

# Red Effect

A tendency to perceive women wearing red as more attractive and men wearing red as more dominant.

The color red plays a significant role in communicating the fertility of females and the dominance of males throughout the animal kingdom. Female chimpanzees, for example, signal their period of greatest fertility each month by developing large red swellings around their anus and vulva, which increases their sexual appeal to males. The rank of male mandrills within their troops is largely determined by the degree of red coloration on their snout, rump, and genitalia, which signals their level of testosterone and mate viability to females.

Humans, too, are influenced by the color red in certain contexts.<sup>1</sup> Although healthy reproductive human females exhibit visible biologically induced signals of fertility, such as full red lips and flushed cheeks, the cues are comparatively subtle. Thus, it is common across cultures for females to accentuate these facial features with rouge, lipstick, or similar cosmetics. Females also increase their sexual attractiveness by wearing red clothing. For example, when male subjects were presented pictures of the same female wearing different colored clothes, the males identified the image of the red-clad female as most attractive, indicating that they were most likely to ask her out on a date and would be willing to spend twice as much money on her during that date. The red effect in these contexts regards sexual attractiveness only, and does not influence perceptions of likability, kindness, or intelligence. Similarly, males wearing culturally appropriate red attire (e.g., red “power” tie) are perceived as more dominant, and therefore more attractive than their non-red-wearing peers.

The color red impacts perceptions of dominance in human males, perhaps due to the common association between anger and a red face, which signals aggression, versus a pale face, which signals fear. At the 2004 Olympic Games, contestants in boxing, tae kwon do, Greco-Roman wrestling, and freestyle wrestling were randomly assigned red or blue uniforms (or body protectors). A study comparing match outcomes found that contestants wearing red won a statistically significant greater number of matches. A follow-up study looking at the performance of English football teams over fifty-six years confirmed the effect for team sports.<sup>2</sup> Does wearing red make a person more aggressive, intimidate the non-red-wearing adversary, skew the perception of the referee to favor the person in red, or is it a combination of factors? Causation is not yet fully understood.

Consider the red effect in advertising and product design. Present females wearing red to attract attention and associate products with sexuality. Present males wearing culturally appropriate red apparel to signal power and authority. The red effect is sensitive to context, but likely generalizes to products and activities that strongly relate to female sexuality (e.g., apparel) and male dominance (e.g., sports cars).

See also [Attractiveness Bias](#), [Baby-Face Bias](#), and [Color](#).

<sup>1</sup> The seminal works on the red effect are “Red Enhances Human Performance in Contests” by Russell Hill and Robert Barton, *Nature*, May 19, 2005, vol. 435, p. 293; and “Romantic Red: Red Enhances Men’s Attraction to Women” by Andrew Elliot and Daniela Niesta, *Journal of Personality and Social Psychology*, 2008, vol. 95(5), p. 1150-1164.

<sup>2</sup> See “Red shirt colour is associated with long-term team success in English football” by Martin Attrill, Karen Gresty, Russell Hill, et al., *Journal of Sports Sciences*, April 2008, vol. 26(6), p. 577–582.



When wearing the red dress, this female strongly signals her fertility to males, significantly increasing her sexual attractiveness. When wearing the blue dress, she must rely on weaker and subtler biological cues such as red lips and flushed cheeks.