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## Academic incentives need to change if we are to build trust in science

The current academic pressures and demands of research careers act as barriers to scientists engaging directly with the public, say six young scientists

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By [Members of the Global Young Academy \(/cn/author/members-global-young-academy\)](/cn/author/members-global-young-academy)



Young scientists need to have a conversation about the structures and the role of our fields in society. We would like to do better science and, together with science communicators, help to rebuild trust between science and society.

The anti-vaccine movement, the denial of the human causes of climate change, the rejection of evolution and outright hostility

towards certain forms of scientific research (such as gender studies) are among the most visible signs of increasing scepticism towards science.

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Recent challenges come from “post-truth” statements and the rising populist and extremist religious movements that promise simple solutions for complex societal problems. Around the globe they openly reject interventions of experts, further fuelling doubt.

Distrust in science especially affects us as early career academics, who face the challenge of establishing ourselves within the profession and who, as a consequence, get caught up in confronting broader societal challenges facing science as a whole.

We have no wish to develop a blind trust in the authority of scientists. Science is a social endeavour and some claims that seem solid “facts” today may turn out to be wrong or misguided tomorrow. Nonetheless, on many topics, science provides the best tools for detecting mistakes and fake information, and for devising innovative solutions to help solve critical problems.

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In order to build trust, the human faces of science need to be more visible, the failures admitted, and the lines of communication open. The best strategy seems to be to show the public how science works behind the scenes. As psychologists Susan Fiske and Cydney Dupree explain in their recent paper *Science communication, like other communication, needs to convey communicator warmth/trustworthiness as well as competence/expertise, to be credible* ([http://www.pnas.org/content/111/Supplement\\_4/13593](http://www.pnas.org/content/111/Supplement_4/13593)), one of the best approaches is to participate in outreach such personal encounters, listening to doubts, engaging in dialogue and explaining what it is that can make science trustworthy.

Early career scholars are often digital natives. It comes naturally to us to communicate with broader audiences through traditional as well as social media (<https://www.youtube.com/watch?v=huEnLu7PmmM&frags=pl%2Cwn>) – the very spaces where attacks on science often happen and distrust is bred.

However, many of us find ourselves in academic environments that are not supportive of these endeavours: we have to survive the pressures of “publish or perish” cultures and hunt for grant money in order to keep our place in academia.

The demands of this system work against engaging in careful or “slow” research. To gain a standing in the discipline, publications in high-ranked journals often count for more than applied research that helps to address concrete problems.

Meanwhile, the current incentive structures in many scientific fields are highly dysfunctional: they encourage sloppy research and (self-)plagiarism while discouraging the sharing of data among colleagues.

Often, scientists have to publish their research in paywalled

journals instead of making it available to the wider public and to scientists in developing countries whose scientific advancement is thereby delayed. In many countries, early career researchers are not mentored by more experienced colleagues, leaving them to navigate the difficult and highly competitive academic environment alone. Under such circumstances, is it surprising that some scientists move away from the best version of themselves? We need to pay serious attention to how much potential is lost because of these factors.

We also need more time for reflecting on the values that inform our research, opportunities for discussing the role of science in society with peers and mentors, and training in how best to communicate science in highly politicised and increasingly contentious contexts.

As science and scholarship are global endeavours, some of these problems will have to be tackled on a world scale. At a structural level, researchers' independence needs to be safeguarded through sufficient funding and the availability of permanent, secure positions. With regard to private funding for research, strict rules for transparency and codes of conduct are needed to ensure there is no undue influence by funders. At the level of science culture, we must strengthen an ethos of responsibility and a willingness to be an independent, critical voice. Finally, we need to value explicitly the importance of scientific education, training, communication, co-production and outreach.

We are confident that young scientists from around the world can make important contributions to building trust in science. But it can only be tackled if we all play our part and recognise that it is time for science itself to make changes for the better.

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