Commentary:

INTERSECTIONALITY OF AGE, RACE, AND GENDER IN FACIAL RECOGNITION

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Abstract

This commentary explores the intricate intersectionality of age, race, and gender in the context of facial and emotional recognition. The use of face masks as a preventive measure during the COVID-19 pandemic posed a cognitive challenge: how did masking affect facial and emotional recognition, given that facial features and expressions that play a crucial role in our daily social interactions were partially obscured? Beeson and Sell (2023; see this present issue of JISS) reported that facial and emotional recognition was indeed affected by facial masking, with an amplified impact on individuals with autistic indications. This observation prompts the question about how socio-cultural factors such as age, gender, and race may influence facial and emotional recognition in the presence of face masks.

Keywords: facial masks, COVID-19, emotion identification, facial recognition, autism

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COMMENTARY

During the recent COVID-19 pandemic, face masks were highly effective in reducing the transmission of the SARS-CoV-2 virus and in the prevention of illness. Cognitively, the question of how masking may impact facial and emotional recognition is critical, as facial features and expressions that were occluded by masks were arguably some of the most important socio-emotional cues in our daily social interaction. Beeson and Sell (2023; see this present issue of JISS) supported the finding that participants' facial and emotion recognition were impacted by facial masking, with the effect being amplified by participants' autistic indication. Therefore, the question that stemmed naturally from this study is how age, gender, and race may affect facial recognition.

The Complex Relationship between Age and Face Memory

Through the past decades of cognitive and neuroscience research, we have learned a tremendous amount about the brain's plasticity and ability to adapt to new environmental changes. For example, using the McGurk effect, Chládková et al. (2021) found that young and older adults adapted almost immediately to the challenge of facial masking in the beginning of the pandemic by utilizing other visual and auditory cues to arrive at an answer for this task that requires an integration of visual and auditory cues. However, they found significant age differences, in that younger adults were faster to switch to reliance on auditory cues than did older adults. The literature has also documented an own-age bias, which suggests that young participants usually recognize young faces better than older faces, and vice versa (Anastasi & Rhodes, 2005). These findings have been found to extend to children as well, which raise a good question as to whether age would make a difference in facial and emotion regulation, especially when autism is considered.

Gender and Sexual Orientation Effects in Facial Recognition

Based on past research, women usually remember faces better than men (Lewin & Herlitz, 2022), and have been found to decode subtle emotional cues more accurately than men (Hoffmann et al., 2010). Apart from these fundamental gender differences, past studies have also found evidence of an own-gender bias, in that people usually remember faces that match their own gender at a higher rate than other genders, especially if they are asked to rate the faces for distinctiveness. However, when asked to rate the faces for attractiveness, an other-gender bias is often observed for heterosexual participants (Hills et al., 2018). These findings point to the outstanding ability of our cognitive systems in adapting to the motivation and goal of cognitive resource allocation. Thus, it would be an interesting and important next step for researchers to examine how the methodology used in testing facial and emotional recognition affect recognition rates. In Beeson and Sell's (2023) study, could there have been a gender or sexual orientation effect if the questions of the recognition task were modified?

The Significance of Race and Ethnicity in Cognition

Similar to the own-gender bias, extensive cognitive research supports the phenomenon of the own-race bias or cross-race effect, whereby people are in general better at recognizing faces from their own racial group, e.g., Asian participants are better at recognizing Asian faces than Caucasian or Black faces and vice versa (Platz & Hosch, 1988; Meissner & Brigham, 2001). This effect has incredible relevance in our criminal justice systems, for example, in the context of eyewitness identification, own-race bias can influence the reliability of eyewitness testimonies (Meissner & Brigham, 2001). Witnesses may be more accurate when identifying individuals from their own racial or ethnic group and less accurate when identifying individuals from other groups. Thus, these studies prompt the question of how autism may interact with the own-race bias as well. Does the familiarity of one's racial and ethnic background impact the way faces may be processed under masked conditions, especially when autism indications are considered?

Intersectionality and Social Implications

The factors described in the present commentary do not exist in isolation of one another, meaning that the examination of the intersectionality and interaction of age, gender, and race on facial and emotional recognition is more important than ever. It is imperative for cognitive scientists to consistently examine the contributions of these factors in cognitive processes in examination of any systematic effects. It is also important to expand the current examination cross-culturally as facial masking frequency and expectations differ among cultures around the world. For example, facial coverings may be a traditional part of life for women in certain parts of the world, and thus, how do facial and emotional recognition manifest in these settings? Furthermore, how can we utilize these critical findings to move the needle in age, race, and gender equity, especially in a world that is more and more dependent on artificial intelligence and technology?

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