

The Beauty Bias Effect in Scientific Careers

Keywords: Beauty effect, Beauty bias, Scientific careers, Career success, Machine learning

Extended Abstract

Securing positions at higher-ranking institutions is essential for the career success of scientific scholars (Garcia-Sancho et al., 2021; Larivière et al., 2015). Factors influencing such placements include scientific output (Larivière et al., 2015; Siler et al., 2020), educational background (Hengel, 2020; Larivière et al., 2015), funding acquisition (Jackson & Bielby, 2020), and professional social networks (Uzzi & Evans, 2013). However, one often-overlooked factor in the discussion of scientific career success is the role of physical appearance.

While scholars' are ideally assessed through their public scientific output, (Larivière et al., 2015; Siler et al., 2020), the halo effect implies that physical attractiveness may also influence career success. This cognitive bias leads people to assume physically attractive individuals possess other positive qualities such as intelligence, competence, and likability (Dion, Berscheid, & Walster, 1972). Outside academia, empirical studies demonstrate that physical attractiveness can enhance career success, including job interviews (Hosoda, Stone-Romero, & Coats, 2003), sales (Mulford, Orbell, & Shatto, 1994), and politics (Zebrowitz & McDonald, 1991).

To investigate the relationship between facial beauty and career success among scientific scholars, we collected two datasets. First, we extracted over 20,000 scholars from Google Scholar and used three independent machine learning models to assess their facial beauty based on their Google Scholar profile pictures. Variation in the quality of photos was also reduced using machine learning. Second, to address the limitation of relying solely on profile pictures for facial beauty evaluation, we used a separate dataset of TED Talk videos by scientists (N=4,625). We applied similar machine learning models to assess the facial beauty of scholars from various angles and expressions.

Our findings revealed a consistent, positive correlation between scholars' facial beauty and their university ranking (see Table). Controlling for various factors, the higher the rank of the university, the greater the likelihood that the faculty are good-looking, a finding that is amplified for white vs non-whites, and for men relative to women.

Our results of TED talks showed a positive correlation between facial beauty and the number of views and likes on TED Talks.

These findings suggests that the beauty bias effect is associated with a scholar's career placement and public reputation, which are vital for career advancement.

This research contributes to the growing body of literature on the beauty effect across various domains (Dion, Berscheid, & Walster, 1972; Hosoda, Stone-Romero, & Coats, 2003; Mulford, Orbell, & Shatto, 1994; Zebrowitz & McDonald, 1991). By establishing a positive correlation between facial beauty and career success in scientific fields, this study emphasizes the potential impact of beauty bias on outcomes in yet another domain. Furthermore, it highlights the need to promote diversity and equity in scientific fields, ensuring equal opportunities for all scholars

regardless of appearance or background. Ultimately, this research can inform policies and practices that foster greater fairness and inclusivity in scientific careers.

References

- Dion, K., Berscheid, E., & Walster, E. (1972). What is beautiful is good. *Journal of Personality and Social Psychology*, 24(3), 285-290.
- Garcia-Sancho, M., Marquina, M., & Isusi, I. (2021). The institutional and geographical determinants of researchers' career advancement. *Science and Public Policy*, 48(2), 227-240.
- Hengel, E. (2020). Publishing while female. *AEA Papers and Proceedings*, 110, 205-209.
- Hosoda, M., Stone-Romero, E. F., & Coats, G. (2003). The effects of physical attractiveness on job-related outcomes: A meta-analysis of experimental studies. *Personnel Psychology*, 56(2), 431-462.
- Jackson, J., & Bielby, D. D. (2020). Advancing careers in academic science: The role of gender, mentoring, and networks. *Science, Technology, & Human Values*, 45(3), 523-547.
- Larivière, V., Ni, C., Gingras, Y., Cronin, B., & Sugimoto, C. R. (2015). Bibliometrics: Global gender disparities in science. *Nature*, 504, 211-213.
- Mulford, M., Orbell, J., & Shatto, C. (1994). Physical attractiveness and the 'halo' effect in sales. *Perceptual and Motor Skills*, 78(1), 267-274.
- Siler, K., Tauginiene, L., Sugimoto, C. R., & Larivière, V. (2020). Research output, collaboration, and impact in Lithuania: A national-level bibliometric analysis. *Journal of Informetrics*, 14(3), 101040.
- Uzzi, B., & Evans, J. A. (2013). Social networks in the academic world. In J. F. Helliwell, R. Layard, & J. Sachs (Eds.), *World Happiness Report 2013* (pp. 164-186). New York, NY: Earth Institute, Columbia University.
- Zebrowitz, L. A., & McDonald, S. M. (1991). The impact of litigants' baby-facedness and attractiveness on adjudications in small claims courts. *Law and Human Behavior*, 15(6), 603-623.

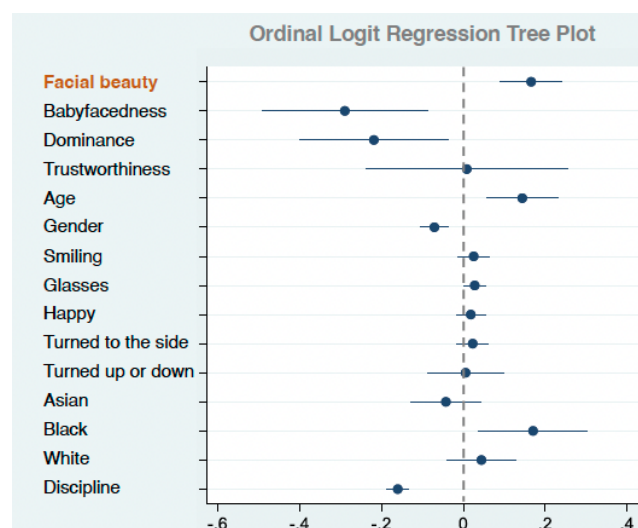


Figure 1. Forest plot displaying the regression coefficients with scholar's facial beauty as dependent variable and school rank, gender, age, races, and other facial features as independent variables. Facial beauty is significantly and positively correlated to the school ranking. The higher the facial beauty, the more likely the scholar is at a high-ranking university.