

Editorial

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Finally, the first issue of the *JProcRSNSW* under the new editorship. Several papers: the outgoing president's address by Don Hector, the W. B. Clarke Memorial Lecture by Griffin et al., the Liversidge Lecture by Banwell et al., a paper by the late Commonwealth Statistician, Ian Castle, on one of the most illustrious members of the Royal Society and its forerunner, the Philosophical Society of N.S.W., the forgotten polymath, William Stanley Jevons, scientist and economist, followed by a paper of mine which puts Jevons' activities in the Society into context and updates Castle's article with some recent debates about the implications of Jevons' work for energy policy. The last paper is by Foster, a Royal Society Scholarship winner. There are also 16 abstracts of recent doctoral dissertations from several N.S.W. universities.

The delay in publishing this issue is due to two things. First, the handover took place in May, with few accepted papers. Second, I threw myself into indexing the contents of past issues back to 1866 and before, making the index accessible to Google's indexing robots (which has now happened), and making the contents of past articles readily accessible to anyone on the Internet.

This process would not have been feasible without the work done by past editors and librarians of the Society, the Biodiversity Heritage Library (the host on the on-line repository of the *Journal*), the Smithsonian Libraries, the Missouri Botanical Garden Peter H. Raven Library, the Harvard University Museum of Comparative Zoology Ernst Mayr Library, the University of

California Libraries, the Leland Stanford Jr. University Library, the Wayback Machine's Internet Archive, and the National Library of Australia's incomparable, but threatened, Trove on-line archive of Australian material back to first European settlement. For the on-line repositories of the *Journal*, past issues were scanned to PDF and placed on-line in large files, one per issue or volume. These were embedded in a viewing platform which includes Optical Character Recognition output.

Readers can see the format of the main repository by going to the Journal Archive page of the *Journal's* contents, at the Society's web pages.

Clicking on a volume and then a paper reveals a PDF of each page with a plaintext OCR on the right (when clicked on). Although the files are large, each page (corresponding to a page published in the hard-copy version of the *Journal*) has a unique URL, which allows us to link the initial page of the 3,110 articles in the *Journal* since 1867. I used plaintext versions of each issue's contents to derive the pages of the contents of each volume. These contents pages, roughly one a year, enable an on-line index for the *Journal's* contents, with the URLs providing the links to each paper.

The index of articles and papers starts in 1822, forty years before the Royal Society was granted its letters patent, when the first forerunner of the Society, the Philosophical Society of Australia, was active, under the patronage of the Governor, Sir Thomas Brisbane. At that time there was no dedicated publication for the Society's papers (that

would have to wait for over thirty years), but some papers presented to the Society were published as chapters in a book published in London in 1825, edited by a former member of the Society, Barron Field, a lawyer. This book is now in the public domain and its contents have been made available on-line as part of the Gutenberg Project.¹

After thirty years of little if any activity, the Philosophical Society of New South Wales began in 1856, under the patronage of the new governor, Sir William Denison, an engineer. Some papers were published in the Sydney newspapers, especially Henry Parkes' *The Empire*, and are now available on Trove. There were two other outlets for papers in the 1850s and early 1860s: a commercial monthly, *The Sydney Magazine of Science and Art*, published papers from the Society and other learned groups for the two years it was in existence. It too is freely available on-line. The Philosophical Society of N.S.W. also published the *Transactions of the Philosophical Society* from 1862 to 1865, and this too is available on-line. In 1867 the *Journal of the Royal Society* first appeared, and has done so ever since. Perhaps someone will use this newly accessible resource to write a paper analysing how the contents, authorship (numbers, sexes), etc of papers have changed over the past 110+ years.

In 1955, the president of the Society, Ronald Nyholm, mused about the three phases of the Society, as reflected in submissions to the *Journal*:

¹ The Gutenberg Project's copy appears to come from the Stanford library, although Stanford University was only founded in the 1890s. It turns out that Thomas Welton Stanford, brother of Leland Stanford, the railroad baron who founded Stanford, lived in Australia for many years and amassed a library of Australiana, which he bequeathed to the University. (I thank Jessica Milner Davis for this sleuthing.)

“Broadly speaking, the history of the Society falls into three periods. Before the first world war the Royal Society of New South Wales was the main scientific society in Sydney, at least so far as the physical sciences were concerned. The Society was, for scientific people, an important means of mutual contact, discussion and the *Journal* received many of their original researches. Between the two world wars there were founded in Sydney many specialist scientific bodies or branches of older ones, such as the Institute of Physics and the Royal Australian Chemical Institute, the meetings of which catered for discussions of specialist subjects. Nevertheless, many of the original papers of these specialist still found their way to our *Journal*. Thus, the 1940 *Journal* was one of the largest ever, and in it were 38 research papers. There were 23 chemistry papers, 4 in mathematics and 9 in geology. After the Second World War we enter the third phase—the development in Australia of new specialist journals to cater for the needs of scientists. Examples of these are the *Australian Journal of Chemistry* and the *Australian Journal of Physics*. Furthermore, overseas societies publishing specialist journals, e.g. the Chemical Society of London, speeded up the rate of handling of papers and went out of their way to provide air-mail facilities in order to assist folk submitting papers from Australia.”

The decline in the number of research papers received (as distinct from the Presidential Address, Clarke and Liversidge Lectures) is shown in Figure 2 of Nyholm's paper. In 1952 the *Journal* was the smallest since 1929.

Nyholm argued that this had at least two effects: the mix of disciplines in the *Journal* had become unbalanced, which would even-

tually affect journal exchanges with other institutions; and Society members would lose interest in the Journal and perhaps in the Society. Sixty years ago, Nyholm quoted a previous president, Richard Bosworth, who argued for a policy of encouraging researchers to write reports on their research worded so as to be intelligible to a novice in the field, rather than to the expert readers the specialist journals assume.

What was true sixty years ago still holds today, although the pressure to publish in A-rated journals means that fewer such accessible papers will be submitted. And the fourth phase of the *Journal*—the age of the Internet—means that the *Journal*, at least in its hard-copy form, is increasingly an anachronism. The other side of that coin is the ability to make over 160 years of articles accessible to anyone with a browser. The *Journal* still publishes the Clarke and Liversidge lectures and now also a garland of papers from the annual forum. We also publish short abstracts from recent Ph.D. dissertations. But the flow of first-rate, cutting-edge research papers has stopped long since.

What is happening at our sister societies? *The Transactions of the Royal Society of South Australia* is the result of an amalgamation (in 2004) with the *Records of the South Australian Museum* and is published by Taylor & Francis in both hard and soft copies. Its 2015 impact factor was 0.484. Contents of the *Transactions* are not freely available. Subscriptions to the two annual issues of the *Transactions* are included in members' dues, but non-members and institutions pay up to \$285 a year for hard and soft copies.

The Proceedings of the Royal Society of Victoria is published by CSIRO Publishing. Current issues are freely available. The *Proceed-*

ings are only available in soft copy. Articles back to 1855 are available on-line.

The *Papers & Proceedings of the Royal Society of Tasmania* are freely available on-line, but not for the last two years. There are, apparently, no hard copies printed. Only members of the Society who pay to do so have access to the last two years of the *Papers*.

The Proceedings of the Royal Society of Queensland are apparently freely available on-line. The *Proceedings* publishes only a single issue a year, and then only in soft copy.

The Journal of the Royal Society of Western Australia is (since December 2015) no longer printed, but is available only on-line to fully paid members of the Society and approved exchange partners and educational institutions.

The Journal of the Royal Society of New Zealand is published quarterly in soft and hard issues by Taylor & Francis. It has a 5-year impact factor of 0.918. The current issue is available on-line, but archive (permanent) access to soft and hard copy costs AU\$640 a year. Earlier issues (1868 to 1961) are freely available on-line.

What is to be done? Sixty years ago Ronald Nyholm's suggestion was not particularly effective. And today it is even less likely to succeed. I encourage review articles and articles taking an historical approach to the development of science and social phenomena. I also urge readers to consider writing longer book reviews of recent books that raise issues of interest, particularly of science policy and history. This fits, I hope, with the Society's push to widen its membership from the hard sciences to the social sciences and to the arts and humanities. Please consider the *Journal* for your next such paper.

Finally, I'd like to thank Ed Hibbert, Don Hector, and Jason Antony for their assistance in processing the *Journal's* text.

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