Correspondence

Can AI predict and limit online hate?

In-person attacks on religious institutions in recent months have underscored the need to reflect on the role of artificial intelligence in both spreading and counteracting hate speech online. On the one hand, algorithms can amplify the spread of extreme social-media posts to increase engagement, and large language models sometimes produce biased outputs, reflecting prejudices in their training data. On the other hand, AI can detect online hate speech quickly and on a large scale.

But AI cannot prevent real-world violence on its own. Political and legal mechanisms to govern these tools effectively are urgently needed. Oversight, diverse input in designing data sets and regular audits to ensure AI supports online safety rather than amplifying prejudice are all essential.

Germany's 2017 Network Enforcement Act, which requires platforms to remove 'obviously illegal' content within 24 hours, has inspired private initiatives in the country that could lead the way in this work. Their AI-powered monitors check social media for hate speech that can then be removed or filtered out (go.nature.com/4h5fv7w). The next step is to develop an active response to hate speech — factual corrections, explanations of harm and prompts to reconsider language. These interventions might reduce hostile messaging and encourage reflection, with the hope that adequate design technology can help to steer online conversations towards understanding instead of outrage.

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Give the public a say in virology safeguards

Your Comment article was a welcome admission that the safety measures taken when researching potentially dangerous viruses can, very occasionally, be inadequate (M. Ott *et al*. *Nature* **646**, 31–34; 2025). The authors propose that scientists from relevant fields should come together to produce international guidelines that bolster the management of this work. But the proposal omits a key stakeholder: the public.

There will be no hope of restoring political support for pandemic preparedness research, nor public acceptance of it, if virologists seek to continue under a business-as-usual model. Public inclusion is about fairness, respect and the need for scientists to recognize that they can benefit from the opinions of others.

The US Army Medical Research Institute of Infectious Diseases engages with the public on the use of its maximum biocontainment facility through an advisory committee that includes citizen volunteers. This type of model must be adopted when addressing oversight of research that is essential for pandemic preparedness but that carries considerable risks. Another good example comes from the US National Institutes of Health, which has started 'listening sessions' on strengthening biosafety policy.

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China should undertake more risky research to close the Nobel gap

As of this year, only one China-based scientist has won a Nobel in natural science — Tu Youyou, in 2015, for work developing the anti-malaria drug artemisinin. Yet China invests more in research and development than any other country besides the United States, and the Chinese Academy of Sciences leads the Nature Index, which ranks institutes according to their research outputs.

China's focus on short grant cycles for applied research that already has a strong evidence base — emphasizing gap-filling over bold exploration — is a good way to boost Nature Index rankings, but rarely produces major leaps in knowledge (C. Carnehl and J. Schneider *Econometrica* **93**, 623–659; 2025). By contrast, Nobel-worthy moonshot initiatives thrive on bold, risky research. This type of work is better supported in Japan, which has won 27 Nobels in the natural sciences, and the United States, which has won more than 200.

To bridge the gap, China could foster moonshot programmes, extend funding timelines and reduce the pressure to publish high-impact work (R. Hill and C. Stein *et al*. *Q. J. Econ*. **140**, 1111–1185; 2025), balancing efficiency with transformative science.

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When will Africa have a Nobel prize in medicine?

African research saves millions of lives, from vaccine development to genomic surveillance and public-health interventions. Yet the continent has never produced a Nobel laureate in physiology or medicine who did the bulk of their prizewinning research in Africa. This absence reflects systemic barriers. Underfunded laboratories, limited access to top-tier journals and constrained mentorship pathways hinder the visibility and impact of African discoveries.

Most African countries invest less than 1% of their gross domestic product in research and development — much less than the global average of 2.7%. African scientists often contribute essential data and fieldwork in multinational studies but do not occupy key authorship positions (R. Mbaye *et al*. *BMJ Glob. Health* **4**, e001855; 2019), reducing global recognition for Africa. Without better infrastructure, equitable collaboration frameworks and structured mentorship, even the most innovative researchers struggle to produce internationally recognized work.

Africa's first Nobel Prize in Physiology or Medicine will not come by chance. Strategic investments through improved government funding are needed to boost research capacity, improve training programmes, allow institutional support for independent projects and support access to open-access publications. These steps can help African scientists to lead transformative studies in medicine.

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