

Seminar Report

Thinking, Debating, and Shaping Science Diplomacy

By Eric Piaget, Diana Shendrikova, Luciana Radut-Gaghi, and Luk Van Langenhove

Introduction

On the 25th of January, 2023, a seminar was held at the Directorate-General for Research and Innovation ([DG RTD](#)) of the European Commission, the nerve centre of European research policy. It was organised by the UNTRAD¹ Presidency of the [European Union Science Diplomacy Alliance](#), in association with the European Commission, [EUTOPIA](#), and the [Norway-EU Science Diplomacy Network](#).

The general idea of the seminar was to assess the present state of the art of science diplomacy in Europe from three perspectives. The first perspective, labelled **Thinking Science Diplomacy**, examined the status of science diplomacy as an academic endeavour. Questions that were tackled included: how are established scientific disciplines coping with the concept and practice of science diplomacy? Is there an academic field in the making? Is there a theory of science diplomacy in the making?

The second perspective, **Debating Science Diplomacy**, unpacked the question of how science diplomacy is affected by societal and geopolitical challenges, the shifting nature of diplomacy, and the place of science in preserving the global commons. The question of scientific scepticism was also addressed.

The third perspective, **Shaping Science Diplomacy**, focused on how to shape a future for science diplomacy in Europe. Questions addressed here included: what is happening at the European level? What should academia's input be? And also: what needs to be done at the level of MFAs and diplomatic missions of the EEAS and Member States? And what about other actors, such as sub-national (regional) level and supra-national (multilateral) level?

The participants, who came from across Europe and beyond, included members of the Alliance, EU institutions, Member State governments, academics (especially from the EUTOPIA Alliance) and other science diplomacy stakeholders. The seminar was organized under Chatham House Rules and participants spoke in their personal capacities. Thus, the content of the discussion will not be attributed to the individuals who imparted it.

What lies below is a synthesis of each of the discussions.

Thinking Science Diplomacy

Diana Shendrikova

¹ UNTRAD is the **Unit on Non-Traditional Diplomacy**, a joint entity of the United Nations University Institute on Comparative Regional Integration Studies ([UNU-CRIS](#)) and the Brussels School of Governance of the Vrije Universiteit Brussel ([BSoG](#)), which held the presidency of the EU Science Diplomacy Alliance from July – December 2022.

Even though science diplomacy is a fairly recent term, diplomatic use of science is a practice that goes back centuries. At the dawn of the millennium, science diplomacy increasingly gained political currency in association with more liberal governance images aligned with the cultivation of soft power. Such was reflected in, for example, Obama's Cairo speech, which followed eight years of a neoconservative administration more concerned with hard power metrics: "On science and technology.....We'll open centres of scientific excellence in Africa, the Middle East and Southeast Asia, and appoint new science envoys to collaborate on programs that develop new sources of energy, create green jobs, digitize records, clean water, and grow new crops."²

In Europe, science diplomacy is now a key component of the [Global Approach to Research and Innovation](#). However, there is an ongoing debate on how to conduct scientific cooperation at this pivotal moment where science diplomacy is undergoing a transition towards more delicate issues: security-related aspects, dual-use, political rivalries, and international research collaboration between democratic and non-democratic states. Questions emerge, such as whether science can remain neutral and whether we can forge a distinction between science and politics. Another important question concerns the difference between science diplomacy and international policymaking. Finally, it is crucial to ask why the EU (or Western countries in general) collaborate(s) with authoritarian regimes, which are less advanced scientifically (for example, African countries), while limiting or punishing –as in the case of Charles Lieber– collaborations with more technologically advanced, geopolitical heavy-weights like China.³ With these questions in mind, clear indications of where to place boundaries and limits of such collaborations need to be provided and developed.

Contemporary approaches to science diplomacy tend to be focused on single case studies, with impact assessments and integrated approaches being complicated by conceptualization and implementation. Such approaches tend to highlight success stories, such as [SESAME](#) or [CERN](#), which paints an overly rosy picture. Creating an evaluative network and comparative analytical tools could help overcome a lopsidedly wholesome image of science diplomacy, helping it to embrace the complex challenges the field is facing now.

Another obstacle facing the field is the fact that science and diplomacy actors do not always speak the same language (literally and metaphorically), and thus attribute varying degrees of weight to this diplomatic tool. For some, science diplomacy is first and foremost a diplomatic tool, with diplomats being the main beneficiaries of its actions. Nevertheless, diplomats do not talk much about science diplomacy and it is thus important to find ways to engage them in the discussion. For others, science diplomacy lacks the engagement of the scientists themselves. Science diplomacy is too often driven by the science policy actors, and only to a limited extent pushed and promoted by scientists who are possessing nevertheless an important and valuable resource – scientific knowledge. No doubt, the higher the scientific uncertainty, the higher the scientific input in the diplomatic action and the greater importance of its scientific component (e.g. the Antarctic Treaty of 1959). On the other hand, if the scientific uncertainty is low, like in case of territorial claims based upon historical grounds, the role of politics and diplomacy increases significantly.

² <https://www.aps.org/policy/analysis/diplomacy.cfm>

³ US Department of Justice. (2020). Harvard University Professor and Two Chinese Nationals Charged in Three Separate China Related Cases. [online] Available at: <https://www.justice.gov/opa/pr/harvard-university-professor-and-two-chinese-nationals-charged-three-separate-china-related> [Accessed 24 Feb. 2023].

It is important not to overplay the role of science in science diplomacy, considering the main failures of science diplomacy are linked to diplomatic failures. For example, [COP15](#) in Copenhagen was a failure because diplomacy failed, while the agreements reached in Paris at [COP21](#) are attributed to the diplomatic success.

The debate regarding the perfect science diplomacy “recipe” is ongoing. Trying to define how much *science* and how much *diplomacy* the concept comprises is an endless circle of discussion. The linguistic analysis of the term implies that *science* is the adjective of the noun *diplomacy*, making the latter the main component of the equation. With *science* responsible for providing evidence and *diplomacy* for taking decisions, one of the possible meeting points of the two can be found in their performativity.⁴

Some experts emphasize the importance of overcoming methodological nationalisms. Assuming “the nation-state is the natural social and political form of the modern world”⁵, a more cosmopolitan methodology is needed to address global challenges and design collaborative solutions over the promotion of national interests. After all, many of the risks and challenges the world is currently facing are borderless, as well as requiring technological innovation to address them. Therefore, even though the current geopolitical context positions science diplomacy in a realpolitik dimension, we cannot forget about the more collaborative essence that the field was born from.

There is a call on behalf of scientists to be more engaged in the decision-making process, while there is also a need to engage diplomats in the science diplomacy debate. This can be achieved by including diplomatic culture in the understanding of science diplomacy for scholars on the one hand, and training diplomats in science and technology on the other. Universities and academic collaboration will play a crucial role in this process, creating a win-win approach for academia, where science diplomacy theory and practice can bring different disciplines together, and where policy-makers and diplomats can obtain specializing training.

Debating Science Diplomacy

Eric Piaget

The EU’s approach to openness in science is in a transformative state. The Barroso Commission (2004-14) established the **Research, Innovation and Science Expert** group (RISE), which touted the three O’s: open science, open innovation, and open to the world. However, in the wake of geopolitical tensions – from Russia’s invasion of Ukraine to an increasingly assertive China – this openness approach is under siege.

The somewhat contradictory notion of “open strategic autonomy” is the new mantra, which encapsulates the as-open-as-possible/as-closed-as-necessary approach. However, concepts like “knowledge security”, “technological sovereignty”, “scientific sanctions”, “academic espionage” and “dual use” are maturing into standard lexicon which further complicates the maintenance of openness.

Today, Europe is stuck in a dichotomy illustrated by the Nils Bohr (the Danish physicist who advocated for openness even in security-sensitive fields like nuclear) approach to complete open science on one

⁴ Performativity is the power of language to effect change in the world: language does not simply describe the world but may instead (or also) function as a form of social action, as described by the philosopher John L. Austin

⁵ Wimmer, A. and Glick Schiller, N. (2002), Methodological nationalism and beyond: nation–state building, migration and the social sciences. *Global Networks*, 2: 301-334. <https://doi.org/10.1111/1471-0374.00043>

side, and a closed off approach that treats science as a closely-guarded national treasure on the other. All the while, science is facing a barrage of distrust. It is this context that drove the discussion for the debating session.

The doors closing to openness reflect changes in the world order. When general openness was the approach, vestiges of the post-Cold War Fukuyamian perspective on history still lingered large in a unipolar international system led by the United States and its likeminded partners like the EU. It was hoped and assumed that openness would accelerate trends of globalisation and create a wealthier, happier, and safer world guided by the growing acceptance of Western values.

Alas, the current world order has grown more complex with the emergence of new powers and threats that dilute Western hegemony, called by some as the “age of fuzzy bifurcation”.⁶ Western values have not quite lived up to their *universal* adjective, reflected in the large number of autocratic, illiberal, and authoritarian regimes in power across the globe that fail to uphold them. However, Western restraints in openness vis-à-vis these countries tend to stem less from their rejection of Western values than they do from having geopolitical agendas that conflict with the West. For example, neither the United Arab Emirates nor Iran espouse the values upon which Western societies are based, but Western cooperation with the former is robust, while it is nearly non-existent with the latter.

Essentially, the changing world order has made the approach of openness less effective, as new powers and challenges materialize and weaken Western hegemony and the universal application of Western values is challenged by the large number of autocratic regimes that fail to uphold them.

Science diplomacy offers to play a key role in the current geopolitical environment through the facilitation of international scientific collaborations and the exchange of knowledge and data. However, there are significant hurdles that complicate the smooth operating of science diplomacy, such as political crises. The Russian invasion of Ukraine and subsequent Western sanctions is a prime example of political currents washing over bridges of scientific cooperation, such as in the Arctic, where 30 years of increased collaboration has been put on ice. While the inexcusable actions of the Kremlin justify the severe sanctions against it, it is a clear example of science as a victim of geopolitics. At the same time, Western scientific collaboration continues with other countries that fit the illiberal profile. For example, the EU’s Partnership on Research and Innovation in the Mediterranean Area ([PRIMA](#)) includes many countries that score poorly on the democracy index.⁷ However, while cooperating with these governments may grant them more legitimacy, it also presents the opportunity to promote democratic values like openness and transparency.

There is a need for more diplomacy in science, involving scientists and policymakers in a dialogue that combines scientific knowledge with policy-making. But as we’ve seen, politics stands to dictate other activities like scientific engagement. When there is political turmoil between countries, it can be difficult to steer scientific engagement on the national level. Looking at other forms of diplomacy, however, can be useful in finding the role of science diplomacy in the current geopolitical environment. For example, urban diplomacy can operate under the (supra)national level and support open science by creating a supportive environment for scientific research and promoting international scientific collaborations. In addition to promoting the transborder exchange of knowledge, cities can

⁶ Higgott, R. & Reich, S. (2022) The age of fuzzy bifurcation: Lessons from the pandemic and the Ukraine War. *Global Policy*, 13, 627– 639. Available from: <https://doi.org/10.1111/1758-5899.13141>

⁷ Economist Intelligence Unit (2023). "Democracy Index 2022: Frontline democracy and the battle for Ukraine". *The Economist*.

also provide infrastructure and resources that facilitate scientific research, such as research centres, laboratories, and funding opportunities.

Track II/ multitrack diplomacy can also help open science by facilitating informal dialogue and collaboration between scientists, experts, and stakeholders across borders. This type of diplomacy typically involves non-governmental actors, such as academics, think tanks, and civil society organizations, who can engage in frank discussions and exchange of ideas on sensitive issues, including those related to scientific research and development. The Arctic is host to a variety of track II diplomacy initiatives, which can serve as effective case studies.

While science diplomacy faces challenges due to political tensions, it can still play a key role in promoting international scientific collaborations and the exchange of knowledge and data. Although political barriers are becoming more prevalent, it is important to remember that scientific cooperation with non-democratic countries can still promote democratic values like transparency. When that fails at the national or supranational levels, other forms of diplomacy, such as the urban and multitrack varieties, can help provide a supportive environment for scientific research and foster networks of scientific expertise, whilst facilitating informal dialogues and collaboration between scientists and experts across borders. By using these alternative diplomatic channels, science can transcend national borders and contribute to global scientific progress despite political conditions.

Nonetheless, it is crucial to stress the importance of caution. Being careful about scientific engagement involves balancing the benefits of collaboration and openness with the need to protect knowledge security and prevent the misuse of scientific research and technology (dual use). To address this challenge, it is important to establish guidelines and mechanisms for the responsible conduct of research and the sharing of scientific knowledge, particularly in fields with dual-use potential. On the individual level, it is also important to ensure that engaging with scientists in authoritarian regimes does not put them at risk of persecution.

In addition to the question of positioning science diplomacy in the current geopolitical ecosystem, another important question arises: how do we deal with the erosion of trust in science? While scientific evidence overwhelmingly proves the existence of threats like climate change, distrust amongst populations and policymakers persists, which leads to fragmented policy measures. It can also bolster nationalism. One potential solution is the standardization of vast amounts scientific evidence into digestible reports. Successful examples of this can be seen through the Intergovernmental Panel on Climate Change ([IPCC](#)) or the European Commission's Scientific Advice Mechanism ([SAM](#)). However, distrust in science is a broad issue, and trying to teach science to those who distrust it may not be effective, as the root of the problem may lie in the incentives to believe a conspiracy rather than a lack of scientific understanding. To earn trust, it is argued that scientists and policymakers need to adopt, with greater vigour, open science principles, such as those that acronymise FAIR⁸, and third-party verification. Ultimately, it was concluded that trust in science can only be protected and restored through open and transparent scientific practices.

Shaping Science Diplomacy

Luciana Radut-Gaghi

When speaking about “shaping” science diplomacy in a turbulent world with global problems that transcend national borders, a robust European approach seems more obvious than ever. However,

⁸ Findable, Accessible, Interoperable, and Reusable. For more information about this, see the International Science Council's Committee on Data ([CODATA](#))

this means understanding the added value of science diplomacy at a European level, compared to the national level.

Like the dawn of a new age, the **European Science Diplomacy Agenda** seeks to coordinate science as a unifying point within the foreign policies of the EU's 27 Member States. Arguably, creating a critical mass in this field would result in increased efficiency in matters such as ethics and academic independence. Moreover, dealing with globally existential crises can lead to global cooperation and methods to think globally and act locally, with an emphasis of a European voice and a European perspective.

However, a series of **challenges** come with this ambitious objective and the first of them is the multiple competencies set needed for science diplomacy. For example, one might see the **professional differences** between scientists and diplomats as a cornerstone defiance of the domain. Myriad kinds of actors are present in the science diplomacy world and the different implementation fields, such as in the Western Balkans, are subject to variable geometries.

Another challenge is the **diversity of injunctions** and mechanisms with which a European science diplomacy needs to deal with. A strategic autonomy objective coexists with third country or neighborhood cooperation mechanisms. Regional specificities such as in Africa or the Indo-Pacific are to be considered. Non-likeminded countries, such as China and Russia, separate the field in a dichotomy between "us" and "them". Meanwhile, the presence of both state and non-state actors adds a new layer of complexity to the European science diplomacy.

Despite this, a series of science diplomacy tools stands ready to operate from a European perspective. These can be seen as **solutions** for all those challenges.

Regarding the actors and their competencies, solutions can be found in mobility paths between scientists and diplomats, like academic curricula from the undergraduate to the PhD, fellowships, or even the mobilization of scientific diaspora abroad.

As for a European-based ethos of science diplomacy, developing a research field on the topic is more urgent than ever. Value-based themes, such as gender-balance or intellectual autonomy, can be prioritized within science diplomacy. Open science is pertinent leverage for developing and sharing a theoretical background on science diplomacy and for advancing the path of "science for diplomacy". Ongoing initiatives concerning research assessment compliment the European Science Diplomacy Agenda as it moves ahead, adaptively integrating training and evaluation along the way.

The diversity of science diplomacy interlocutors around the world is both a challenge and an opportunity. Regional studies developing knowledge pertaining to Russia or China, for example, can help science diplomacy navigate a complicated landscape.

When it comes to implementation, the EU Missions in Horizon Europe⁹, in conjunction with other partnerships, are key.

Tensions are inherent to the discussions at a global level. Do these contribute to a fading out of science diplomacy, or rather, contribute to its efficiency? From a communication studies perspective, the latter is the answer. As long as partners maintain dialogue, even when not agreeing, the

⁹ For more information on the EU Horizon Europe missions, see: https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe_en

communication continues. Science diplomacy from a European perspective has a crucial role in entertaining the dialogue through science even in the most adverse situation.

This dialogue can be facilitated by actors long involved in but rarely at the forefront of international relations: universities. At the core of the science production, academia is now developing place-making functions and smart specialization strategies. Universities, and more recently alliances like [European Universities](#), prove to be ready and mature enough to get engaged in a European science diplomacy agenda. Their motivation is doubled by their appetite to address global challenges in original ways, like in coalitions of knowledge and actions.

Conclusions

Luk Van Langenhove & Eric Piaget

The field of science diplomacy holds immense potential for addressing global challenges and fostering international collaborations. However, it also faces significant challenges and complexities in today's geopolitical landscape. The changing world order, with the emergence of new powers and threats, has made the approach of general openness less effective. Political tensions and crises can hinder scientific cooperation, but alternative forms of diplomacy such as urban and multitrack diplomacy can provide avenues for scientific engagement and collaboration. Trust in science is another critical issue, and open and transparent scientific practices are essential for restoring and protecting trust. The European Science Diplomacy Agenda aims to shape science diplomacy at a European level, coordinating efforts and leveraging the added value of science within foreign policies. Challenges include the diverse competencies required, the complexity of global dynamics, and the presence of various actors. However, solutions can be found through mobility paths for scientists and diplomats, the development of a research field on science diplomacy, regional studies, and the involvement of universities as key actors. Despite the tensions, maintaining dialogue and communication is crucial, and science diplomacy plays a vital role in facilitating this dialogue through scientific engagement even in adverse situations. By embracing these approaches and overcoming challenges, science diplomacy can contribute to global scientific progress and address pressing global issues effectively.

In sum, there is a case to be made for keeping science as open as possible and as closed as needed given the current geopolitical situation. But within that context, two strategic considerations should be kept in mind: (i) whatever geopolitics currently demands, it should not be forgotten that global scientific cooperation is absolutely necessary in order to combat challenges that threaten the whole of humanity; and (ii) the only way to build hope for a world free of devastating conflicts is to keep the lines of communication open between adversaries. Dialogue across states and civilizations, even in times of war, remains necessary. Science diplomacy has the potential for stimulating dialogue as well as global scientific cooperation. In order not to prevent naivety, there is a need for awareness and capacity building across the communities of diplomats and scientists. In this complex interplay of geopolitics and scientific cooperation, fostering dialogue and global collaboration through science diplomacy becomes crucial, reminding us that the pursuit of a better world requires both open minds and steady hands across diverse fields.

