SCIENCE DIPLOMACY AND THE GLOBAL STATE OF AFFAIRS

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Abstract

Sir Peter Gluckman's address explores the precarious state of science in an era of global instability, political populism, and societal distrust. He argues that international science faces an existential challenge marked by declining trust, increased politicization, and eroding public engagement, particularly in democratic nations. While science, defined by its universal principles of empirical inquiry and peer review, remains a global public good, the institutions that produce and use science can be entangled in political, economic, and ideological battles. The post-COVID world has intensified these tensions, with misinformation, short-termism, nationalism, and elite scepticism undermining the social contract between science and society.

Science diplomacy, once effective in uniting nations around shared goals like the Sustainable Development Goals and climate agreements, now struggles within an outdated multilateral system. Gluckman emphasizes that for science diplomacy to remain impactful, it must balance national interests and global needs, particularly regarding the global commons. Informal, Track 2 science diplomacy and a reformed scientific ecosystem, more inclusive, transdisciplinary, and socially engaged, may be key to rebuilding trust and influence.

The science community must reflect on its role, address its own institutional weaknesses, and better communicate with an increasingly sceptical and divided public. Young scientists, new diplomatic strategies, and a redefined relationship between science, society, and politics are essential to restoring the credibility and utility of science in policymaking. Despite these formidable challenges, Gluckman remains cautiously optimistic that science can still serve as a critical tool for global cooperation and problem-solving, if its social contract can be renewed.

Keywords

Science Diplomacy, Global Commons, Trust in Science, Populism, Multilateralism

I want to focus on the broader challenges for science diplomacy. International science is facing an existential challenge and we need to discuss science diplomacy within that context. In doing so, it is useful to reflect on what science is and its limits, then consider what has led to the current challenging times for science, particularly in the democracies with major consequences for international science cooperation, progress on the global commons, and finally turn to the roles of science diplomacy and its path forward.

We are now living, at least in the West, in a world where trust in science appears less certain, where science denial has become an ideological badge, and where debates over the acceptance and use of scientific knowledge are caught in extreme partisan politics. The epistemological positioning of science relative to other knowledge systems and its role in societal decision-making can be questioned – indeed, that is at the heart of populist objections.

Science and Science Systems

We need to be clear about what we must defend and how we should react. Science is defined by its principles, it is an organized system of knowledge – one based on observation and experimentation. Explanations can only be based on causal reality, logic, and past observation. Explanations based on merely subjective and non-empirical considerations, be they from belief or bias, are excluded. Claims without quality assessment by expert peers are not science. Thus, science is defined, not methodologically, but by iterative review and progressive modification of knowledge as new observations are made and incorporated. It is these principles that make science universal and ensure that science can be a global public good. Crucially these principles apply across all cultures and are built on centuries of very diverse developments from multiple sources. In this sense using the term 'Western science' rather than 'modern science' is a misleading political statement reflecting the reality that science like other cultural developments, including religion and technology, has been used in colonial projects.

It is these principles that give modern science its explanatory and practical power allowing it to provide the most reliable and inclusive way to understand the universe and the world around and within us. Because of this, it has a critical role to play in how societies make decisions in every domain.

But we must distinguish what is science from the scientific systems and institutions that evolved to produce or use science. The latter vary enormously and are influenced by context, culture, and motive. Here we must be honest: institutionalized science has contributed both good and bad and has its own power dynamics.

But critically to our discussion, science is not the only knowledge system people use. In their daily lives, people apply and combine a variety of knowledge systems, including those that define their identity, values, and worldviews; these may be local, indigenous, religious, cultural, or occupational in origin.

Perceptions of Science

The issue of the moment is how science is perceived by components of some societies and thus whether the knowledge it provides is likely to be used appropriately. But underlying this is the question of whether it is science itself that is rejected or its application that is denied – the evidence would suggest that distrust is not so much about the knowledge that is produced but more about the positioning of science as an elite institution in both decision-making and truth-seeking.

We are now seeing urgent and deep challenges to international science. The issues that arise are multiple. The role of science in addressing the global commons is compromised. International exchanges, data sharing and the openness that characterizes science are put at risk. But there is also a growing cultural and political focus on the institutions that produce science and on universities and on international collaboration. The production system is at risk, and we need to understand why that is so.

The Social Contract, the Choice to use Science or not

The social contract between science and society is threatened at the very time when science is needed more than ever, and science diplomacy is but a component in a broader context. What we are observing is a risky and dangerous rebalancing of the relationship between science and society being reflected and defined by political movements. While the focus of much in the science and science policy community has been on the disruptive events affecting the scientific endeavor over the last few weeks, we will be in error if they are looked at in isolation. We can be justifiably alarmed, but we should not be surprised.

Think of the anecdote of the frog in the slowly warming water – it has been warming for a time but now it has boiled. When we look at the relationships between science, society, politics and diplomacy, there has been a set of issues confronting science in its relationships in democratic countries that have been emerging over many years.

What we mean by 'trust in science' or perhaps better 'respect for science' is fundamentally defined by the nature of the relationship between science and society and this has a major effect on how and when science is used or not. Diplomacy is ultimately about managing relationships and we must increasingly focus on the relationship that science as an institution has with its society. In any relationship the style of the interaction matters - we have seen an abreaction when some parts of the scientific community are seen as preaching at communities and thus perceived as an inappropriate decision-making authority rather than engaging with society - a challenge I shall return to.

So why has the Social Contract Changed?

My comments will focus, not surprisingly given the populist turn, on the attitude to the place of science in the Western democratic world. Some factors are obvious. Any listing will lead to debate over the relative importance of each. It is highly contextual across different societies.

At the highest level, the shift to a multipolar world has been unsettling. We are seeing shifting and unstable alliances, a weakened and outdated multilateral system designed for a very different world which is unable to effectively deal with the issues of conflict that led to its formation in the first place. Conflicts rage unresolved. The rules-based system set up to ensure stability and to maintain agreed boundaries and to promote ways to engage commercially across boundaries is being increasingly ignored or undermined. This influences how citizens see governments.

At the same time, the sociological changes and the dominant economic model of the past few decades have not met the needs of many citizens. While the overall average statistics show great progress; it is what happens to individuals that matters when greater inequality emerges. As a result, we have seen greater societal polarization, loss of social stability, and exacerbated economic inequities in Western societies.

And we need to look through a psychological lens. We live in a time of extraordinary change – much brought about by the science-based technologies now accelerating at an extraordinary pace – creating mismatches between the technology itself and society's capacity to adapt creating power shifts.

And many of the challenges we face are linked to past scientific developments. Most obviously, climate change is ultimately the result of 19th-century technology creating an economy based on fossil fuels. We see more conflict, increasingly powered by science-based technologies – indeed war has always been a competition of technologies. But now with drones and AI, the role of science is even more obvious. We see massive demographic change brought about by public health. We face massive sociological change brought about by developments ranging from reproductive technologies to communication and transport technologies and we see many social changes brought about by a changed information environment.

For many the rapid changes in entertainment technologies have destabilized and threatened the psycho-cultural boundaries and created the so-called culture wars. Migration and rapid demographic change have changed the relative status of some groups within societies causing anger and resentment.

The impact of the changed information environment cannot be underestimated. Yes, people have more information, but much is unfiltered in its reliability, and it has given the false impression that experts are no longer needed. While disinformation is not a new phenomenon, the internet has put fuel on the fire of conspiracy and alternative facts. Our cognitive biases can be reinforced and opinions manipulated. Social media has changed the basis of human-to-human interactions and indeed the way conversation occurs. It has changed the nature of societal discourse, it is angrier, less nuanced, and of a form that most did not accept even a few decades ago.

A new set of actors has emerged empowered by the pace of technological change and the shift of much research-based innovation from the public to the private sector; we have non-state actors with global reach and influence equivalent to or greater than that of many nation-states. The pace of change and the power of these actors have outstripped the capacity of domestic mechanisms to regulate and that has further disrupted societal, diplomatic and economic norms.

The impact of Covid

And then came Covid. While the response to Covid was a massive success for biomedical science in the rapid development of vaccines and in particular mRNA vaccines, it was not the 'Sputnik' moment for science one might have expected. Indeed, science as an institution has become a target.

For those in society who were already primed, the pandemic often reinforced their attitudes to science. Claims by politicians that they were 'just following the science' when often progressing other agendas did not help. And there was too often a failure by both the political and scientific leadership to acknowledge uncertainty. There were dogmatic, paternalistic and in some cases manifestly self-interested statements by public scientists. Trust in political elites was already compromised, and science was seen as part of that elite set of institutions. Conspiracy theories were fuelled. The interaction of geopolitics and science was clearly in play in debates over the origin of Covid that continue. The science of immunization got confused with the politics of mandates, public health and individual freedoms.

The lasting consequences have been persistent economic challenges, a rise in disinformation and conspiracy theories, greater societal anger, increased nationalism and a turn away from globalization, and reduced trust in multilateral institutions, such as the WHO.

Populism and Politics

When people feel anxious, scared or angry they seek strong leadership and this fuels the autocratic turn in many countries. In turn, this can be manipulated by populist leaders. Overall, these shifts have accelerated the decline in trust of elites which is at the heart of populism and science is essentially an elite process.

Science has been blamed for policy failures and instrumentalized science has been politicized. The institutions that produce science have been attacked albeit that other factors have been involved: there may be a valid debate about the roles of public universities beyond knowledge production. But academic freedom is key to the role of a university in a democratic society.

Populism's attitude to science has several dimensions – science can be seen as part of the alleged decision-making of the so-called deep state and that delegitimizes it as being corrupt. Secondly, science seemed to usurp epistemic legitimacy which in the view of populists, truth does not lie in evidence but in the people's views.

Science is also affected in other ways beyond the populist turn. Economics has increasingly pushed governments to shift their emphasis from science as a tool of knowledge enhancement to being a fuel of economic innovation. Secondly, the intensifying links between national interests, economics, science and technology are changing how governments view international scientific collaboration. The mantra 'as open as possible, as closed as necessary' dominates in science policy circles but it is extending from its traditional dual-use focus to an economic one.

Many factors, including the nature of the information environment, psychological drivers and self-interest, have had another important effect. They have reinforced a focus on short-term thinking. Issues of economics and transactional issues are dominating political discourse at every level.

We will make a mistake if we focus on the matters of the moment as if it is a singular issue focused on a single country. It is a much broader and the science, diplomatic, science policy and science diplomacy communities need to place recent events into perspective.

The Global Commons

The outcome of these various shifts is that the issues of the global commons are off the agenda of too many in influential and political positions. The Sustainable Development Goals were developed in a very different and more positive era when superpower tension was much lower, globalization was valued, and longer-term and more positive thinking was enabled within the broader diplomatic and political community.

How things have changed in ten years. Priorities for many nations have shifted to the immediate – security and economic growth are the primary focus driven by the changing contexts that I have discussed. The question becomes what can we do about the declining priority given to the global commons? Firstly, we must not only consider populism which rejects the authority of scientific evidence but we also have the challenge of confronting interests, motivated reasoning and cognitive biases. We have seen over the years how partisans across the political spectrum have cherry-picked the science – whether it is over genetic technologies or climate change. Of course, science can be accepted and the use of the technology still rejected on valid societal or normative grounds.

Science Diplomacy

So, in this context what is the role of science diplomacy? We can get caught up in the semantics of what science diplomacy is or is not. My general preference is to view it through the lens of seeing how science can help achieve diplomatic goals. Put simply and if we look at it from a national perspective, science diplomacy is about how science can help a country meet its diplomatic goals. Generally, these are about ensuring the national self-interest is protected in a negotiation, in the linkage between knowledge, power and economy, and in the context of protecting the country's local environment and natural resources.

The advances in science diplomacy in the post-Berlin Wall era occurred because countries gave greater recognition to the importance of the global commons. The greatest victory of science diplomacy was persuading countries that it was in their own vested self-interest to cooperate to address the global commons. The development of the SDGs and the Paris Accords were the epitomes of success. But this commitment was always vulnerable – domestic politics and especially the politics of interests and short-term thinking made some relatively reluctant to engage.

We have to face the domestic and international tensions I have discussed, post-colonial anger in many countries, and a multilateral system designed for 1945 but not for 2025. These all add to the realpolitik.

If science diplomacy is to address the issues of the global commons, then it requires us to find ways to somehow get every country to achieve the understanding that addressing the global commons is ultimately in the national self-interest. No country was immune to Covid, no country will be immune to climate change. Here science diplomacy ultimately depends on domestic processes and politics. What happens in the multilateral space at least as it is currently constructed depends entirely on decisions by sovereign states. Governments in the end are not that altruistic – they will do what is in their interest. But to achieve this we need to get them to think with a longer-term focus than they do normally. In a democracy, this requires thinking not only about the politician but also the voter. And we face the immediate challenge that short-term interests generally dominate in their thinking too.

Given what I have discussed – the nexus of short-termism, domestic politics driving nationalism and self-interest, and the growing nexus of science, technology, economy, security and power in a world where technopoles are emerging with very distinctive approaches, the growing power of non-state actors – this retreat from the global commons is disappointing: frightening but not surprising.

Future of Science Diplomacy

So where does science diplomacy now go? At the bilateral and national self-interest level, science diplomacy will continue to be used along with the other tools within the diplomatic toolkit. Some countries understand its value better than others, but too often it is really seen in narrow terms of economic diplomacy.

At the global level, it is much harder. Some UN agencies are trying to shift the discourse – for example the work that the UNEP has partnered with the ISC in using anticipatory foresight to provide a consensus on the weak signals that nations must consider in future planning. But other agencies may have reinforced the skepticism – the scale of the climate change COPs and the way they have become an arena for overt cynical competition of interests suggest an outdated model for global assessments and bringing science to the policy and action table. The multilateral system is no longer fit for purpose, but there is little likelihood of effective change soon.

Track 2 Efforts

Formal track 1 science diplomacy has its limits, given the state of the multilateral system and global tensions. In that context, informal track 2 science diplomacy practiced by organizations such as ISC may be needed more than ever. As the First Cold War showed, the two tracks could work very effectively hand-in-hand.

Sadly, the positioning of both natural and social sciences in the multilateral system is variable and, in some cases, tokenistic. Outside the technical agencies, it can be seen as a marginal interest rather than core to making progress. The ISC has been working hard to reverse that. There can be unnecessary egotistical positioning by intergovernmental bodies in their interactions with the nongovernmental system rather than promoting the synergies so they can work together.

But the science community itself still tends to be fractured and bedeviled by our own institutional egos. We need a more unified voice from science. That, itself, is a major diplomatic challenge but it may be a necessary step.

International Science Cooperation

We cannot ignore the role of international scientific collaboration. Science as a universal language has shown it can work well across cultural and political boundaries. The EU leadership is trying to define the principles and values that underlie international scientific cooperation. This could be an important step towards using the scientific community as a tool for a better world. The ISC has been grateful to be a partner in this effort. Indeed, the ISC sees its primary role in advancing the global public good through science policy interactions, and science collaboration.

While the intent of the SDGs is as important as ever, perhaps a different framing will be needed if we are to make real progress. They are complex to understand and in many areas, the focus is not clear. The way we do science may also need to change to meet both the needs of sustainability that mode 1 science has failed to deliver – transdisciplinary and post-normal approaches are needed. We may need new structures within science to achieve this. Fortunately, many young scientists want to embrace this agenda, and we should assist and encourage them. They may be our best army in reinforcing the social contract for science.

So just as the multilateral system needs change, too must the science system to make a dent in the issues of the global commons.

Looking at Ourselves

Obviously, recent events have put science and science systems at risk – but as I have pointed out they have been at risk in many countries for some time. 'Crying wolf' is not a sufficient answer. We need to look more closely at the social contract between science, society and politics.

We need to give priority to our own project – asking how evidence can better impact national and global decision-making given the complexity of institutional distrust, polarization and short-termism fueled by issues of group status issues and interests. Here cognitive sciences, political sciences, social sciences, communication sciences and psychological sciences need to assist not just in an academic sense but in mapping a pathway to refocus on the matters that really matter – a boiling world, fractured societies, anxious people.

In the 1970s and 1980s track 2 science diplomacy had major impacts. This was an era when science, politics and society saw each other in a more heroic image. But at that time the social contract between science and society was different – strong and less debated albeit the relationship was defined in a Mertonian or patronizing way with science preaching truths at a less skeptical population. But the world is now very different.

Perhaps we now need a new form of science diplomacy. How can we ensure science is accepted as trustworthy so that it is used appropriately in this new and very different sociological, geopolitical and technological context? Contexts where the collective threats to the global commons are real but easy to reject in the face of self-interest and short-termism. The use of scientific knowledge is a societal and political choice. We must find ways to bridge to all sectors of all societies so their decision-making meets the global interests, not just those of a few.

A Final Comment

We must strongly reject the demonization of science and its institutions and protect the principles of science, the institutions of knowledge generation, and international science collaboration. But we must also be constructive in finding solutions to these challenges. Critically, we will not achieve the necessary progress without also looking at ourselves and thinking about what we can do to rebuild and reinforce the social contract. That will be a major diplomatic effort at multiple levels.

Let us be cautiously optimistic – science is ultimately core to the health of the planet, its biota, its societies and its citizens – we must and can use our collective abilities to avoid the real tragedies of the commons, even if it is going to be a difficult diplomatic effort – using the term in the broadest sense possible.

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