



## **JOSHA's Critical Review of "India's Scientific Diversity: Caste Barriers" by Ankur Paliwal**

Authors: Neher Aseem Parimoo, Roland Mertelsmann  
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The article "India's Scientific Diversity: Caste Barriers" by Ankur Paliwal highlights the challenges faced by marginalised communities in pursuing scientific careers in India. It reveals the under-representation of Adivasis and Dalits in science and their discriminatory experiences in higher education. The article emphasises the need for more mentorship and guidance for students from marginalised communities and calls on the government and institutions to address the lack of diversity and promote equality. While the article is effective in drawing attention to the issues, it lacks an in-depth analysis of the root causes of caste barriers and offers limited recommendations for overcoming them. It also fails to explore the wider impact of the caste system on scientific research. Nevertheless, the article is an important reminder of the importance of creating an inclusive and equitable scientific community in India that provides equal opportunities for all, regardless of caste or background. This article was first published in Nature on

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Neher Aseem Parimoo, Roland Mertelsmann

[admin@josha-archive.org](mailto:admin@josha-archive.org)

Journal of Science, Humanities, and Arts, Freiburg im Breisgau, Germany

## Abstract

The article "India's Scientific Diversity: Caste Barriers" by Ankur Paliwal highlights the challenges faced by marginalised communities in pursuing scientific careers in India. It reveals the under-representation of Adivasis and Dalits in science and their discriminatory experiences in higher education. The article emphasises the need for more mentorship and guidance for students from marginalised communities and calls on the government and institutions to address the lack of diversity and promote equality. While the article is effective in drawing attention to the issues, it lacks an in-depth analysis of the root causes of caste barriers and offers limited recommendations for overcoming them. It also fails to explore the wider impact of the caste system on scientific research. Nevertheless, the article is an important reminder of the importance of creating an inclusive and equitable scientific community in India that provides equal opportunities for all, regardless of caste or background. This article was first published in Nature on January 11, 2023 (<https://www.nature.com/immersive/d41586-023-00015-2/index.html>).



The article "India's Scientific Diversity: Caste Barriers", published in *Nature* by Ankur Paliwal, discusses caste barriers in Indian science that prevent marginalised communities from pursuing careers in science. It examines the under-representation of Adivasis (indigenous peoples; referred to as 'Scheduled Tribes') and Dalits (formerly known by the dehumanising term 'untouchables'; referred to as 'Scheduled Castes') in science. The article also highlights how students from privileged castes (referred to as the 'General' category) often discriminate against marginalised students in higher education, causing them to feel intimidated and consider dropping out. It explains how the government's quota system has helped to uplift excluded communities but has not been effective in increasing diversity at higher academic levels. The government is accused of failing to hold institutions accountable for failing to comply with reservation policies. Overall, the article serves as a wake-up call for Indian academia to address caste barriers and lack of diversity to promote equality and inclusivity in the field.

The article notes that less than 1% of professors in India's top-ranked engineering institutes come from Adivasi or Dalit communities. The caste system limits scientific opportunities for certain groups, and this is evident in the educational pipeline from primary school to university. Teachers and mentors specialising in science are rare in rural high schools attended by marginalised communities, resulting in the under-representation of Dalits and Adivasis in undergraduate science courses. This lack of guidance and mentorship in science can be a disadvantage for these students in their pursuit of higher education. The article cites examples of students from excluded communities who have faced discrimination and biases. For example, Samadhan, an indigenous person who became the first person in his village to obtain a PhD in science, is reluctant to reveal his family name or institution for fear of highlighting his social status to a wider group of Indian scientists. It points out that "free off" is a common insult used by students from privileged castes to refer to students from marginalised communities who receive government assistance. Moreover, the article states that there is no statistical data available to analyze scientists by caste and academic position beyond the undergraduate level, and most universities do not publish this data.

In conclusion, the article "India's Scientific Diversity: Caste Barriers" by Ankur Paliwal is an important piece that exposes the under-representation of Adivasis and Dalits in science in India. The author raises awareness of the challenges faced by marginalized communities in the Indian educational pipeline and calls on the government and institutions to take immediate action to promote equality and



inclusion in the field by providing mentorship and guidance in science, following up on the reservation policy and ensuring that marginalized communities have equal opportunities to advance their careers in science. By doing so, India can cultivate a diverse and inclusive scientific community that will ultimately lead to a brighter and more prosperous future for all.

**JOSHA's conclusion:** A positive aspect of the article is that it highlights the challenges faced by marginalised communities in India's educational pipeline, from primary school to university. The author also raises awareness of the discrimination and prejudice faced by students from marginalised communities. One of the drawbacks of the article is its lack of in-depth analysis of the causes and reasons for caste barriers in Indian science. It briefly mentions that the caste system limits scientific opportunities for certain groups, but does not explore the underlying reasons for this. The piece only mentions the need for change without specifying what changes are needed to address the issue. It does not provide a comprehensive list of recommendations for overcoming caste barriers and promoting diversity in Indian science. The author could have also explored the impact of the caste system on scientific research, beyond the representation of marginalised communities.

**JOSHA's Critical Reviews focus on recent studies and discoveries in medicine and science that may impact patient care. Our editors aim to stimulate thoughts and reflections on new developments and interventions. While our opinions are subjective, we hope this service is helpful. We welcome comments from our readers!**

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## Article Information

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