Science as a public enterprise

Public meeting organized by the Royal Society's Science Policy Centre, London, 8 June 2011

Earlier in 2011 the Royal Society established a working group on the use of scientific information in ways that reflect public values.[1] Some members of the working group discussed some of the issues behind this policy study in a *Lancet* article published in May,[2] and others were among the speakers at "An Open Meeting on Open Science" organized by the Royal Society's Science Policy Centre on 8 June.

After the meeting had been opened by Sir Paul Nurse, Secretary of the Royal Society, Sir Mark Walport, Director of the Wellcome Trust, addressed the question "Why should science be open?" He noted that it is a characteristic of a free and enlightened society that knowledge should be available to all. He drew a parallel between campaigns to translate the bible from Latin into vernacular languages and some of the reactions from a powerful church that these provoked, with promotion of open access publishing and the reaction of a publisher giving evidence to a House of Commons Select Committee on Science and Technology:

"Speak to people in the medical profession, and they will say that the last thing they want are people who may have illness reading this information, marching into surgeries and asking things. We need to be careful with this very high level information." (Hansard 1 March 2004)[3]

Sir Mark went on to discuss two forms of openness: first, that the results of scientific research should be published; and, second, that the actual data generated by researchers should be made openly available. As the Wellcome Trust has already taken some important initiatives to promote openness – notably, by requiring public registration of the clinical trials it supports and by supporting "open access" publishing - it came as no surprise that Sir Mark supported greater openness in both these respects, for the following reasons:

(i) The very process of science demands that results and data are made available, and contestable

(ii) Part of the scientific process involves attempts to replicate experiments, so experimental details must be available

(iii) When policy decisions follow scientific discovery the evidence must be transparent to all – whether in research in health, climate, or any other field

(iv) When the public purse pays for research, accountability demands the availability of all of the results

(v) The outcomes of expensive research are maximized by allowing everyone access to the data.

He then considered arguments against greater openness. He viewed some arguments as having little merit - for example, that researchers should be allowed to hang on to data for their own benefit; that making data available would add huge opportunity and financial costs; and that allowing the "unqualified" access to it would sow confusion. However, Sir Mark recognized that other arguments did have some merit – namely, that:

(i) No academic credit results from the effort needed to make data publicly accessible

(ii) Scientists in the developed world could expropriate data generated by researchers in the developing world

(iii) The confidentiality of participants may be compromised

(iv) Private investors in science are entitled to keep the results private to preserve their commercial interests

(v) Some research has the capability of abuse, for example, a simple method for weaponising a biological toxin

(vi) Countries that make data available will lose out scientifically and economically to those countries that do not

(vii) We don't yet have well worked out ways of overcoming the challenges in sharing data.

Sir Mark concluded by noting, however, that some of these arguments against open access are contestable, giving as an example the principle that our duty of care to human volunteers in drug trials and patients demands that the results should be published, whether studies are privately or publicly funded.

Following Sir Mark's presentation, Professor Geoffrey Boulton (Regius Professor of Geology Emeritus at the University of Edinburgh, and Chair of the Royal Society's Working Group) chaired a panel discussion involving Stephen Emmott (Microsoft Research), William Dutton (Oxford Internet Institute), David Dobbs (freelance science writer), and members of an audience of about 50 people. A theme that was reinforced repeatedly was that science is "organized skepticism," and that falsifiability and replicability were key features of science, so openness was essential for science to function efficiently.

Philip Campbell, Editor of *Nature*, suggested that action to promote greater openness needs to come from the funders of research. He noted that people should not be under any illusion that, once data had been made publicly available, that it would be possible to control the way that they were used.

In a final session chaired by Professor Charlotte Waelde (Professor of Intellectual Property Law at the University of Exeter), Cameron Neylon (Science and Technology Facilities Council), and Timo Hannay (Digital Science) spoke about the need to go beyond the traditional metrics used to assign credit in academia, and noted the opportunity to learn from the experience of introducing the Creative Commons models of ownership.

The report of the Royal Society's Working Party on Science as a Public Enterprise is expected to be issued by summer 2012.

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References

1 Royal Society. Science as a public enterprise. http://royalsociety.org policy/projects/science-public-enterprise/

2 Boulton G, Rawlins M, Vallance P, Walport M. Science as a public enterprise: the case for open data. *The Lancet* 2011;377:1633-5. doi:10.1016/S0140-6736(11)60647-8. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60647-8/fulltext

3 Select Committee on Science and Technology. Tenth Report. Chapter 3, Accessibility of research. Paragraph 39, The public. *Hansard*. Available at: http://www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/399/39906.htm#note65

EASE-Forum Digest: June to September 2011

You can join the forum by sending the one-line message "subscribe ease-forum" (without the quotation marks) to majordomo@helsinki.fi. Be sure to send messages in plain text format.

Acknowledgements in PhD theses

The literature provides plenty of advice on how to structure a PhD thesis but John Taylor had not been able to find anything on what was expected in the acknowledgements. The acknowledgements in a thesis he was editing were long and amounted to a hyperbolic eulogy of the student's professors and lecturers. He wanted to know if there was anything he could do about the 'sickly slush'. The response from the forum made it clear that such acknowledgements are common in theses world-wide and the general feeling was that editors should only correct obvious language errors. Mary Ellen Kerans pointed to research in applied linguistics (e.g. by Ken Hyland) which showed that students followed their own whims when writing acknowledgements as well as local departmental 'rules'. Françoise Salager-Meyer added that Mohammed Nahar Al-Ali (University of Jordan) had written a paper on acknowledgements in PhD dissertations written in English by Arab writers where, she commented, Allah was frequently acknowledged as well [*Academic and socio-cultural identities in English dissertations acknowledgements of Arab writers* In ESP (English for Specific Purposes) Across Cultures. vol 6. 2009. p. 7-29].

Sylwia Ufnalska had also recently edited a paper (written by a Polish author) where about 30 people were mentioned in the acknowledgements, many she thought without good reason. She had explained to the author that when publishing results in English they would need to follow English rules of science writing and advised them to correct this section in accordance with the http://www.ease.org.uk/guidelines/index.shtml. As a result the authors had greatly shortened the acknowledgements. Mary Ellen thought that while those guidelines worked for articles,

acknowledgments in PhD theses typically had personal touches and a sincere, not-very-academic tone to them. Although Sylwia agreed that some flowery thanks may be acceptable, she considered a whole page unacceptable. Students should confine their thanks to those for which there was a good reason. However, from Carol Norris' experience, which she illustrated with a photo of one of the stacks of theses she had edited from students in Finland, one to four pages of detailed and personal acknowledgements are normal. She commented that many people contribute much during one's half a dozen years of research.

Joy Burrough, who edits theses by Dutch students, fervently defended long and emotional acknowledgements as a venue for young scientists to speak in their own words. She found the acknowledgments were often very personal. God may be mentioned and thanked, but also supervisors who have provided hospitality to foreign PhD students far from home, friends and colleagues who had been encouraging, or had cooked nice meals, friends who had gone on long walks during which the problems of research/the world etc. had been discussed...

James Hartley agreed with Mary Ellen that there is a distinction between acknowledgements in theses and acknowledgements in papers. He commented that the inclusion of an acknowledgement section in scientific articles has increased from about 60% in the 1960s until it is now almost 100%. There were also disciplinary differences between papers in the arts, social sciences and sciences in the kinds of things acknowledged — funding, technical support, conceptual issues, and editorial help. Blaise Cronin had researched the topic and more details could be read in pages 53-55 of Hartley, J. (2008) *Academic Writing and Publishing* published by Routledge.

Placement of table and figure captions

"Does anyone know why the captions for tables appear above the tables and the captions for figures below the figures?" James Hartley asked this interesting question and Tom Lang replied that William Playfair, who had created the concept of graphs, put the captions above the figures but he suspected that the location of captions had been determined by some aspect of early typesetting. Mary Ellen found that positioning varied depending on a journal's house style. *The British Journal of Anaesthesia*, for example, puts what other journals would call table 'foot' notes up at the top, immediately after the title and some IEEE (Institute of Electrical and Electronics Engineers) journals put table 'titles' at the bottom.

Yateen had explored the topic some years previously and suggested that Laurence Penney had provided the answer to Tom's questions in the quote "In general, it is good practice and polite to introduce things before shoving them in the reader's face. Tables, like sections in a book, particularly need an introduction since they are symbolic — language and numbers abstracted away from their subject. A glance through a table is even less profitable than a glance through a block of text of that size. So tables need an introduction, hence a caption above them. By contrast figures and pictures usually serve as their own introduction. They are analogous to what they represent, there's no change of mode. So it could be a tiny bit patronizing to 'introduce' them, more respectful to use a caption below, which does not demand to be read." Yateen added that what applies to the entire table (i.e. introduces it) goes into the headnote and what is specific to particular cells goes into the footnote.

Ammunition for going Open Access

With a view to persuading her journal to become fully Open Access (OA), Aleksandra Golebiowska asked which organizations required studies they had sponsored to be Open Access. She discovered that projects within the European Union's 7th Framework Programme had to be available free-of-charge after 6 months (a year at most) and Reme Melero provided the URL of a publication about OA in south European countries (http://www.accesoabierto.net/sites/accesoabierto.net/files/OASouthEurope.pdf), published as a result of a workshop held in Granada, Spain, to debate the OA landscape in those countries. She also gave two other sources: DRIVER wiki: http://www.driver-support.eu/pmwiki/index.php?n=Main.HomePage and COAR (Confederation of Open Access repositories, http://coar-repositories.org/). With this information Aleksandra hopes to be able to succeed in her mission.

Strengths of the study section

Tom Lang had encountered a section titled 'Strengths of the Study' before the usual 'Limitations of the Study', in an article he had edited and wondered if anyone else had come across this heading. He thought the title was a valuable addition to the discussion, especially for large studies and systematic reviews, and asked if forum participants thought there was any value in promoting the use of such a heading throughout the biomedical literature.

Kersti Wagstaff had also come across the heading and thought it was a good idea and Norman Grossblatt had edited book-length reviews that, in summarizing published studies, used both a 'strengths' and 'what the studied added' headings in parallel sections. He thought the heading could also be valuable in a single paper. Joan Marsh added that *The British Journal of Psychiatry* sometimes had a section called 'Strengths and Limitations' or 'Strengths and Weaknesses' (somewhat inconsistent editing) and also one called 'Implications'.

Liz Wager had not encountered the 'strengths' heading but liked the *BMJ* (*British Medical Journal*) style of having a short box stating 'what this study adds'. She thought such a box would be more useful than a heading on strengths. Tom countered that the strength of the study is not the same as the value of the research question. A study with more dropouts would be weaker than a study with fewer dropouts. Larger samples, better control over bias, and so on could be mentioned. A 'strengths' heading would prompt authors to consider these issues.

A linguistics note was introduced by Mary Ellen who pointed out that in English, where subjects are required, there is enough 'signposting' of paragraphs like strengths and limitations because they typically start with phrases like "A strength of this study...." or "Limitations of this study....". Therefore she thought a reader of an IMRD article would not have any trouble finding the strengths and limitations paragraph. Unless the discussion was very long, providing subheads would chop up the section too much. Furthermore ordering of types of information is relatively standardized, increasingly so with the advent of guidelines (CONSORT, STROBE, etc.). But here Mary Ellen had noted a recent shift. Whereas the strengths-and-weaknesses (limitations) paragraph/section used to appear as the second-to-last in the Discussion it now usually appears as the second paragraph of the discussion. She thought this shift might have resulted from authors' interpretation of the STROBE guidelines.

Beware of conference scams

Karen Shashok was flattered to receive an email invitation to speak about one of her publications (the title was mentioned) until she noticed that it did not fit into the topic of the event. The invitation was from a 'consulting agency' in a country distant from the event's location. The agency had been 'authorized by the organizing committee to co-organize'. She checked the agency's online information about the event through a URL link provided in the email but found that although the event was only 6 weeks away no information was given about the programme or the programme committee. She emailed the person who had contacted her to ask for more details about the event and the participants but never received a reply. A little later she found that the agency's website no longer listed the event but did list another event in the same city on a different area of medicine, on almost the same dates. The links to information (Programme committee, Venue and hotel, Visa information, Programme, Registration, Sponsors, Well-known speakers etc) were all empty. Karen found this suspicious and wanted to know if anyone else had had such an experience. Tom Lang had received the same approach for an event in a city in China. His Chinese friends from the city had indicated probable fraud.

Christiaan Sterken had also received such invitations but had experienced the opposite situation too. When he had organized an astronomy workshop he had received emails from companies asking to register several people whom he could not find in any bibliometric database in astronomy. He googled a complete sentence taken from such an email and found the same phrase in several other locations, finally tracing it to a travel agent in a country in middle Africa. It seemed the agency were offering money (registration fee) and expected to receive an invitation (for visa) in return.

John Taylor related his experience when he had organized a congress for an international professional association to be held in Rio. Unknown to him a number of registered participants received a letter from the hotel informing them that payment had to be made in advance direct to the hotel. They paid by bank transfer as instructed. Upon arrival in Rio the hotel informed them that it had not received any payment. It proved impossible to trace the account holder, even though the hotel name had been used, as the account had been closed (and emptied).

Karen's further investigations revealed that the company that had contacted her was involved in spamming and scamming the people it contacted. People should be beware of unexpected invitations that address you as Dr Surname, A.B., mention one of your publications, contain a generic-sounding description of the event, and are signed by Yao Lu, MD, PhD, President of EPS Global Medical Development Inc in Montreal, Canada. See:

http://rmm257.blogspot.com/
http://blog.lib.umn.edu/denis036/thisweekinevolution/2011/05/fake_scientific_conferences_in.htm
http://biospam.wikidot.com/
http://www.ripoffreport.com/event-planners-sites/eps-global-medical-d/eps-global-medical-development-5ae30.htm

How to edit mixtures of American and British English

What should a good editor do when editing a book in which parts are written in American English and parts in British English? The same problem applies to articles in journals. Some journal style manuals specify either British or American English while others allow authors to make the choice, although one or the other should be used consistently within a single article. As Mary Ellen Kerans pointed out, articles in which the languages are mixed raise suspicions of textual plagiarism.

Sylwia Ufnalska was copyediting a medical book written by many authors. Its editor had written in American English but one of the authors mentioned the latest WHO classification using British spelling. She was wondering if she could simply change the spelling to American to be consistent with the other parts of the book. The editor had suggested leaving the British spelling but Sylwia was concerned that this could look like sloppy editing.

Suggestions varied from adding a footnote that spelling is like in the original document to adding the American spelling in brackets after each word that differed between the languages.

Tricia Reichert thought that the use of two spellings side-by-side throughout a document would be distracting and perhaps patronizing, implying that the reader is not expected to know, for example, that the word 'organize' in American English is the same word as 'organise' in British English. She considered annotation of the spelling was not needed and advocated consistency throughout the book.

Tricia's journal is American and uses American English but British spellings are retained for proper names and official names of organizations, congresses, institutions, agencies, grants, etc., as well as for official names of classification systems. However, for the specific items within a given classification system, they use American spellings. If there is some reason to quote an item from a classification system in which British spelling was used, they quoted the item verbatim, including the spelling. As such an item is enclosed in quotation marks, its special nature is indicated, making explanation for the different spelling unnecessary.

The EASE guidelines include a short list of spelling differences at http://www.ease.org.uk/Guidelines_AppendixSpelling/index.shtml

Although the forum discussion concentrated on spelling, it's worth noting that there are also differences in grammar between the languages, e.g. the first word after a colon starts with a lowercase letter in British English and a capital letter in American English.

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ANNOUNCING

The 2011 SCRIPT Award

The SCRIPT Award is for creative writing by scientists and health care professionals. Any topic is acceptable, especially non-scientific.
The task: to write a "Mini Epic" in exactly 100 words
The prize: $1000 (Cdn)
The closing date: December 21, 2011
Further details available at: www.scriptmedical.com/script-award.html

Details of the award are available online at www.scriptmedical.com/script-award.html.
Please feel free to circulate to any eligible writer

SCRIPT was founded in 1998 by Helen Leask. Since then, it has grown to a full-service communications agency that provides world-class medical communications to international and Canadian clients.

Marking 30 years of EASE: call for memorabilia

The year 2012 marks the 30th anniversary of EASE's founding (Pau, 1982). We would like to document these first three decades with a history of major events in the life of our Association and with stories and a display of physical artefacts that tell the EASE story. Please send us:

- Photos of EASE events (with legend and names if possible)
- Names of people who should be honoured with an anniversary diploma because of their work for EASE (please add a few sentences of explanation)
- Conference newsletters
- Posters of EASE events
- Short anecdotes about memorable moments (good, bad, sad, funny)
- Souvenirs of any kind

plus - any ideas for special anniversary events in connection with our Tallinn conference. Contributions and ideas should be sent to: Sylwia Ufnalska (sylwia.ufnalska@gmail.com) or Alison Clayson (alison@clayson.org)