

Interview with John Pullinger¹

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John Pullinger will be the incoming President of the IAOS. He also serves as the National Statistician in the United Kingdom's Statistics Authority.² In addition, he has served as the President of the Royal Statistical Society, and is a chartered statistician, as well as the inaugural chair of the Royal Statistical Society's "getstats" campaign. John has also represented the United Kingdom internationally at the United Nations (UN), Organization for Economic Co-operation and Development (OECD) and the European Union (EU), as well as other forums.

¹The views and opinions expressed in the conversation are those of the interviewee and do not necessarily reflect the policy or position of the Statistical Journal of the International Association for Official Statistics, nor IOS Press.

²John will be retiring from this position as of June 2019 – a list of the many accomplishments during his tenure in this position can be found at, <https://www.statisticsauthority.gov.uk/news/john-pullinger-plans-to-retire-as-national-statistician-in-june/>.

In this interview, we will learn about how John became interested in statistics and how he entered the world of official statistics. While John will not be taking up his post of President of the IAOS until after the publishing of this interview, which took place at the IAOS biennial conference held September 2018 in Paris we talked about his plans going forward and what he hopes to accomplish during his term.

INTERVIEWER: *Thank you so much for allowing us to interview you. Let us start at the very beginning and go back to your childhood. What was it like growing up in your country?*

I was born and grew up in inner London. I guess, my first impressions are that, my parents were both from very poor families, but they had a really strong commitment to education, hard work, and family. So, that kind of ethos of trying to be the best you can be was instilled in me from a very early age. I think my second reflection is my first school. My first school was very multicultural, even then in the 1960s.

I can remember a boy coming into my class from the Turkish part of Cyprus and just hearing about his experiences. But the one memory that most stuck with me was when I was eight years old. A natural disaster had occurred in a mining village, in Wales and many children had died as a result.

There was one girl in our class from Afghanistan. She said, "Oh, we must do something." And I'd never really come across this idea of being able to take action. She said, "We must raise some money. We must send some clothes. We must do. . ." But the fact that it was coming from her and she had such passion, even at the age of eight, stayed with me. I still remember that

now, and it gave me a sense of agency. I can picture her now as we speak.

So, I think there's two things. This idea of family wanting to improve, and this idea of a diverse community, being able to work collectively with a desire to get something done.

INTERVIEWER: *Turning to your education, what was it like before university? And what made you get into the official statistics realm? I see from your CV that you were a statistician by training, so, did you have that burning desire with numbers from an early age? Or was it something that came on more slowly?*

Well, the first thing to say is, that I was never top of the class in my school. However, there was one subject that I loved and I was very good at – and that was math.

So, I could very quickly understand the mathematical concepts and be really comfortable with numbers. Thus, this was the subject I was most successful at. However, the subject I loved was geography because I loved places. While I lived in a big city, I just loved the idea of the way that communities and places work. So, that made me apply for a degree in geography and statistics.

INTERVIEWER: *So, this meeting's³ geospatial overtone must be very interesting to you.*

Absolutely.

INTERVIEWER: *Looking back to our childhoods, we often find that a particular event or person had an impact on our later years. Did a particular person or event shape you into the person you are today?*

I have to say the person that influenced me the most was my mother, because she had this passion for education. She was a little bit quirky, as well. [Laughter]

INTERVIEWER: *Mother's always are. [Laughter].*

No one in my family had been to university before. It was not very natural. I had thought... and indeed, when I first left school, I did go to work in the building industry, which is where my father [worked] and that's what I thought I would do. But [my mother] said, "You

must go to university. You must go to university." And so, I did [Laughter].

INTERVIEWER: *That actually brings up an interesting question, in terms of England at that point in time, was going to university more of an elite kind of thing, or has it changed in terms of getting into university over time?*

The levels of participation at university education have gone up a lot since then. But for me, there was nobody from *my family* that had gone [to university] before [me]. I didn't have [anyone else's] experience to draw on.

So, it was unfamiliar to me. But it wasn't such a strange thing to do for my classmates, obviously. [There were a group of people that I could talk to and thus, I was able to] adjust to student life.

INTERVIEWER: *While we did talk about your training as a statistician? Was there a particular individual/professor that inspired you into a particular area of statistics?*

No. There are two things that I think stand out from my university statistics work/training. The first one was that we were required to do a thesis that combined both parts of our degree. So, for me [studying geography and statistics] my tutor suggested this very interesting data set called the census.

So, I did an analysis of integration of different ethnic communities into different cities across Britain using three censuses. It was an opportunity to use a large data set and look both spatially and over time at diverse communities. So, this is official statistics. [Laughter].

That was the first thing. But the most striking course that I had was in my very first year. And [that] course was called "Social Trends" and the textbook came from the official statistics system. It had been created by someone who did the job that I am now doing. [Laughter]. [His name was,] Claus Moser, who later was a very important mentor to me. He had this idea that if you could create good visualization of statistics, good graphics, and good words, that they would speak to people much more clearly than numbers [alone] could.

And so, this publication was all about turning numbers into stories that people could understand. This publication came out every year. So, the course was

³Our interview took place during the 2018 IAOS-OECD meeting in Paris, France.

trying to think about these stories from numbers and how you collect them, where the data is coming from, how you join up different data sources to make sense of the picture.

INTERVIEWER: *In addition, it's interesting that we are still talking about how do we do that still today. And with new technology we can think about it in different ways.*

Yeah. And another great thing for me, 20 years later, I was the editor of this publication. [Laughter]

So, that was very instrumental in my thinking when I left university as to which jobs I applied for. I saw this job to work for the Government Statistical Service, and thought, "This is a good thing."

INTERVIEWER: *That's a good lead into the next question. Remembering back to when you were completing your education, what did you hope to accomplish? And what were your aspirations in your professional life? Were you thinking that you were going to be leading the agency? Or were you thinking something else?*

I think I had the drive from my mother to be the best that I could be, so I was going to push myself, but I don't think I really had a destination in my mind. I just [knew] that I could be successful in using numbers, and I liked using them in a way that linked with society and the environment. So, when I was applying for jobs, I looked particularly at analytical jobs, and the main ones in my mind were working for the government. The oil industry was the other area that interested me.

At that stage, again the geography link [came into play], where understanding a lot of very interesting analytical problems in [the oil industry] were just intriguing.

INTERVIEWER: *So, you began your professional career at the Department of Trade and Industry and then moved to the Department of Environment. What did you see as your greatest satisfaction in this period of your work life?*

Well, I was very lucky in my first job in the Department of Industry. I joined there in 1980, and the country was going through a very turbulent shakeout of in-

dustry. My job was to look at a survey of investment in the manufacturing industry.

The numbers were falling off a cliff, and there was a real resistance from the policymakers to believe that it could be as bad as [the data] was [showing]. My boss took me to a meeting in our finance ministry as they were preparing for the national budget.

They were having this discussion – talking about these numbers. Someone in the meeting then turned to me and said, "So what are you seeing in this survey?" And I said, "Well, these numbers are falling off... there's this little industry over here [where] the patterns are strange and we don't understand them yet." They said, "What do you mean?" And the industry with strangeness was in the finance industry. That has never had any role in investment before.

So, they said, "Oh, you know, we should look into that". So, we then did a follow up survey, and what was happening [we found out] was due to the incentives in the tax system.

The manufacturing industry was not investing, but actually it was creating the idea of finance leasing, which was a new concept at that stage. So, the ownership of the assets was sitting in a bank, but the use of the assets was sitting in a manufacturing industry.

This was a really formative experience for me because it's thinking – statistics is important for the policymakers – and we then created a whole new survey to understand finance leasing. This was a great revelation. I was just a little small person in the room, but first of all they asked my opinion, and secondly, they gave me a job – to make a new survey and find out what was happening. So, that was really my first job, and that's been instrumental in my career since. The number one thing is to be in the room with the policymakers, because otherwise, they won't ask you these questions. They will just see these numbers and think, "I don't understand."

So, you have to be in the conversation. That was the first job that I really think was important to me. But the second [job] was in the Department of Environment, which you mentioned, and for various reasons, I ended up doing a policy job – for inner city renewal. Which at that time, we had a team that was looking at different cities and thinking how they would be renewed. So, one of [these cities] was the docklands of London. Often – at that time, [inner cities under consideration] were the very rundown cities in the midlands of the UK, in the northeast and the northwest.

This was really my first opportunity to work alongside ministers, trying to think about policy interven-

tions, not from a statistical point of view, but simply from a political point of view. I was there in the general election in 1987 when this was the key feature of the election campaign.

Margaret Thatcher was the prime minister, and the image on the screen from her election campaign was, “Let’s get back into the inner cities because they need to be renewed. And we will do this.” Where she was standing was one of the sites that was my job to try and fix. [Laughter]

The question facing me was – So, how do we get some financing to this place to build some new houses or shops or businesses? In addition, the question from a user side of things was “What information do I need to gather to help the policymakers and the business leaders think ‘We should invest in this place’.” So that was great because it was my geography in action, of course. But again, it is looking at policy from the political side and thinking about why evidence is important to them.

INTERVIEWER: *So, you were able to use your statistics background to explain, using the data/numbers, to go forward and use the terminology correctly.*

Yes. Although the other thing you [must] realize in that space is you often don’t have very much time. Things are moving at a pace, and the time to commission and analyze information is often very short. There are strong political or commercial deadlines that you have to compete with. And, it certainly made me think what needs to happen to create a good balance of supply and demand. Because often the demand side is too busy to think about the evidence. And the evidence-side is not in the room – not for any bad reason, just for practical reasons, they often don’t connect. Even with my background, I found that very challenging because the process often doesn’t give you the space for that kind of reflective thinking.

But the key for the analyst is to anticipate and have your data organized in a way that when the question comes, you can mobilize it really quickly.

Overall, I have been lucky. I mean each project I have worked on has been interesting and some have been more successful than others, but each has been an opportunity for learning.

INTERVIEW: *You then became Director of Policy and Planning at the Central Statistics Office. This in turn led you to the creation of the Office of National*

Statistics. But before I let you talk about your experiences there, can you describe to me [and the readers] the structure of the UK statistical system. I hear about the Office of National Statistics (ONS), but that isn’t the same as UK Statistical Authority – or is it?

So, what the law defines is the UK Statistics Authority is the legal entity that has the responsibility for ensuring the country has the statistics it needs to serve the public good. It defines my function as National Statistician as having that professional responsibility. But it also says that the National Statistician shall create an office to assist in the duties – and that office is the Office for National Statistics.

So, the legal entity is the UK Statistics Authority, while the administrative organization is the Office for National Statistics.

INTERVIEW: *Okay. That’s good to know. So, let me get back to the question at hand. Could you give a little bit of background regarding the history of official statistics in the UK – when was the first census for the UK?*

The first census was held in 1801. From there, it has been every 10 years apart from 1941 and there was a midterm in 1966.⁴ (John also identified two good books – (1) “People Count” – which is a history of the census and the general registry office which are combined together. It tells the story from the beginning of the 19th century up until the 1980s. The second book is “Keeping Score” – this tells the history of the Central Statistic Office, which is from 1941 through the 1980s – see citation at the end of this piece. In addition, John wrote an article published in ISR that has an historical perspective on it – see citation at the end of this piece. Also, see https://en.wikipedia.org/wiki/Office_for_National_Statistics).

INTERVIEW: *Turning back to you and your career as Director of Policy and Planning at the Central Statistics Office and other high-level management positions, what did you see as your greatest satisfaction in these positions.*

⁴For more information on the history of statistics in the UK, please see: https://en.wikipedia.org/wiki/Demography_of_the_United_Kingdom.

Well, UK Official Statistics had quite a hard time in the 1980s. There were quite significant reductions in budget and personnel.

I had taken jobs more or less outside the system at that point. And then in 1992, Bill McLennan was appointed as the head of office from Australia. I think this was the first time that someone had been recruited to head a national statistics agency from a different country.

He created a position that was his Director of Policy. When that was advertised, I thought, “This looks very interesting. I know about statistics. I know about policy”, and, I was very fortunate that he appointed me to that job. But that meant that I was in the next-door office to him, so that was the first time I really had the opportunity to see the role I’m now doing up close.

He had come from Australia where there was a strong national office in the ABS.⁵ He asked me to kind of design what that would look like for the UK. He then went and discussed that [design] with the Prime Minister and the Prime Minister said, “Yeah. Okay. Well, I get, kind of get that. Um, let’s do it.” So again, my job was to design the project to make it happen. And then the office came into being in 1996, so obviously I’m very happy about that. [Laughter]

ONS gave us a critical mass as the center of UK statistics. There was this idea of a wider agenda, that it wasn’t just about the National Statistics Office. It was about influencing the way statistics were created, as well as used in the society as a whole – which is the idea I had in the front of my mind.

INTERVIEWER: *In 2004, your biography states that you became the 14th Librarian of the House of Commons. How did that come about? What did you see as your greatest satisfaction in this position?*

Well, as you can gather from this interview, I like to do things that are interesting. [Laughter] . . . and potentially challenging. I saw this job advertised in a newspaper. I didn’t really know anything about it. Okay, obviously I knew about Parliament, and I knew there was a library in the Parliament, but I didn’t know really

what it was. But the way the job was described really appealed to me and appealed to all the things that had guided my career up to this point. The core of the job is providing a research service to the Parliamentarians of all parties. While of course, there is a very lovely library to help with that, the core is ensuring that democracy is well-informed.

So again, I applied for the job. They had always appointed someone from inside the Parliamentary system before, but I think they wanted to think a little bit differently. So, I came in and really very much enjoyed that role. In this position, you are very close to the politicians. My office was literally next door to the Speaker’s office. And, you could hear the Chamber of the House when they are [in session] even on a quiet day. So sometimes I would have to shut my door because it was too noisy. [Laughter]. But you really feel you’re in the middle [of things]. I had Big Ben outside my window, and so you were never late for a meeting because you would hear this bong, and you would run to the meeting.

But there was also a sense of research and analysis as an essential tool of democracy. But the thing I was probably most satisfied with during my time there was building a parliamentary education service. So, there were several leading politicians who were really passionate about ensuring that school children could come to Parliament to experience it, and certainly to also learn about it. The challenge I was given was to think on how we can broaden the reach of [parliamentary education service].

The big problem for this is Parliament is [actually] a very small building and there are many, many millions of school children. [Laughter]. However, we managed to build an education center that could increase by a factor of 10 the number of children that could come and visit. We also developed materials to study remotely, mainly online. We built some very nice computer games and worked with the gaming industry to design. The first one, which was really interesting, was called “MP for a week”.

And so, you could come in and you could try to navigate being loyal to your party, being loyal to your constituents, and being able to survive the British media... and you could work your way through this system.

We had little clips from politicians to help you as you were going through. But the funniest thing was, we released this game not long before we had a general election. And afterwards, I discovered from many of the people that came to be MPs that they had played this game as part of their training (laughs).

⁵Australian Bureau of Statistics – for more information see “Interview with Gemma Van Halderen” in the *Statistical Journal of the IAOS*. 32(4): 439–445 – <https://content.iospress.com/articles/statistical-journal-of-the-iaos/sji1035?resultNumber=0&totalResults=129&start=0&q=Gemma+van+Halderen&resultsPageSize=10&rows=10>.

So that was very lovely. And another part of the job was working on several missions to other countries who were wanting to build their democracies. So, I was able to work with colleagues in those countries and with MPs.

We had countries ranging from Iraq – I went to Baghdad a couple of times – to Myanmar when they were looking at how to build their parliamentary system; and Nigeria, would be another one. Again, very interesting just seeing democracy in different stages of development.

INTERVIEWER: *That's amazing. So, you were there for 10 years and then you came back to be the National Statistician in the UK. And, we've sort of talked around what it is, but the question I have is what do you do in this position (laughs)? You have this nice title, but, . . . you do some real work. So, what is the job of the National Statistician?*

Well, my predecessors had done a great job of creating the personality for this role that had this very clear statutory independence and authority, and kind of voice. We had a good portfolio of statistics with a good tradition of publications. So, the question was really how to build this and take it to the next level. So, I came into the role in 2014 which was the year of the UN Secretary General's report on the data revolution and its impact – not just on statistics, but on the broader functioning of politics. Working with and what I was listening to from government ministers, from the Governor of the Bank of England was also very instrumental in my thinking here, but also civil society groups and politicians from different parties. . . that it wasn't the production of statistics that was important. It was mobilizing the power of this amazing data to help them make good choices.

Whether it be in politics or whether it be for a citizen trying to make a choice about which job to apply for or any other thing crucial in their lives. So, to really re-state the mission of the organization about helping decision-makers, whoever they are rather than producing statistics. So, producing statistics are a necessary, but not sufficient condition for the job of the statistician isn't done when they produce the numbers. It's only done when people understand what those numbers are saying and using them to help them make a better choice.

INTERVIEWER: *As I have been sitting through the sessions in this conference, I've been hearing a lot about this issue – data needing to be useful to the user. So, this conference is pretty much talking about the same things you have been dealing with in your job. You have been in your job for three or four years, what do you see as your greatest satisfaction so far? What are you looking forward to? And, what do you see as the challenges in the position going into the future?*

I have been in this position for four years. So far, my greatest satisfaction comes from going around and seeing teams in the office that have done something brilliant which has improved our understanding of the world in some way. So, as well as being the head of the Office for National Statistics, I'm also the head of the Government Statistical Service. I visit statisticians in different departments. And over the last few weeks, I've visited teams in the Department for Work and Pensions who are doing some really interesting analysis about changes to the social protection system and to enrollment in pensions. I visited the National Health Service team in Scotland, and they're doing some fabulous work helping clinicians get the data they need to help with their diagnoses and prescribing. I've also visited statisticians in Northern Ireland who are trying to work out what are the flows across the border, which is very central to the Brexit negotiations.

And, . . . of course, teams inside the Office for National Statistics, with some fabulous analysis of trade, some really tough, interesting statistics coming out on crime – ranging from difficult questions on child abuse or domestic violence through to cyber-crime. What is it? How do we measure it? I mean, most recently, something really challenging has been on student suicides which there has been a big-political debate. Clearly this is a very challenging issue. However, we are working with third sector organizations, so as we put out the statistics, we are also giving people who are affected, the opportunity to find who they can call and information on where the support networks are.

So again, connecting the statistics that we are producing with the narrative about what is going on. . . but also the ability for people then to seek help for whatever situations that arise for them or find themselves in. And again, the very fact of publishing the statistics creates a debate that is relevant and well-informed.

The context is also important. A critical role for the statistician is not just to produce a number in isolation. It's to see how it fits within the situation – is this

a big number? Is this a small number? Is this a number that should cause us to notice or is this just something within the rounding of the figures? I mean, another example that we've done recently. . . again, it was sparked from a political debate on the issue of loneliness in society, and concerns that with our society aging, there will be more people who are lonely. But when you analyze it, actually it's the younger people who are more likely to be lonely than the older people. So again, if the thing you're worried about is loneliness, well, don't forget younger people too. So, what really is the social concern?

And so, we really do our utmost to be relevant to the questions that are being asked in society, and particularly if we see that a debate is not well-informed for various reasons. So, what are the information sources that can be brought together to have a rational debate. These sources may not always be official statistics.

The SDG agenda, I think, also forces us to think much more open-mindedly about where there are sources of information that are useful. This tests what is in the fundamental principles of statistics. The test is practical utility. And I think that is quite a challenge to statisticians who often see the test being defined much more technically in terms of precision and bias. But sometimes, if you spend a long time trying to get something which is very precise, it's not useful because it's too late.

INTERVIEWER: *Moving on to the next question, as your time is valuable. You have served as the President of the Royal Statistical Society, as well as represented the UK internationally at the EU, UN, OECD and other forums. Is there any project while you were active in these organizations or representing the UK internationally that you felt you can look back on and say, "That was my favorite project" or "This gave me the greatest satisfaction"?*

Yeah, I'll pick one from each.

From the Royal Statistical Society (RSS), I've been active in the Society for most of my career. I had been on the Council of the Society for some years before I became President. It was in the Presidency of David Hand that there was a strategy review of what the Society was for. The outcome of that review was a big consultation of the membership and there was a rediscovery, I think, of the initial mission of the Society in the 1830s, which was much more campaigning and thinking about statistics for the public good rather than just

focusing on the discipline and the professional aspects. Again, important though they are, the real soul of the Society lay in this idea of statistics making an impact.

The particular project that I was invited to lead, and this is before I was President, was a national campaign for statistical literacy. That was a great joy, but particularly thinking about which are the communities we should work with most actively. And we prioritized two groups: politicians and journalists.

So, I was working in the House of Commons at that time, so it was possible to get MPs together and think about how to support them, as well as journalists. The RSS has a very nice award for statistical journalism and we were really just trying to raise the game.

The first thing you realize is that people like to be better informed. They certainly don't like to look stupid because they are not. Thus, this is where the idea of literacy really works well. Almost nobody would say, they want to be illiterate. So, if someone's coming to say, "I'm going to give you a skill" then the programme succeeds.

So, I did that for three years, and that was wonderful. On the international side, the most extraordinary moment has to be being the chair of the United Nation's Statistical Commission in 2015, which was the year of the SDGs. So, going up to the podium at the UN, at the Commission, was just an extraordinary moment because there were hundreds and hundreds of people. There were the chief statisticians of all the countries, but also all of the UN agencies and international bodies of all kinds, a huge number of NGOs passionately concerned about getting better statistics to support or give voice to their advocacy. This was not a dull, technical meeting. This was statistics at the forefront of helping us to decide about priorities for political action. But also, to hold decision makers to account for places where it actually is not happening. So, at that moment of coming up onto that stage and just addressing that group was a very powerful one. But, of course, during that year, it then meant that I was the voice of the statistical community and. . . I think Stefan Schweinfest would say I'm the first statistician to address the General Assembly and talk to them about the importance of this. And just being in New York in September 2015 when the SDGs were signed politically, when Obama, and Putin, and the, the presidents of all the countries are present. There was a massive meeting of statisticians and data scientists thinking, "So how are we going to measure this?"

So, there was a sense of "We are in the mix", with that discussion and "We have a responsibility to step up and play our part".

INTERVIEWER: *In your biography, it states that you were appointed a Companion of the Order of Bath. I was trying to look it up on Google. I was interested in what it is and what do you have to do to get this.*

Well, Britain has a long tradition of state honors of different types. This particular one is associated with service to the state. There is a very strong role of the military in this group, but also people who have been supporting the functioning of the state in its broadest sense. The Bath is, it's about someone who is cleansed to serve the monarch. It's that kind of-

[We had a laugh as, I had thought it might be associated with geographic location of the city of Bath.]

There is this idea of having this connection with the system. Mine was very specifically for services to Parliament. That is just having a supporting role for the system of democracy.

So that, for me, was a very great honor, and it feels extraordinary. I'm still this little guy from South London. [Laughter]. How am I going to go up to Buckingham Palace and stand in line and receive this medal?⁶

INTERVIEWER: *Let's turn to your participation in IAOS. You just were named the next President of IAOS – after Mario Palma, who is the current President. How did you get involved in IAOS?*

Well, I've been a member of ISI for a long time. So, it was natural when the question arose as to whether I was interested in being more involved. I said – "Of course" But I know I have very big boots to fill. I think Mario has done a fabulous job in his two-year term, so far. And he himself is standing on the shoulders of many others. I think the association is in great health. I mean, we have a record number of members. We have just had this conference in Paris which has been very vibrant and very diverse. I think there is an opportunity to think and ask the question what is the next step from here?

⁶John's mother was not able to see this honor bestowed on her son as she had died just three years before. However, we agreed that she was looking down to see him receive this honor. John added "she told me which cloud she would be sitting on, so I could watch for the bolt" making sure that he toes the line every time. We laughed.

INTERVIEWER: *So, is it too early to ask the question as you wait in the wings to become President, what do you want to accomplish during your term?*

I think I want to work very closely with the executive committee and the membership really to get a more general view about what we want, so this is a really inclusive proposition and to really see the Presidency is about serving the society rather than taking forward my ideas. So, I do want to listen very carefully. Certainly, during this year between now and when I start during the World Statistics Congress next summer, I want to hear from as many people as possible and I'll be listening very carefully. But I do feel very strongly that there is a moment for the world of official statistics to occupy a space which our societies desperately need.

I think we must think carefully what we want to wish for and also what is the place that this organization has. What voice does it have? It has an amazing strength of voice because it doesn't have the constraints of being a government agency. However, it has all the benefits of having this amazing wisdom of the people in the room here, both currently serving and formerly serving. And at this conference in Paris, we had many former Presidents, many former Directors General of Statistics offices still passionate about our calling . . . and we have heard in this conference from people who care about the soul of official statistics. That's very critical for our community, as well, I think, the great thing about this community is this spirit of public service in the very old-fashioned sense.

The message is simple. To a young statistician coming into official statistics, you have the opportunity to do something really valuable for your society.

INTERVIEWER: *You couldn't have said it any better. Very simple, but clear and to the point. Thank you. We have a little more time – so I would like to continue this discussion and ask how do you see IAOS can have an impact on official statistics.*

We have a space to think about the difficult questions and at this conference, we have been thinking very hard about what the new world of data really means for official statistics, where the boundaries are, where is our unique position in a future world? I think IAOS provides a unique convening place for people inside and outside the system to really look at the horizon. I think the other is that [IAOS] has a voice, which we have

seen in this conference and the discussion we have had.⁷ The IAOS is very special in being able to convene that kind of discussion and have that kind of concern.

INTERVIEWER: *Overall, what are some of the challenges you see facing statisticians working in government settings?*

I think it is necessary to be both technically competent and politically astute. Also, I think the particular thing that marks out the government statistician is the need to really be good at communication and engagement with people. And I think we have to invest in that training because often you don't get it through the university statistics courses. Although in the UK we are investing in courses like PhDs in data science for the public good, so really addressing the scientific aspects as well as the public good aspects. But also Masters in official statistics, and Eurostat has been very active in promoting that as an idea. So that is giving early stage undergraduates and graduates a sense of this blend of skills that you need to be effective. But, certainly inside our office to give people that opportunity to think about communication, written communication, and spoken communication, but just more generally how you can connect with a political system whose actually prime interest is politics. And you are trying to think how can you make politics more effective through statistics rather than just be an armchair critic.

INTERVIEWER: *Has the field of statistics changed since you received your education? If no, what has sustained it? And if yes, what ways did it change?*

I think the ways in which it hasn't changed is the intellectual rigor of the discipline, of scientific curiosity and skepticism, but coupled with a special thing about statistics around uncertainty, and being able to capture imprecision in all kinds of phenomena and turning that into a better understanding of the world. That is, I think, our unique contribution to science.

What has changed, I think, are two things. The first one is when I was doing statistics, the scarcest thing in the world was data. You had to make every single piece of data you had work very hard. Now, data is everywhere. And, the real challenge is to work out so which

bits of it have some kind of value and some properties you can actually find some kind of traction with. But a second thing that's changed is that statistics is in all other disciplines.

By that I mean, not just the close by disciplines like geography or psychology or biology or computer science, but the faraway disciplines as well. So, to be an archaeologist, you need to assess evidence, and the way you assess evidence is often through statistical thinking or statistical technique. And when I was President of the RSS, I went around many universities. One event particularly sticks in my mind going to humanities faculty in the University of London. And every single person who I spoke with – said that they regretted that they had not done mathematics or statistics to a higher level because it was now very hard for them to be effective – whether it be in an English degree trying to analyze texts, or a history degree trying to really evaluate evidence or war studies. I mean, all of these things which you think of, they are a long way from statistics, but the contribution of assessment of evidence to every discipline is now fundamental. Statistics is absolutely the core of that.

So, I think two things. Data is now ubiquitous, not scarce. And statistics is not a department that is an island within the university. It is something that is necessary in every discipline, and our challenge is how we can get enough competence into those areas and avoid what is often described as “cargo cult statistics”... where people are just taking a package and getting a *p* value and thinking, “Hurrah”.

Again, our job is to help those people to do their jobs better, and they always welcome that, rather than just sitting in our common rooms and tut. [LAUGHTER].

INTERVIEWER: *Our last question is – do you have any words of wisdom for students preparing for working in the world of official statistics?*

I hesitate to feel it is wisdom. I think the main thing I would say is if someone offers you the opportunity to work on a new problem, just say “YES”. And whatever happens, you will learn from it.

You are going to be better able to tackle the next problem whether it's a success or is a real challenge. If you keep that spirit of continuous learning you will have a great career.

INTERVIEWER: *Great advice! Thank you for taking the time to talk with us.*

⁷Here, John briefly touched upon the difficult cases of Greece and Argentina and Kazakhstan.

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