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The Path to Becoming an S&T Superpower: Interview with British Ambassador to the United States Dame Karen Pierce

Ambassador Dame Karen E. Pierce is the British Ambassador to the United States. Prior to arriving in Washington, D.C., she was the United Kingdom’s Permanent Representative to the United Nations in New York starting in March 2018. Previously, Ambassador Pierce served as the Director General for Political Affairs and Chief Operating Officer of the Foreign and Commonwealth Office in London. Between 2015 and 2016, she was the UK’s Ambassador to Afghanistan and from 2012 to 2015, she served as Ambassador and Permanent Representative to the UK Mission to the United Nations, World Trade Organization and Other International Organizations in Geneva. Ambassador Pierce’s diplomatic career began in 1981.

Ambassador Pierce spoke with Kim Montgomery, Director of International Affairs and Science Diplomacy and Executive Editor of *Science & Diplomacy*, on the UK-U.S. bilateral relationship and science diplomacy. This is the ninth interview in the Ambassador Interview Series.

Kimberly Montgomery (interviewer): *You have had an impressive diplomatic career, with posts in London, Tokyo, New York, and Geneva. From your current perspective as the British Ambassador to the United States, what are the United Kingdom's priorities in the United States, in relation to science, technology, and innovation?*

Ambassador Dame Pierce: The Prime Minister has set out an ambition for the UK to be a science and technology superpower by 2030. As part of this goal, the UK is increasing our investment in R&D to 2.4% of GDP and launching an innovation agency inspired by the United States' DARPA, the Advanced Research and Invention Agency, to boost transformative research.

Collaboration with the United States is critical for reaching this goal. Since the Manhattan Project, the UK and the United States have had a very close scientific relationship. Both countries lead on Nobel Prize winners and there is intense scientific collaboration between them. For example, almost 14% of papers published by UK researchers include a U.S. co-author, and U.S. collaborators are included on 30% of UK Research and Innovation's international grants. In fact, the United States is more prevalent as a collaborator than the next three countries combined.

To reaffirm our shared commitments and aspirations, the UK and the United States signed a New Atlantic Charter last year, on the 80th anniversary of the signing of the original Atlantic Charter by then-U.S. President Roosevelt and Prime Minister Winston Churchill. As a part of the New Atlantic Charter, the Prime Minister and President Joe Biden committed to develop a Landmark U.S.-UK Technology Partnership, enabling a new era of strategic cooperation between our countries. Through this partnership, we aim to continue to lead the world in R&D; guarantee the safety and security of our citizens; create prosperity; tackle inequality; uphold the values of liberal democracies, open societies, and open markets; and ensure that all of these are embedded in the design and use of technology globally.

Montgomery: *UK Prime Minister Boris Johnson said he wants to restore The United Kingdom as a scientific superpower, has called for increases in R&D spending, and increasingly puts science and innovation at the heart of British foreign policy. For instance, in 2020, he appointed Joe White as the first UK Technology Envoy to the United States and Consul General to San Francisco. How do domestic science policies connect to broader foreign policy issues, and how, if at all, have those connections changed with the evolution of technologies and their applications?*

Ambassador Dame Pierce: For our ambition to become an S&T superpower by 2030, we want to increase our science, technology, and responsible cyber power to tackle global challenges like climate change and pandemics, strengthen

security, and bolster democracy and good governance. Keeping the UK's place at the leading edge of science and technology will be essential to our prosperity and competitiveness in the digital age.

We are taking a whole-of-UK effort to achieve this, supporting scientists and researchers, investors, and innovators, and leveraging academia and the private sectors. We are also working with regulators and standards bodies and bringing in manufacturers to take innovations through to markets.

Bilateral collaboration is not just about science; it is also about the economy. There are 1.2 million people in the United States working for British companies and 1.4 million people in the UK working for U.S.-based companies. Along with scientific progress and economic development, S&T collaboration between countries that share the same values is also important for strengthening security relationships.

Montgomery: *In 2010, the AAAS and the Royal Society of London released a framework for science diplomacy with three dimensions. Two dimensions of the framework are “science in diplomacy”—using scientific knowledge and expertise to help inform diplomatic objectives and policymaking and “diplomacy for science” —promoting diplomatic initiatives that help foster international scientific collaboration and strengthen domestic and worldwide scientific capabilities. What are some examples of how the UK has used those two aspects of science diplomacy?*

Ambassador Dame Pierce: The UK and the United States have both produced highly effective COVID-19 vaccines. The time it took to roll out those vaccines—from their appearance to their authorization—shows what science can do for ordinary citizens and the importance of international scientific collaboration.

At the G7 Summit in Carbis Bay in 2021, leaders signed the declaration on health spearheaded by our Chief Scientific Adviser Sir Patrick Vallance and Melinda French Gates. It set out the ambitious goal to have safe and effective vaccines, therapeutics, and diagnostics within 100 days of a future pandemic threat being identified.

Another critical example of multilateral science-based diplomacy is the international effort to combat climate change. We are very proud of the success of the UK's COP Presidency; the COP26 forum in Glasgow, Scotland last year was a terrific event, with a record-breaking number of delegates attending. We achieved the Glasgow Climate Pact, with every Party in attendance—representing almost 200 countries—agreeing. It will build resilience, curb emissions, and provide the necessary green finance for doing both of those things. It is now up to all of us to deliver the ambitions it sets out.

Montgomery: *Several of your previous positions were focused on the Balkans, including being the Team Leader for Ukraine, Belarus and Moldova; the Deputy Head of the Eastern Adriatic Department; and the Balkans Coordinator. The third dimension of science diplomacy in the AAAS/Royal Society of London framework is “science for diplomacy”—using science’s soft power to improve relations between countries. Are there lessons that can be gleaned from the historical and current political landscape in the Balkans that could apply to “science for diplomacy” efforts in that region and others around the world?*

Ambassador Dame Pierce: If there is open information and debate, it is very hard for people to claim that certain communities are a threat when they are not. One very topical example is suggesting that Russian-speaking communities in the Donbas region of Ukraine are being persecuted by other Ukrainians when they are not. It is very important to show what is really happening to the world.

What is included in school textbooks really matters and is vital to building an open society, especially when there is a lot of conflict or transition occurring within a country or region. I have observed this around the world, including in Afghanistan, where I saw first-hand the effects of extremely religious schools. Schools that are not focused on teaching maths and science do not provide the same foundation of objectivity, support the value of inquiry, and help students learn to question things. These are critical for understanding the world and the people around us. Diplomats can help improve human development by fostering understanding of how important science is across societies.

Additionally, we have seen how science can be very helpful in collaboration with different countries, even when their relationship is difficult.

Montgomery: *The Science and Innovation Network (SIN), operated by the UK Foreign, Commonwealth and Development Office and the Department for Business, Energy and Industrial Strategy (BEIS), has around 100 officers in over 40 countries and territories. In the United States, this includes staff based in the British Embassy in Washington, D.C. and consulates in Atlanta, Boston, Chicago, Houston, Los Angeles, and San Francisco. Can you tell us more about the SIN’s activities and how it helps promote UK science and innovation, both in the United States and globally?*

Ambassador Dame Pierce: We have over 100 SIN officers in our global network, including in the UK Embassy in Washington, D.C., and most of our consulates in the United States. Working closely with relevant colleagues, the role of SIN officers is pivotal to achieving the Prime Minister’s goal of being a science and technology superpower. Fundamentally, SIN allows us to project UK expertise and leadership, build collaborations that benefit both the United Kingdom and host countries, and provide insights and information into areas that need further study.

Personally, I think new technologies are going to transform the world in the way that nuclear energy did in the 1950s. Just like we needed international frameworks dealing with nuclear issues—the Non-Proliferation Treaty, for example—diplomats will be critical in negotiating frameworks for new technologies. Therefore, we will have to train them to be science- and tech-savvy.

Here in the United States, the UK government is very keen to link scientific collaboration with international cooperation for development policy. Our close collaboration with USAID is directly linked to our three priorities: global health, critical and emerging technologies, and climate and the environment. This was demonstrated in Glasgow during COP26 in November 2021 and the work we have done with developing countries to be more resilient and develop new farming methods, for instance.



Ambassador Dame Pierce in a flight simulator. Courtesy of British Embassy Washington.

Montgomery: *You recently made a popular video on how to make a real cup of tea that depicted your military advisers making tea on land, in the air, and at sea. It shows how social media platforms like Twitter can be used to communicate with a broader audience. What advice would you give to early-career diplomats for using these platforms to connect with traditional stakeholders as well as reaching new audiences?*

Ambassador Dame Pierce: We have a campaign in the Foreign, Commonwealth and Development Office to improve diplomats' use of social media. We need to keep up with the social media platforms where people get their news. As government representatives, we need to engage more directly, so people can hear more objective descriptions of what is happening around the world.

Also, we need to collaborate more with broadcasters. What would have happened if Voice of America and the BBC had not scaled back their work in Eastern Europe and Russia at the end of the Cold War? Perhaps there would be more of a debate in Russia at the moment. At a minimum, there might be more Russian journalist covering what is really happening right now in Ukraine This is incredibly important for us.

Montgomery: *The UK's long history in innovation is demonstrated through its popular science-related destinations, from world-class museums such as the Royal Observatory in Greenwich and Bletchley Park, to The Eagle, the pub in Cambridge where Watson and Crick announced that they had discovered the structure of DNA. Now that travel is becoming more feasible, what are some of destinations you would recommend for those interested in science and technology?*

Ambassador Dame Pierce: As an English major at Cambridge, I wrote an essay on the clarity of scientific writing based on Watson, Crick, and Franklin's ability to convey novel findings using simple language. You can see their original papers at Cambridge's Science Library, which is phenomenal.

For individuals interested in maths and computers, I would recommend visiting the Enigma machine at Bletchley Park, which is now being restored. Also, the Royal Observatory in Greenwich is a fantastic place on the River Thames, which you can get to by boat. It highlights a very important aspect of science: the development of global standards. Greenwich Mean Time was voted to be the basis for international timekeeping in 1884. Since it is the dividing line between Eastern and Western time zones and hemispheres, you can stand with one foot on each hemisphere.

Finally, as someone who grew up in the north of England, I recommend visiting Jodrell Bank Observatory near Manchester, where I used to go as a young space enthusiast. It is now a UNESCO World Heritage Site and the international headquarters for the Square Kilometre Array, an international effort to build the largest radio telescope on earth. **SD**

Disclaimer

This interview has been edited for length and clarity.