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National Interest, Global Interest, and Science

E. William Colglazier

How countries define their national interest largely determines their willingness to work toward goals that are perceived to be in the global interest. Foreign ministries are guided by the national interest even when they collaborate on global goals. The degree to which global concerns are incorporated into national aspirations becomes one of the most important factors in determining whether countries can tackle worldwide problems together.

A major benefit of the United Nations 2030 Agenda with the seventeen Sustainable Development Goals (SDGs) is the framing of national interest as part of the global interest. Whatever a country seeks to accomplish for its own prosperity, security, resilience, and quality of life can be found somewhere in the SDGs. Key issues regarding global concerns are there as well. The SDGs were intended to address common social, economic, and environmental challenges to help all people and the planet, and they were approved by 193 countries.

E. William Colglazier is the editor-in-chief of Science & Diplomacy. He is the former Executive Officer of the National Academy of Sciences (1994-2011), former Science and Technology Adviser to the Secretary of State (2011-14), and former co-chair of the Ten Member Group at the U.N. advising on science, technology, and innovation for the 17 Sustainable Development Goals (2016-18).

Nevertheless, many autocratic governments, including some democracies succumbing to populist leaders, pursue narrow visions of national interest based on a “zero sum” view of international relations rather a notion of shared interests that require a “win-win” cooperation. It would have been educational and inspirational if there had been one SDG for democratic governance with targets and indicators to help encourage and protect democracies, but that was not politically feasible. Nor would that have guaranteed every country ratifying the 2030 Agenda truly shared the broad global vision.

A dangerous path that can occur with a narrow vision is seen in the spectacle of the outgoing U.S. president elected on the banner of “America First” and “Make America Great Again.” His approach was defined in opposition to international cooperation despite more than seventy years of U.S. commitment to common security with traditional allies and working within a rules-based international order with all countries on global challenges. The global interest was largely ignored or rejected by his administration and followers. It is ironic and tragic that his narrow perception of America’s national interest combined with his personal immorality and misdeeds led to an attack on the Congress that could have led to a catastrophic failure of the nation. The president’s behavior almost eviscerated America’s constitutional democracy.

The solution to making progress on the most important national and global goals surely requires visionary and competent political leadership not only to solve real problems but also to make the case to the public that working for the global interest is often critical to furthering the national interest. Science is a tool that can help to find solutions to national and global problems, including those that have led to the rise of autocratic populist politicians. Science can also provide evidence to support the need for global collaboration to make progress.

What Science and Technology Can Contribute to Solving the Most Important Global Issues

Successes and failures in dealing with the most challenging issues facing countries—peaceful international relations, national security, economic growth, economic competitiveness, public health, social and economic equity, climate change, societal cohesion—have many lessons. One factor above all others stands out. Responding effectively to rapidly spreading pandemics, damage to the planet from climate change, economic disruption of trade and global supply chains, increased poverty and migration from failed states, hostile relations with states operating outside international norms, eruption of active conflicts and wars,

and other societal stresses requires international coordination, cooperation, and collaboration.¹ Yet accomplishing that cooperation to the extent required for real progress has been exceedingly difficult. A fundamental question facing the world is what can be done to accelerate countries working together to solve their national and global problems.

The response to the pandemic provides compelling evidence that science, technology, and innovation can be absolutely crucial for overcoming a worldwide crisis. While a number of countries responded early and effectively with national leadership, public health measures, and societal cohesion—wearing masks, practicing social distancing, employing testing and tracing—other countries including scientific and technologically advanced countries like the United States had enormous failures. The data for the U.S. with 20 percent of the deaths and 4 percent of the world's population can be seen as a staggering indictment of its leadership, culture, politics, and a lack of shared values.

Yet the scientific and technological innovations, occurring in the U.S. and other countries, and originating from fundamental research, combined with accelerated international scientific cooperation and new public-private partnerships, produced new vaccines, therapeutics and diagnostics in record time. Science has been one of the greatest successes of the worldwide pandemic response.

The U.S. is now almost totally reliant on these new vaccines in having any possibility of defeating SARS-COV-2 within a year. The effort to vaccinate the world will likely take many years. The suffering, death, job losses, economic disruption, education deficits, and social isolation from COVID-19 will continue to incur an enormous cost for all societies. Strengthening the World Health Organization, making vaccines available for people in every country, developing a more coordinated global economic response, and providing financial help for the poorest countries are essential. Responding better to the ongoing pandemic as well as preparing for future global pandemics will require more international cooperation, less self-serving nationalistic responses, and even greater international collaboration among scientists. That is a critical message for the politicians, diplomats, and the public to hear.²

Preserving the peace is another issue where science and technology are critically important for addressing the key challenges facing the planet. The nuclear age has provided the most searing evidence that scientific and technological advances can produce existential threats even if the technology offers potential benefits. The near-term challenge includes maintaining and strengthening nuclear arms control agreements such as New Start with improvements for verifying warhead limits, maintaining the Nuclear Non-Proliferation Treaty, re-establishing compliance with

the Iran Nuclear Agreement, seeking additional states ratifying the Comprehensive Test Ban Treaty, and working for a new treaty to restrict intermediate-range nuclear weapons.³ New systems utilizing hypersonic and autonomous weapons with conventional or nuclear warheads present additional threats. Enforcing bans on chemical and biological weapons and working on threats that could emerge from synthetic biology are needed. Threats posed by cyber weapons, drones, misuse of social media, artificial intelligence, big data, and other scientific and technological advances remain inadequately addressed. The possibility of new outbreaks of conventional warfare at the regional level is always present. Scientific advances not only contribute to the threats but are essential to control and mitigate them. Again, international collaboration among countries and among scientists as well as partnerships between scientists, technologists, and policy makers is required for ensuring the peace.

The challenge in responding effectively to climate change has much in common with responding to a worldwide pandemic. Vaccine nationalism has complicated the pandemic response. A narrow view of national interest exacerbated by powerful vested economic interests has created a strong opposition to dealing effectively with climate change. The long decades required for the societal transformations to mitigate and adapt to climate change provide an even bigger challenge. Like nuclear weapons, climate change could present an existential threat. It now seems clear that international political will and behavioral change by societies are absolutely necessary, and that can be advanced by strengthening the Paris Climate Agreement. These steps are obviously important, but they will not be sufficient. Again, scientific and technological advances are essential to mitigate the disastrous consequences of anthropogenic climate change. Only with even more aggressive scientific and technological investments in developing and deploying carbon-free sources of energy on a massive scale will the world have a chance to avoid the worst outcomes for the planet.

Dealing with the threat from nuclear weapons, pandemics, and climate change requires constant vigilance, attention, and action at the national and international levels. Science and technology are part of the problem but also are part of the solution. Working towards that solution requires active engagement of the scientific and technical community inside and outside government with their elected political leaders and diplomats. Science diplomacy utilizing scientific knowledge and expertise in advancing diplomacy can help to achieve the international collaboration and cooperation that is imperative for making progress on these immense challenges and ensuring that every country's view of its national interest incorporates the global interest.

What Must Not be Overlooked Where Science can Contribute

Many of the threats that societies face have root causes that go far beyond the scientific realm. Nevertheless, knowledge coming from the social sciences and humanities is essential for understanding and moderating these challenges. The United States is now confronted with an existential threat coming from domestic terrorists who use new technologies including social media in their attempt to destroy free and fair elections and disrupt fundamental norms of democratic governance. The causes come partially from economic and other stresses on society, but the deeper causes for the gravest threats come from societal disfunction, powerful autocratic leaders, and the spreading of big lies. The historical precedents of these latter factors are prescient. As the historian Timothy Snyder wisely noted regarding the current American crisis, “Post-truth is pre-fascism, and Trump has been our post-truth president. [...] Post-truth wears away the rule of law and invites a regime of myth. [...] The lie outlasts the liar.”⁴

Science must contribute to dealing with potentially catastrophic threats caused by disfunction in societies that can be exploited by abhorrent ideologies and unscrupulous political enablers seeking power. Following the terrorist attack of September 11, 2001, the U.S. National Academies of Sciences, Engineering, and Medicine commissioned with its own funds the study “Making the Nation Safer: The Role of Science and Technology in Countering Terrorism.”⁵ The committee included scientific and technical experts from the physical, biological, engineering, medical and social sciences as well as wise professionals with experience in government, international affairs, and the private sector. The report, released in early 2002, influenced policy changes and actions of the U.S. government. The National Academies are considering undertaking a new study on countering threats from domestic terrorists who use new technologies seeking to destroy our democratic society.⁶ The audience for the proposed report will be the American public and the political leadership.

The success of science in helping to address the current pandemic with new vaccines may result in increased trust in science by citizens. In addition to providing sound policy advice to the government, science can help to rebuild trust in government. It can provide advice on how to address the root causes that have contributed to the current crisis and how to communicate to the public that the national interest is served by embracing the global interest. **SD**

Endnotes

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