

# “Sexual objectification beyond the metaphor: an EEG investigation”

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## Introduction

Sexual objectification is a widespread phenomenon characterized by a focus on the individual's physical appearance over his/her mental state. This shift in terms of attention consist of reducing women to their body or certain body parts making them similar to objects. It is already known that the elaboration of human and non-human stimuli is subserved by separate brain areas (Mitchell, Heatherton, & Banaji, 2002), but the human – object divide fades when humans are objectified or objects are anthropomorphized. Moreover, objectified women and certain type of objects can be recognized using the same analytical processing style (Cogoni et al., 2018) but this not guarantee their total overlap in the eye of the perceiver. The present work aims at testing to what extent does a “she” becomes an “it” when objectified, and whether the perception of women as objects of desire is a mere metaphor or does the objectification of women convey true similarities with objects?

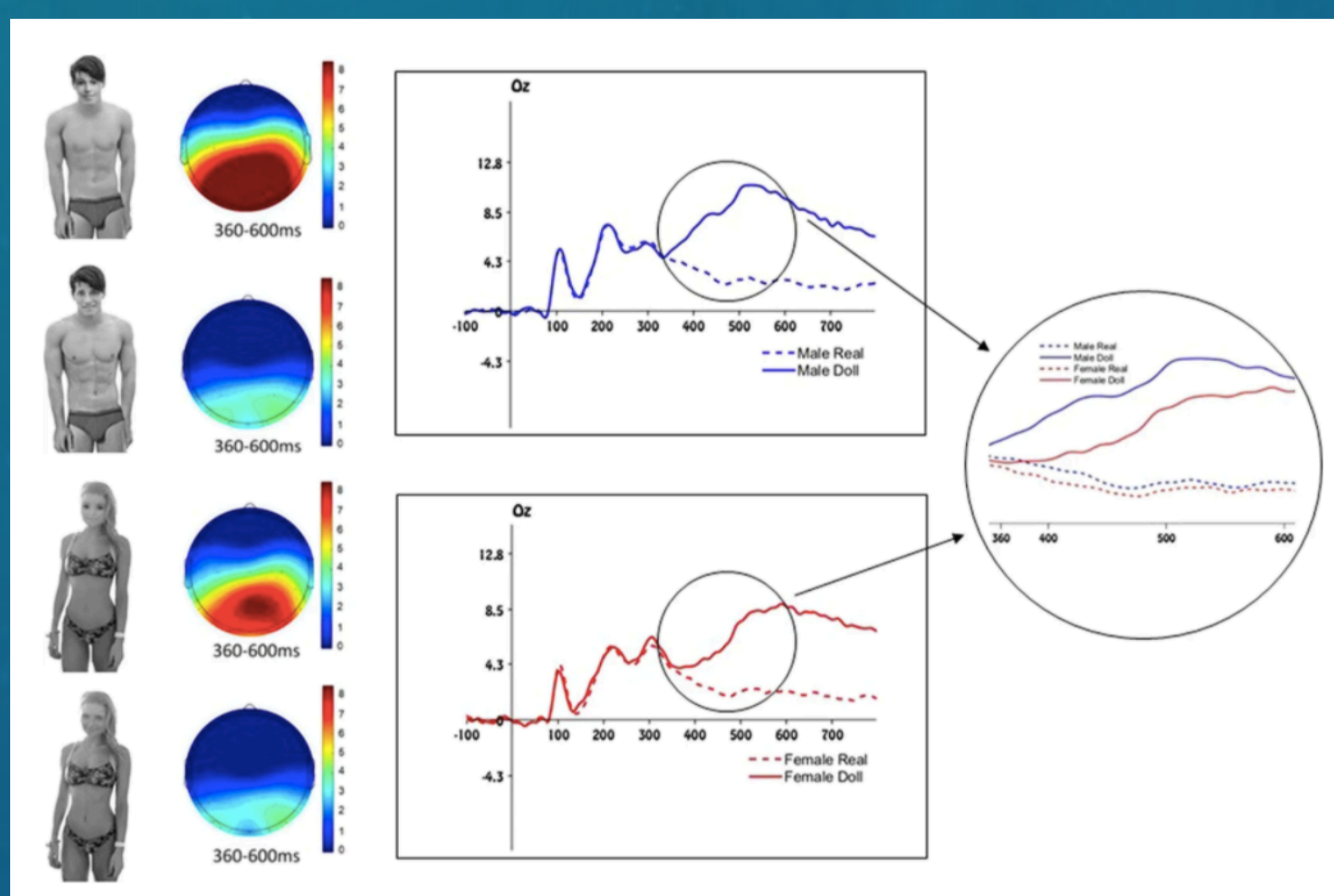
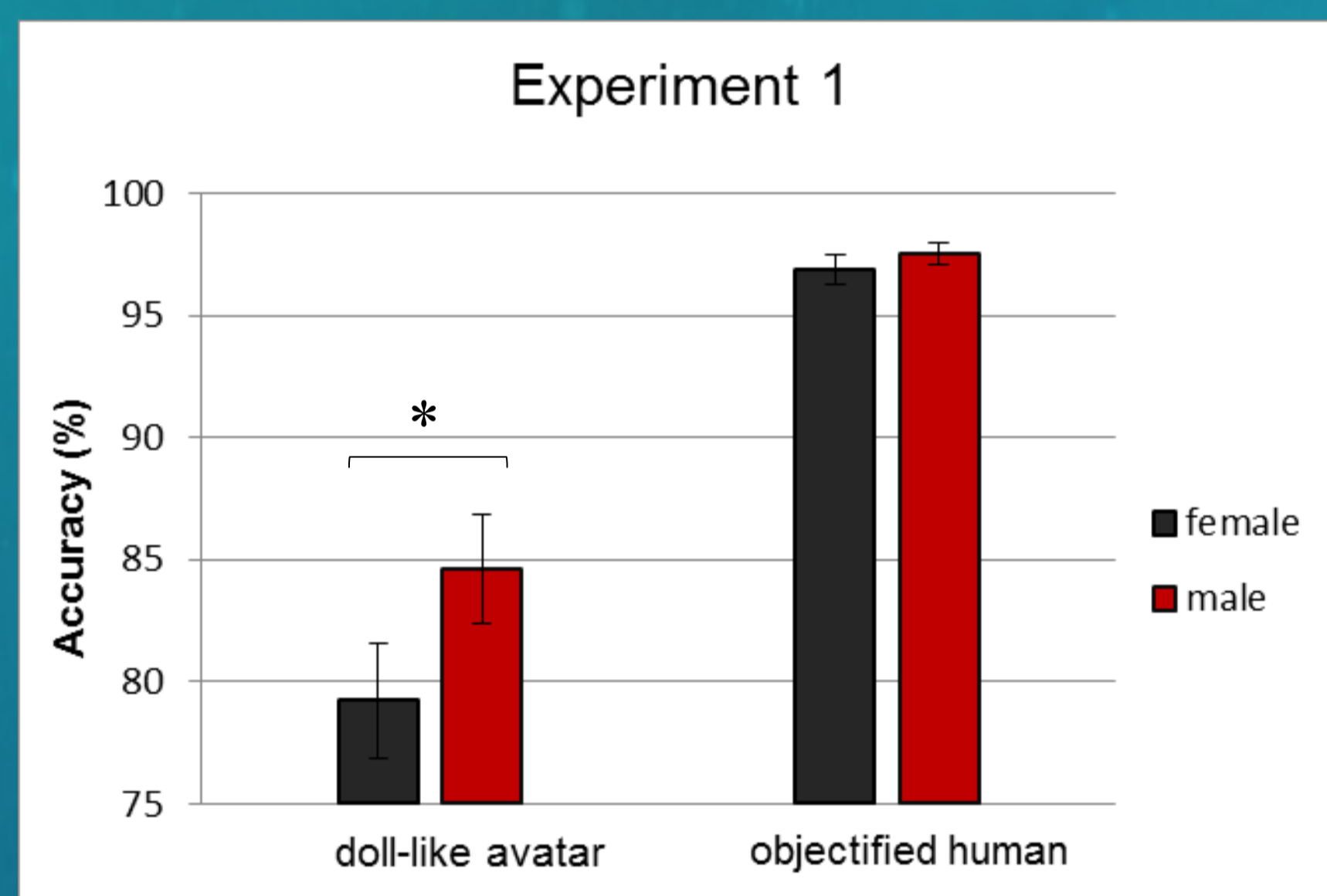
## Method

To gauge the true similarities between objectified women and objects, we used a procedure that directly assesses the perceptual similarities between object and human stimuli. In 3 different studies, neural activity was measured during an Odd-ball paradigm in which a sequence of repetitive stimuli is infrequently interrupted by a deviant stimulus (i.e., the oddball). More in details, participants analyzed frequently presented male and female human stimuli and infrequently presented gender-match doll-like objects. In each study, participants completed a human vs. non-human categorization of pictures of male and female human targets while the infrequent stimuli were doll-like avatars.

### Study 1

Objectified targets

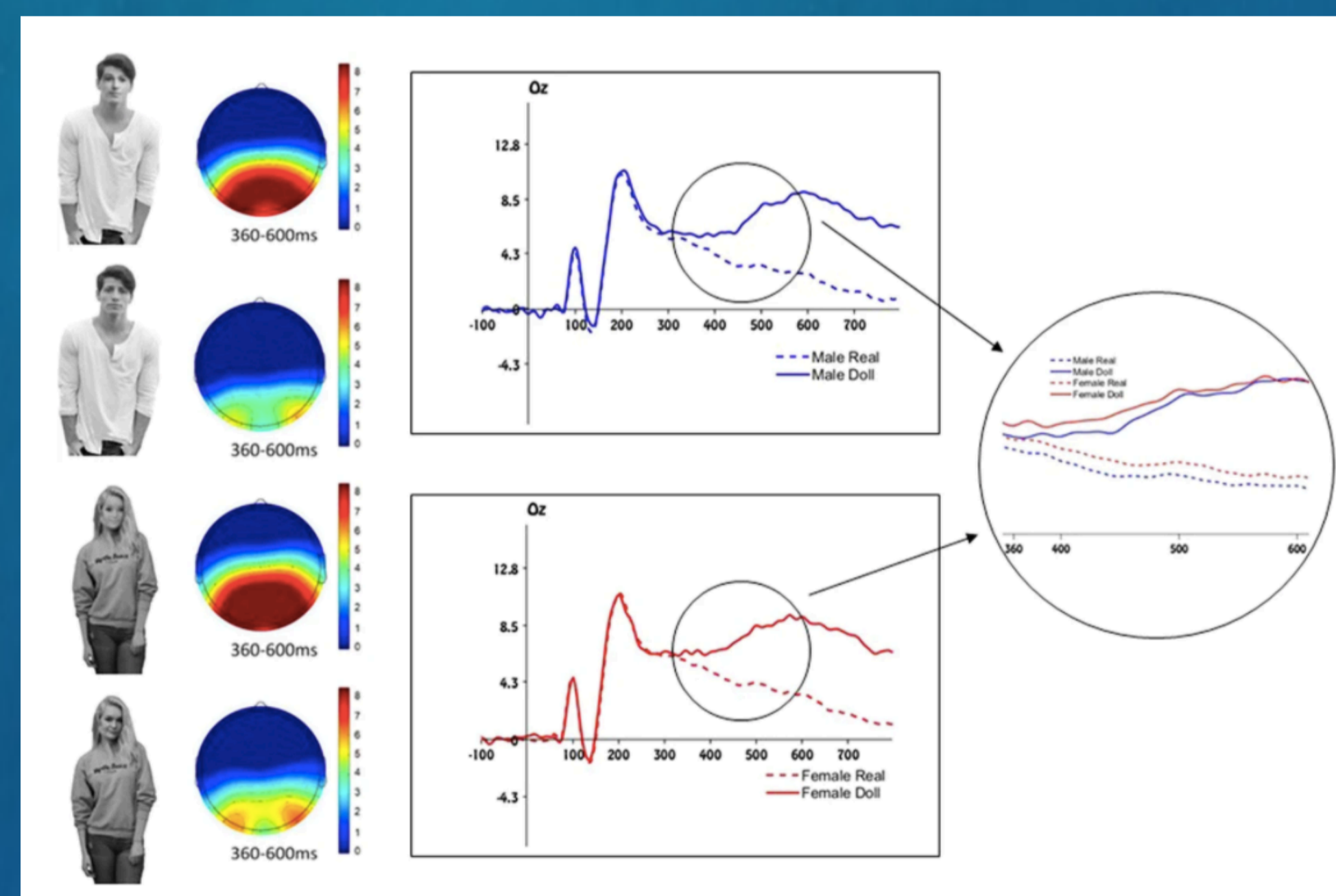
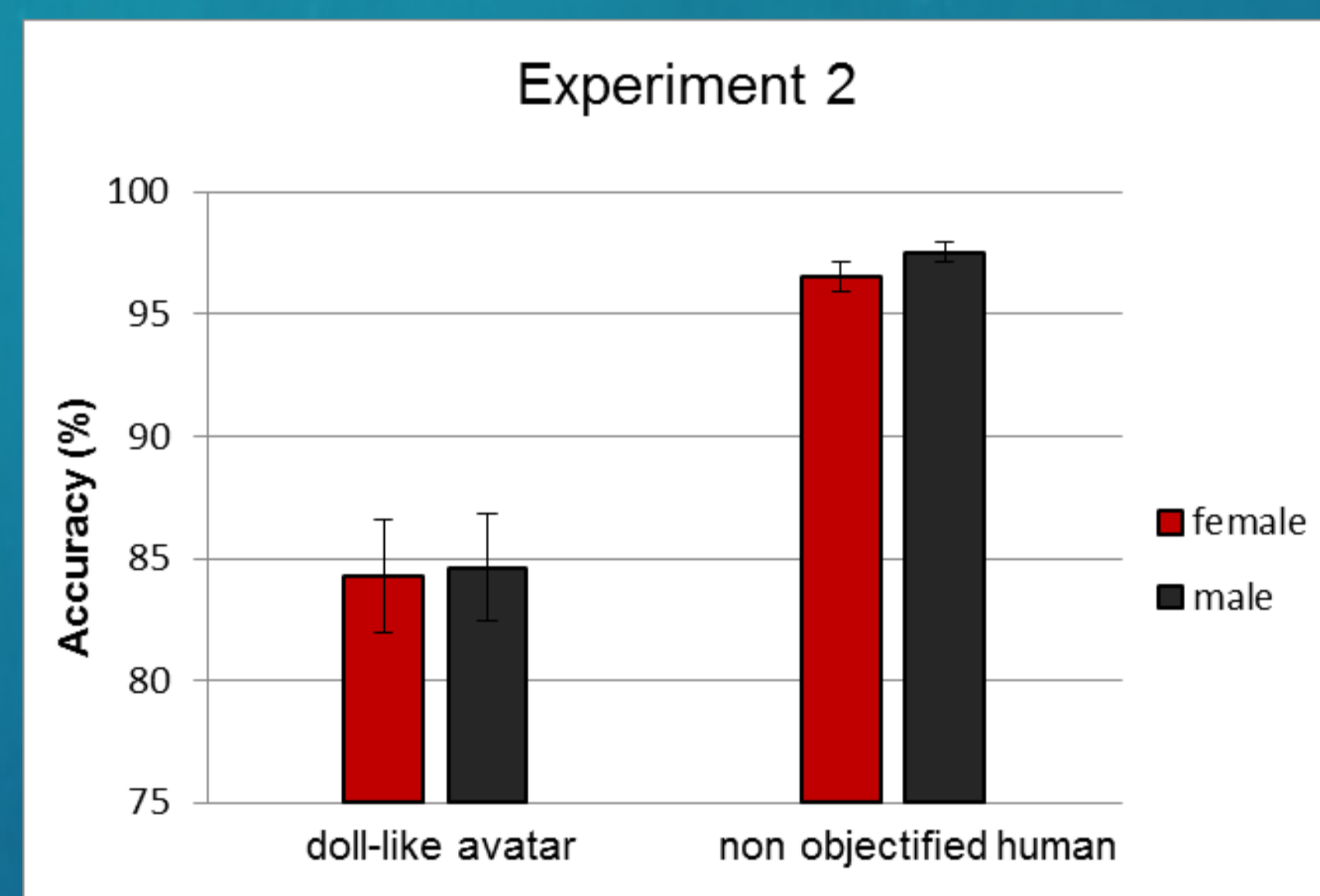
18 participants (8 female;  $M_{age}=20.66$ ,  $SD=1.29$ ).



### Study 2

Non-objectified targets

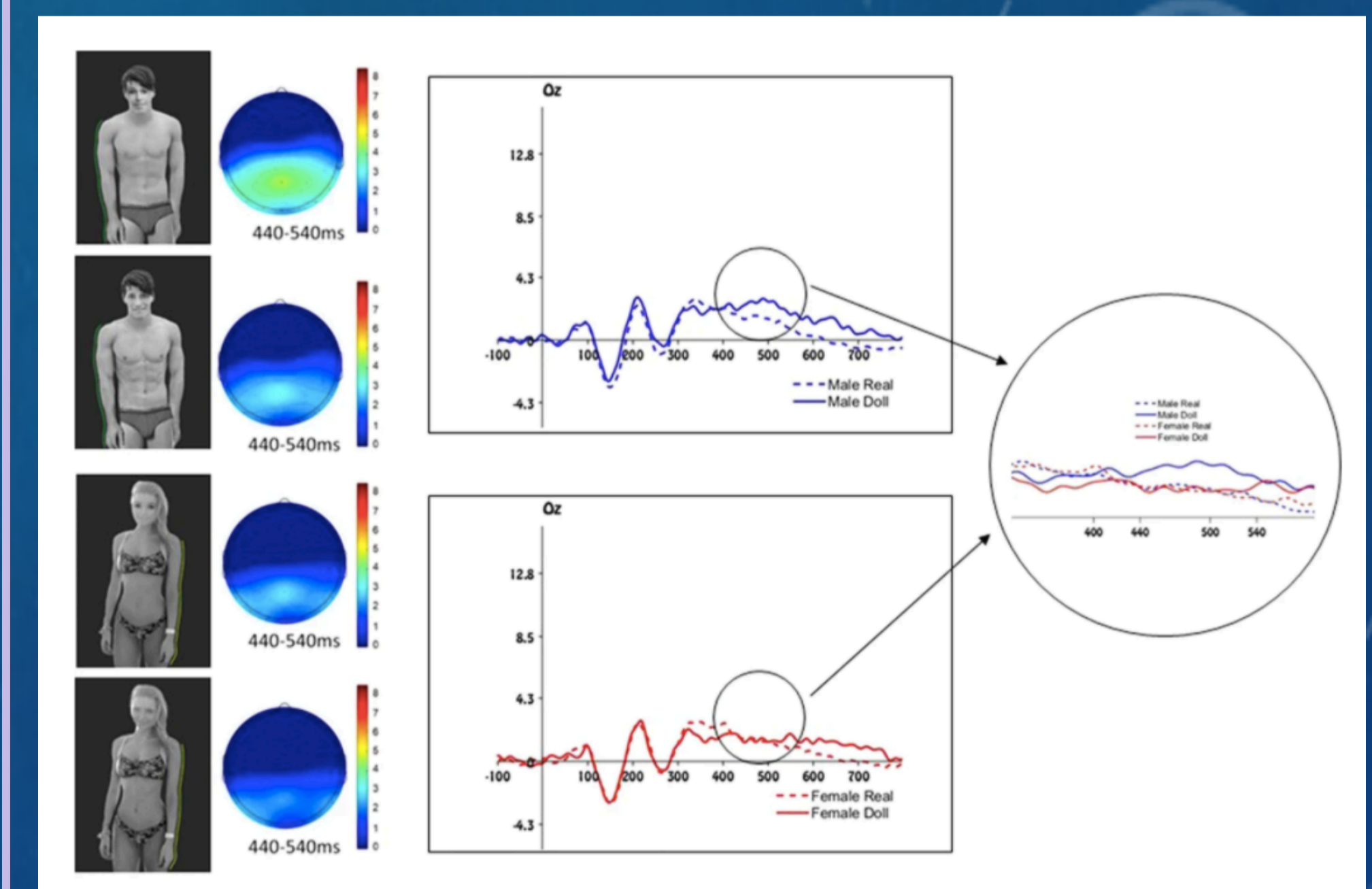
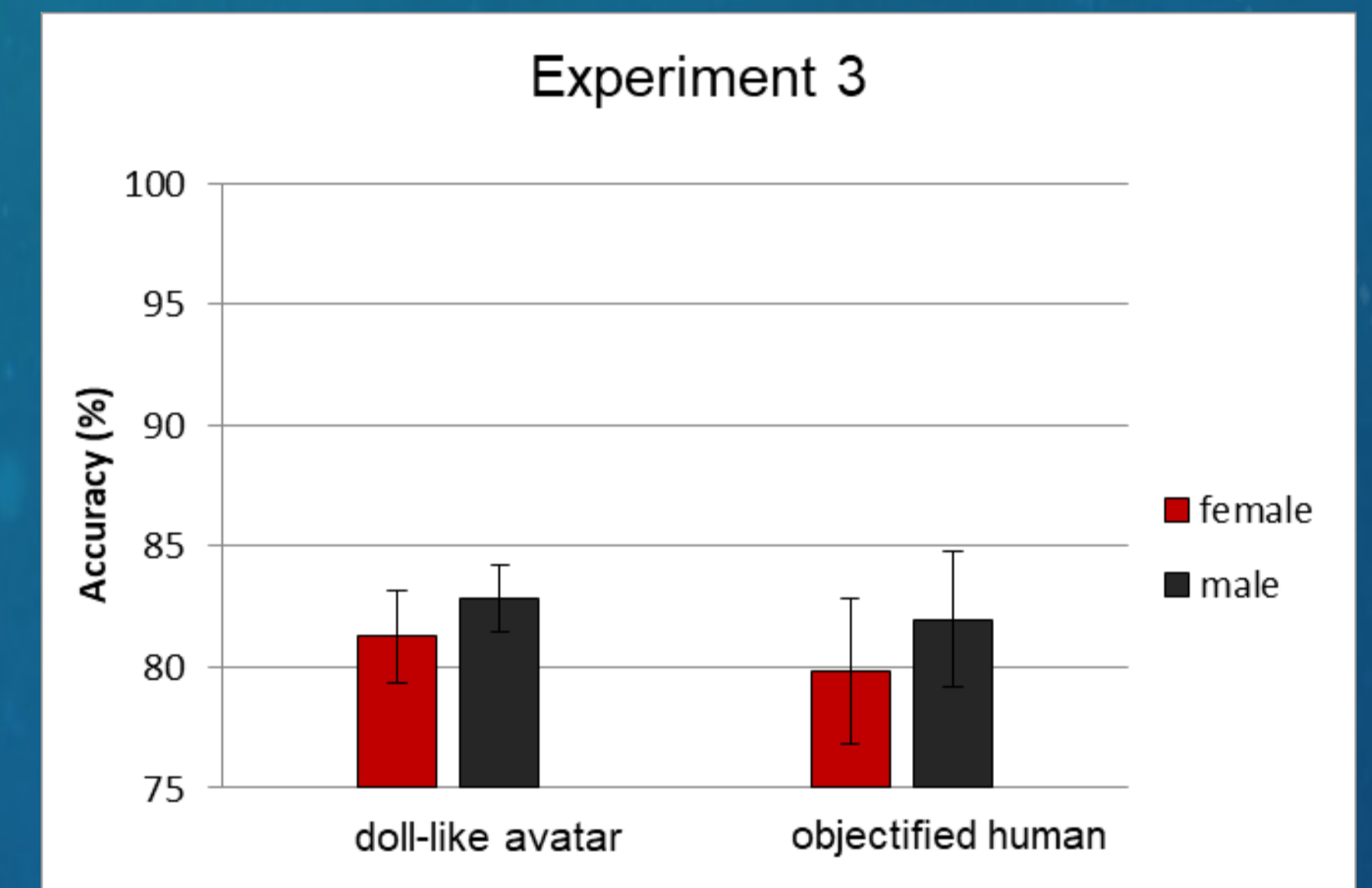
18 participants (8 female;  $M_{age}=22.97$ ,  $SD=2.24$ ).



### Study 3

No semantic reference to human – object divide

20 participants (10 male;  $M_{age}=21.2$ ,  $SD=2.08$ ).



## Conclusion

In Study 1, a significantly smaller P300 (a neural wave whose amplitude increases to the extent that the oddball stimulus is perceived as different from the repeated stimuli) was elicited by female doll-like objects among objectified women, compared to the amplitude of the P300 elicited by male doll-like stimuli among objectified men. In Study 2, this pattern of results was not replicated with non-objectified male and female stimuli excluding the possibility that the previous differences reflected only a gender effect. In Study 3 no semantic references to the human-object divide were provided, objectified stimuli were categorized on the basis of a colored border, but objectified women were still perceived more similar to real objects. Results confirmed that objectification occurs also if the categorization criterion is not semantically related to the human-object dimension. Taken together, these results demonstrate that the perception of women, when objectified, changes in essence beyond the metaphor making them more similar to objects than men. In other words, this work suggest that the female body literally has object qualities and the “woman object” is not a mere metaphor but conveys true similarities with objects.

## References

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- Mitchell, J. P., T. F. Heatherton and C. N. Macrae (2002). Distinct neural systems subserved person and object knowledge. *Proceedings of the National Academy of Sciences of the United States of America* 99(23): 15238-15243