**Highlights**

* Technological advances render the distinction between artificial and real stimuli increasingly difficult, and factors driving our beliefs regarding their “reality” remain largely unknown.
* After receiving the (false) information that some stimuli are “fake” (AI-generated), most participants do indeed rate a large portion of them as such (often with high confidence), despite all images being pictures of real faces from the same database, highlighting the malleability of reality beliefs.
* Perceived face attractiveness seems to play a role - albeit of small magnitude – in driving reality beliefs with faces rated as more attractive being classified as more real. Gender differences might modulate the relationship between attractiveness and judgments of reality.
* The large proportion of unexplained variance remaining warrants future studies to uncover the determinants of reality beliefs.