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The state of science and society in 2022

As 2022 begins, and the third year of the pandemic continues to put pressure on both the scientific community and the public, it is worth considering the state of science and society. The main headline from Wellcome's Global Monitor 2020: Covid-19 survey was that global public trust in science and scientists grew during the pandemic. The largest of its kind, the survey covered 119 000 people in 113 countries, and seems to suggest that, after a year of heightened exposure to scientists, and with the first COVID-19 vaccines hailed as a scientific triumph, the value of science might not have eroded as badly as the common narrative—of rising infodemics, vaccine hesitancy, protests against public health measures, and populist politicians—implies. Or does this interpretation paint too rosy and simplistic a picture of the relationship between science and society?

In fact, science has too often come under attack. In a survey of 300 scientists in *Nature*, dozens of researchers shared stories of death threats, or threats of physical or sexual violence, for speaking about COVID-19. Anti-science rhetoric has escalated through coordinated disinformation campaigns by anti-vaccine lobbyists and, in many countries, direct action by politicians. A Correspondence from Brazilian scientists outlines how budget cuts, attacks on scientific autonomy, and hostility towards science by President Bolsonaro's administration are jeopardising future scientific development in the country, as well as harming education, public health, and the environment. The cuts could be reversed when Brazilians vote in this year's presidential election, but the damage could be long lasting. How does this violence square with an increase in global trust?

The Wellcome data also show enormous regional differences in the trust placed in science and scientists. There were large rises in the percentage of respondents who said they trust science a lot in east Asia (predominantly China), Latin America, eastern Europe, and southeast Asia, no change in Russia, the Caucasus, and central Asia, and a fall in sub-Saharan Africa. So the idea that trust in science is universally high is simply wrong.

It has become hard to disentangle where trust in government ends and trust in science starts. Wellcome found that trust in scientists was closely linked to trust in national governments. Exceptions like Brazil aside, science and politics are generally not in opposition,

but, rather, closely intertwined. Indeed, some nations, where trust in government is strong, recognise science as a vehicle for societal progression—superpower aspirations, even—and scientists are hailed as national heroes. In China, for example, research budgets grew throughout the pandemic, and chief scientists promoted to top political posts led the country's pandemic response. In other cases, governments have tried to co-opt public trust in scientists (and overcome public distrust of politicians), by using slogans like “following the science”—even when they do not. The line between scientific policy and government becomes blurred.

However, nearly a third of respondents felt that their government did not place much or any value on scientists' opinions. Whether this reflects a growing expectation for science-led, evidence-based policy is unclear. With widespread demonstrations against public health measures such as vaccination mandates and COVID passes, scientific opinion often seems pitted against wider society and individual liberties. Nevertheless, the public has shown an appetite for scientific evidence and understanding during the pandemic—from R numbers to vaccine development. This appetite has not always been tempered with an acknowledgment of unknowns, uncertainty, and the evolving nature of scientific knowledge. Infection modelling projections, for example, might help dictate policy. But when the catastrophic numbers of infections are taken as expectations, and do not come to pass, the public's trust risks being undermined.

There is a need to strengthen scientific literacy, both in the public and in leadership, and to communicate the caveats and limits of science honestly and transparently. Having more scientists in governments, parliaments, and the civil service would help. Ensuring diversity and inclusion in the scientific community could reduce the elite image of science and change power dynamics in knowledge-generating pathways. Medical journals have a role too, by facilitating scientific conversations, providing transparency and a means of scrutinising evidence, and defending scientists. Trust is not the same as deference. Trust is earned. And it comes through a relationship, sometimes fragile and often tense, but built on openness, admission of uncertainty, and mutual respect. ■ *The Lancet*



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For more on attacks on science from the federal government in Brazil see [Correspondence](#) page 23

For more on the Wellcome Global Monitor 2020: COVID-19 survey see <https://wellcome.org/reports/wellcome-global-monitor-covid-19/2020>

For the *Nature* survey of scientists see <https://www.nature.com/articles/d41586-021-02741-x>