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... (2010), ... (2008, 2009) ... (1992; D ... , 1998; B ... , 2011). H ... H ... 3A ... 3A ... (DC ...)

**Materials and methods**

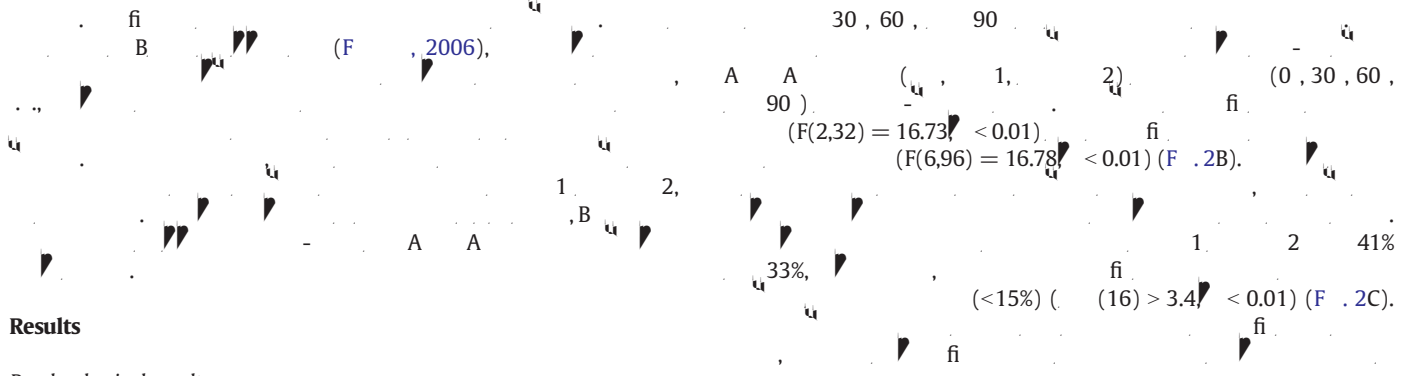
*Subjects*

(J., 2009).  
 0, 30, 60, 90  
 (0, 30, 60, 90).  
 E ( )  
 D 10  
 (pre-training threshold – post-training threshold) /  
 pre-training threshold 100%.  
 A B D ( ) E 16  
 10 12 , fi  
 ( ) 12  
 D E 200 fi

32  
 F  
 ( ) fi ( / / )  
 fi ( . . , 30 . 90 ) 30  
 16-  
 fi  
 fi ( ,  
 2005; . . , 2008; . . , 2009; . . , 2010 ).  
 fi 0.25.  
 B D fi  
 Acc (trained direction post-training) - Acc  
 (trained direction pre-training) - Acc (untrained directions  
 post-training) - Acc (untrained directions pre-training) ,  
 Acc  
 30 , 60 ,  
 90

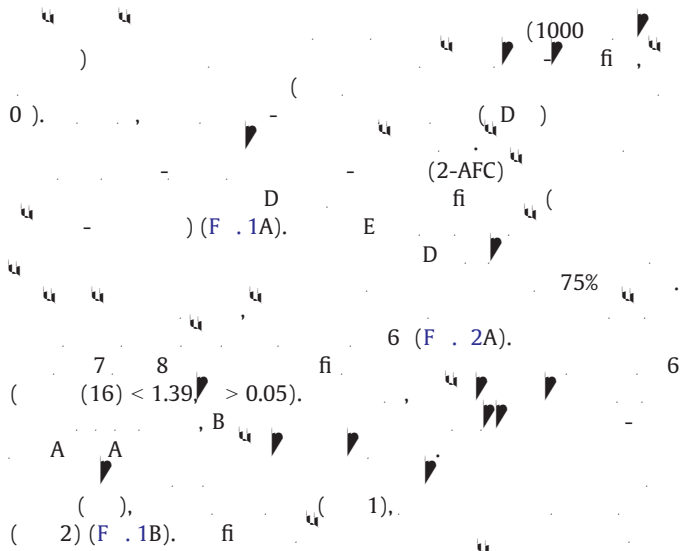
Multivariate analysis – forward model

fi

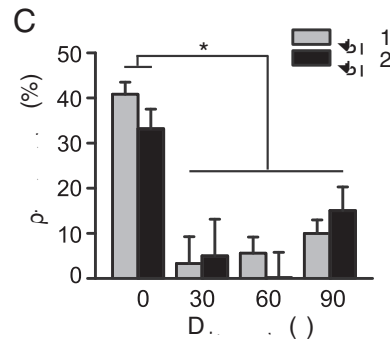
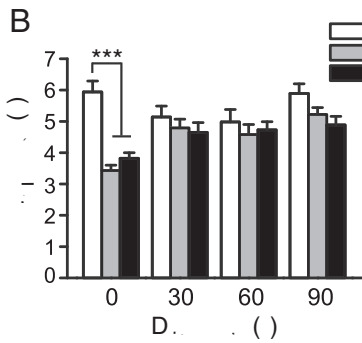
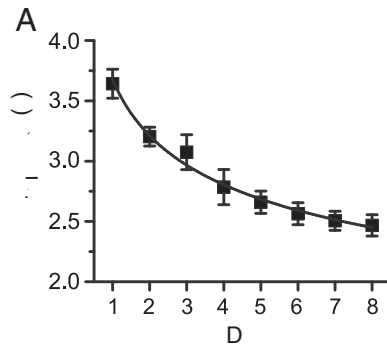
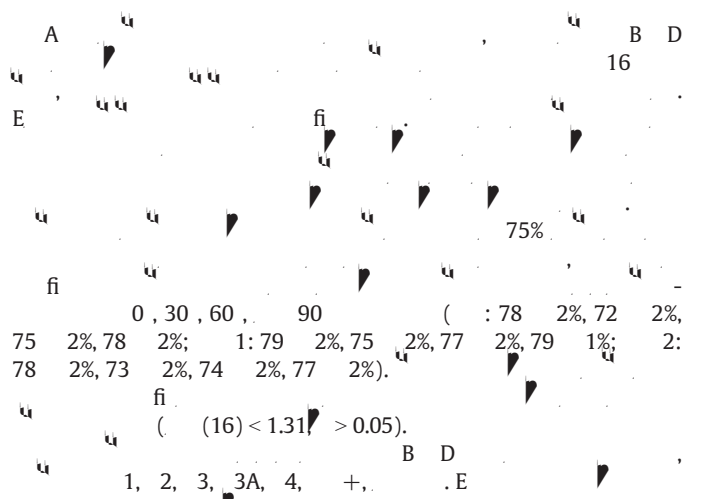


**Results**

*Psychophysical results*



*Univariate analysis of fMRI data*



**Fig. 2.**

(A) Behavioral performance (d') for conditions 1 and 2 at delays 0, 30, 60, and 90. (B) Behavioral performance (d') for conditions 1 and 2 at delays 0, 30, 60, and 90. (C) Univariate analysis of fMRI data (percent signal change) for conditions 1 and 2 at delays 0, 30, 60, and 90. Statistical values:  $(F(2,32) = 16.73, p < 0.01)$  and  $(F(6,96) = 16.78, p < 0.01)$ .



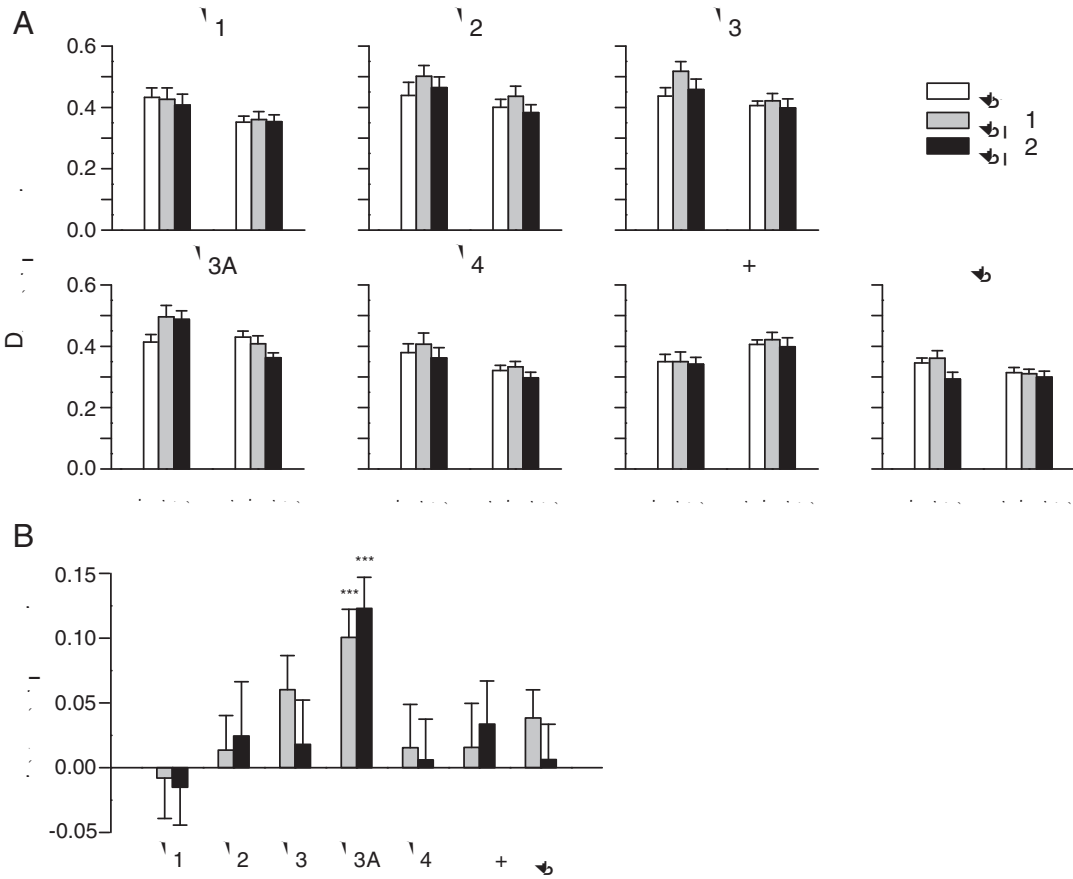


Fig. 4. (A) D (\*\*\* < 0.001). E (\*\*\* < 0.001). (B) A (F(2,32) = 19.07, < 0.001).

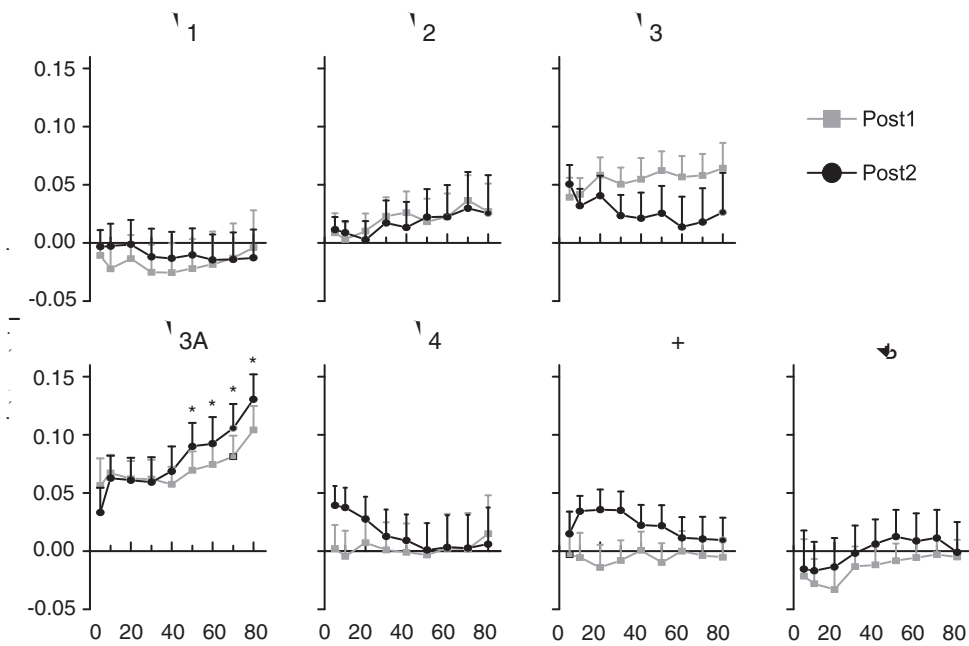
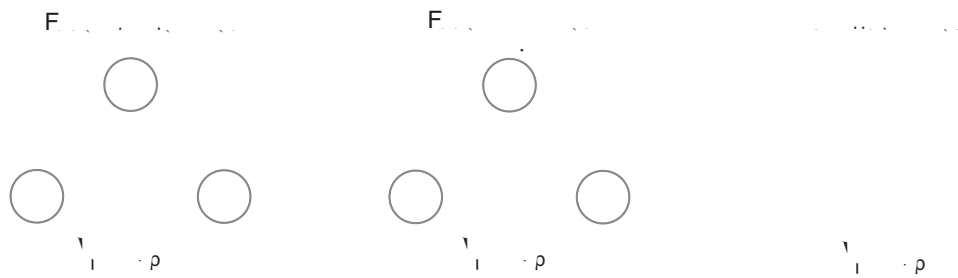


Fig. 5. (A) (p < 0.05). E







H  
3A  
A  
DC  
1  
3A  
1  
+

**Correlation and regression analyses between psychophysical and fMRI measures**

1  
2 (F .8A)  
B)  
1  
(F .8C),  
2 (F .8D).  
(P)

(B) (C)

$$P = k_0 + k_b B + k_c C.$$

B C  
F  
F(2, 16) = 7.2 < 0.01; 2:  $r^2 = 0.57$ , F(2, 16) = 9.4 < 0.01).  
1:  $r^2 = 0.51$ , F(2, 16) = 7.2 < 0.01).  
2:  $k_b = 0.50$ ,  $k_c = 0.53$ , < 0.05;  
1:  $k_b = 0.67$ ,  $k_c = 0.74$ , < 0.01).

**Discussion**

(1)  
B (1987). (2)  
B D 3A







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(, A.B., , D.G., 1983. E : B . 10, 2014.). 14127–14133. . 30.

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18, 1922–1926. . H., 2004. . 24, 1617–1626. . 2008. D . 57, 827–833.