# Visit by Society President and Chief Executive to Academies and Other Agencies in UK, Ireland and Canada; 29 Oct. – 9 Nov. 2019

## Key Findings

- All academies are thinking hard about "research culture" which includes the academy taking a leadership role on matters like career structures, research integrity, dealing with poor behaviour and misconduct etc.

- All academies are taking assertive actions to diversify the types of people being made Fellows and we are behind some others in this respect. In particular, we are less advanced on 'proactive nomination' of under-represented candidates and on updating the nature of a nomination to be inclusive of diverse forms of excellence. The term "inclusive excellence" was used in a few places and is a terminology we could adopt.

- ECRs initiatives are common but everyone is concerned about career structures and progression and seeking to find the right engagement model with the Young Academy model not being seen as the right model by many. The College model of the Royal Society Canada seems superior to Young Academies generally (and is similar to the best Young Academy models – Scotland and Netherlands).

- Industry and professional linkages are a vital part of engineering and technology academies, and to a slightly lesser extent, this is also true of medical academies. Separate academies in these domains have emerged when science-based academies have not been sufficiently inclusive of the different ethos of clinical research, engineering or technology.

## London-based Academies

There are five "national" academies in the United Kingdom – Royal Society (science), British Academy (humanities and social science), Royal Academy of Engineering, Academy of Medical Sciences and Academy of Social Sciences.

At the Royal Society, we found that within their five-year strategic plan the issue of "research culture" was seen as important – they have a broad view of this, including research integrity, career structure, harassment and bullying, diversity, early career issues. It has also led them to formalise a code of conduct for Fellows and look again at the procedure for hearing complaints.

The Royal Society has two temporary nominating groups for Fellowship in action – one on industry and the other on diversity (including ethnicity and geography). Fellowship nominations were now more "make the case" rather than based on a list of research outputs. Their text is:

> *"Please list the nominee's most significant achievements and contributions to science (maximum 20 examples)."* (Note: The question used to ask for their top 20 papers/publications.)

The Society is committed to open processes such as open peer review. This includes publishing the peer review comments and author responses and giving the option of naming the reviewer. In terms of open data, the Society will provide a repository service as a default if other options are not available,

The Academy of Social Sciences (AcSS) started in the 1980s when the social sciences were under threat in regard to research funding. Initially, it was informal but

by 1999 an academy of learned societies was formed which was then extended by introducing individual Fellows. Half the effort goes into the Campaign for Social Science, this being the distinct "offering" in which the AcSS differs from the British Academy (BA). At the AcSS, Fellowship embraces practitioners as well as researchers with criteria based on demonstrating eminence and impact of the work.

The British Academy had a clear pre-occupation with the impacts of Brexit which could lead to significant loss of research investment in the UK. But also because they see Brexit as an opportunity to show the relevance of the social sciences and humanities with a series of monographs on the Irish border issue. They see opportunity around the theme of "ideas that changed the world" to advance the importance of humanities and social sciences. BA is still struggling to elect a diverse range of Fellows. They do use Honorary Fellowship to recognise those with non-standard careers, an option which is not available to us. Like us, they do not consider the performing arts to be in scope unless there is a clear research base. The BA had looked at Young Academies and decided the Dutch model was the most viable. Academic quality is a qualifying requirement, but selection is based entirely on what the applicant offers to contribute to the entity.

The Academy of Medical Sciences (AMS) was spun out of the Royal Society 20 years ago when it was realised that biomedical science required particular attention. The medical colleges had drifted away from embracing research towards training and certification to practice so a gap had opened up. Their goal is to elect 50% academics and 50% clinicians each year. For clinicians, the key criterion is impact in the biomedical space. They admit they are still to settle on a route for recognising people whose contribution is not through research. Like the other academies, they have not yet removed a Fellow but recognise the need to define the standard expected and have a process to hear complaints. AMS is concerned with the vulnerability of ECRs, and have a highly structured one-on-one mentoring scheme. At new Fellow induction there is an expectation of immediate contribution as a mentor, but also acknowledgement that the mentoring methods some Fellows adopt may not be appropriate. Like the BA, they have highest support for the Dutch model amongst young academy models.

The Royal Academy of Engineering (RAE) take a broad view of engineering and see their distinctiveness as bringing the practitioner perspective alongside the academic perspective. The RAE is 46 years old, formed by breaking away from the Royal Society, and had an initial Fellowship almost entirely from industry. Academics started to become elected, and over time this became too dominant a route so their goal now is a 50/50 mix of academics and industry. As a consequence, the RAE has broad criteria for Fellowship.

## Advance HE (AHE)

This visit was to obtain an update on Athena SWAN. Changes in the last 3 years had included the bedding in of other charters beyond women in science, and a realisation that the system needed to change to avoid the burden of applying for accreditation being carried by a small group of overloaded women in academic units. In theory, there was senior buy-in but things were going awry as middle management level and junior women were carrying the load. There was internal work in progress on streamlining the application process, but an independent review has also commenced, due to report in 2019. The "race" charter exists only at institutional level, and the gender charter exists at both academic unit and at institutional level across all academic disciplines. The expectation was that there would be charter revisions in 2019/2020.

## Learned Society Wales (LSW)

LSW is the Welsh equivalent of the Royal Society Edinburgh (RSE) but is only eight years old whereas the latter is over 200 years old. LSW, RSE and the Royal Irish Academy are multi-disciplinary academies operating out of population bases of about the same size, so they are natural points of comparison for ourselves.

Welsh Fellows of the BA and the Royal Society started a call for a Welsh entity which led to the formation of the LSW. The eight Welsh Universities all support LSW financially. They elect 40 Fellows per year and expect a balance roughly between humanities and sciences but there are four places kept for non-traditional nominees. LSW has three major strategic goals – increase their advice to the Welsh government, inspire the nation and recognising excellence. LSW has investigated the idea of a Young Academy. They indicated that LSW had no particular role for government in regard to the Welsh language, but did want to be seen to be embracing it.

## Royal Irish Academy (RIA)

The academy was founded in the 1780s and had an initial foundation heavily in the humanities. Over time sciences were introduced and it now operates with a balanced approach to the two. The current President is an engineer, but the next President must be from the humanities side.

They have a particular issue with lack of diversity on the science side. 16% of the members (fellows) overall are female. They have a diversity committee and do undertake unconscious bias training. Their members are almost entirely academics. There is a pathway for "Council-nominated members" to pick up non-academic people of eminence but few of these are elected.

The distinct difference from us is that rather than administer government programmes as we do, they directly procure research funding and carry out research. There are about 30-40 staff on such work and about 20 on the core Academy roles. Most of the research is only partly externally funded and partly funded from the large core government annual grant they receive (about ten times our equivalent core grant).

The library houses many valuable manuscripts in the Irish language – many researchers come there to study. They have a digital repository and some responsibilities for Irish language and historic knowledge.

There is a very substantial operation publishing six journals and a number of monographs (with likely audience of libraries) and more recently items intended for public consumption. They do not publish in the Irish language. There are three foci for policy/expert advice projects – early career researchers, culture and heritage and research infrastructure.

There is an early career system in Ireland whereby two consecutive 4-year post-doctoral fellowships are common, but then European law requires further employment to be permanent. RIA think there is a need to re-envisage the present system. For example, people on short terms contracts cannot win research funding so get stuck. They also have over-supply of people wishing to stay in academic research.

Additionally, RIA has a major role on national forums for research integrity, doctoral research, open research, higher education research and the Irish Human Alliance. All nine universities (including the two in Northern Ireland) participate beside RIA in such activities.

## Canada

The Royal Society Canada (RSC) was established in 1883 by an Act of Parliament as the sole Canadian academy. In the late 20$^{th}$ century there were breakaways in engineering and then more recently in health sciences. These were for similar reasons we observed elsewhere – the multi-disciplinary body did not in the eyes of engineers and clinicians seem to be inclusive of the types of intellectual endeavour in their domain, and hence recognition as a Fellow was unlikely.

An attempt by the RSC (with encouragement from a government agency) to get government funds for undertaking evidence-based analyses for government backfired as the government insisted the money go to a body embracing all three academies, the Council of Canadian Academies (CCA).

Within RSC there are three "academies" and one "college". The three academies are humanities, social science and "sciences", this latter including health and engineering and is far bigger than the other two. There are 2400 Fellows (for a country of 35m), and each year the typical election is 15 in humanities, 25 in social science and 40 in the sciences, RSC continues to elect Fellows in medicine and engineering in spite of the existence of the other two academies. There is a route for "specially elected Fellows" with up to 4 annually being permitted. There is a goal of 30% female Fellows, supported by an equity and diversity committee.

RSC is unusual in that there are 65 universities which are members, paying a fee that meets the largest part of the $2m/year budget. The 65 universities provide the bulk of the Fellowship nominations. The National Research Council (sort of equivalent to our CRIs combined) is also a member and can nominate for Fellow.

The College of New Scholars, Artists and Scientists is 4 years old. Up to eighty members are elected annually and there is a seven-year lifetime with a qualifying criterion of being within 15 years of PhD completion. The bulk of the nominations come from universities and tend to be 20% humanities, 40% social science and 40% sciences. There is good gender diversity amongst these – 50/50 but the hard sciences still lag. The criteria for selection reflect the goal of multi-disciplinarity, but otherwise is on academic merit and how the candidates might impact on the work of RSC. RCS is adamant that "Young Academy" is the wrong title. However, the full name of the College is now rarely used – they are just the College. This reflects too long a name and problems with the word "new".

RSC is making a drive towards the inclusion of indigenous knowledge and indigenous researchers. It has a truth and reconciliation working group, and has adopted a commitment for early engagement and partnership, especially with Innuit people around Arctic matters.

In 1987 a group of 44 engineers, a mix of academics and industry leaders formed the Canadian Academy of Engineering (CAE) as a breakaway from RSC. There was initial fundraising to create a capital base of $1m to get CAE underway. The Fellowship process involves the normal sorts of steps and the criteria, like most engineering academies, are broader than those for sciences. In 2018 about half those elected were non-academics. Ethnic diversity is wide (as in North America most people doing engineering PhDs and moving on to academic roles are overseas born), but low on first nations people and still low on gender diversity. Using its industry linkages, CAE can raise a little sponsorship to support its expert advice programme. That programme is volunteer-driven, and the main theme has been energy and climate change. The poor performance of Canadian industry in innovation is another important topic.

In 2005, the CCA was given $30m as a one-off grant which it grew to $39m by investment. In 2015 there was a renewal of $15m over five years on a $3m/year basis so the bulk grant has dropped. Each of RCS, CAE and CAHS (Canadian Academy of Health Sciences) has two reps on the Board of CCA. CCA carries out projects sent to it by government (a bit like how the NZ Productivity Commission works). The A process involves scoping of the task (the question) with the client agency. Once the task is reasonably defined the member academies of CCA are asked to propose experts. Chairs are recruited first and consulted on panel members. Once a panel is established it holds a first meeting with the client present. Then the client sits back and waits for the report. Panels work by staff holding the pen under the guidance of the panel.