

Scoping Paper 6: Professional issues, the RSS, and statistical work

Notes by Kevin McConway, 24 Sept 2015

Background

Most (?) work that most people would define as statistical is done by people whose main work focus is not statistics, whose job title is not 'statistician', and who would not be accepted to the professional grades of membership of the RSS. In higher education, most teaching and learning of statistics involves students who are not specialising in statistics, not even partially.

That shouldn't be a problem. We are not the Radical Statistician's Group and the society is not the Royal Statisticians' Society. Radstats has always aimed to demystify statistics and statistical thinking and to put all citizens as far as possible in a position to use statistical ideas and tools themselves.

But there remain questions of ensuring or benchmarking statistical competence, of trying to guarantee to the users of statistical work, particular in a public arena, that the outputs from the work are fit for purpose. And 'ownership' of skills and knowledge in dealing with numerical data is arguably moving away from statisticians and groups interested in statistics (including the RSS), partly because of the production and availability of so much data. (See, doubtless, other areas being scoped.)

Some threats

Data science. Whether it is just a new name for old things, or whether it is a temporary fad, are interesting questions, but there are now around 30 MSc courses in data science (or similar) in UK universities, and about 6 first degree courses in it. Most of these did not exist, even under other names, two years ago. In some cases though the courses involve what I would recognise as statistical data analysis, they have no involvement from statisticians. There's a consequent loss of control by statisticians (or at least people labelled as such) over data analysis work. Will this lead to loss of expertise and de-skilling?

RSS withdrawal from professional examinations. One less route into being a professional statistician, and (probably more importantly) the loss of the RSS Ordinary and Higher Certificates as ways to provide evidence of statistical competences. (But not many people took those routes anyway.)

Potential changes to the statistical profession in government (or is this an opportunity?)

Some opportunities

Data science again. More people are interested, there are (arguably) more questions to answer, and more scope for involving people in statistical thinking in their work (even if it is not called 'statistical'). Resulting possibility of more for a, in a wider range of groups and societies, for the discussion of what we'd call statistical issues.

Again on data science etc., much work has been done by the Tech Partnership, NESTA, Universities UK, the British Academy¹ and others on investigating skills, shortages of skills, routes to improve the UK skills base, and so on. Despite (or perhaps because of) the newness and messiness of data science as a term, much work has been done on the nature of the labour market in data science and on the nature of data science work. There has not been such a broad or comprehensive look at the statistical labour market or the current nature of statistical work – but perhaps relevant material can be extracted from the data science and data skills reports, or piggy-backed onto future work in this area.

RSS new accreditation schemes (currently under development). These are linked to the demise of the RSS professional exams. But it remains to be seen how far they will go from being a route to a narrowly defined professional status, to include things like certifying competence in specific areas of statistical work, or badging qualifications in quantitative social science as part of degree study (e.g. under the Q-Step programme).

The RSS

The RSS's dual role as a gatekeeper to professional status and as a general promoter of statistical interest, knowledge and awareness has awkward aspects, given that most statistical work is not done by statistical professionals (in the RSS sense). I think the RSS may be at a crossroads. The prominence of data, data science, big data, and data skills in public discourse is an opportunity for the RSS to engage much more widely with important debates across society, government and business. But to engage appropriately will involve collaboration between the RSS and bodies and organisations with which the RSS has not traditionally worked – among others, bodies in IT and computing. Some potential partners seem to see the RSS as a stuffy organisation with outdated ideas. There is an image problem to overcome. I suspect that there may also be a need for the RSS to acknowledge a (further) loss of control over defining statistical expertise.

Other aspects

There are other aspects to which I have devoted even less thought, including:

- The role of the statistics profession in government.
- Projects such as the Automatic Statistician (<http://www.automaticstatistician.com/>)
- Data journalism as a profession and as linked to other statistical work
- ...and doubtless yet others.

¹ See, among many others: http://www.britac.ac.uk/policy/count_us_in_report.cfm
<http://www.nesta.org.uk/event/securing-skills-data-revolution-new-evidence-and-policy-recommendations>
<http://www.universitiesuk.ac.uk/highereducation/Documents/2015/MakingTheMostOfDataDataTrainingSkillsInEnglishUniversities.pdf>
https://www.e-skills.com/Documents/Research/General/BigData_report_Nov14.pdf