# Article information:

Does physical interstimulus variance account for early electrophysiological face sensitive responses in the human brain? Ten lessons on the N170 - ScienceDirect
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# Article summary:

1. The N170 component of the human brain's electrophysiological response to visual stimuli is larger for faces than other object categories, and has been extensively studied in non-invasive ERP experiments.

2. A recent study by Thierry et al. claimed that the larger N170 response to faces was due to an uncontrolled methodological artifact of interstimulus physical variance, but this claim is unfounded and conflicts with existing literature.

3. The article provides ten lessons on the N170 component, including clarifying the nature of Thierry et al.'s claim, discussing the respective roles of low-level visual properties and high-level visual processes in accounting for N170 amplitude, and addressing the question of why the N170 is larger for faces than other categories.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Does physical interstimulus variance account for early electrophysiological face sensitive responses in the human brain? Ten lessons on the N170" is a critical analysis of a study by Thierry et al. (2007a) that claimed to eliminate the larger N170 amplitude to faces by controlling for a methodological artifact of interstimulus physical variance. The authors of this article argue that Thierry et al.'s claim is unfounded and in conflict with their own data, and they provide ten lessons on the N170 component to shed light on its preferential response to faces and its relation to physical variance of stimulus sets.

The authors first clarify the nature of Thierry et al.'s claim, which suggests that previous studies observed a larger N170 in response to faces because they used pictures of objects presenting much higher interstimulus physical variance than face pictures. However, the authors argue that this claim is unfounded because physical variance between faces and nonface objects was not controlled in Thierry et al.'s study actually, contrary to their claim. Moreover, the authors point out that there are no explicit guidelines in the literature as to which electrode sites should be analyzed when comparing faces to nonfaces on the N170, making it important to consider for current and future N170 investigations.

The authors also discuss some general issues related to Thierry et al.'s claim, such as the respective role of low-level visual properties of stimuli versus high-level visual processes in accounting for the largest N170 amplitude in response to faces. They argue that while part of the N170 face effect may be related to interstimulus physical variance, it is unlikely that greater perceptual similarity of face stimuli would account for substantial part of this phenomenon.

Overall, this article provides a critical analysis of Thierry et al.'s study and sheds light on important issues related to the N170 component's preferential response to faces. However, it is important to note that the authors of this article may have their own biases and perspectives on the N170 component, which could influence their interpretation of Thierry et al.'s study and their ten lessons on the N170. Therefore, readers should approach this article with a critical eye and consider multiple perspectives on the topic.

# Topics for further research:

* N170 component and face processing
* Interstimulus physical variance and N170
* Low-level visual properties and N170 face effect
* Electrode sites for N170 analysis
* High-level visual processes and N170 face effect
* N170 component in cognitive neuroscience research

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