An Experimental Study on Social Network Brands Cognitive Information Processing

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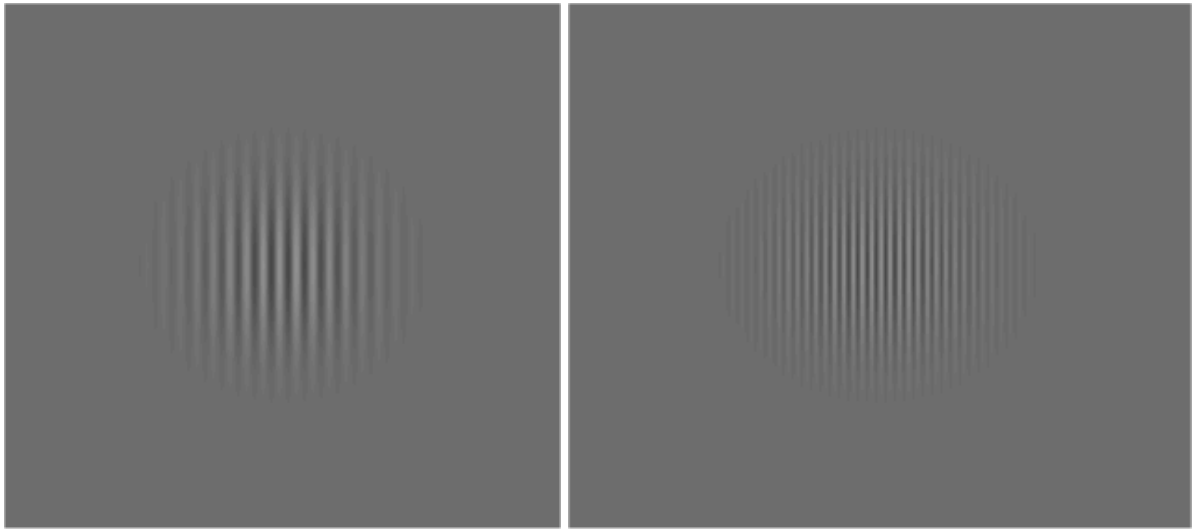
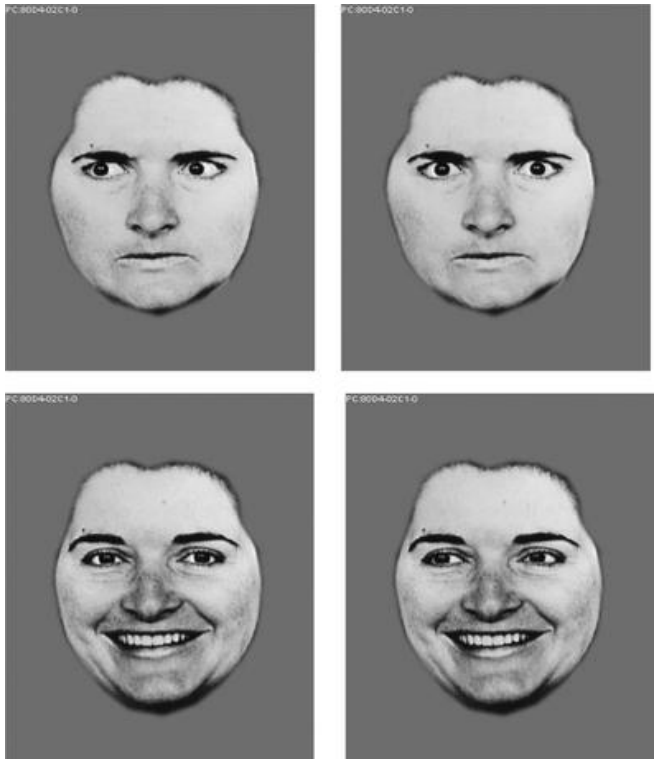
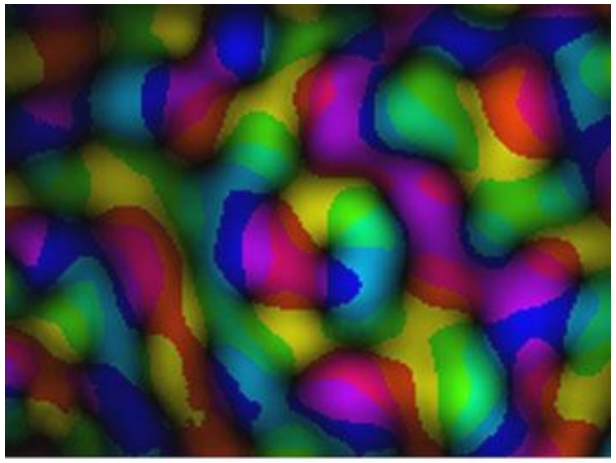
Stimuli – luminance, contrast, color







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Stiliyan Yordanov Georgiev

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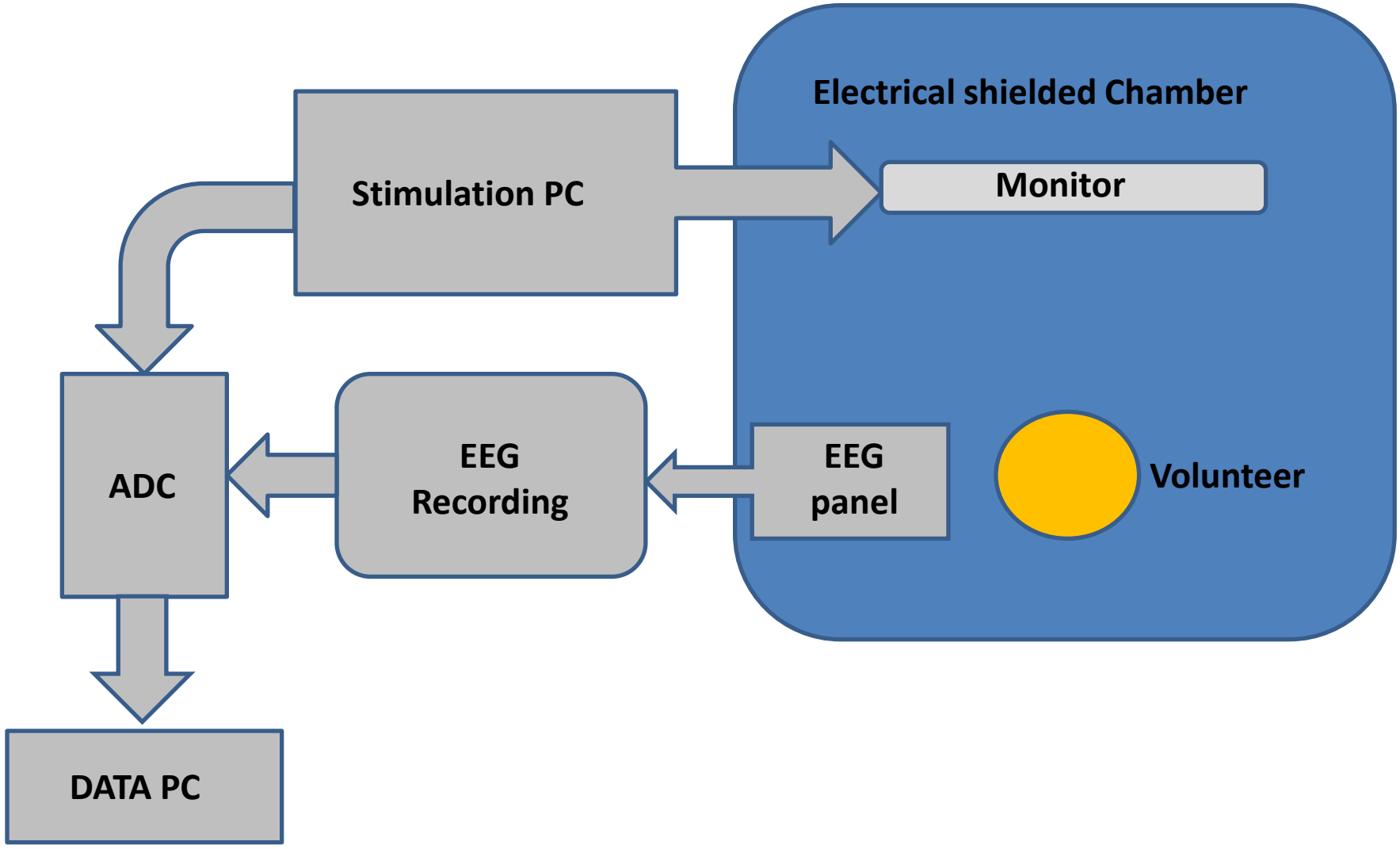
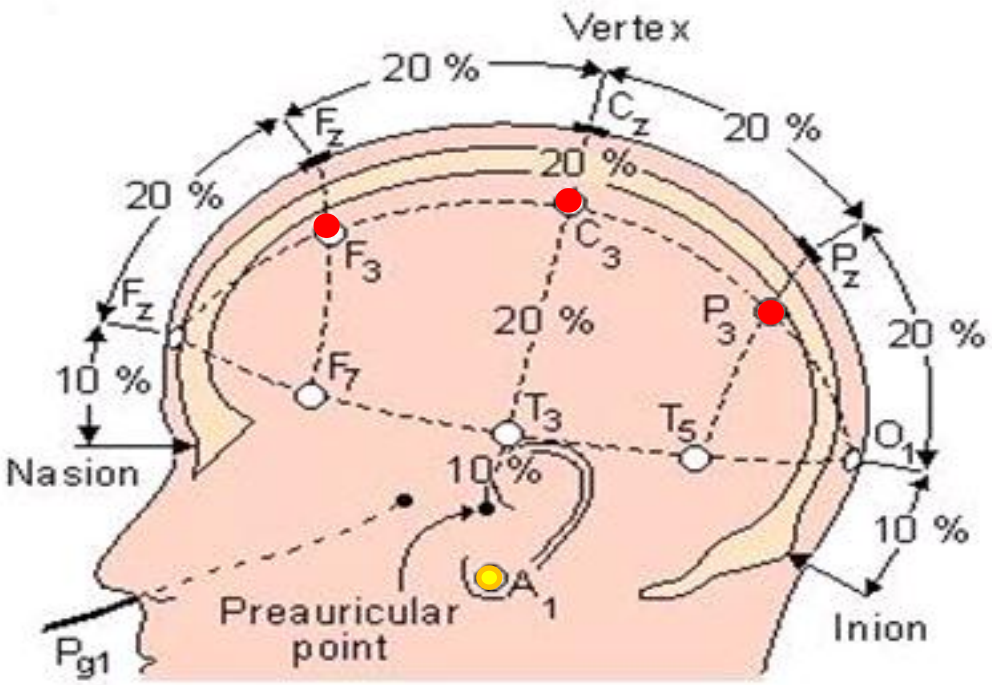
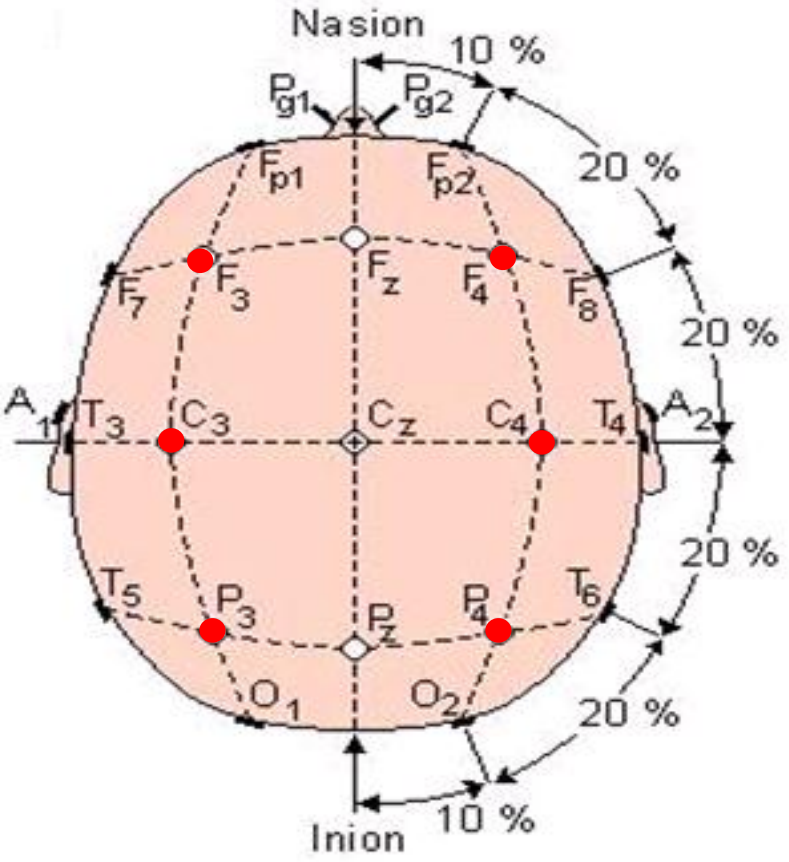
Methods


Electrical shielded Chamber
Stimulation PC
Monitor
ADC
EEG
Recording
EEG
panel
Volunteer
DATA PC

Methods

Brain electrical activity (EEG) was recorded from parietal, central, and frontal brain areas.



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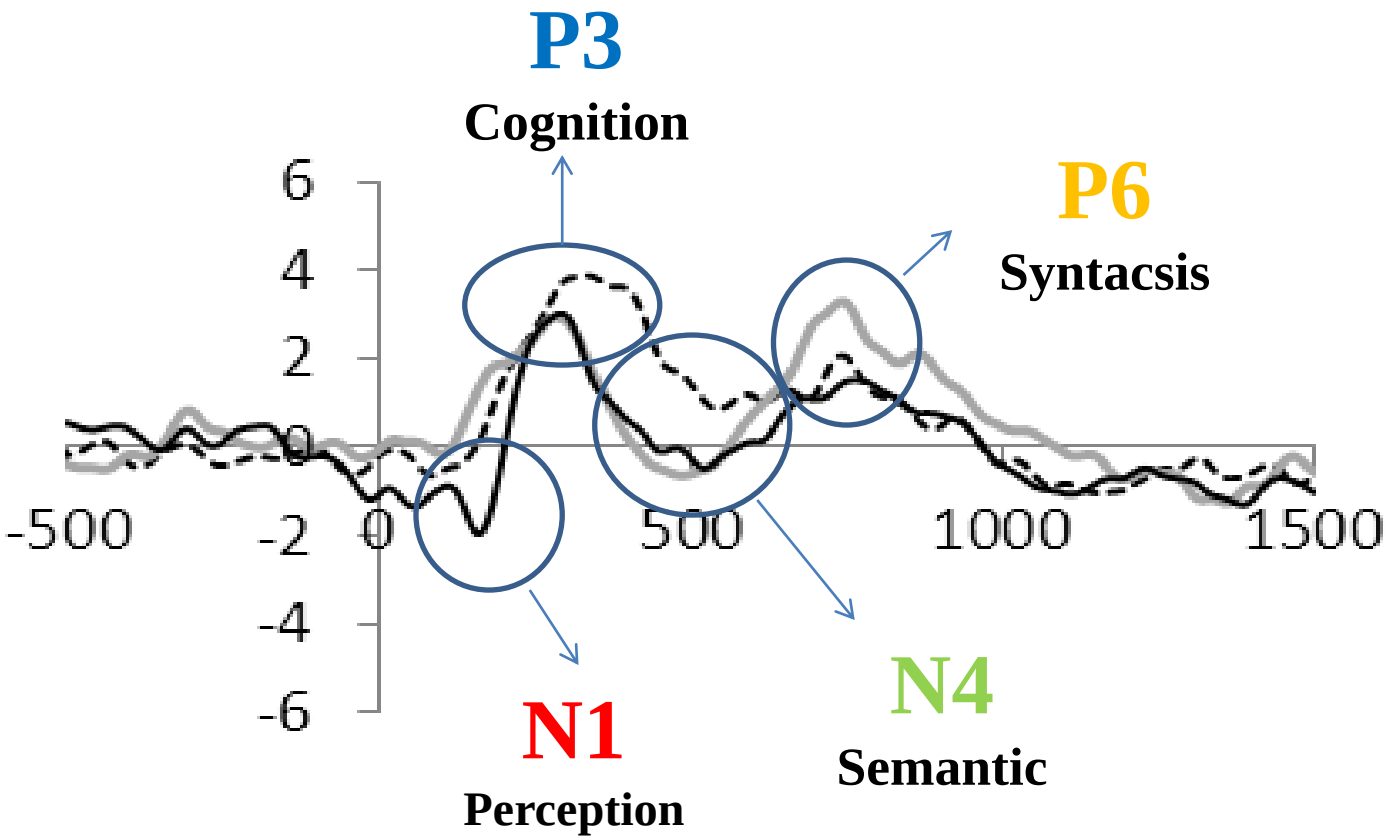
Event-Related Potential Components

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NETLOG


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YouTube


twitter


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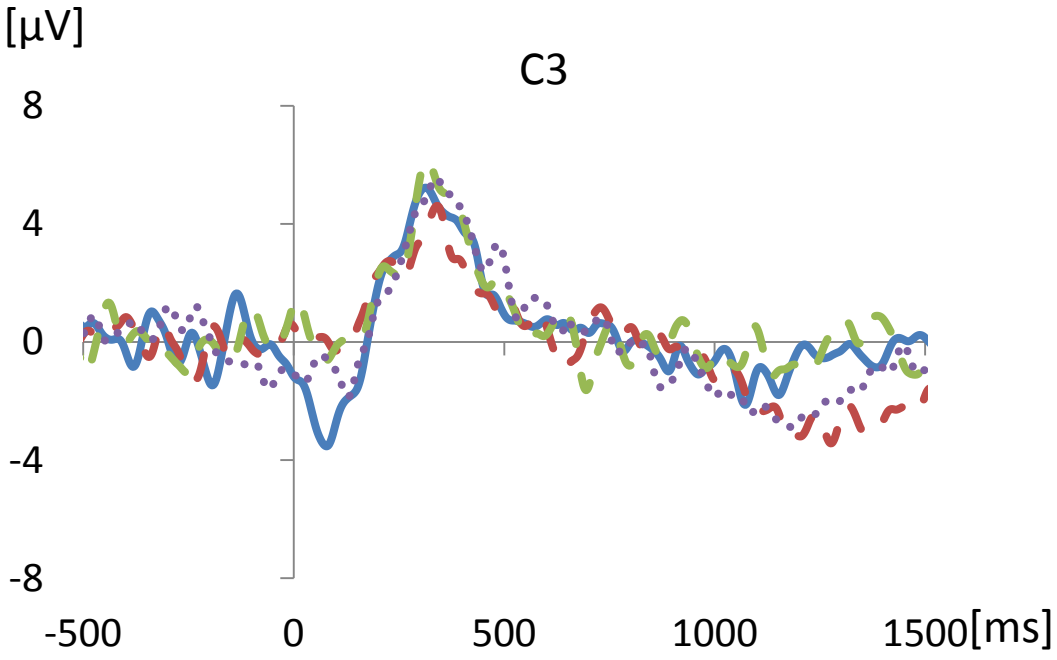
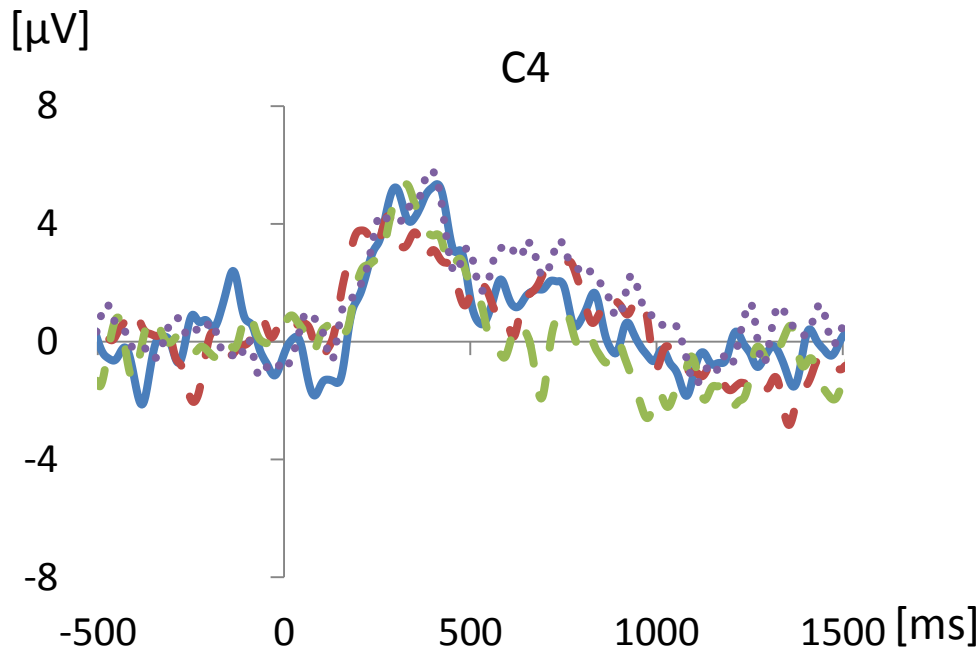
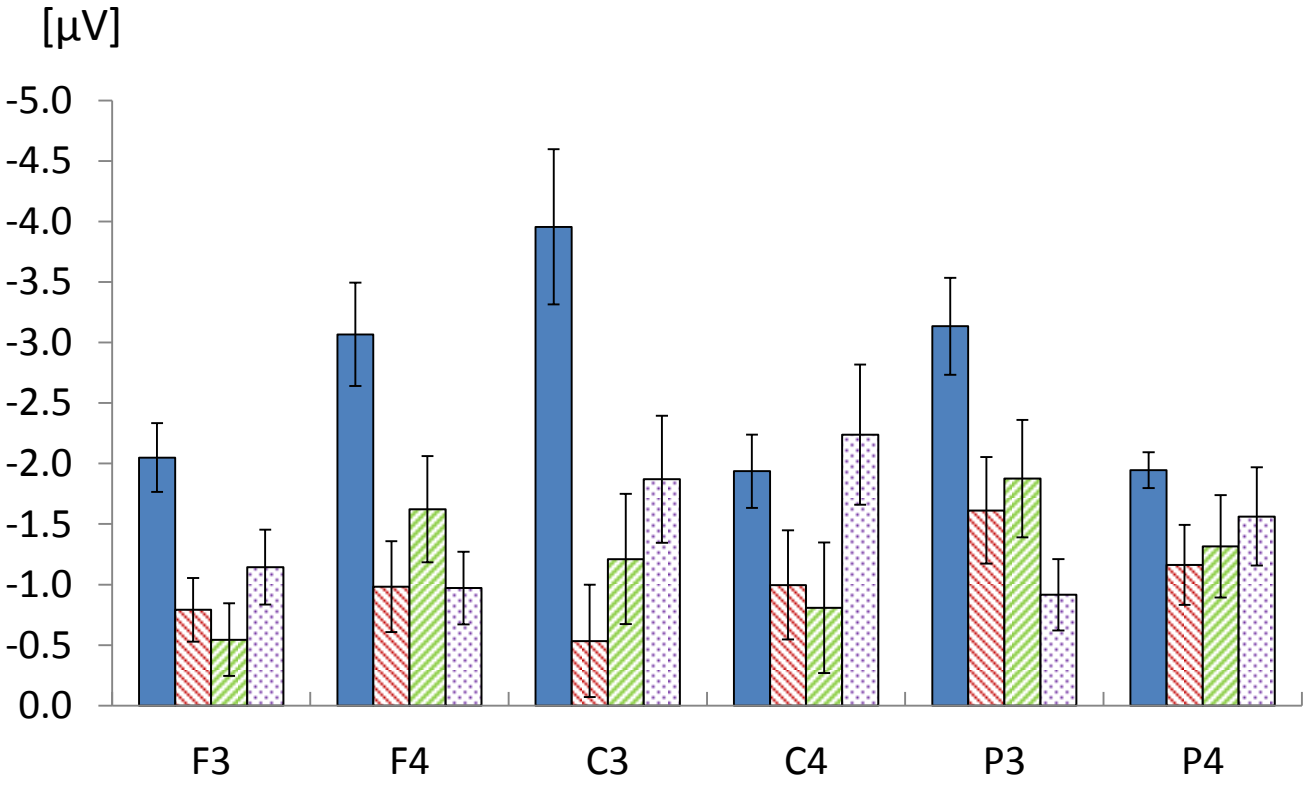




Visual Event-Related Potentials evoked by social Network logos presented on white background. The figure shows the time period from 500 [ms] before stimuli presentation to 1500 [ms] after the stimuli onset. Each stimulus remained on screen for the entire 2000 [ms] time period. Different logos on social networks are displayed with different color lines, as follows:

Facebook — Twitter — Linked In — Netlog



Comparison of N1 component amplitudes of Visual ERPs elicited after Facebook ■, Twitter ▨, Linked In ▨ and Netlog ▨ logos presented on white background.

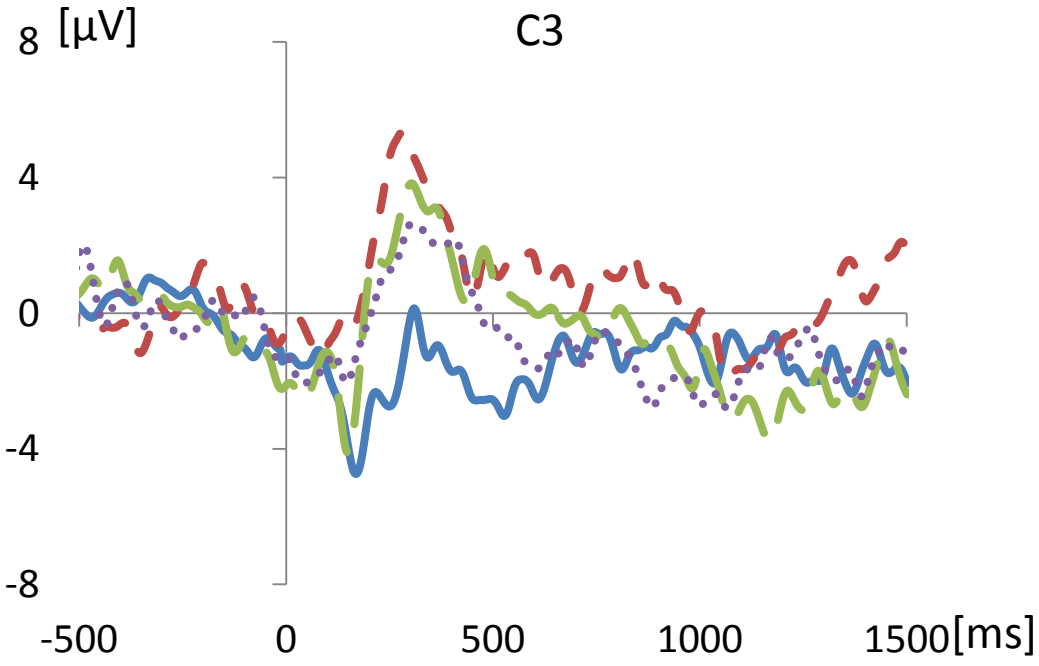

facebook

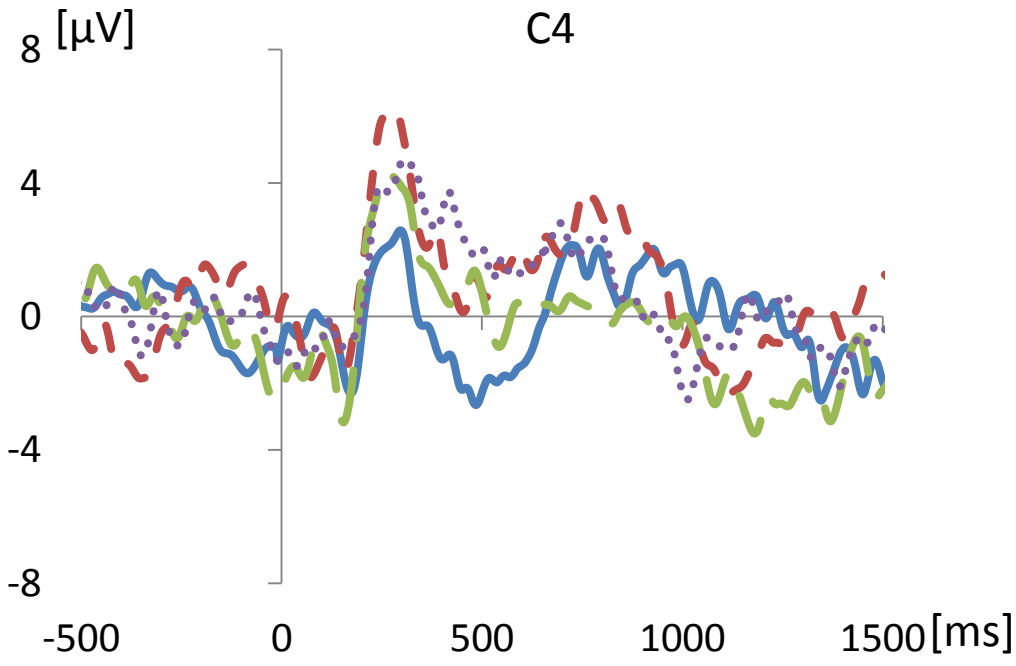

NETLOG™


LinkedIn


twitter

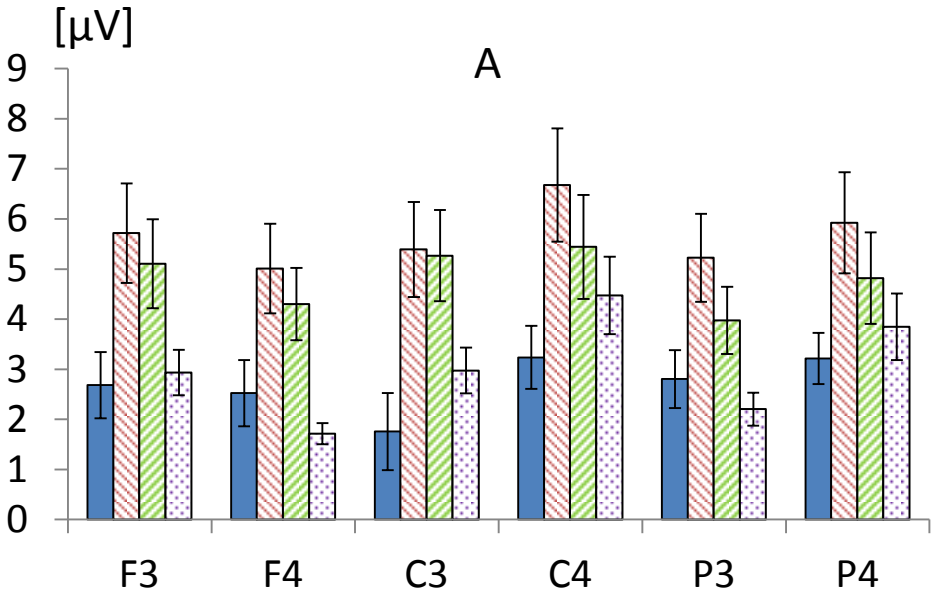

Google

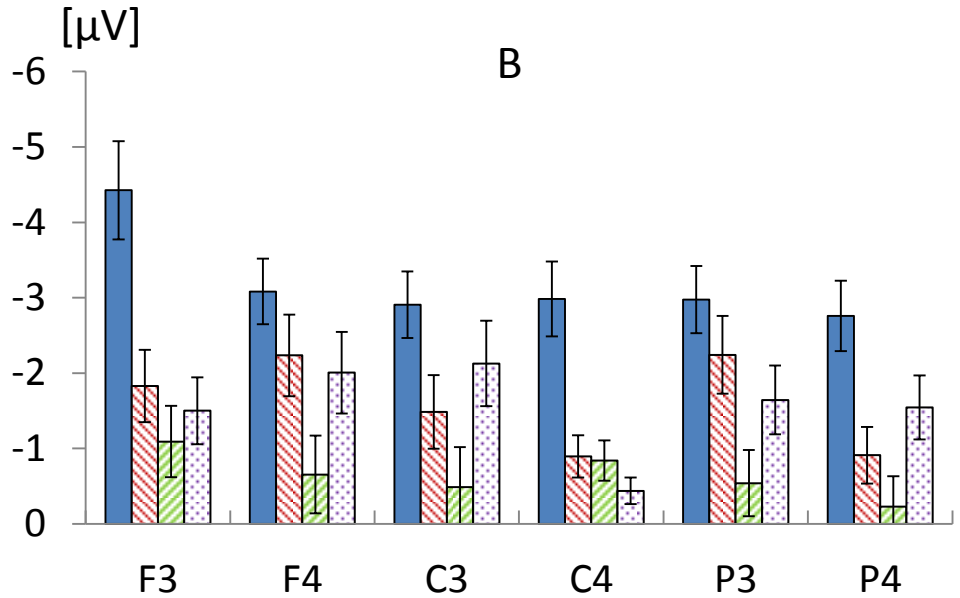


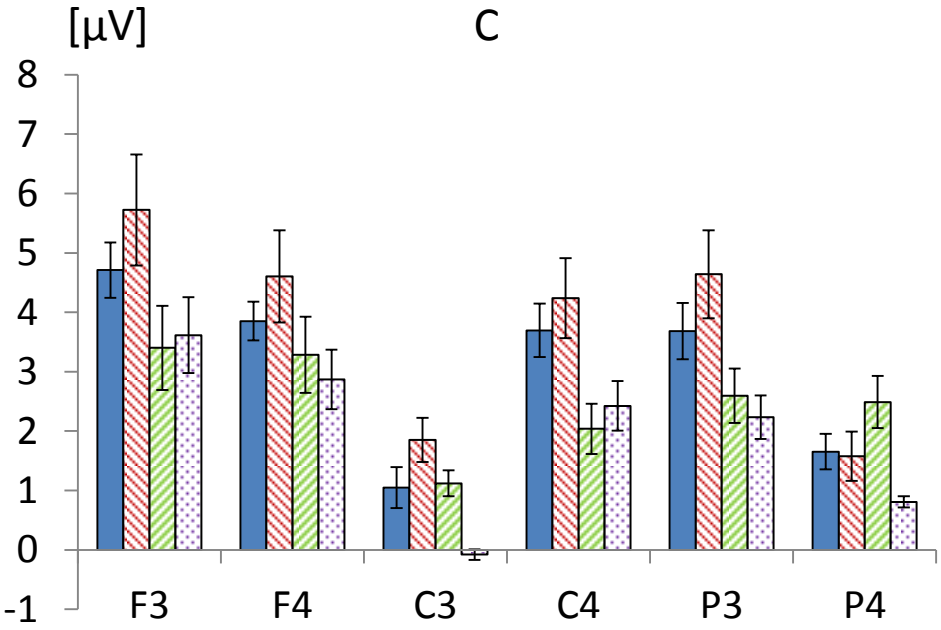


Visual Event-Related Potentials evoked by social Network logos presented on black background. The figure shows the time period from 500 [ms] before stimuli presentation to 1500 [ms] after the stimuli onset. Each stimulus remained on screen for the entire 2000 [ms] time period. Different logos on social networks are displayed with different color lines, as follows:

Facebook Twitter Linked In Netlog







Comparison of P3 (fig. 3A), N4 (fig. 3B) and P6 (fig. 3C) components amplitudes of Visual ERPs elicited after Facebook, Twitter, Linked In and Netlog logos presented on black background.

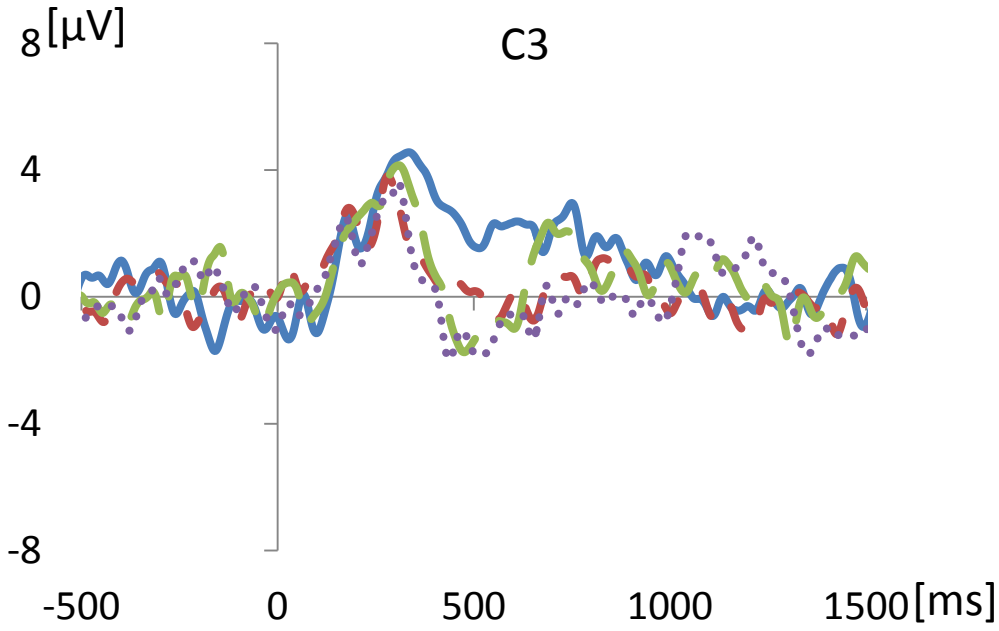
facebook

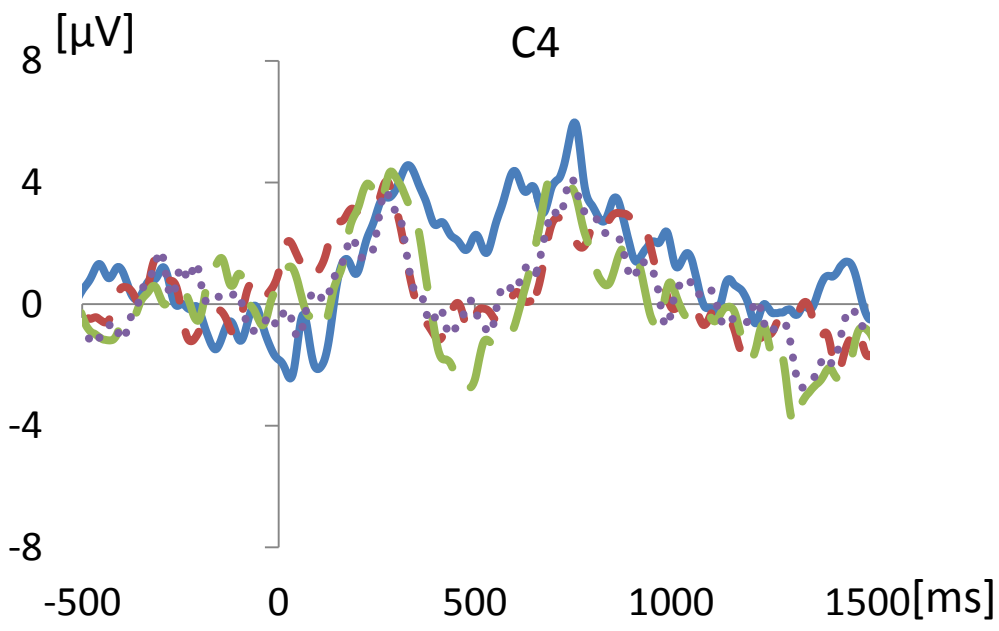
netlog

linked in

twitter

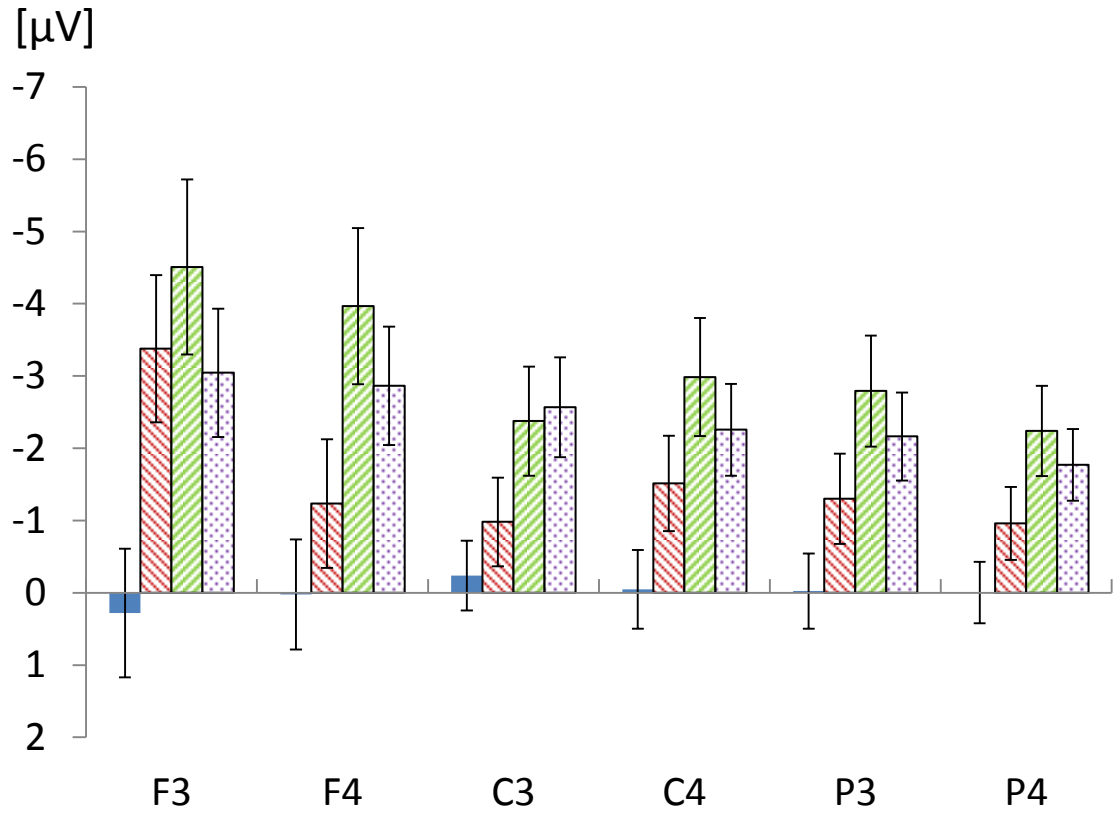
google+



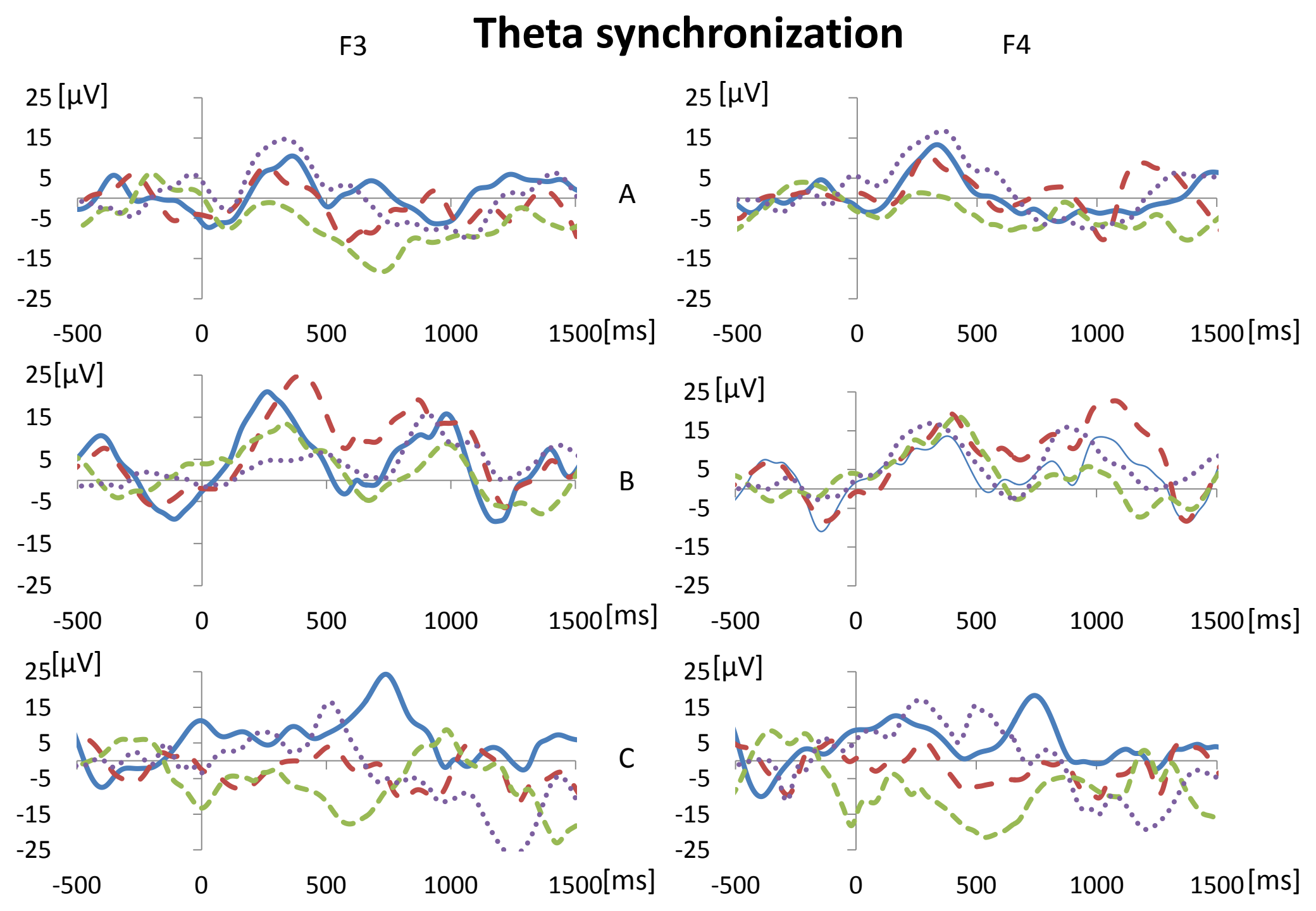


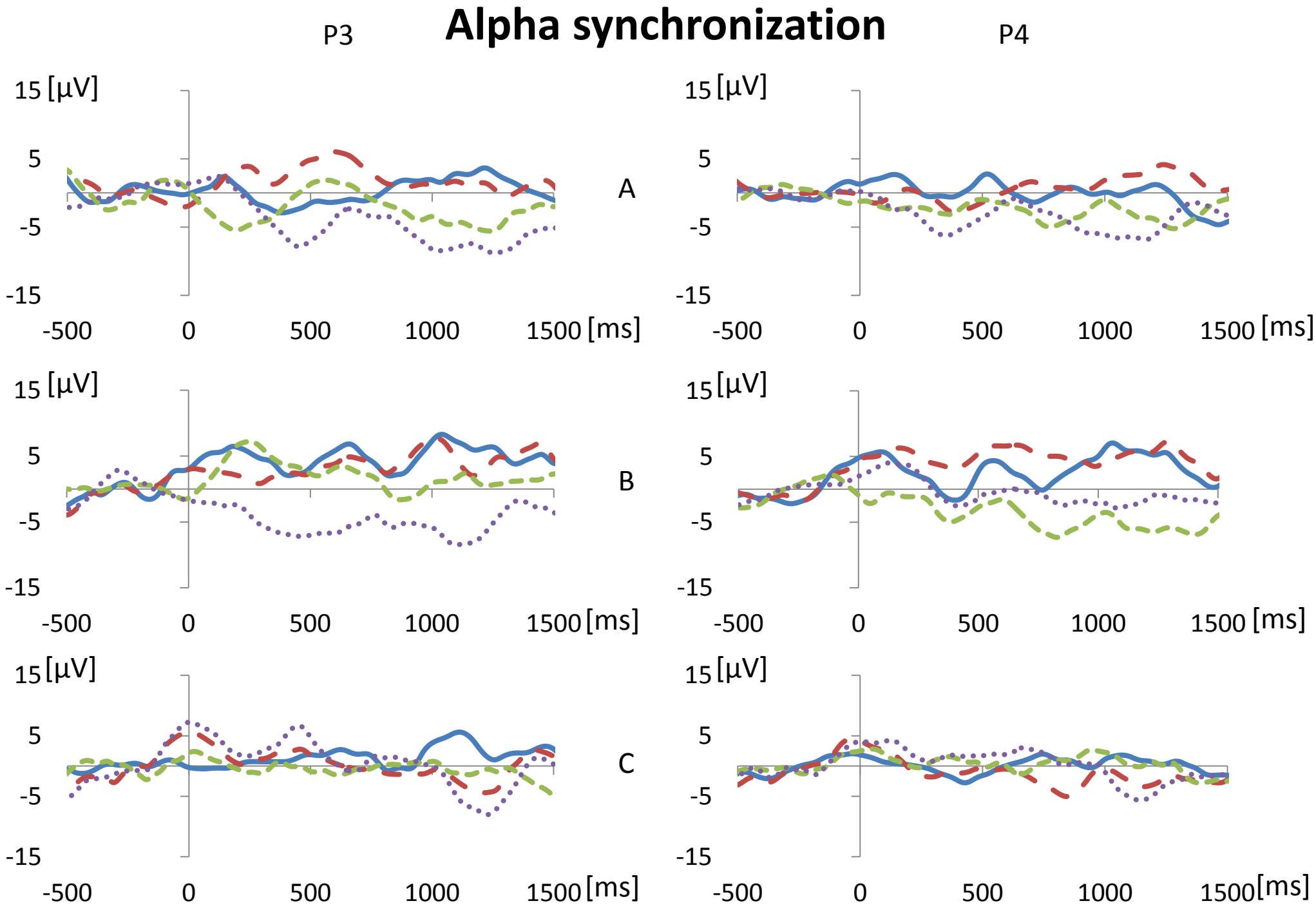
Visual Event-Related Potentials evoked by social Network textual printed logos on gray background. The figure shows the time period from 500 [ms] before stimuli presentation to 1500 [ms] after the stimuli onset. Each stimulus remained on screen for the entire 2000 [ms] time period. Different logos on social networks are displayed with different color lines, as follows:

Facebook — Twitter — Linked In — Netlog



Comparison of N4 component amplitudes of Visual ERPs elicited after Facebook , Twitter Linked In and Netlog logos presented as text on the gray background.


Theta synchronization
F3
F4
A
B
C
25 [μV]
15
5
-5
-15
-25
-500
0
500
1000
1500
[ms]


Alpha synchronization
P3
P4
A
B
C
15 [μV]
5
-5
-15
-500
0
500
1000
1500 [ms]

Conclusions

1. The P3 amplitude prefers Twitter and Linked In.

2. Theta synchronization prefers Netlog and Twitter.

3. Alpha desynchronization prefers Netlog and Linked In.

4. **Facebook** may be considered as the most emotional text brand and **Twitter** as the most emotional logo brand.

Finally, this provokes a research hypothesis about predisposition of social network users to hidden cyber & behaviour threats due to emotional reasons.

Acknowledgements

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We also express our gratitude for the data base support to 'Influence of the TV commercials on audience attention, memory and information processing', Grant NID 21.03-26.2009, University of National & World Economy, 2008-2012, www.neuromarketing.bg

Thank you for the attention!

Questions?