

# Transcending boundaries

**N**ext week in Washington, DC, the Annual Meeting of the American Association for the Advancement of Science (AAAS, the publisher of *Science*) will celebrate science and explore many daunting global challenges. The meeting's theme—Science Transcending Boundaries—considers how science can bring together people, ideas, and solutions from across real and artificial borders, disciplines, sectors, ideologies, and traditions. Today's rapidly changing social and scientific terrain demands thinking and acting in new ways. The scientific community must evolve to meet new realities if it is to continue its path of growth and progress and address the world's most pressing problems.

The benefits of science and technology cannot be dismissed. They are embedded in our daily lives and undergird the solutions to everything from poverty to disease; sustainable food, water, and energy; climate change; and national and international security. But major challenges to the scientific enterprise loom large: underinvestment in research and development, uncertainty about jobs and career paths, major gaps in science literacy, and a growing skepticism or indifference about science and its practice by some sectors of society.

Of great concern is the onset of a so-called post-truth era, complete with “alternative facts,” disdain for expertise, and a diminishing reliance on facts and analytical thinking in public life. We have witnessed increasing political polarization around the science—and threat—of climate change. Vaccination rates are decreasing in some regions despite clear scientific evidence on safety and disease prevention. In the United States, platforms for scientific advice in government, federal agencies, and the White House have atrophied or remain vacant.

At the same time, many institutions have finally begun hard-won discourses about gender and diversity that are reshaping society and forcing them to recognize the insidious culture of harassment and prejudice that plagues from within. The scientific community is not immune. Certain groups are, and have been, disenfranchised in ways that affect how science is done

and who benefits. The scientific community must do more than be outraged by this problem—it must work to fix it.

Meanwhile, scientific advances and technology-driven trends are disrupting other cultural norms and posing important questions about the future of the workforce, ethics, and perhaps even what it means to be human. For example, advances in gene editing and artificial intelligence along with automation, such as robots and driverless cars, are generating new resentments and anxieties about applications of science and technology and how to wield their powers responsibly.

The way forward across this uncharted landscape is for the scientific community to open its arms to the wider community of decision-makers, communicators, and the public as scientists work thoughtfully and respectfully to keep pace with the sea changes under way. As AAAS president, I am privileged to serve an institution committed to help lead. AAAS has steered the international scientific community for 171 years through paradigm shifts, social movements, and near-existential threats. Always seeking to strengthen the place of science in society, the organization has embraced civil rights activism, established programs during the Cold War to promote scientific freedom across the world, and advanced science diplomacy in the face of global conflict. Today's challenges rise to the same level of urgency, and AAAS is once again taking action to respond. Among other efforts, two new programs—SciLine, focused on the journalism community, and Epi Center, focused on policy-makers—promote the inclusion of, and reliance on, scientific evidence in influential sectors of society.

In our modern, rapidly changing world, there are many things that serve to divide us. Science should not be among them. Together, the global scientific enterprise must do more than break down boundaries; it must transcend them—personally, professionally, and as a unified scientific community.

—Margaret Hamburg

**“...there are many things that serve to divide us. Science should not be among them.”**



**Margaret Hamburg** is president of the American Association for the Advancement of Science (AAAS) and foreign secretary of the National Academy of Medicine, Washington, DC, USA. [peggy@hbfam.net](mailto:peggy@hbfam.net)

# Science

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Margaret Hamburg

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