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Science, Technology, and Innovation from an Australian Perspective: An Interview with Ambassador Sinodinos

Ambassador Arthur Sinodinos has been the Australian Ambassador to the United States since February 2020. His previous roles include Australia’s Minister for Industry, Innovation and Science, Senator for New South Wales in the Australian Parliament, Prime Minister’s Senior Economic Adviser, and the Prime Minister’s Chief of Staff.

Ambassador Sinodinos spoke with Kim Montgomery, director of International Affairs and Science Diplomacy and Executive Editor of *Science & Diplomacy*, on science diplomacy. This is the first interview of the Ambassador Interview Series launched by the AAAS Center for Science Diplomacy in April 2021.

Kim Montgomery (Interviewer): *Thank you, Ambassador, for being part of this interview series. You began your term as Australia’s Ambassador to the U.S. in February 2020, right before the world (and traditional diplomatic interactions) were brought to a halt by COVID-19. How did the pandemic affect Australia’s priorities in its bilateral relation with the U.S. and your personal experience as Ambassador?*

Ambassador Arthur Sinodinos: After arriving in Washington, I had about six weeks of getting around and meeting people before we went into lockdown. Fortunately, that time included two ministerial visits and meetings with members of the U.S. Administration and Congress. During lockdown, I learned a lot more about the consular part of the operation - we were helping Australians living in the U.S. return home and coordinating personal protective equipment - while working on policy and reporting on the U.S. 2020 elections. One of the downsides of this period has been less contact with people, which is why I am looking forward to returning to more in person activities.

For me, priorities for the bilateral relationship with the U.S. include how do we deepen the relationship. We have strong relationships in the defense and security areas, but as a former Minister for Science, Technology and Innovation, I am interested in working together more on science and technology, including critical and emerging technologies. Also, I am focused on what Australia can learn from the U.S. about innovation and any lessons that may be transferable to our system.

Montgomery: *Soon after you assumed office, the Biden administration hosted a Virtual "Quad" Leaders' Summit. What does this signal for future Australia-U.S. collaboration focused on shared challenges in the Asia Pacific region as well as global issues like climate change?*

Sinodinos: What was good about the Quad Summit is that, by having leaders meet, they put their "elephant stamp" on the Quad and elevated it to another level. The Quad has a positive vision, built around an open, inclusive, and resilient Indo-Pacific, one in which there is freedom of movement and navigation, where people observe rules and standards that have been fairly set. The areas that were identified for cooperation were practical areas.

The first area of cooperation is vaccine diplomacy. I think it is a clear recognition that pandemics are here to stay, and we need to be better prepared, which includes vaccine manufacturing, capacity, and production going forward.

The second issue that you mentioned in your question Kim is climate change and we are looking at the technology space. For example, if we put resources into reducing the cost of new low-emission technologies and it increases the uptake, particularly in developing countries, it makes it easier to make the transition from a more carbon constrained environment without having to sacrifice growth and jobs.

The third area is about critical and emerging technologies, such as artificial intelligence and quantum computing - areas that will fundamentally change life going forward. A challenge is who sets the rules and therefore, who benefits the most economically and geopolitically by being on the ground floor. The best outcome in terms of stability is to have a global rules-based order where the standards are being set by partners who share certain values in common, including democracy, transparency, and the rule of law.

Even though we talk about this in the context of geostrategic competition, what we are starting to see is a race as to who would invest most in these areas and that would mean more funding for science and technology. It is quite interesting what the U.S. Congress is doing with legislation such as the *Endless Frontier Act*. Australia is investing more as well; we revamped our research and development tax incentives and just announced a new strategy for digitalization of the economy. The challenge going forward is making sure that we get good outcomes from all this funding.

Montgomery: *You have had a prolific career in Australia as a public servant, political adviser, and as member of your country's Parliament. As you already mentioned, you served as Australia's Minister for Industry, Innovation and Science. Also, you were Chief of Staff to former Prime Minister John Howard from 1997 to 2007. From this experience, how have you seen the intersection of science and diplomacy evolve over time and be applied in the international diplomatic sphere and in your country in particular?*

Sinodinos: Over the years, even though I am not a scientist, science and technology have played a larger role in what I have done. When I was in the Prime Minister's office, we started to think more about science and technology policy, not just as a discrete area, but its connection to the economy. Over time, governments of both perspectives in Australia were committed to putting more resources into science and technology as there was an appreciation that there was a clear linkage between science and technology policy and economic growth.

One of the challenges we have increasingly met over time is to recognize the international and diplomatic aspects of science and technology. What are the cooperative arrangements that Australia could enter which are a force multiplier for what we are doing domestically? If Australia has good scientists and equipment that other countries value, they will want to work with us, and if we work together, the result would be much better than what we do apart. Over time, that has meant more investment in our national science and research infrastructure, including our supercomputing facilities, like the Pawsey Supercomputing Centre; the Australian Institute of Marine Science; and the Commonwealth Scientific and Industrial

Research Organisation (CSIRO), as well as international collaborations like the Square Kilometer Array (SKA) project with South Africa.

Montgomery: *About a decade ago, in 2010, AAAS and the Royal Society of London developed a framework for science diplomacy: You already spoke quite eloquently about a lot of international scientific collaborations that Australia has been part of, but I wonder if you have any other examples from Australia on the other two dimensions of science diplomacy, which are focused on scientific knowledge informing diplomatic objectives and policy making and utilizing science's soft power to improve relations between countries?*

Sinodinos: In relation to scientific knowledge helping to inform diplomatic objectives and policymaking, there is more explicit consideration of scientific knowledge and expertise in framing diplomatic objectives. For example, it has framed our response to the coronavirus and the international approach we have taken on that including calling into an enquiry into the origins of the virus done by independent, objective people under the auspices of the World Health Organization.

On international scientific engagement helping to advance diplomatic objectives, in our own region, we have had a history of scientific and technological aid in the region. It cemented the person-to-person connections, which provided the diplomatic dividend of having close relationships with people who had studied or worked in Australia. A contemporary example is Aus4Innovation, that is a program we have that aims to strengthen Vietnam's innovation system. This type of program helps countries shape their agenda on science and technology from a practical perspective and understand how S&T impacts society. CSIRO has several projects throughout the ASEAN region, where it works in collaboration from the hub in Singapore; this is another example of practical cooperation, increasing personal relationships, while at the same time building the scientific community in the region.

Montgomery: *With global challenges spanning borders and science and technology being the drivers of solutions, there is an increasing role for science diplomacy. Based on your experience so far as an Ambassador and your previous experiences, what are some skills and experiences that would be helpful for someone coming from the scientific side that was interested in pursuing a career in science diplomacy?*

Sinodinos: I think pursuing a career in science diplomacy is a bit like regular diplomacy, you need to put your foot in the door, establish relationships, be a good listener, be articulate—what I mean by that is the capacity to translate the science into everyday outcomes, so people see the link between what you are pushing and how it affects them. And you need to demystify the science. In Australia, Questacon

science discovery center in Canberra is a great example of a place where people can see how science operates in the real world.

Another thing we have tried to address in Australia are the disparities in the STEM disciplines. Over the years, we have put in place programs to try to alleviate those disparities. We have not been entirely successful but numbers particularly of girls in pursuing scientific careers are going up. Ensuring diversity and inclusion in scientific fields is now getting more attention in the U.S. under the Biden administration as well.

Montgomery: *We would be remiss if we had this opportunity to speak with you and did not ask you, what are some of the highlights—in addition to this great science museums and places you just mentioned—should people visit in Australia once the pandemic has improved and travel restrictions are lifted?*

Sinodinos: There are so many places to visit. I would recommend visiting Sydney and appreciating the harbor and the Opera House, which overlooks the harbor. It is really a beautiful spot. Then going to Queensland to the Great Barrier Reef and if possible, doing a bit of snorkeling around there. The water there is crystal clear, it's wonderful. I also suggest going to the outback, spending time seeing some of the flora and fauna in its natural state. We are trying to capture the colors of the outback in the new Australian Embassy here in DC. The diversity of landscapes in Australia and the contrast of topographies and areas across the country make it a very interesting place to go. For example, north of the Great Barrier Reef has a rainforest as good as any in the world, Daintree National Park is a very different experience. Finally, if you have not been to Tasmania, I would recommend it. It has a similar climate as New Zealand, a bit like parts of Britain, it can be very green, and they have a great Museum of Old and New Art that attracts visitors from around the world. **SD**