

THE PRESENCE OF THE BOGART ILLUSION IN LIGHT AND DARK SCLERA APES

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tafuhesis proposes that humans evolved white sclera to enhance gaze direction for joint attentional interactions and conspecific communication. Under this hypothesis, dark sclera, predominantly found in the great ape species, shields gaze direction from conspecifics thus diminishing the amount of communicative information available in eye gaze. Apes are therefore thought to be more reliant on head and body orientation and eye gaze is not a heavily used social cue. The “Bogart illusion”, demonstrates the power of eye gaze direction in humans, expressed by the distinct color contrast between the iris and sclera. Studies predict that apes with conventional dark eye coloration will not produce the illusion when stimuli polarity is inverted. However, since little attention has been brought to examples of great apes that have a whitened sclera similar to that of humans, the presence of such an illusion in these types has been unaddressed. Comparisons between apes with variable sclera can elucidate something about the contribution of light sclera, independent of other facial features, to gaze information available to others. This study determines that the illusion is present across all given stimuli suggesting that eye gaze information is readily available and detectable for both dark and light sclera types. Results of the present study do not support the current, strict version of the cooperative eye hypothesis, however, they do support a less stringent version, as white sclera aids judgment of gaze direction. White sclera therefore may be one more cue contributing to a variety of cues that enhances gaze in ape faces.

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