

## **The curious economist: William Stanley Jevons in Sydney**

**Address at the Dinner to Mark the Opening of the Exhibition at the Powerhouse Museum<sup>1</sup>**

**The late Ian Castles<sup>2</sup>**

**Former Australian Statistician, 28 October 2004**

### **Abstract**

In 2004, which marked the 150th anniversary of William Stanley Jevons' arrival in Sydney, the Powerhouse Museum mounted an exhibition on "Jevons: The Curious Economist." Jevons was born in Liverpool, in England. He studied chemistry in London, and came to New South Wales at the age of 19 to work at the Sydney Mint. The Gold Rush was in full swing, and his job was to assess the quality and purity of the precious metal from the diggings. This work put him in a unique position, at the intersection of geology, chemistry, economics and industry. Wanting to document as many aspects of life in Australia as he could, Jevons also took up photography, even taking his camera equipment to the goldfields. After five years in Sydney, Jevons returned to England, where he eventually became the first Professor of Economics at University College in London. He became a member of the N.S.W. Philosophical Society on 13 June 1856. He left Australia in April 1859. He drowned in 1882, aged 46.

At a dinner to celebrate the opening of the Exhibition, the late Ian Castles gave this address. Ian Castles (1935-2010) was an accomplished statistician and civil servant. He was Secretary of the Commonwealth Department of Finance (1979-1986), the Australian Statistician (1986-1994), and Visiting Fellow at A.N.U. between 1995 and 2000. He was Executive Director and Vice President of the Academy of the Social Sciences in Australia. His family has given permission for the *Journal* to publish the address, lightly edited by Robert Marks.

### **Introduction**

I begin by congratulating the Powerhouse Museum and especially the exhibition curators — Matthew Connell and Lindsay

Barrett — on the splendid exhibition we've had the privilege of viewing this evening. I'm sure that the curators would agree that they had in "the curious economist" an extraordinary subject upon which to focus.

My job tonight is to try and give some added context to the amazing story that began just 150 years ago when the teenage Stanley Jevons landed in this city. I'm

<sup>1</sup> <http://www.powerhousemuseum.com/exhibitions/jevons.php>

<sup>2</sup> Lightly edited, with references, by Robert Marks, 2016.

honoured that the Powerhouse has invited me to perform this task, and especially grateful in that, ten or twelve years ago, the Museum could only have seen me as a nagger and a nuisance.

My interest in persuading the Powerhouse to mount an exhibition on Jevons' years in Sydney dates back to a conference that I attended at the Reserve Bank in the early 1990s. I can't remember the subject of the conference, but I remember well that, during the luncheon break, I strolled southward along Macquarie Street with a visiting British economist. I pointed across the street to the fine building that formerly housed the Sydney branch of the Royal Mint, and remarked that that was where Jevons had spent the first four or five years of his working life.

My companion's initial reaction was one of disbelief. So we crossed the road and spent a few minutes in the building known as the Mint Museum, which at that time was part of the Powerhouse Museum. To my satisfaction, we were able to confirm immediately that Jevons had indeed worked at the Mint.

But to my consternation, and that of my economist colleague, the captions to the display revealed nothing about who Jevons was or what he had done. Let me quote:

This room ... focuses on the lives of two Mint employees and social aspects of the gold rush era. [It] focuses on contrasting experiences of those years: life on the diggings and the experiences of two gentlemen who worked at the Mint, William Jevons and Robert Hunt...

This was true as far as it went, but my companion and I thought that visitors to the Mint Museum should have been told that "William Jevons" was later to become one of the founders of modern economics. And

perhaps also that he pursued a remarkable range of interests in his Sydney years.

So strongly did I believe this that I wrote to the director of the Powerhouse Museum to suggest that the a museum of applied arts and sciences was missing an opportunity by not making a good deal more of the young Jevons' association with Sydney — and his contribution to the applied arts and sciences during his five years in this city. I had a polite response, and one or two useful meetings with people at the Powerhouse.

But, just at this stage, the Powerhouse Museum announced a major acquisition: the famous difference engine invented by Charles Babbage, commonly recognised as the forerunner to the modern computer. In discussions at the Powerhouse, I said that this was all very well, and that the engine was indeed an eminently appropriate artefact for a museum of applied arts and sciences. But Babbage had had no connection with Australia.

I argued that the Museum should take an interest in the fact that Jevons too had built a proto-computer. Moreover, unlike Babbage, the former resident of Sydney had done the whole thing at his own expense. And Jevons' machine was the first machine that could solve a complex logical problem faster than that problem could be solved without using the machine.

Then there was a further development. The Powerhouse Museum acquired Jevons' telescope — not just a telescope like the one Jevons used, but the instrument that he actually used. I was told, and of course I agreed, that one object directly relating to Jevons was not enough to build an exhibition around. The inscription on the telescope reveals that, not long after leaving Sydney, Jevons gave it to his cousin who was then in Penang in what is now Malaysia. It is not clear how or why this telescope found its way back to Australia.

The instrument is, I suggest, a deeply symbolic artefact. It encapsulates Jevons' passionate interest in the means and meaning of observation and measurement of the natural and the social world. It was through this telescope that the young Jevons — whom we now know to have been Australia's first urban sociologist — first viewed an Australian city. The city was Melbourne, not Sydney. In a ship anchored off the port of Melbourne on 24 September 1854, Jevons confided to his journal that:

the town is very curious; it looks like a crowd of ugly buildings of every size chiefly iron and wood arranged as if no two houses were in one street. There seem to be very few large buildings and these are as ugly as the rest, but we can make out by the telescope an Exhibition building, 2 or 3 churches ... [and] a railway station on the other side of the bay. (Black & Könekamp 1972, p. 109)

This would have been the just-completed collection of weatherboard train sheds on the site now occupied by Flinders Street station.

In Sydney, Jevons used the same little telescope to observe two eclipses of the sun in 1857. In an extended report written after the second of these events, he told the readers of Henry Parkes' newspaper, *The Empire*, that

The first contact of the moon with the lower limb of the sun could be easily observed with the aid of an ordinary telescope, and seemed to take place within a few seconds after the time ... calculated by Mr. Tebbutt, of Windsor, my watch being regulated by the noon gun at Fort Philip. The coincidence would, no doubt, have been the more complete the more accurate the means of

observation. (*The Empire*, 19 Sept. 1857, p.4)

“Mr. Tebbutt<sup>3</sup>, of Windsor” was later to become the world-famous amateur astronomer who formerly appeared on the Australian \$100 banknote. At this time, he was 23 years of age, one year older than Jevons. The report of the eclipse in *The Empire* on the day after the eclipse is quite an extended one, and Jevons' diary on the day that he wrote this report survives in the John Rylands library in Manchester.

Let me quote the entry for this day in the life of W. S. Jevons, a 22-year-old public servant:

After sleepless night got up about 3.30 and started to Bellevue Hill in dark. About 5 a.m. commenced observations concerning eclipse. Returned to Mint [this was presumably where he wrote the report that was published on the following day]. Tea at Mr. Newton's [Mr. Newton was Chief Engineer at the Mint] and then to Victoria Theatre. Brooke and Mrs. Heir very good in Much Ado About Nothing. Nature books for Willy Newton 8/6 [presumably his host's son]. Whewell's Lect. on Political Economy 11/-.

On the facing page of the diary, the entry for the succeeding day (28 March 1857) reads:

Played much music in evening [this would have been on the harmonium that appears in the photograph of his study at Double Bay, which appears in the exhibition]. Meteorological work, etc. Wrote and sent letter to *Empire* with aim

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<sup>3</sup> Like Jevons, John Tebbutt Jr. was also a member of the Philosophical Society of N.S.W.

of shutting up writers about “Protective humbug”<sup>4</sup>.

Jevons was a strong free-trader.

During Jevons’ stay in Sydney, *The Empire* published many reports and letters authored by him, on subjects as diverse as meteorology; the land and railway policy of New South Wales; the resolutions passed at the protection meeting; “A Cure for the Revenue”; lead poison in the Sydney water; the danger from lightning strikes on the ammunition stores on Goat Island; a new sun-gauge<sup>5</sup>; the royal prerogative of mercy; the conflict between the archaeological and Biblical accounts of the length of human existence on earth; and “New Facts Concerning the Interior of Australia”.<sup>6</sup>

Many of Jevons’ pieces in *The Empire* were quite combative. He acknowledged this in a letter to his cousin toward the end of his sojourn in Sydney (9 October 1858):

I am becoming quite accustomed to the pen as a weapon of offence & defence, indeed I suffer under such a rage for writing that I am scarcely to be trusted with a pen in my hand. I often write a newspaper article and am then on thorns for ever so long after for fear of a libel action. But alas! my organ the ‘Empire’ has passed away in bankruptcy and I am now reduced to that milk & water affair the “Herald” which too has not yet learned to appreciate me, and sticks to small type, on the backpage, whereas Parkes always gave me large type next after the leading article, & usually reprinted me for the monthly summary.

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<sup>4</sup> See his letter to *The Empire* of March 30, 1857, listed below.

<sup>5</sup> Jevons’ paper, “On a sun-gauge, or new actinometer,” was presented at the Philosophical Society of N.S.W. on 8 July 1857.

<sup>6</sup> See the Reference list below for many of these, with links.

I send you the monthly summary of the Herald which is certainly a wonderful publication for a single day; the number of copies sold too is something enormous. You will find in it every scrap of colonial news... (Black 1973-1981, 2, pp. 345-346).

Some of these comments are somewhat unfair to the Herald, which had done Jevons proud by publishing his long and fascinating review of the first consolidated volume of the monthly Sydney Magazine of Science and Art, to which Jevons himself had made significant contributions.<sup>7</sup>

In the event, it has turned out to be for the best that the plans for an exhibition on Jevons in Sydney, including especially the Symposium, have come to fruition in 2004 rather than in 1994. Because, in the intervening ten years, Jevons’ life and work in Sydney and afterwards has attracted unprecedented attention from researchers in a wide range of disciplines, both in Australia and overseas. At least a dozen peer-reviewed journals have published papers focusing solely or mainly on aspects of Jevons’ work. The list of the names of the journals in which these studies have appeared testifies to the diversity of Jevons’ interests, and of the continuing scholarly interest in Jevons:<sup>8</sup>

*The History of Political Economy,*  
*The History of Economics Review,*  
*The Journal of the History of Economic Thought,*  
*European Journal of the History of Economic Thought,*  
*Economic Inquiry,*

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<sup>7</sup> *Sydney Morning Herald*, 27 Sept. 1858, p.8.

<sup>8</sup> Ian Castles did not specify which papers the following list refers to, but in the References below I have included possible papers — Ed.

*Measurement in Physics and Economics*  
*Discussion Papers at the London School of*  
*Economics,*  
*The History and Philosophy of Logic,*  
*Australasian Music Research,*  
*The Australian Meteorological Magazine,*  
*The Journal of Physical Oceanography,*  
and  
*Scientific American.*

I would like to be able to talk about the significance of some of this work, much of which has been produced by one or other of the distinguished scholars who are with us this evening and will be presenting papers at tomorrow's symposium.<sup>9</sup> But it would be beyond my capacity to do these scholars justice, and I can only urge those who may be able to come to the symposium to do so.

The primary source material for those who are engaged in research on Jevons consists, of course, of his own writings, published and unpublished. Only a small fraction of his writings in Australia appeared in print during his lifetime. In a volume published soon after his death, Jevons' widow published edited extracts from his personal journal and from many of the surviving letters (Jevons 1886). Much more extensive extracts of his papers and correspondence have been published in subsequent years.

Yet much of Jevons' Australian work remains unpublished. In a paper published as recently as 1999, the leading Jevons scholar Bert Mosselmans and a Belgian colleague (Mosselmans & Mathijs 1999) published extracts from a manuscript by Jevons – uncompleted but running to 50 pages – entitled “On the Science and Art of Music”

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<sup>9</sup> Mike White, Monash; Harro Maas, University of Amsterdam; Lindsay Barrett, University of Western Sydney; Geoff Barker, University of Sydney; Megan Martin, Historic Houses Trust NSW; Neville Nicholls, Bureau of Meteorology; Matthew Connell, Powerhouse Museum; Jamie Kassler, Australian Academy of Humanities; Ian Castles, A. N. U.

which is located at the John Rylands Library at Manchester University. The work was written in Sydney and sent to Jevons' sister in London as each chapter was completed. The John Rylands Library<sup>10</sup> and the Public Library of New South Wales hold many letters and other manuscripts relating to Jevons' Australian years which have never been published.

It is a pity that much of Jevons' writings in Australia — whether published in contemporary journals and newspapers, intended for publication in Sydney or in Britain, or never intended for publication at all — is not now readily available. They are of value not only as a record of several formative years in Jevons' own development, but to those interested in the history of Sydney and of Australia at this time.

It is now possible for manuscript material to be “digitised”, enabling it to be disseminated freely. This has the further advantage, by comparison with publication in hard copy, of providing the user access to interactive facilities for selective searching and retrieval of the contents.

So I am led to conclude with a suggestion. I'll introduce it by pointing out that, some thirty years ago, the Royal Economic Society felt justified in publishing hundreds of pages of letters and papers written by Jevons while in Australia, in the handsome seven-volume set edited by Professor Collison Black. It is fair to say that much of this material is of interest to Australian social historians but sheds little light upon the history of economic thought: this is true, for example, of the accounts of Jevons' journeys to the Hunter Valley and Maitland,<sup>11</sup> the Macquarie towns<sup>12</sup>, the

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<sup>10</sup> <http://www.library.manchester.ac.uk/search-resources/guide-to-special-collections/atoz/jevons-family-papers/>

<sup>11</sup> Black & Könecamp 1972, pp. 123-130, 23 May 1856.

Illawarra district<sup>13</sup>, Bathurst and Sofala<sup>14</sup>, Braidwood and Araluen and the Victorian gold fields<sup>15</sup>. Ironically, this wealth of material is little known in Australia except among those who have been led to it by their interest in the life and work, especially the economic work, of Stanley Jevons.

With the advances of technology that have now occurred, the opportunity now arises to link all of the Australian-related Jevons material that is readily available in published sources with the as-yet unpublished letters, papers and photographs that are held in research libraries. The result would be an interactive product of considerable potential interest and value, and not only to scientists of all colours. The cost would not be small, but nor need it necessarily be prohibitive. If the exhibition that opens tomorrow stimulates as much interest in “the curious economist” in Sydney as I hope that it will, I believe that the publication of a consolidated archive in digitised form of the surviving record of Jevons’ years in Sydney, published and unpublished, would be a worthy and imaginative project. It is something that the Powerhouse Museum and its supporters might wish to consider.

I am confident that such a project would attract international interest — and not only among research scholars but among people in many walks of life who find fascination in the development of an extraordinary mind — one of the minds of the century, as John Maynard Keynes wrote to Lytton Strachey in 1905, when Keynes was 22.

In the Preface to her book *A World Ruled by Number*, the first full-length study of the life and work of William Stanley Jevons, Dr. Margaret Schabas, now Professor of Philosophy at the University of British Columbia, wrote that she “had found, over the course of six or seven years, that my views on these subjects have changed considerably and that Jevons had an even richer set of insights than I had initially suspected... That the world is ruled by number may still be subject to dispute, but not the element of simplicity and beauty in Jevons’s vision of mind and matter.”

Thank you again for inviting me to speak this evening. I wish the Exhibition and the accompanying Symposium every success.

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<sup>12</sup> Black & Könekamp 1972, pp. 134-154, 24-28 December 1856.

<sup>13</sup> Black & Könekamp 1972, pp. 159-178, 9-13 April 1856.

<sup>14</sup> Black & Könekamp 1972, pp. 213-238, 9 March 1856.

<sup>15</sup> Three letters to his sister, Lucy Jevons, 13 and 16 March 1859 and 9 April 1859, reprinted in Black 1973-1981, 2, pp. 366-373.

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Day & Day 1984 record that Jevons was admitted as a member of the Philosophical Society of N.S.W. at its second meeting, 13 June 1856.<sup>16</sup> He remained a member until he left the colony for England, in March, 1859.

<sup>16</sup> See also *The Empire* of 14 June 1856, p.3. <http://trove.nla.gov.au/newspaper/article/60249242>

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