

Define the human right to science

The adoption of the Universal Declaration of Human Rights (UDHR) by the United Nations (UN) General Assembly will mark its 70th anniversary on 10 December. One right enshrined in the UDHR is the right of everyone to “share in scientific advancement and its benefits.” In 1966, this right was incorporated into the International Covenant on Economic, Social and Cultural Rights, a treaty to which 169 countries have voluntarily agreed to be bound. Unlike most other human rights, however, the right to science has never been legally defined and is often ignored in practice by the governments bound to implement it. An essential first step toward giving life to the right to science is for the UN to legally define it.

The UN Educational, Scientific and Cultural Organization began a process for defining the right to science in 2005. Five years later, the American Association for the Advancement of Science (AAAS, the publisher of *Science*) recognized the right as lying at the heart of the organization’s mission and began engaging the scientific community, broadly defined, in delineating the right.

The scientific community has contributed three key insights to the ongoing UN process. One is that the right to science is not only a right to benefit from material products of science and technology. It is also a right to benefit from the scientific method and scientific knowledge, whether to empower personal decision-making or to inform evidence-based policy. In addition, access to science needs to be understood as nuanced and multifaceted. People must be able to access scientific information, translated and actionable by a nonspecialist audience. Scientists must have access to the materials necessary to conduct their research, and access to the global scientific community. Essential tools for ensuring access include science education for all, adequate funding, and an information technology infrastructure that serves as a tool of science and

a conduit for the diffusion of scientific knowledge. Also, scientific freedom is not absolute but is linked to and must be exercised in a manner consistent with scientific responsibility.

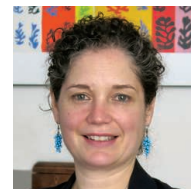
In October 2018, the UN Committee on Economic, Social and Cultural Rights released a list of 29 questions related to defining the right to science. Three of the most important questions were: What should be the relationship between the right to benefit from science and intellectual property rights? How should government obligations under the right differ based on the available national resources? What is scientific knowledge and how should it be differentiated, if at all, from traditional knowledge?

It is vital that the committee decide which of these and the remaining 26 questions truly need to be answered, which have been sufficiently answered already, and which are beyond the immediate scope of the task. The effort to define the right must not become mired in demands to resolve questions a priori that can only be answered over time. Insights from the scientific and engineering communities provide responses to many of the questions. Civil society must continue to illustrate how the

right to science complements existing human rights protections. The scientific community, particularly in the 169 countries bound to implement the right, must demonstrate how the right can be instantiated within their own national contexts. And all interested parties should take the opportunity to contribute their input and insights to the UN process.

The power and potential of the right to science for empowering individuals, strengthening communities, and improving the quality of life can hardly be overstated. It is time for the UN process to reach a responsible and productive end and for the right to science to be put into practice as was intended when it was first recognized by the United Nations in 1948.

—**Jessica M. Wyndham and Margaret Weigers Vitullo**



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PHOTOS: (FROM TOP) ADAM COHEN; ALAN BRAIN

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