



STATEMENT

Ethical responsibilities of scientists at a time of a global threat

The vision of the International Science Council (ISC) is of science as a global public good. The COVID-19 pandemic highlights the importance of this conviction. Scientific knowledge is crucial to dealing effectively with SARS-CoV-2. The natural sciences will help us understand how it works and how it can be combated; the social sciences will enable us to evaluate its social impact; and interdisciplinary approaches will be an essential component of counter-measures to it as well as of efforts to arrive at effective models, solutions and insights in the context of pandemics.

The ISC applauds the unprecedented response to the pandemic by the global scientific community. The virus does not respect political or geographical borders and the scientific community almost immediately responded with an approach that recognized the problem as a global one. The sharing of data and knowledge across research teams, institutions and countries has been laudable, as have the number of research groups that have quickly pivoted their attention to the pandemic. Scores of academic journals have committed to making their research on COVID-19 freely available for the duration of the outbreak. We hope that best practices emerging from this response will be used as models for global threats, now and in the future.

Across various news and social media platforms there has been a deluge of information on the COVID-19 pandemic. Some of this is based on good scientific practice, but a significant proportion falls under the heading of misinformation, based on weak or no evidence, or deliberately misleading. Such misinformation is often interwoven with scientifically credible and accurate information, thus rendering it all the more difficult to identify trustworthy and reliable sources. These developments emphasize the importance of continuing engagement by the scientific community, which in so doing must maintain complete transparency and be explicit about both evidence-based information and potential shortcomings.

The pandemic highlights many important ethical issues. The right to scientific freedom is paired with the responsibility to ensure that research promotes the common good. The Principle of Freedom and Responsibility in Science, enshrined in the ISC's Statutes, requires researchers and institutions at all levels to conduct and communicate their research with 'integrity, respect, fairness, trustworthiness, and transparency, recognizing its benefits and possible harms.' To this end we highlight some ethical responsibilities of science as it deals with this grave global threat.

- Health and social policies should be guided by the best possible scientific evidence. When communicating to policy-makers or the public at large, scientists therefore have the responsibility to use the best evidence that they can.
- Misinformation can have dire consequences, from promoting panic or denialism to the use of unproven and possibly dangerous therapies. The scientific community has the responsibility to be vigilant in the face of such anti-scientific acts, to make publicly known their lack of validity, and to advocate strongly for scientific values and the scientific method.

- Scientists should recognize that the best social and health responses to the pandemic will not come from science alone. The right policies for an area will depend on many factors, including the demographics, health care system, law and values of that community. Science should aim to best inform policy, not dictate it.
- Scientists have the responsibility to communicate uncertainties, where they exist, to policy-makers and the public. What counts as a “reasonable risk” depends in part on one’s values. For this reason the communication of uncertainties is crucial to societies’ responses. Public health models, like all science, involve uncertainty, and it is important to communicate the uncertainties to avoid risks of being counter-productive in the long-run. Unless prefaced with the uncertainties involved, the results of inaccurate models could contribute to an erosion of the public’s trust in science.
- The rapid development of new technologies and procedures, integrated with big data, is changing the way in which we conduct science. Researchers must continue considering how personal data is collected, managed and used, including but not limited to, obtaining informed and voluntary consent and ensuring privacy and security of the data. Technology can be used for benefit or harm. The “dual-use” of technology must still be appreciated, as governments often react to crises with increased surveillance and control. The serious threat posed by the pandemic should not be used as an excuse to ignore these basic ethical principles.
- COVID-19 highlights the fact that the vulnerable in society are generally the worst affected in a public health crisis. This is due to many reasons, from inadequate access to quality healthcare, poor health, and the need to accept risks to subsist. Scientists should recognize that there are always asymmetries between more and less vulnerable groups as they select patients for study, suggest therapies and policies, and much more.

Good science is absolutely essential to an effective response to the COVID-19 pandemic and other global threats. For it to be truly effective, scientists must have the right to scientific freedom but also pursue their research in an ethical and socially responsible manner.

The members of the [Committee for Freedom and Responsibility in Science](#) include Daya Reddy (Chair), Saths Cooper (Vice Chair), Richard Bedford, Craig Callender, Enrique Forero, Robin Grimes, Cheryl Praeger, Sawako Shirahase, Peter Strohschneider, Hans Thybo and Nadia Zakhary.

[Read more](#) on the ISC's commitment to protect scientific freedoms enshrined in the Declaration of Human Rights and our work in advocate for these responsibilities. The Principle of Freedom and Responsibility in Science is enshrined in [ISC Statute 7](#).

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