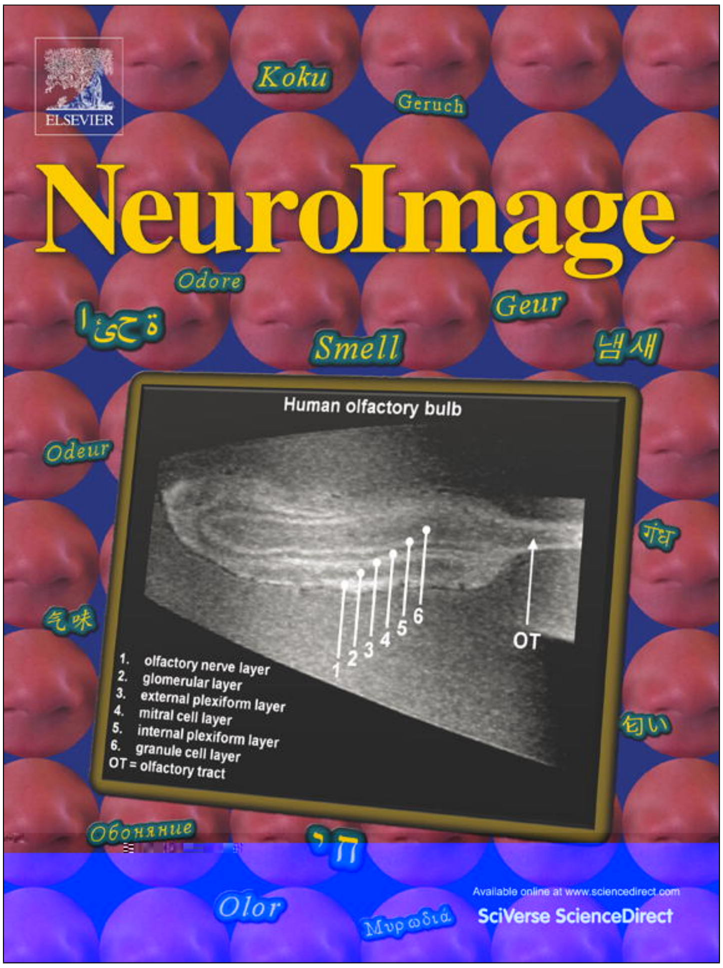

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Introduction

S - fl . T - fl - (MRI) (, H N , 2009; H , 2011; N ., 2006) - (R ., 1977). I - - - (BOLD) , (MPFC) (PCC), - (F ., 2003; H ., 2008; H ., 2006; K ., 2002; M H , 2011; M ., ; M ., 2004; M ., 2006; ., 2007; ., 2002),

N 6.999, 2009;H 2322T 14 ( )2318( )16( )1 821 -1- 003-1.32 318(6 16( )) 2( )22(-15((82 57(6 ( )226( )21)-)23( )TJ/T123

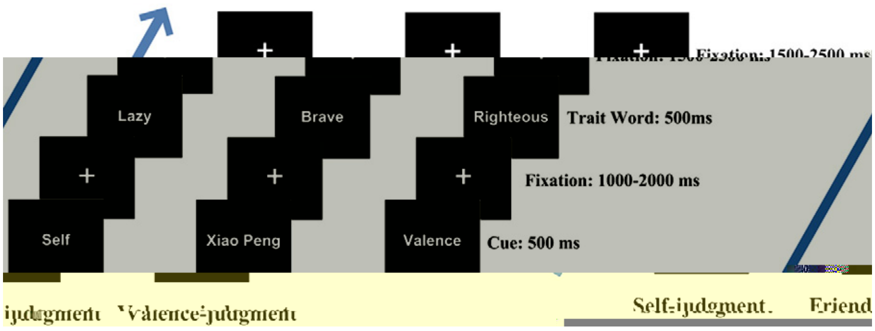
Lazy
Brave
Righteous
Trait Word: 500ms
Fixation: 1000-2000 ms
Self
Xiao Peng
Valence
Cue: 500 ms

Fig. 1.

Materials and methods

Subjects

Stimuli and procedure

W NCW , - 119.7 1.3 H 2 H . T 19.9 8.0 H 80 H .

T TF fi - - - . T TF fi −200 0 (P A , 1979). C - 50 20 0 1000 . T TF 50 H 50 H C . T : (2–4 H), (5–7 H), 1 (8–10 H), 2 (11–13 H), (14–26 H), 1 (28–40 H), 2 (60–80 H), - (M H , 2010). T - TF , (: F , FC ; : C , CP : P , PO), (: F1, F3, F5, FC1, FC3, FC5; : F2, F4, F6, FC2, FC4, FC6), (: C1, C3, C5, CP1, CP3, CP5; : C2, C4, C6, CP2, CP4, CP6), (: P1, P3, P5, PO3, PO5, O1; : P2, P4, P6, PO4, PO6, O2).

T TF - - , - (ANOVA) C (- . -) R (, -) H ( ) - . T - , ANOVA C (- . -) R /H - . S ANOVA (.) R / H - TF / T fi , ANOVA S (/), T (/) R /H - . T TF E 1 , ANOVA TF E 2 C (- . - . -) R - /H - . A P- ANOVA G –G .

Phase synchrony analysis

S (D ., 2008; G ., 2004; L ., 1999; L ., 2004; R ., 1999), M (TFOI) - - - - - - . W - - (PLV) fi . T PLV - j k t f N :

$$PLV_{j,k,t}=N^{-1}\left|\sum_{N} e^{i[\Phi_j(f,t)-\Phi_k(f,t)]}\right|$$

PLV 0 1. 0 1 - j k.

W 21 - , 210 (21 20/2) (F3, F4, F), - (FC3, FC4, FC), (C3, C4, C), (CP3, CP4, CP), (P3, P4, P), - (PO3, PO4, PO), (O1, O2, O) . T - . T -I - , P (K ., 2004; M O , 2007). T PLV 1000 . T - . T - 1000 – , 1000 T . A 1000 T , 95 - . T PLV T 95 (P<.05) fi .

Results

Behavioral performance

T ANOVA (RT) E 1 -

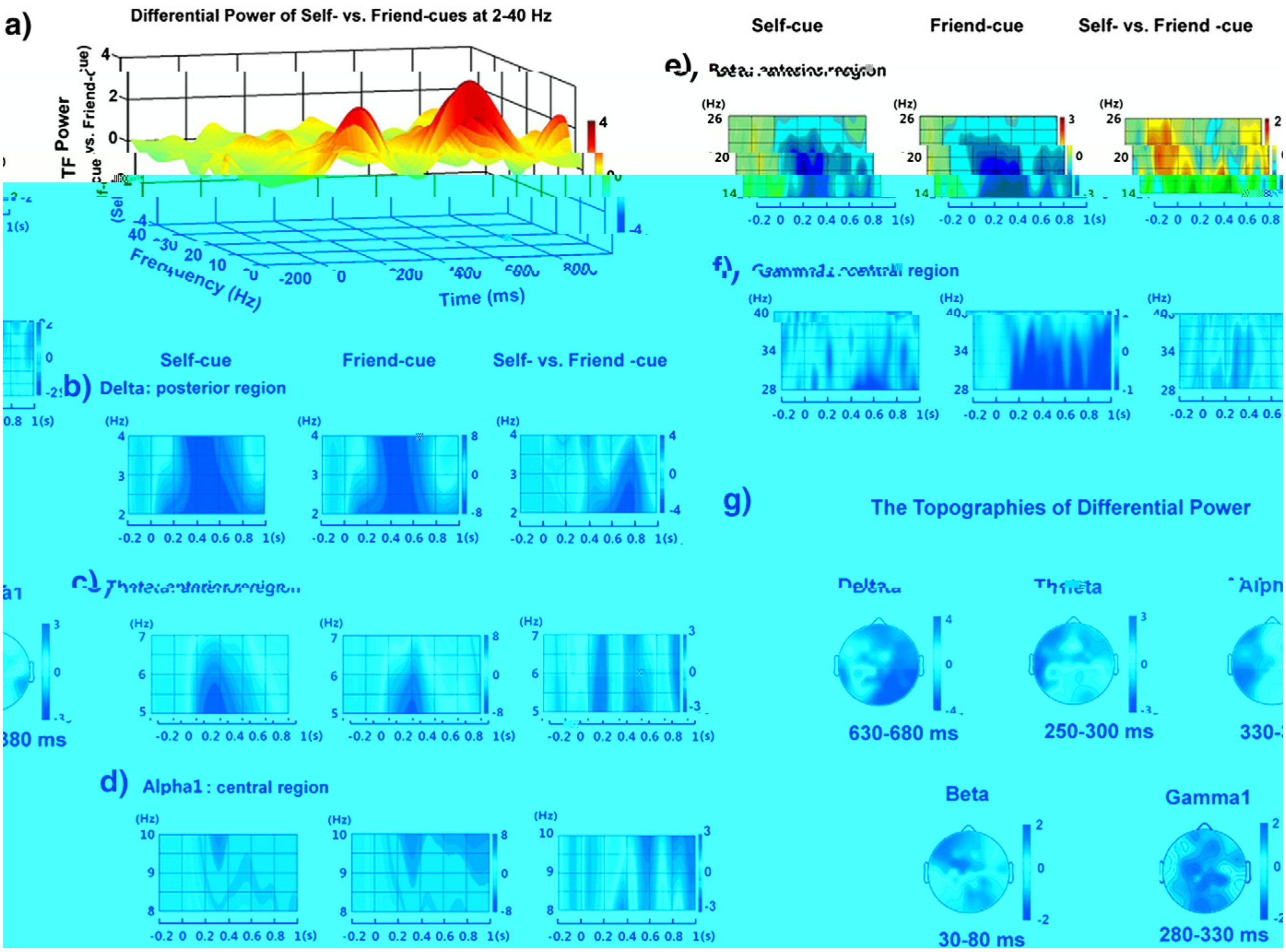

Fig. 2. T ... TF ... F5 ... 2–40 H ... 0 ... 1000 ...) D ... P1.) T ... CP3.) B ... F5.) A ... 1 ... C1.) T ... 50 ... . T ... TF ... . R ...

S ... fi ... C ... R ... 1 ... 300–400 ... (F (2, 50) = 9.53, P<.01, η²=.28) ... 50–100 ... (F (2, 50)=5.783, P<.05, η²=.19). P - ... 1 (F (1, 25)= 5.32, P<.05, η²=.18) ... (F (1, 25)=5.55, P<.05, η²=.18). S - . ... 2 ... 2 (P >.05). ANOVA ... C ... H ... 600–1000 ... (F (2, 50)=8.61, P<.01, η²=.24). P - ... 600–700 (F (1, 25)=8.61, P<.01, η²=.24). T ... fi ... C ... H ... 1 ... 700–900 (F (2, 50)=4.86, P<.05, η²=.15) ... 2 ... 800–900 (F (2, 50)=7.15, P<.05, η²=.20). P - ... (1, F (1, 25)=6.85, P<.05, η²=.22; 2, F (1, 25)=8.89, P<.01, η²=.26). N ... C ... C ... R ... fi ... (P >.05).

Desynchronous activity related to evaluation of one's own personality traits

N ... fi ... . R ... 1: ... , F (1, 25)=6.25, P<.05, η²=.20 ... 300–400 ; ... , F (1, 25)=6.58, P<.05, η²=.21 ... 300–400 ; ... , F (1, 25)=7.47, P<.05, η²=.23 ... 300–500 ; ... , F (1, 25)=7.79, P<.01, η²=.24 ... 200–500 ; ... , F (1, 25)=6.81, P<.05, η²=.21 ... 200–400 ; ... , F (1, 25)=6.32, P<.05, η²=.20 ... 200–300 ; ... 1: ... , F (1, 25)=4.55, P<.05, η²=.15 ... 300–400 , Fig. 3). I ... 100–300 ... (F (1, 25)=5.33, P<.05, η²=.18). ANOVA ... fi ... (P >.05).

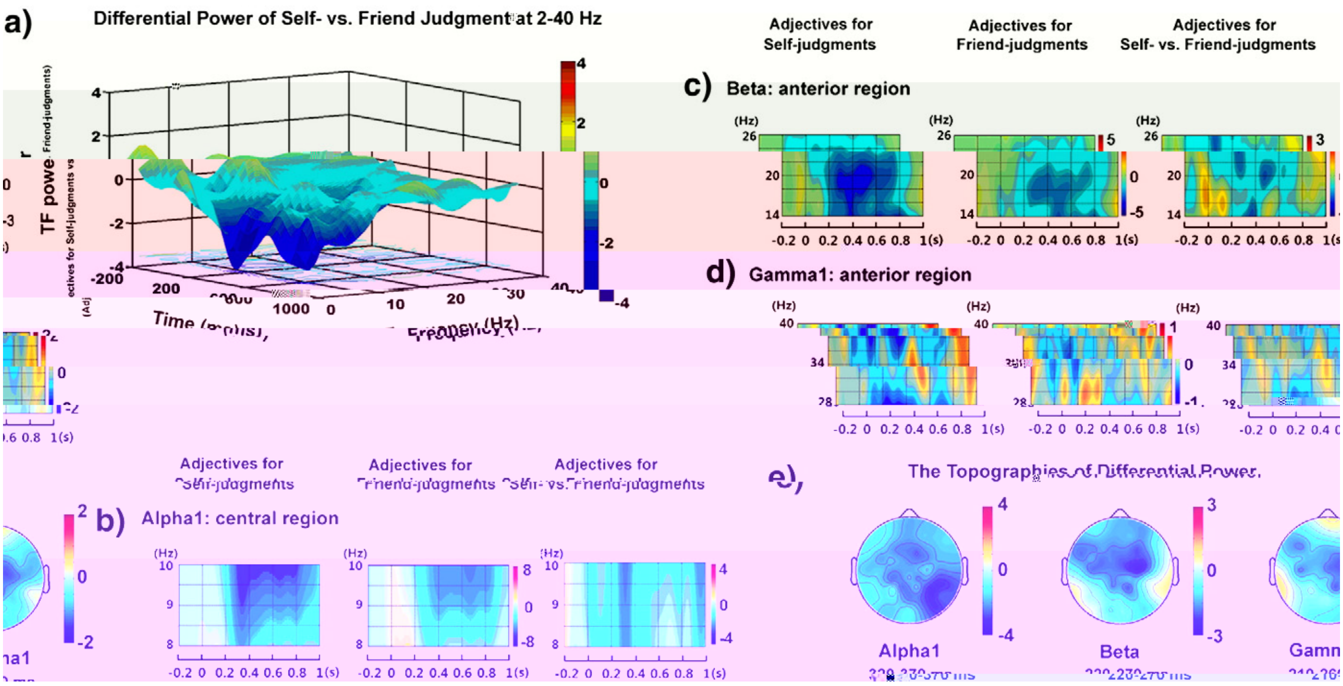

Fig. 3. T TF 5–40 H 0 1000 FC2.) G 1 C1.) B P5.) A 1 C2.) T 50 . T . R

R 1 (300–400 , F (1, 25) = 5.69, P<.05, η^2 = .19; 700–800 , F (1, 25) = 14.80, P<.01, η^2 = .37) (300–400 , F (1, 25) = 6.64, P<.05, η^2 = .21). N H (P > .05).

Distinct patterns of neural oscillations to self-cue and self-related trait adjectives

T ANOVA S ( ), T ( ), R /H . T S . I . C 400–1000 (, F (1, 25) = 29.02, P<.001, η^2 = .54; , F (1, 25) = 46.86, P<.001, η^2 = .65 , F (1, 25) = 54.77, P<.001, η^2 = .69; , F (1, 25) = 69.56, P<.001, η^2 = .74), 900–1000 (, F (1, 25) = 14.04, P<.001, η^2 = .36 , F (1, 25) = 22.71, P<.001, η^2 = .48), 800–900 (, F (1, 25) = 4.66, P<.05, η^2 = .16). M , S T 300–400 (F (1, 25) = 5.42, P<.05, η^2 = .18, Fig. 4), 1 300–1000 (, F (1, 25) = 8.94, P<.01, η^2 = .26; , F (1, 25) = 5.42, P<.05, η^2 = .18, Fig. 4), (50–100 , F (1, 25) = 9.48, P<.01, η^2 = .28; 200–400 , F (1, 25) = 8.17, P<.01, η^2 = .25, Fig. 4) (200–400 , F (1, 25) = 6.04, P<.05, η^2 = .20), 1 (100–200 , F (1, 25) = 4.09, P = .05, η^2 = .14; 300–500 , F (1, 25) = 9.27, P<.01, η^2 = .27, Fig. 4). T

P . R (300–400 , F (1, 25) = 31.92, P<.0001, η^2 = .56), 1 (300–1000 , F (1, 25) = 14.84, P<.001, η^2 = .37) (300–1000 , F (1, 25) = 14.64, P<.001, η^2 = .37), (0–100 , F (1, 25) = 7.85, P<.01, η^2 = .24; 200–300 , F (1, 25) = 4.62, P<.05, η^2 = .16), 1 (300–500 , F (1, 25) = 6.60, P<.05, η^2 = .21). I , (200–400 , F (1, 25) = 9.84, P<.01, η^2 = .28) (200–400 , F (1, 25) = 5.23, P<.05, η^2 = .17), 1 (100–200 , F (1, 25) = 4.57, P<.05, η^2 = .16). T (P>.05).

Phase synchrony of neural oscillations to self-cue

T , TFOI . T PLV TFOI . Fig. 5 . R , 300–400 ((25) = 3.08, P<.05) 1 300–400 ((25) = 2.92, P<.05). S

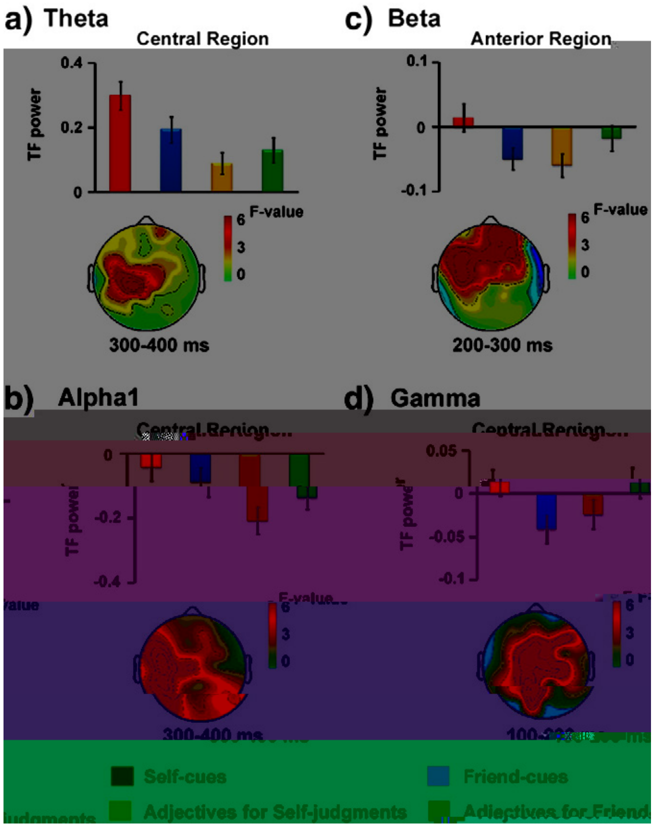

Fig. 4. I . E . T S T) F 300–400 ,) 1 300–400 ,) 200–300 ,) 100–200 .

400–500 1 ((25) = 3.41, P<.05). H , TFOI (P > .05).

Phase desynchrony of neural oscillations to evaluation of one's own personality traits

T TFOI . R 1 300–400 ((25) = −3.22, P<.05) 1 300–400 ((25) = −3.18, P<.05, Fig. 5). TFOI (P > .05). W . T 1 300–400 ((25) = 2.88, P<.05).

Non-phase-locked neural activity in Experiment 2

T E 1 , TF 2, E . T (P > .05). W , , 400–700 (F (1, 17) = 8.28, P = .01, η^2 = .33) (F (1, 17) = 8.53,

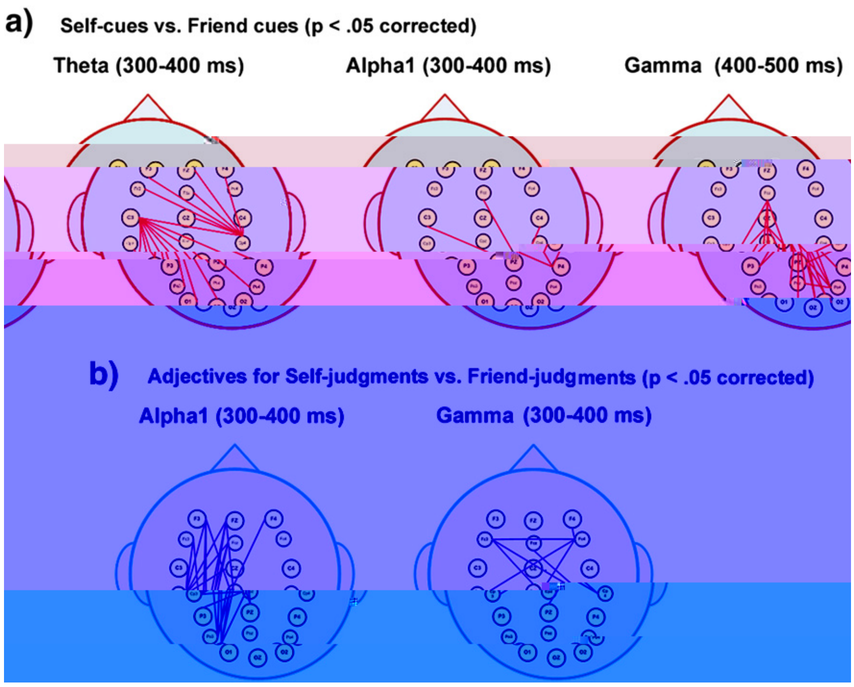

Fig. 5.) I (300–400), 1 (300–400), 1 (400–500) .) I . 1 (300–400), 1 (300–400) .

$P<.01$, $\eta^2=.33$) ... 400–600 ... ($F(1, 17)=5.20$, $P<.05$, $\eta^2=.23$) ... ($F(1, 17)=4.83$, $P=.04$, $\eta^2=.22$) ... TFOI ... ($P>.05$).

Discussion

T ... W ... (R ... ., 1977) ... W ... I ... O ...

Neural oscillations and self-related attentional orientation

I ... W ... ? A ... K ... (2002), ... T ... I ... B ... I ... I ... 1 ... I ... A ... 1 ... T ... E ... 2 ... A ... E ... 2 ... H ...

... E ... 2. T ... P ... EEG ... A ... (F ... ., 1995; H ... ., 1996) ... (L ... ., 2007). I ... (C ... ., 2003; O ... ., 2001) ... S ... O ... I ... (B ... ., 2000). S ... (G ... ., 1999; H ... K ..., 2001; M ... ., 2000), (H ... ., 2000), ... (B ... A ..., 2002; T ... -B ..., 2009). B ... T ... -B ... (1996, 1997) ... O ... (R ... ., 1999). T ... (V ... ., 2001). I ... H ... T ... U ... B ... (F ... A ..., 2011), ...

Neural oscillations of self-related evaluation

T ... T ... W ... T ... I ...

(M H , 2010)

B (V ., 2001), . F

(D ., 2003). S

(H ., 2004 , 2004). T

(H ., 2004 , 2004). W fl

(M H , 2010) (K ., 2002). I

. T fi fl fl

O

. T

. R

(F A , 2011,). F

(P K , 2009). E

(G ., 2001). I

. T

(K ., 2002).

Conclusion

T . N fi EEG . W . H / / . O fi . N

A EEG EEG . F MRI fi . F (H N , 2009; H ., ; M K , 1991), fl .

Acknowledgments

T N B R P C (973 P 2010CB833903), N N S F C (P 30910103901, 91024032, 81161120539), C P S F (P 2011M500171, 2012T50006). W L L .

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