

# Are Neutral Faces Really Neutral?

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When your face is relaxed and visibly devoid of any emotional expression, do people see a neutral affect or do they perceive something else entirely?

A symposium at the 2016 APS Annual Convention in Chicago featuring APS Fellow Ursula Hess, Aleix M. Martinez, D. Vaughn Becker, Daniel N. Albohn, and Reginald B. Adams examined just how unemotional our neutral faces really are and explained how people often derive meaning from these expressionless faces nonetheless.

Hess began by discussing facial expressions globally — how personality traits combine with an individual's values, motivations, and resources to help that individual appraise a situation and generate an emotional response in the form of an expression (or lack thereof) — and how, in real-world settings, these expressions often determine how approachable, competent, or believable we seem to others.

Of the many studies she highlighted, one compared neutral faces with faces showing expressions of anger and shame in a business setting. In the study, trained actors were instructed to make neutral, angry, or ashamed expressions while answering a question about a service failure which caused damages to a client and their performances were recorded in several videos. Participants observed the videos and made a decision on whether or not they believed the actors' account of what happened to cause the problem. They also indicated whether they would promote this person in the future given what had happened. The researchers found that the neutral faces had significant effects on the believability of the actors' statements, increasing the believability and their chances for future promotion compared with the emotional faces.

“Neutral isn't neutral. It has meaning,” Hess said, adding that it is the social context that drives us to derive meaning from the “neutral face.”

Martinez furthered the discussion by elaborating on how facial bone structure can change the way we perceive a face even when it is neutral. He explained that research shows that wider faces tend to be perceived as angrier, while thinner faces are perceived as being sadder — even when the individual and their expression are held constant between the faces (i.e., when face-morphing software is used to change the width of the face). Additionally, the length between a person's brow and mouth has been shown to influence perceptions of anger and sadness even for basic schematic, or “dot-and-line,” faces (the shorter the distance, the angrier the face is perceived; the longer the distance, the sadder the face is perceived).

Martinez said these perceptions have nothing to do with an individual's personality, but rather that the mere structure of a person's face affects others' impressions of that person. He also discussed a new action-unit-based computational model of face space theory for understanding facial structures and expressions that allows for both continuous and categorical understandings, including multifaceted

expressions such as sadly angry or happily surprised. The new theory allows for a much more complex understanding and coding of faces, which could help improve software developments in facial comprehension.

Becker continued the discussion from an evolutionary perspective, discussing how, as primates began to walk upright and evolve into humans, the face became an increasingly important source of information for social understanding and interaction. He highlighted replication studies across multiple methods that show that people detect anger in male faces much faster and more accurately than in female faces. He elaborated by focusing on a “confounded signaling” between male faces and angry faces that is often thought to reflect only stereotypes. Becker went on to explain how anger expressions may have converged on features that make a face look more masculine because masculinity was already a sign of greater potential aggression. The neutral male face does not look angry, he said; rather, the angry face looks more male.

Lastly, Albohn focused on emotion perception of neutral faces and discussed how detectable residual emotions influence impressions. Albohn’s presentation highlighted an experiment in which participants were presented with neutral faces of targets from before and after an induced emotion (positive or negative). The findings indicated that participants were able to detect emotions in what would generally be labeled neutral faces and also that they could distinguish which face came before and after the induced emotion. Additionally, Albohn and colleagues’ research found that when participants select photographs for a social context (e.g., a social media profile picture or political campaign photo), they are more likely to prefer a neutral face made after a positive emotional expression as opposed to a neutral face made after a negative emotional expression, even though the faces the participants were evaluating were for all intents and purposes “neutral.” Albohn said the research highlights the fact that the neutral face is “not a blank canvas” and “not truly neutral at all.”