

Editorial

“Why are we so susceptible to biases derived from facial perception?”

Antonio Olivera-La Rosa*, Eliana Aristizábal**, Yesid Felipe Tapias Medina***

Universidad Católica Luis Amigó

Forma de citar este artículo en APA:

Olivera-La Rosa, A., Aristizábal, E., & Tapias Medina, Y. F. (2024). Why are we so susceptible to biases derived from facial perception? [Editorial]. *Revista Colombiana de Ciencias Sociales*, 15(1), 20-26. <https://doi.org/10.21501/22161201.4852>

“I don’t judge people.” You’ve probably heard this expression on more than one occasion. However, the reality is very different. If there’s one thing, we’ve learned from decades of research on biases derived from facial perception, it’s that judgments associated with first impressions are virtually unavoidable. You could say that we are predisposed to judge, even if we don’t always do it intentionally.

In this context, it’s worth emphasizing the predominantly automatic (fast/non-conscious/limited attention) nature that characterizes the formation of first impressions based on faces (Bar et al., 2006). For example, it has been documented those judgments of trustworthiness are formed within 33-100 ms of exposure (Todorov et al., 2009). In other words, in a tenth of a second, we usually “scan” the face of the person we’ve just met to assess whether we find them trustworthy or not. Think about the times you flag down a taxi on the street, and the first thing you do is, redundantly put, “scan” the taxi driver’s face to decide whether to get in or wait for the next one. Consider that while this facial “scan” is extremely fast and provides evaluative information (trustworthy/untrustworthy), we actually know nothing concrete about the morality of the taxi driver in question. This particularity is important for two reasons. First, a characteristic of forming first impressions is that it is based on any evaluative information available (gaze, voice, smell, etc.) (Cone et al., 2017). Second, the diagnostic validity of personality inferences

* Doctor en Cognición y Evolución Humana (Universidad de las Islas Baleares). Profesor Titular en Universidad Católica Luis Amigó. Pertenece al grupo Neurociencias Básicas y Aplicadas (Medellín, Colombia) Y al grupo Evolución y Cognición Humana (Palma de Mallorca, España). Contacto: antonio.oliverade@amigo.edu.co. Orcid: <https://orcid.org/0000-0001-7637-8518>, Google Académico: <https://scholar.google.com/citations?user=p1jzZwMAAAAJ&hl=en>

** Estudiante de Psicología. Integrante del semillero Emoción, Intuición y Toma de Decisiones de la Facultad de Ciencias Sociales, Salud y Bienestar. Universidad Católica Luis Amigó, Medellín, Colombia. Contacto: eliana.aristizabalmo@amigo.edu.co Orcid: 0009-0009-7825-2973.

*** Psicólogo. Especialista en Neuropsicopedagogía Infantil. Pertenece al grupo de Neurociencias Básicas y Aplicadas (NBA). Integrante del semillero Emoción, Intuición y Toma de Decisiones de la Facultad de Ciencias Sociales, Salud y Bienestar. Universidad Católica Luis Amigó, Medellín, Colombia. Orcid: 0000-0003-3568-0168. Contacto: yesid.tapiasme@amigo.edu.co. Google académico: <https://scholar.google.es/citations?user=viOMwjUAAAAJ&hl=es&oi=ao>

derived from faces is, at best, questionable (Todorov et al., 2015). This doesn't prevent faces from being regularly used as a source of information, even when more diagnostically valid information is available.

It is well known that, whether we like it or not, facial attractiveness plays a significant role in social perception. Several studies suggest that the relationship between facial attractiveness and perceived trust is so close that initial judgments could precede and, to some extent, influence subsequent ones (Gutierrez-García et al., 2019). Decades of research have consistently documented a positive bias toward attractive faces that has implications in various domains (“what is beautiful is good,” Dion et al., 1972). For example, attractive faces tend to facilitate the perception of higher moral values and better social skills compared to less attractive faces (Eagly et al., 1991, Langlois et al., 2000). The legal domain, grounded in a rational paradigm, is not immune to these biases (Kirshenbaum and Miller, 2021). Under certain conditions, attractive faces may lead to less severe judgments (Yang et al., 2019), an effect that can also affect real judges (Stewart, 1985). In this regard, if a defendant in a crime case has a face that arouses distrust, this circumstance can affect the severity of their judgment (Jaeger et al., 2020). In other words, a person with a perceived untrustworthy face may be “guilty until proven innocent”.

This aspect is especially relevant because the effects of facial aesthetics on social judgments seem to be particularly powerful when it comes to faces perceived as unattractive (the heuristic of “ugly is bad,” Griffin & Langlois, 2006). Recent studies suggest that faces perceived as strange or “unsettling” are more likely to suffer social penalties, an effect that could apply to both face-to-face and virtual social interactions (Olivera-La Rosa, 2018; Olivera-La Rosa et al., 2019). For example, it has been documented that faces with Botox implants that alter facial expressions and faces considered highly unpleasant are more likely to be seen as possessing a “different” morality (Olivera-La Rosa et al., 2021). This negative social bias could also apply to those faces with facial anomalies, such as scars or skin problems (Hartung et al., 2019; Jamrozik et al., 2019).

It should be noted that the effects of facial perception on social attributions go beyond assessments of trust/attractiveness. Numerous studies have shown that people whose faces are associated with traits considered “desirable for work” tend to fare better in the job market (Olivola and Todorov, 2017). For example, political candidates whose faces are perceived as more competent tend to receive more votes (Olivola and Todorov, 2010). The effect of perceived facial competence also seems to predict higher salaries, even when actual performance does not justify it (Graham et al., 2017). Certainly, when it comes to gauging the influence of faces in the job market, the maxim “tell me what your face looks like, and I'll tell you what you're good for” seems to apply. Thus, in the military domain, cadets with faces perceived as more dominant tend to achieve higher ranks, which explains why military leaders often have facial features associated with a “tough” or dominant appearance (Olivola et al., 2014).

Why? Psychological Explanations

The underlying question inevitably appears: why are we so susceptible to facial biases? It's curious that, despite the generality and relevance of these evaluative shortcuts, we lack more conclusive data to better understand their potential causes. There are possible explanations, not mutually exclusive, for this phenomenon. On one hand, it has been proposed that the ubiquity of facial biases is partially rooted in informal/subjective beliefs ingrained in “popular psychology.” In everyday life, people rely on different beliefs, intuitions, and knowledge to understand and explain how the world works (Heintzelman et al., 2020). For example, the pseudoscience of physiognomy—whose origins trace back to ancient Greece—was based on the idea that the face mirrors one's personality. Despite physiognomy being discredited as science, these beliefs persist more than one might expect and have a real effect on social perception (Jaeger et al., 2019a). In other words, the influence of faces on the formation of first impressions would partially reside in their subjective validity: people tend to believe that facial features provide information.

On the other hand, more “cognitive” explanations suggest that the ubiquity of biases derived from the face is rooted in our tendency toward cognitive economy. Kahneman (2011) proposes that we process information through two systems. System 1 is experiential, characterized by preconscious, automatic, rapid, and holistic processing. System 2 is rational, involving conscious and controlled processing, enabling intentional and analytical thinking. Crucially, System 1 uses fewer attentional resources, resulting in cognitive effort savings. Kahneman (2011) argues that our minds tend to be lazy: unless the occasion requires it, our “default” mode prioritizes saving cognitive resources. We can think of this duality as the mental equivalent of taking an elevator instead of climbing stairs. While there are two ways to reach the destination, the tendency to save effort often prevails when choosing the elevator over the stairs. In fact, just as stairs are not used unless necessary (especially if you live on a high floor), the “costly” System 2 usually predominates only in those instances when there is motivation and/or opportunity to engage it (important decisions that require considering multiple options, for example).

In summary, we are guided by faces because it is cognitively easy. Specifically, the face is a type of social stimulus that tends to be prioritized by our limited attentional resources (Hahn et al., 2018; Jaeger et al., 2019b). One could say that we develop an early “PhD” in identifying faces, a natural expertise that translates into our hypersensitivity to detect any perceptual pattern suggesting the presence of a face (from faces in clouds to Volkswagen Beetles). It is important to emphasize that this expertise presumably has evolutionary reasons linked to the important adaptive function of the face in social interactions. It has been argued that biases derived from the face may have evolved as a way to help humans make quick decisions—though not necessarily

accurate ones—about how to interact with other individuals in the social environment (Rhodes, 2006). For example, the ability to quickly detect the intention of an unknown person could have been highly useful in avoiding the high costs of an unfavorable social interaction. From this adaptive perspective, biases derived from facial perception would function similarly to a smoke detector: hypersensitive mechanisms that prioritize minimizing false positive errors (approaching a potential threat) at the expense of increasing false negative errors (avoiding a potential friendly interaction). In other words, from an adaptive perspective, the cost of acting quickly and making mistakes is lower than the cost of conducting a thorough analysis of a person before taking action.

At this point, it is important to note that the science of facial perception seeks to understand the causes and functioning of biases derived from the face as they occur in reality (a descriptive approach). It does not seek to legitimize them prescriptively. We consider that knowledge of how these evaluative mechanisms work is of utmost importance to deal with their significant everyday implications. Just as the treatment of any disease depends on an accurate diagnosis—even if it's not necessarily pleasant—it is necessary for the knowledge outlined in this editorial not to be the exclusive domain of those who work in facial perception. Likewise, we must keep in mind that good diagnosis is necessary—but not sufficient—to solve a problem. In effect, while knowing about this issue may not be sufficient to “immunize” us against the effects of biases, it is entirely necessary to deal more effectively with these silent evaluative shortcuts.

Conflict of Interest

The authors declare that there is no conflict of interest with any commercial institution or association.

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