Strengthening the UK-Argentinian Science Relationship

Robin W. Grimes
Foreign & Commonwealth Office

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Abstract
In 2016 it was recognised that cooperation in science would be an important element of the developing relationship between Argentina and the UK. This was possible because of strong historic UK-Argentina science ties. Also, both countries recognised it was crucial to strive for excellence in science and that international collaboration led to better science outcomes, especially for their respective economies and development. In November 2016 the two science Ministers signed a 'Statement of Intent', which identified science focus collaboration areas. These have progressed with the support of industry and Academies, national laboratories and Universities. An important factor in the sustainability of science links is to offer sufficient opportunities for the exchange of people.

Commentary

Certainly the UK and Argentina have had challenging diplomatic relations over the last few decades. Looking further back, relations have been good and at times extremely good. In 1823 the UK was among the first nations to establish diplomatic relations with Argentina. In the 19th and early 20th centuries the UK played a pivotal role in building the Argentinian railway network and other important infrastructure (Lewis, 2015). At one time the UK was Argentina's largest trading partner (Bulmer-Thomas 1998). Further, there is significant shared cultural activity, especially in sports such as football, rugby and polo. Famously the largest Welsh speaking community outside Wales is in Chubut, Patagonia (News View, 2015).

The UK and Argentina have benefited from a historically productive science relationship. For example, two of Argentina's Nobel Prize winners, Prof. Cesar Milstein (antibody research) and Prof. Federico Leloir (metabolic pathways) spent considerable time working at Cambridge University. A third Nobel Prize winner, Prof. Bernardo Houssay (pituitary hormones) was also a member of the Royal Society. Currently there are many UK-Argentina researcher to researcher links, part of the overall further internationalisation of science.

Recently UK-Argentina relations have warmed and science links are playing an important role in the process. In January 2016, Argentine President Macri and UK Prime Minister Cameron met in Davos and agreed that 'there was an opportunity to embark on a new chapter in relations' and further, 'the discussion covered three main areas: economic reform, trade and investment' (Prime Minister's Office, 10 Downing Street and The Rt Hon David Cameron, 2016). Then in September 2016 Minister of State in the UK Foreign & Commonwealth Office Alan Duncan visited Argentina and held talks with Foreign Minister Malcorra (Foreign & Commonwealth Office, 2016). In the communiqué that followed science collaboration was a central pillar of future activities and further it was recognised explicitly 'that Argentina and the UK have strong, historic (science) ties' (Foreign & Commonwealth Office, 2016). The communiqué suggested four focus areas: agri-technology, advanced materials and nanotechnology, ICT and life sciences. It also highlighted upcoming opportunities for students. Further, the Argentine Ambassador Carlos Sersale di Cerisano noted in the joint statement: 'Science and Technology is one of the pillars in bilateral cooperation' (Foreign & Commonwealth Office, 2016). Given historical and current science connections, it seems logical to have made science central to a new dialogue (an example of 'science for diplomacy') but as will become apparent, it has benefited from strong intervention by science and foreign ministries in both countries, exercising their 'diplomacy for science' role. The specific collaboration areas were those that met the criteria of being historic science strengths of both countries; would be of potential significance to the economic development of both countries; and early discussions had identified potential routes to partnership.

Following soon after Minister Duncan's visit to Argentina, Argentinian Minister Prof. Lino Barañao visited the UK (formally Minister of Science, Technology and Productive Innovation). The key outcome of the visit was the signing of a 'Statement of Intent' with UK Minister Jo Johnson at the end of a tour of the Science Museum (Argentine Embassy London, 2016). This reiterated the four science focus collaboration areas mentioned above but added two more, marine science and palaeontology. Prior to entering government service Minister Prof. Barañao's research area was biochemistry technology and so, as part of his visit, he presented a lecture (title: Biotechnology in Argentina: developments and opportunities) at the Rothamsted Research Laboratories.

Minister Barañao was accompanied by Prof. Alejandro Ceccatto, President of the National Council of Scientific and Technical Research (CONICET), who with Prof. Martyn Poliakoff, Foreign Secretary of the Royal Society, signed a Memorandum of Understanding to promote increased research exchange and collaboration. (CONICET receives ~40% of Argentina's Federal R&D budget to support its more than 250 R&D institutes – some of them shared with Universities – distributed across the country).

The first event on Minister Barañao's visit was a tour of the Crick Institute, hosted by the Nobel Prize winner for Medicine, Prof. Paul Nurse. The delegation discussed a public-private international cooperation partnership, the aim of which is to provide opportunities for postdoctoral training in UK and Argentine laboratories. Following this, the delegation visited the pharmaceutical company GSK's laboratories in Stevenage. GSK, a UK company, have had an important manufacturing site in Buenos Aires for nearly 100 years. This led, on 7 March 2017, to GSK signing a tripartite collaboration agreement in Argentina with the Ministry of Science, Technology and Productive Innovation (MinCyT) and the Crick Institute, to launch the public-private partnership. As part of the agreement, GSK is providing funding for up to three research projects that will allow Argentinian scientists to conduct research at the Crick Institute for three years, in areas related to therapeutic specialisations, such as immunology, oncology and inflammation. In addition, GSK will finance the material costs of the selected projects, MinCyT will defray the cost of transportation and accommodation for researchers in the UK while the UK Government is supporting the transfer of researchers from the Crick Institute to Argentina, to deliver seminars and technical workshops. Of the six research collaboration areas, we are thus making good progress on life-sciences.

A further example of medical science diplomacy has been provided by an Argentinian-UK workshop on urology held in Buenos Aires in Oct 2016 (Rintoul-Hoad et al., 2016). This also demonstrates the expediency of historic links, as it was held at the British Hospital of Buenos Aires, which was founded in 1844. This non-profit community teaching hospital has strong links to the local English speaking community. The workshop was organized with support from the UK Royal Society of Medicine and included not only UK and Argentinian doctors but at least one Argentinian doctor based in the UK. This group of scientists is currently looking for funding to support students and scientist exchange programmes.

Turning now to another of the six areas, agri-technology, there is also encouraging early news. On 26 April, in Argentina, Minister Barañao on behalf of MinCyT and Professor Achim Dobermann Executive Director of Rothamsted Research Laboratories, signed a Memorandum of Understanding. This will lead to a series of workshops, to include Universities, through which research collaboration opportunities will be identified. Given that Rothamsted's mission is 'To perform world-class research to deliver knowledge, innovation and new practices to increase crop productivity and quality and to develop environmentally sustainable solutions for food and energy production'. The agritech collaboration is another example of how the UK and Argentina intend to focus together on translating the science generated into prosperity. During Minister Barañao's visit to Rothamsted the realisation dawned that being in different hemispheres, coordination between UK and Argentinian laboratories provided the opportunity to carry out two crop experiments per year, effectively doubling the rate of progress.

A week prior to the Rothamsted agreement, there was an agrifood mission to Argentina by 11 sector experts from the UK Northern 8 Universities Consortium (N8). The scope of the visit addressed the three themes of the N8 AgriFood programme: sustainable food production, resilient supply chains and improved consumption/health (N8 AgriFood, n.d.). They met with private-sector partners, the National Agricultural Technology Institute (INTA), CONICET as well as the Argentine Ministry of Agroindustry and MinCyT. There was significant interest in collaboration across a number of areas, including livestock health, supply chain mapping, functional foods and dietary health, with common themes and key priority areas for collaboration identified. A follow-up mission to the UK is being planned.

The Royal Society – CONICET agreement has also progressed (Argentine Embassy London, 2016). With the primary objective 'to support the development of research links' the Royal Society and CONICET have announced their International Exchanges Scheme (Royal Society, 2017); an opportunity 'to stimulate new collaborations between scientists in the UK and Argentina working in natural sciences'. This is a cost share programme of three-year duration with a first application submission deadline of 15 June 2017 for two-year joint research projects.

For any science diplomacy activity to be sustained over the long term there must be a deeper scientific advantage that maintains the enthusiasm of scientists, in addition to a diplomatic imperative. For the UK and Argentina there are a number of factors. Very generally, this is collaboration between people from different scientific traditions with complementary strengths. Diversity of science approach can be powerful when tackling hard problems. Both countries believe in pursuing the quality proposition (i.e. excellence) in their science and both are increasingly focusing on the challenge of translating science into national prosperity. So the two countries are well-aligned in general but it will be the specifics (such as the two crops per year for agritech) that will be key. Those we must find by maintaining the collaboration momentum, which is where governments can play a role in providing opportunity and encouraging exploratory steps. In order to achieve this we have set-up 'The UK Argentina Science Coordination Group' which is working to bring about a range of activities: research projects (especially in the six focus areas), student exchanges, degree opportunities and institution-to-institution links. The group meets approximately every three months at the FCO and includes representation from both Embassies and both Science Ministries. It also includes people from the universities sector, academies, non-profit and industry (and is

chaired by the author). Here science diplomacy is developed through a collaboration involving all these groups.

The sustainability of science links is secured as the cadre of people familiar with each other's educational and research systems is increased. Thus, another aspect of the current UK-Argentinian collaboration is to identify opportunities for students to spend time in each other's institutions. For example, in November 2016 an MOU was signed between the Argentinian BEC.AR programme and Universities UK International (UUKi) (Universities UK, 2017). The aim of the BEC.AR programme is to contribute to scientific and technological development in Argentina by supporting overseas training of Argentinian students. In this case the programme provides full scholarships (including fees, travel and maintenance) for MSc candidates. UKKi is the administrator and coordinator of the scholarships.

In conclusion: as quoted on 24 April 2016 in *La Nación* newspaper 'La Colaboración científica Entre el Reino Unido y la Argentina Tiene un Futuro Promisorio' (Bär, 2016). So far that certainly seems to be the case, though as pointed out in the introduction, we are building upon a long history of successful collaboration and a strong Argentinian diaspora in the UK (APARU, 2017). As Minister Barañao noted 'we have historic science ties'. By emphasising those shared achievements in fundamental science and celebrating future successes, including areas of mutual importance for our respective economies and development, we will continue to place science diplomacy at the heart of the new relationship.

Note

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Author Information

Robin Grimes is Chief Scientific Adviser to the British Foreign and Commonwealth Office, ensuring that foreign policy is informed by the best scientific advice. He is also Professor of Materials Physics at Imperial College, applying atomic scale computing techniques to understand the behaviour of materials for energy applications.