

PERCEPTION

About face

We know better, so why can't we stop making judgments based on appearance?

By John Antonakis

Imagine you are part of an experiment. You and your coparticipants are shown photographs of two individuals and are asked to choose who is more leader-like. Unbeknownst to you, the individuals in the photographs are real-life candidates vying for a seat in the U.S. Congress. Would it surprise you to learn that the average ratings of the participants in the experiment could reliably predict which candidate would go on to win the electoral contest?

In 2005, I pondered this very experiment, published in *Science* by psychologist Alexander Todorov and colleagues (1). The results, I'll admit, puzzled me. Are voters biased by facial appearance and their associated stereotypes? Or might it be possible that uninformed observers can detect the competence of politicians from their faces? In *Face Value*, Todorov has produced an impressive, well-written, and well-illustrated book that provides answers to these questions and more.

Todorov covers a lot of territory—and not only from historical and scientific points of view. He also discusses the practical implications of snap judgments, which can be very consequential in hiring, voting, and other evaluative decisions. The book is accessible to a lay audience but will especially interest those who do research on facial perception, as well as those who teach the topic.

In part one, Todorov explains why, over the ages, humans have been mesmerized by the notion that we can infer a person's character from his or her facial characteristics—a practice that he rightly dismisses as a pseudoscience. Physiognomy, he reveals, obtained a veneer of scientific legitimacy particularly in the 20th century because, for all their faults, face-based character evaluations tend to be highly consistent across evaluators.

To borrow from Shakespeare's *Macbeth*, those who think it is possible to "find the mind's construction in the face" will be as disappointed as King Duncan. Inferences individuals make from faces are not at all accurate. Such evaluations—even those conducted by so-called "expert" physiognomists—are

lousy predictors of character or behavior.

The second part of the book explains the computation rules that we use to evaluate faces and provides great examples of computer-generated faces to illustrate the descriptions in the text. Facial shape, skin lightness or darkness, the contrast of the eyes (or mouth) vis-à-vis the rest of the face, emotional expressions, and a perceiver's previous experience collectively guide first impressions, enabling us to classify faces on two dimensions: dominance and trustworthiness. (A larger chin, smaller eyes, and "v-shaped" eyebrows, for example, make a face more dominant.)

We are naturally compelled to make these classifications. When all we have is appearance to infer the behavioral intentions of others, perhaps we are justified in using such evaluations. However, the problem is that we overgeneralize from these initial impressions.

Unfortunately, the impressions gleaned from faces are not only misleading, they often supersede other, more valid indicators of intentions or abilities. Studies have shown, for example, that objective data on the cooperation of individuals participating in a trust game are usually discounted and overridden by how trustworthy they appear.

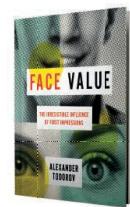
In part three, Todorov critiques—and cor-

current cultural and technological milieu.

The final part of the book discusses how humans are hard-wired to attend to faces and describes the brain regions that process face signals. The amygdala, for example, has been shown to respond more to faces than to objects—and in particular to the emotional state of a face. Interestingly, there are even neurons that specifically respond to faces, suggesting that there are neuronal templates dedicated exclusively to processing face signals.

The last chapter explains why contextual information is important to how we perceive other people and reiterates the point that face signals do not carry much credible information about a person's character or behavioral intent. In the book's closing pages, Todorov speculates that the reliance on facial cues as shorthand for cues about character arose when humans transitioned from small-scale societies, where individuals' intentions and reputations were well known to others, to large-scale societies, where members must use every bit of available information to understand the intentions of others.

Overall, Todorov's book is stimulating and enjoyable. I hope that its conclusions will be disseminated widely and trigger new re-



Face Value
The Irresistible
Influence of First
Impressions
Alexander Todorov
Princeton University
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Visitors to the Broad Museum in 2016 peruse photographs by Cindy Sherman, a contemporary artist who transforms her own face to create a range of prototypical personas, from aging socialites to Hitchcock heroines.

rectly so—the contemporary scientific work that has suggested that faces emit valid signals about intent or character. Many of these studies have unknowingly reported biased results or made unsubstantiated conclusions based on flawed statistical reasoning. He also brings to the fore discussions from evolutionary science, although he argues that facial cues may not hold as much meaning in our

search, but also that they will influence deciders. Only then will individuals actually be judged, as Martin Luther King Jr. dreamed, "by the content of their character." ■

REFERENCE

1. A. Todorov, A. N. Mandisodza, A. Goren, C. C. Hall, *Science* **308**, 1623 (2005).

10.1126/science.aan6311