

President's Message – August 2019

Some forward-looking comments on ISI family strengths, weaknesses, challenges and opportunities

As the ISI August news goes out, the 62nd ISI World Statistics Congress is about to start, with participants perhaps already attending one of the many pre-conference activities: satellites, symposia, meetings, short courses. World Statistics Congresses are as scientifically and culturally rich as their history, and are unique in their reach across the global statistical community. A vast amount of work and preparation goes into each WSC, and enormous thanks are given to everybody who has, and will, contribute to another special WSC – everybody who has worked so hard and long in preparation and behind the scenes, and everybody who participates.



It is appropriate to point to the words which dominated in responses to the open-ended question 'What do you like most about participating as a member of the ISI family?' in the 2018 survey of members of ISI and Associations, as reported in my July message, namely: *conferences, world, statistical, international, networking, global...* Similar themes are prevalent in responses on strengths and reasons for recommending membership: *truly global, statistical coverage, structure, part of being professional, commitment to development, international excellence and cooperation, sharing*. But what about weaknesses, and 'what do you like least?' As I commented in reporting on the 2016 and the 2018 survey, these are much more difficult to summarise and categorise, as there are far fewer responses, which also tend to be highly individual and often give opposing views.

However, having studied and reported both 2016 and 2018 surveys, I found the comments on weaknesses and 'least like' as revealing and important as the many comments on strengths and 'likes', because they are often the 'other side of the coin' and hence are invaluable in forward thinking. So for my last presidential monthly message, instead of a traditional reflection on the past, I provide just a few SWOT-style comments oriented to the future.

ISI and its Associations, which we often call the ISI family, are indeed truly international, and, as I have witnessed many times, are held in high regard in international leadership, representation, collaboration and facilitation. It is the 'other side' – the challenges of being international – which lie behind comments on weaknesses and 'like least'.

A challenge of being international is connecting: networking, knowledge about members, maintaining and increasing collegiality. Once the UN and the UNSD (United Nations

Statistical Division) were formed, ISI had to become a professional society, and the heart and strength of a professional society are its members, both individual and organisational. Not everybody who wants to, can come to a WSC, and, although in 2016 some survey comments wanted less formality in communication and more networking, in 2018 a yearning for more interaction and to know more about members came through more strongly in comments, as well as a strong desire for e-newsletters. An ISI e-newsletter was proposed about 5 years ago, and, using the surveys, I have put together a proposal for an ISI e-newsletter to be run **by** members **for** members, complementing the ISI news and the e-newsletters of the Associations and the ISLP. Its aim and scope reflect the types of news members said they wanted, and provide a news network across the global statistical and data science community, through reports of statistical events, discussion articles on statistical topics, news about people and from regions, and other items of statistical and data science interest. It will require editorial and technical volunteers, and regional and liaison reporters, but it is such member collegiate work that is the driving force of any professional society.

To help ISI become a genuine professional society, the concept of Associations was born in 1947, and the achievements of the Associations in international networking, conferences, events, publications and collegiality are an outstanding success story. Recent times has seen increased interaction and collaboration between and across the Associations, which will greatly add to connecting across the whole ISI family.

ISI also has the flexible structure of Special Interest Groups (SIG's) and special purpose committees, and Executive members and SIG chairs have been re-invigorating existing SIG's and setting up new SIG's and committees. SIG's are an excellent and flexible way of connecting statistical interests across the world. The concepts of ISI Outreach Committees and Regional Statistical Conferences are initially oriented to building ISI and statistical capacity in developing regions, but perhaps ISI should explore extending those concepts to regions in general.

In the 2016 survey, comments on membership included: too large/too small; too diverse/not diverse enough; too many countries/not enough countries/not enough per country; not sufficiently elite/too elite. These are opinions, and let's look at the data. There are 127 countries with elected and regular ISI members, but 91% of these have fewer than 50 members, and 72% have fewer than 20 members. For all ISI family members, there are 134 countries, but the %'s change little: 88% have fewer than 50 members and 66% have fewer than 20 members. Naturally, number of members depends on many variables as well as population size and, as expected, this is highly non-linear, but it is informative to look at just some of the numbers per population million for the countries classified by the World Bank as high income. For countries of population up to 10 million, New Zealand has the highest member ratios, of 5.2 ISI members per million and 8.5 ISI family members per million, followed by Switzerland. For countries from 10 to 50 million, Australia has the highest ratios (2.92 and 4.84). For countries over 50 million, the ratios are below 2 and 3 respectively, with no country having both the highest ISI and ISI family ratios.

As commented above, ISI is held in high regard internationally. Sometimes it is taken too much for granted. ISI plays, and can play more, important international roles, but it is a

professional society. The strength and capabilities of professional societies are its members, and the ISI family needs many more members – across all countries - to maintain and fulfil its roles.

Funding and sponsorship needs always crop up in members' comments, and are indeed ongoing challenges for the ISI family and all statistical professional societies. There is funding of the ISI and funding by sponsors *through* the ISI. One of ISI's strategic priorities is SCB (Statistical Capacity Building), which is often vaguely defined, but certainly includes building statistical capacity in less developed countries, and support of young people and women. Even with wonderful volunteer work, these can be done only through finding, obtaining and maintaining sponsorship. One of the new ISI committees to be set up is a Sponsorship Committee. Sponsors need to see results or outcomes of their sponsorship, so it is essential to understand their aims and to collaborate with potential sponsors on meeting these.

One desire often expressed for ISI effort is mentoring. A challenge, especially for an international society, is that 'mentoring' can have many interpretations and implementations. Many of these require funding, often significantly so. But there is one aspect of mentoring that is inherently natural to a professional society, namely the involvement and 'bringing on' of members in the essential volunteering work of the society across committees, task forces and groups. Because this requires knowledge of people, it is particularly challenging to do this in an international society and also achieve the necessary diversity and representation across countries, statistical areas, age, experience, gender etc. It has been wonderful over the past 8 years on the ISI Executive, and before that as IASE president, to meet and greet so many delightful and talented members of the global statistical community, but there are so many to know. Through my involvement many times in helping to set up award and other committees, I have very often worked through the whole ISI family membership list and always tried to bring in new blood and younger members. This type of mentoring should be natural within a professional society, but for ISI it requires significant collaborative international effort and the kind of increased knowledge of members envisaged as an aim of the proposed ISI e-Newsletter, amongst other initiatives.

One topical matter contributing to increased interaction across ISI, Associations and SIG's, is the current Data Science focus. Two years ago, I tried to set up a Data Science SIG but it quickly became obvious that it is not a 'special interest' but of core importance for the whole statistical community. As I've commented before, I think Data Science provides more opportunities than threats for the statistical community, bringing the teamwork of statistical and technical problem-solvers out of the 'back room' and into the spotlight. There is no question that Statistics is key both within Data Science and in facilitating quality, appropriateness and understanding of implementation and applications of Data Science, but the statistical community cannot assume this will happen by itself. The threats to Statistics are the age-old and ever-present ones associated with the nature of Statistics. Statistics is the science of variation, data, uncertainty, and production and questioning of models, assumptions and interpretations of these. Its critical importance lies in its pervasiveness universality of concepts, and problem-tackling power in specific contexts – across disciplines, business, industry, government and society. However, it is a human tendency to try to turn uncertainty and variation into definiteness, and to embed these within specific contexts.

Diversity and breadth – of contexts, problems, applications and people - is both a strength and a weakness of Statistics, and hence also of Data Science. They are also the strength, challenge and opportunity for the ISI family and the global greater statistics community.

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