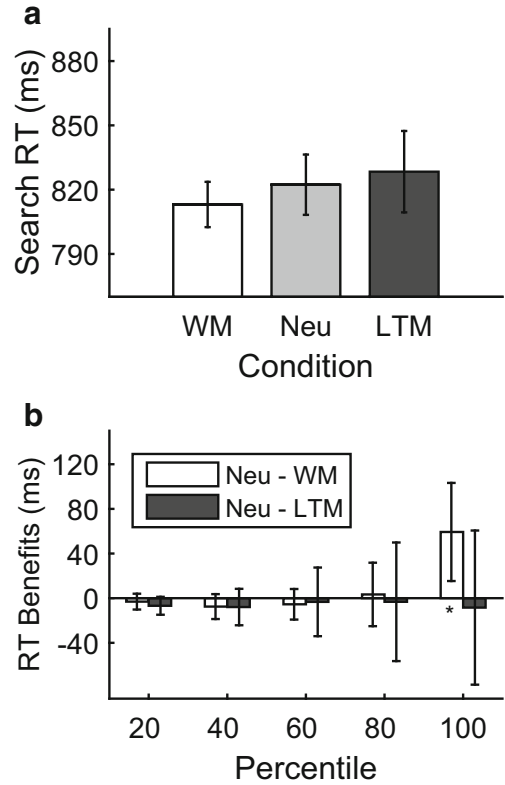


Fig. 4 (b) 3. (a)
 . A
 95%
 (** p<.05, ** p<.01, *** p<.001)

General discussion

(B , 1992; D' &
 , 2015).
 1

2 3,
 ,

(.)

1. 2 3,

(., 2014).

Variation in Working Memory (C, A. et al., . . .), . . . 76–106,

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Acknowledgements

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&D C (2017 \ B1002503).

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D

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