



# Visual representation of age groups as a function of ageism levels

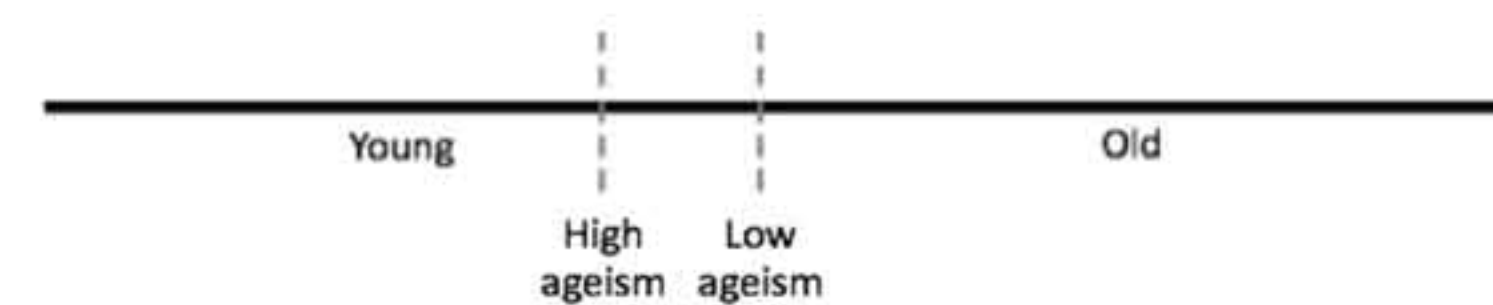
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## Introduction

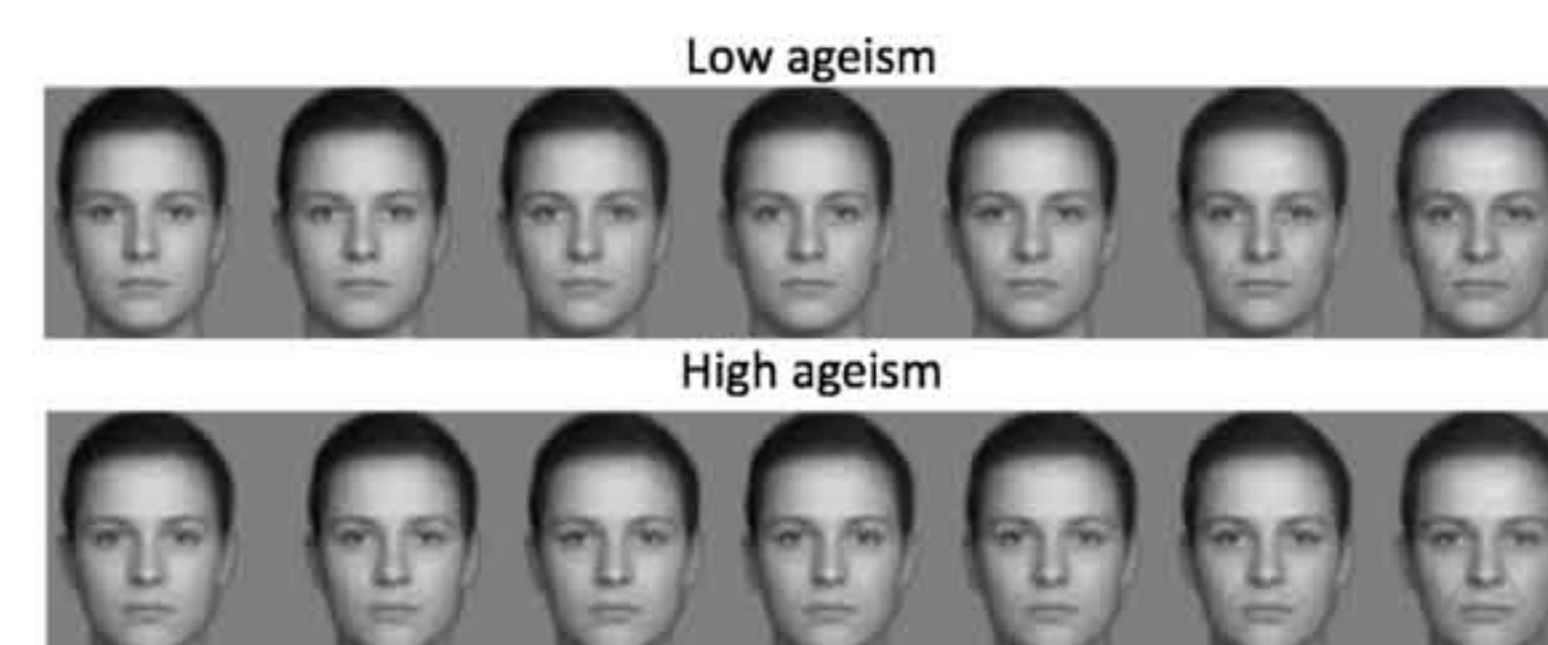
Last VSS (Dion-Marcoux et al., 2016), we presented a study showing that ageism modulates the mental representation of a prototypical young and old face: individuals with higher prejudice represented a young face as being older and an old face as being younger than individuals with less prejudice.

The present study verified if this finding is subtended by:

- Ageism modifying the boundaries used to categorize a person as young or old



- Ageism modifying the representation of facial aging throughout life.

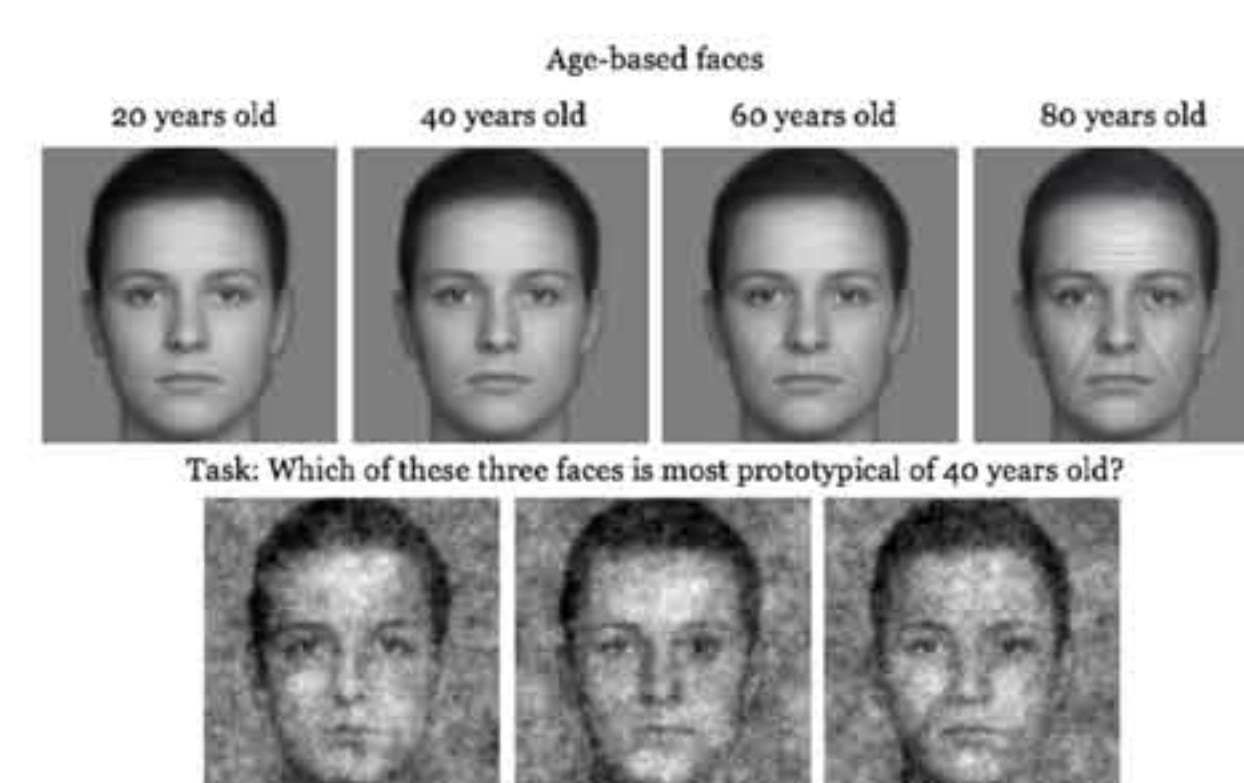


## Phase 1

### Method

n = 30 (14 men, between 18 and 32 year old)

- An implicit association task
- An age categorization task (young/old)
- A reverse correlation task (Mangini & Biederman, 2004).



## Results

- The age categorization task: age at which participants categorized a face as being either young or old on 50% of the trials did not differ as a function of ageism :  $t(18)=0.18$ , ns.

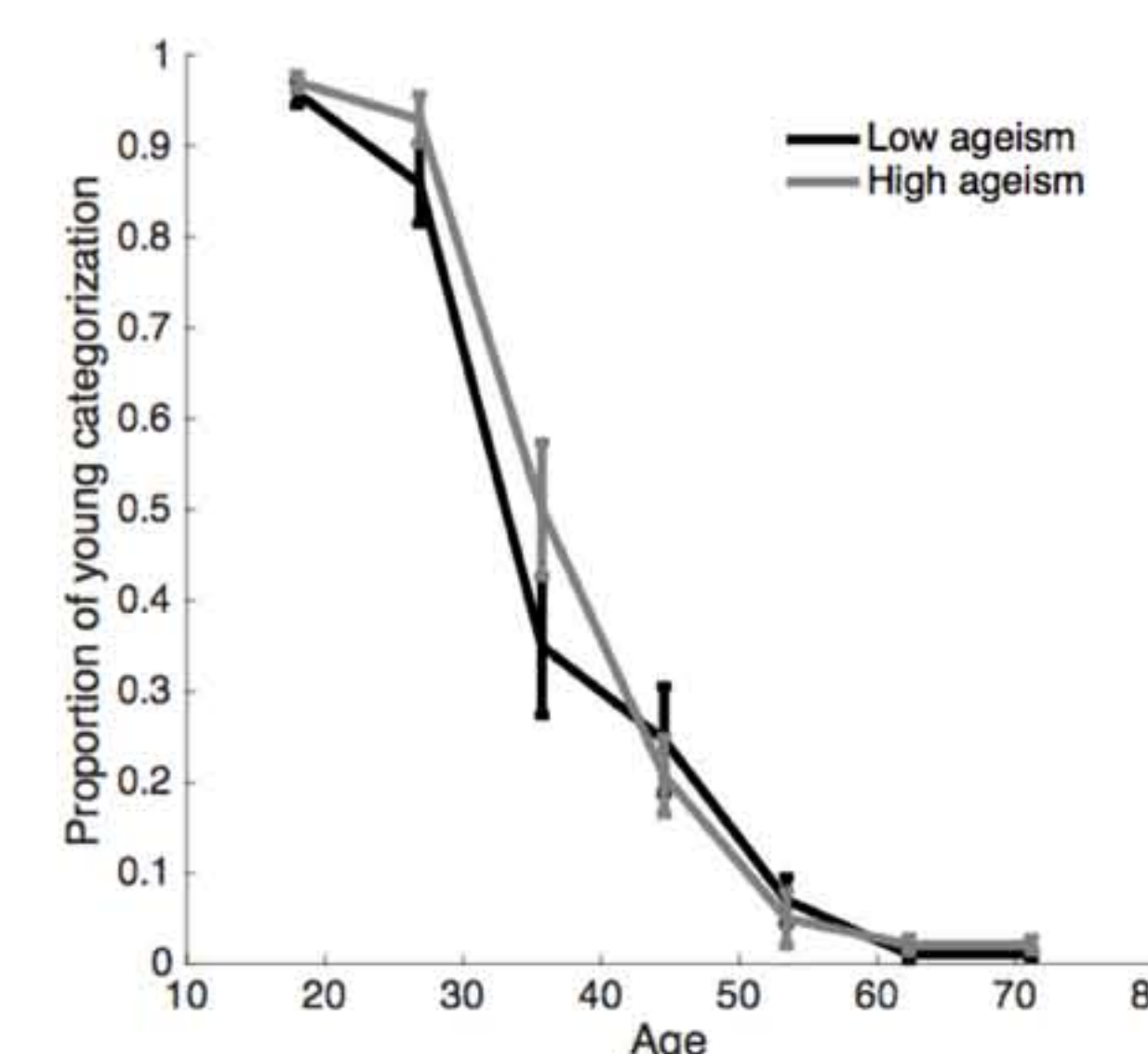


Figure 2. Proportion of "young" responses in an age categorization task as a function of age of the ten participants with the highest vs. lowest ageism levels. Confidence level at 95%.

- Averaged mental representations of 20, 40, 60 and 80 years old faces of the ten participants with the highest vs. lowest ageism levels.



## Phase 2

### Method

n = 30 (14 men)

- An age estimation task: Averaged mental representations obtained in phase 1.

## Results

- Significant interaction between ageism and face group on the perceived age :  $F(3, 87)=17.17$ ,  $p<0.05$ .
- Significant older perception of the age 40 for participants with higher prejudice levels :  $t(58)=3.077$ ,  $p=0.0032$
- Significant younger perception of the age 80 for participants with higher prejudice levels :  $t(58)=-2.317$ ,  $p=0.024$

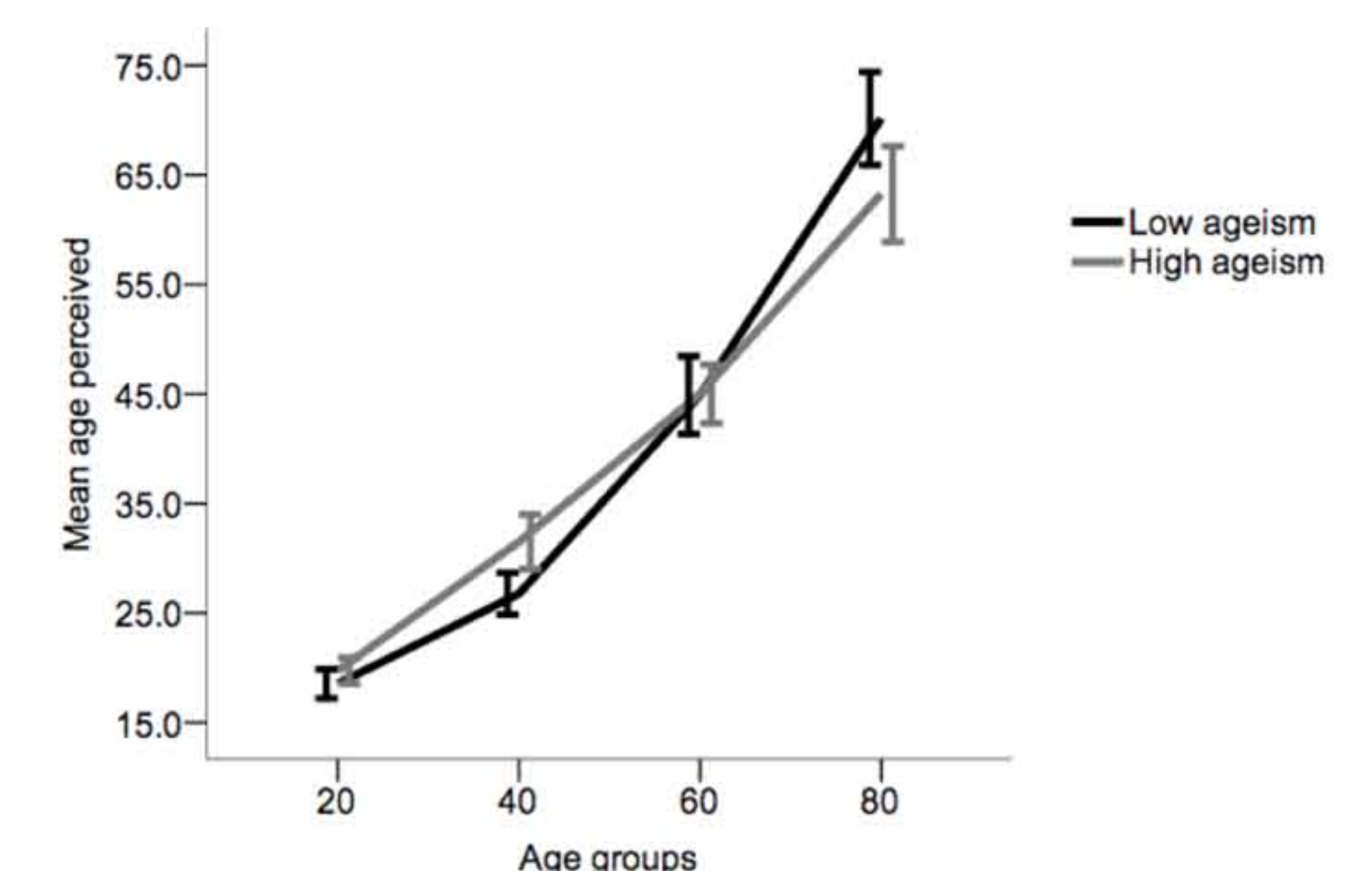


Figure 4. Age estimation of mental representations of 20, 40, 60 and 80 years old groups of the ten participants with the highest vs. lowest ageism levels. Confidence level at 95%.

## Conclusion

- These results suggest that highly prejudiced individuals represent different groups (40, 60 and 80 years-old) of other-age faces as being less dissociable from one another than lower prejudice individuals.
- A similar difference was observed by van Rijsbergen, Jaworska, Rousselet and Schyns (2014) when comparing mental representations of faces of different age groups in younger and older participants: the representations of different age groups were less dissociable for the younger participants than the older participants.
- Despite having only participants of the same age-group, differences in mental representations of different age groups were still discovered, and appear to be in part related to the level of ageism.

## References

- Dion, M. Y., Blais, C., Fiset, D., Goulet, A., Pruneau, C., & Forget, H. (2015). Visual representation of age as a function of the level of ageism. *Journal of vision*, 15(12), 1221-1221.
- Mangini, M. C., Biederman, I. (2004). Making the ineffable explicit : estimating the information employed for face classifications. *Cognitive Science*, 28(2), 209-226.
- van Rijsbergen, N.J., Jaworska, K., Rousselet, G.A., & Schyns, P.G. (2014). With age comes representational wisdom in social signals. *Current Biology*, 24(23), 2792-2796.



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