

Accuracy and awareness of image veracity in human perceptions of manipulated and unmanipulated images

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Abstract: To investigate accuracy and awareness of human perceptions of image manipulation, we examined 80 participants' verbal reports of image manipulation in 14 manipulated and unmanipulated images, and compared these responses to data recordings of their eye movements. We found that in aggregate participants achieved only 56.0% success in correctly identifying whether images have been manipulated or not in verbal responses. Examination of participant eyegaze recordings shows that in some cases the participants' eyegaze fixates on the manipulated elements of images although they fail to report this verbally, indicating that they may perceive the manipulations at a non-conscious level.