Conscious awareness is necessary for processing race and gender information from faces.

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Abstract:

Previous studies suggested that emotions can be correctly interpreted from facial expressions in the absence of conscious awareness of the face. Our goal was to explore whether subordinate information about a face’s gender and race could also become available without awareness of the face. Participants classified the race or the gender of unfamiliar faces that were ambiguous with regard to these dimensions. The ambiguous faces were preceded by face-images that unequivocally represented gender and race, rendered consciously invisible by simultaneous continuous-flash-suppression. The classification of ambiguous faces was biased away from the category of the adaptor only when it was consciously visible. The duration of subjective visibility correlated with the aftereffect strength. Moreover, face identity was consequential only if consciously perceived. These results suggest that while conscious awareness is not needed for basic level categorization, it is needed for subordinate categorization. Emotional information might be unique in this respect.

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