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## Why We Blush: The Social Purpose of Showing Embarrassment

Evolutionary psychologists examine the adaptive function of blushing in social situations

By [Jesse Bering](#)



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Among the many disadvantages of being pasty white in complexion is the fact that a mere blush can broadcast one's social discomfort for all the world to see. Granted, people of all colors and ethnicities blush at a basic physiological level—that is to say, human facial veins dilate in response to subtle psychosocial cues. But for mongrelized [Caucasians](#) such as yours truly, a white epidermis often acts rather embarrassingly like an objective gauge of subjective discomfort. And there's not much you do about it, either: [blushing](#) is involuntary and uncontrollable.

The good news is that although it may cause you some chagrin, blushing appears to serve a

functional purpose. Recent findings by Dutch psychologists [Corine Dijk](#), Peter de Jong and Madelon Peters reveal that if you ever find yourself in a pickle after, say, committing a social offence or being caught in an embarrassing mishap, the presence or absence of blushing can help determine if you'll be forgiven by others. Surprisingly, [these findings](#), published earlier this year in the journal *Emotion*, are among the first to address the adaptive significance of the blushing display—what Charles Darwin referred to as “the most peculiar and most human of all expressions.” The gist of Dijk and her colleagues' [evolutionary](#) argument for blushing is as follows:

Publicly conveying embarrassment or shame may signify the actor's recognition that she/he has committed a social or moral infraction, and regrets this. As a consequence, this message may mitigate the negative social impression that was caused by the infraction.

The authors claim that, much like [crying](#) (another peculiarly human expression of social emotion that is difficult to control), blushing serves to signal the actor's genuine regret or remorse over a wrongdoing. Given the possibility of being [deceived](#), it would have been rather foolish of our ancestors to take at face value a person's verbal or behavioral expressions of remorse. Instead, over tens of thousands of years, uncontrollable blushing would have evolved as a fairly reliable predictor of the actor's future behavior. In other words, if the behavior or situation at issue made the person feel so uncomfortable that his or her facial veins dilated—a physiological response that for many people is attended by a somewhat unpleasant tingling sensation—the blusher would probably avoid repeating that behavior in the future. Thus, blushing seems to be an appeasement display. Interestingly, this evolutionary hypothesis is aligned with a recent argument advanced by neuroscientist Mark Changizi in his book [The Vision Revolution](#) (BenBella, 2009). Among other things, Changizi claims that our species unusually strong color vision evolved so that we could detect subtle hue changes in other peoples' skin, thereby deducing their emotions.

To test their own evolutionary hypothesis, Dijk's group asked 130 undergraduate students from the University of Groningen in the Netherlands to read a series of brief stories about female characters. Participants were told that the woman in the story had either just committed a “social transgression” (such as missing a funeral because of a party, cutting in line at the bakery, driving away after a car crash) or was involved in an “embarrassing mishap” (such as bumping into a rack full of wine glasses, farting in an elevator, spilling coffee on someone). Half of the students were randomly assigned to the social transgression category and read twelve such stories, while the remaining participants read about twelve embarrassing mishaps. Importantly, each brief story was paired with the head-and-neck, color photograph of a different female model (so that there were 24 unique models total) said to be the main character in the story. The students were then asked to rate this woman on a variety of factors. For example, on a scale of 0-100, they were asked to rate their overall impression of this person, how sympathetic they found her, how trustworthy and so on.

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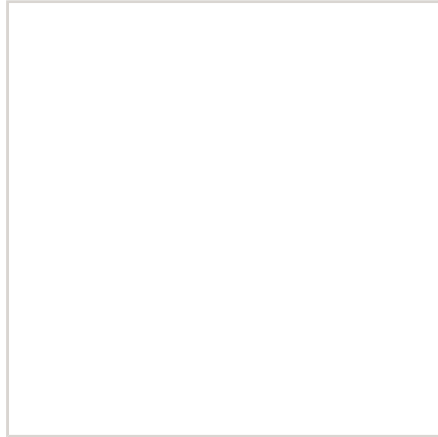
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