



Protecting Freedom of Science and Preventing Distortion of Scientific Truth

A Statement of Concern from the Pontifical Academy of Sciences



Erosion of Scientific Freedom and the Crisis of Truth

The Pontifical Academy of Sciences' Council and co-signing members of the Academy issue this statement with deep concern for the growing global threats to the freedom of science and the systematic misrepresentation of scientific truth. Across multiple contexts and continents, we are witnessing an alarming rise in attempts to discredit, politicize, or suppress scientific knowledge. These developments not only endanger the integrity of science but also imperil the well-being of societies that depend on science to address their most pressing challenges, including poverty, pandemics, health care, climate change, and use of artificial intelligence.

Patterns have emerged in recent years that indicate a disturbing trend: scientific institutions are being undermined through political pressure, budgetary and workforce cuts, and censorship. Evidence-based findings are ignored or openly mis-represented. The peaceful, open discourse that characterizes the scientific process is being replaced in some quarters by ideology-driven narratives, misinformation, and disinformation. In extreme cases, scientists are harassed, marginalized, or personally threatened for their work.

Such attacks are not confined to a particular region or political ideology; they are surfacing in democracies and authoritarian systems alike, in the global North and South. The undermining of truth through denialism and anti-scientific rhetoric has become an international phenomenon. This

is not merely a crisis of communication—it is a structural assault on the values and institutions that make science a pillar of human progress.

The Pontifical Academy of Sciences, guided by its statutes and tradition, has always upheld the belief that science is fundamental to the development of humankind. The Academy has engaged deeply with issues of science diplomacy, from pandemics and climate change to the ethics of artificial intelligence, access to and use of energy, and pathways to reduce global poverty, and has advocated for education accessible for all as a means to reduce knowledge-based inequalities in today's world. These endeavors rely on a shared respect for truth and on the protection of scientific inquiry from ideological or political interference.

Causes of the Current Threats to Science

The root causes of these attacks on science and truth are complex and interconnected. They include:

- **Political Misuse of Science:** In many settings, scientific facts are manipulated or suppressed to serve short-term political goals. Leaders or interest groups may deny inconvenient truths to preserve power or economic interests, rather than address difficult realities with evidence-based policies.
- **Ideological Polarization:** Increasing societal fragmentation, driven by anti-institutional and identity politics, has contributed to the rejection of scientific consensus, sometimes in favor of conspiracy theories. Science is sometimes portrayed as elitist or biased, despite its self-correcting nature, that is, science moving forward often corrects established wisdom and always must be open to new insights.
- **Economic Pressures and Market Forces:** The commercialization of research and the capture of science by powerful industries can lead to conflicts of interest. Public trust is eroded when science appears to serve mainly private profits rather than public good.
- **Digital Misinformation:** Social media and online platforms have accelerated the spread of pseudoscience and falsehoods. The AI driven amplification of sensational content often drowns out reasoned, evidence-based communication.
- **Lack of Scientific Literacy and Engagement:** Education systems in many countries have failed to adequately equip citizens with the tools to understand and critically evaluate scientific claims. This creates fertile ground for manipulation and mistrust.
- **Silencing and Censorship:** In some regions, repressive governments have gone beyond neglecting science to actively punishing those who speak scientific truth to power. Scientific institutions have been shut down, and researchers have faced legal or physical threats.

The cumulative effect of these developments is the erosion of public trust in science and the weakening of its role in informing decisions that shape our collective future. This is not merely a

problem for scientists; it is a danger to peace, welfare, human dignity and global cooperation.

A Call to Action—Safeguarding the Freedom and Integrity of Science

The Pontifical Academy of Sciences calls upon all sectors of society to recognize that the freedom of science and the defense of scientific truth are necessities for human flourishing. The following actions are essential:

1. **Political Leaders and Policymakers:** Governments must uphold the independence of scientific institutions and resist the politicization of research. Support for basic and applied science must be protected as an investment in the public good. Policy decisions should be guided by the best available evidence, not by ideology or misinformation.
2. **Science Communities:** Scientists must reaffirm their commitment to rigor, transparency, and ethical responsibility. They must actively engage with society, communicate their findings clearly, and listen respectfully to public concerns. As much as possible, scientific organizations should protect their members from harassment and advocate for policies that safeguard academic freedom.
3. **Media and Technology Platforms:** Journalists and media institutions must prioritize accuracy and context in the reporting of scientific issues. Social media companies must take stronger steps to limit the spread of disinformation and support authentic sources. Algorithmic transparency and responsibility are urgently needed.
4. **Religious and Moral Leaders:** Faith communities should recognize and promote the compatibility of science and spirituality. As the history of the Pontifical Academy shows, reason and faith can coexist in mutual enrichment. Religious leaders can play a powerful role in restoring public trust in science as a force for good.
5. **Educational Institutions:** Schools and universities must redouble their efforts to cultivate scientific literacy, critical thinking, curiosity, and perspectives for caring about people and planet. Education should empower students to discern truth from falsehood and to appreciate the value of evidence-based reasoning.
6. **The United Nations and International Bodies:** Multilateral organizations must continue to champion global scientific cooperation, protect the rights of scientists, monitor and expose threats to scientific freedom. Progress in addressing climate change, global health preparedness, and food security: all these depend on strong, trusted science, as well as technology development.

We recognize that scientists cannot carry this burden alone, especially in contexts where they face repression or lack institutional support. A global coalition of stakeholders is needed—working together across nations, sectors, and beliefs—to defend the right to seek and speak scientific truth. In doing so, we not only protect the integrity of science, but also uphold the dignity, justice, and sustainability of our common human future. In this spirit, the Pontifical Academy of Sciences

reaffirms its dedication to promoting science that serves humanity, advances peace, and honors the shared pursuit of knowledge in the light of truth.

Signed by[1]

- Joachim von Braun, President of PAS, Vatican City and Germany
- Cardinal Peter K.A. Turkson, Chancellor of PAS, Vatican City
- Chien-Jen Chen, PAS Academician, Council Member, Taiwan
- Ewine van Dishoeck, PAS Academician, Council Member, Netherlands
- Fabiola Gianotti, PAS Academician, Council Member; Italy
- Edward De Robertis, PAS Academician, Council Member, USA
- Mohamed Hassan, PAS Academician, Council Member, Sudan
- V. Ramanathan, PS Academician, Council Member, USA
- Wolf Singer, PAS Academician, Council Member, Germany
- Zeresenay Alemseged, PAS Academician, Ethiopia
- Frances H. Arnold, PAS Academician, USA
- Vanderlei S. Bagnato, PAS Academician, Brazil
- Antonio M. Battro, PAS Academician, Argentina
- Helen M. Blau, PAS Academician, USA
- Steven Chu, PAS Academician, USA
- Aaron Ciechanover, PAS Academician, Israel
- Francis S. Collins, PAS Academician, USA
- Guy Consolmagno SJ, PAS Academician, Vatican Observatory, Vatican City

- Stanislas Dehaene, PAS Academician, France
- Elaine Fuchs, PAS Academician, USA
- Örjan Gustafsson, PAS Academician, Sweden
- Edith Heard, PAS Academician, France
- Klaus von Klitzing, PAS Academician, Germany
- Yuan T. Lee, PAS Academician, Taiwan
- Jean-Marie Lehn, PAS Academician, France
- Pierre Léna, PAS Academician, France
- Juan Maldacena, PAS Academician, Argentina
- Mauro Mantovani, PAS Academician, Vatican Library, Vatican City
- Anming Meng, PAS Academician, China
- Juergen Mittelstrass, PAS Academician, Germany
- Salvador Moncada, PAS Academician, United Kingdom
- Ryoji Noyori, PAS Academician, Japan
- Olivier Pourquie, PAS Academician, France
- Didier Queloz, PAS Academician, Switzerland
- Rafael Radi, PAS Academician, Uruguay
- Chintamani N.R. Rao, PAS Academician, India
- Peter Raven, PAS Academician, USA
- Daya Reddy, PAS Academician, South Africa
- Martin Rees, PAS Academician, United Kingdom

- Maryanne Wolf, PAS Academician, USA
- Roald Z. Sagdeev, PAS Academician, USA
- Susan Solomon, PAS Academician, USA
- Donna Strickland, PAS Academician, Canada
- Cecilia Tortajada, PAS Academician, UK and Singapore
- Rafael Vicuña, PAS Academician, Chile
- Edward Witten, PAS Academician, USA
- Maria Zuber, PAS Academician, USA

[1] The statement is signed by the Academicians of the Pontifical Academy of Sciences (PAS) in their personal capacity as members of PAS. The scientific disciplines of the Academicians are at <https://www.pas.va/en/academicians/ordinary.html>