The youngest of the senior scholars: a tribute to John V. Pickstone

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Everything started an unusually sunny morning in Manchester. It was the last day of the 2007 Annual Conference of the British Society for the History of Science (BSHS) and I was standing at the entrance of the Simon Building. The day before, I had presented the conclusions of my Ph.D., which was then close to submission. Suddenly, a deep voice on my back asked: «Are you the chap from Imperial?» I turned around and saw John Pickstone, staring at me with his eyes always full of curiosity. That was the beginning of a long-standing relationship and, as was later revealed, a crucial moment in my career.

I was the chap from Imperial. In 2003, I had moved to London and started an M.Sc. programme which led to a Ph.D. at the Centre for the History of Science, now at King's College but then based in Imperial College. After recognising Pickstone, I realised that a close collaborator of his had attended my presentation the day before. Pickstone started making questions about my Ph.D. and, as the sessions of the BSHS resumed, he asked whether I was travelling again in the near future. The following month, I was presenting at a conference in Exeter and, although Pickstone would not attend, he would send more questions via Jon Harwood, who was planning to go. On the train back to London, I felt that something important was going on.

At this point, I should make a confession that hope readers will grasp with due historical perspective. I was aware of *Ways of knowing* but in the life of a graduate student, with a long list of ever impending readings, had not paid the necessary attention to Pickstone's arguments. However, in a

fateful coincidence, I was due to discuss a recent article of Pickstone in a reading group at Imperial. In this article, he revisited his *ways of knowing* and *working,* and proposed a new analytical category, *working knowledges,* which was especially appropriate to study late twentieth century biomedicine[1]. I had a printout of the paper in my bag and started to read it with avidity. By the time I was in London Euston Station, I felt that the missing narrative of my thesis had finally been found.

Sequencing, genomics and *WoKs*

Before the trip to Manchester, I had had a meeting with my Ph.D. supervisor, Andrew Mendelsohn. We had discussed the first full draft of my thesis and he did not seem entirely happy with it. All the empirical material was there, but the historiographical relevance of my research remained unclear. Over the last three years, I had carefully explored the history of biomolecular sequencing, starting with the first protein techniques in the 1940s and 50s, and finishing in 2000 with the completion of the Human Genome Project. I had talked to all the relevant scientists and investigated their personal archives. However, the point of writing a history of sequencing was still absent in my story. What differentiated my thesis from the innumerable popular literature on genomics? «Go to Manchester and see if you find inspiration», said Mendelsohn. «Maybe you could think of sequencing as a particular form of scientific work (…)» he added as I was leaving the office.

The reading of Pickstone's paper brought me back to this last minute comment. Sequencing was a form of work because it fitted neatly with his proposed *ways of knowing* and *working* (or *WoKs* and *WoWs,* as Pickstone liked calling them). Once back at Imperial, I returned to the book and realised that if the development of sequencing was seen as a history of *WoKs* and *WoWs* interacting over time, my thesis could go beyond a confined case study. Sequencing, at a first glance, appeared as a form of molecular analysis, but in its history had mobilised the other *WoKs* proposed by Pickstone: natural history —in the attempt of collecting and comparing sequences in databases and experimentation— in the necessary bench workinvolved in the development of the techniques. Furthermore, at the level of *WoWs* the

1. Pickstone, J. V. Working knowledges before and after circa 1800. Isis, 2007; 98 (3): 489-516.

transition from manual to automated sequencing methods squared with a shift from craft to rationalised production, and sequencing in the age of genomics was meant to enable biomedical innovation.

Sequencing was thus a form of work in the sense that it encompassed *WoKs a*nd *WoWs* in historical action. This perspective provided my thesis with a narrative in which sequencing was a means for recasting the history of contemporary biomedicine beyond teleological disciplinary frameworks[2]. In other words, sequencing from a *WoKs* and *WoWs* perspective was something more than the culmination of the accumulated progress of molecular biology, and had the potential of challenging the accepted story which started with the elucidation of the double helix of DNA and led to the determination of the sequence of the human genome.

A short but intense spell

When I met Harwood in Exeter, he inquired me specifically about the historiographical significance of my research. Luckily, I had done the necessary homework and, on my return to London, I had an email from Pickstone inviting me to meet again in Manchester. At that point, he fully disclosed his plans and explained that he had been pursuing a Wellcome Trust application to explore the reconfiguration of recent biomedicine, together with Carsten Timmermann and Duncan Wilson. He offered me to be involved and explained that they would try to get bridging funding to bring me to Manchester and prepare the long-term project proposal. Part one of the plan was successful, and one rainy morning of January, shortly after defending my *WoKs* and *WoWs* reframed thesis, I changed the Centre for the History of Science at Imperial for that in Manchester.

Unfortunately, the second phase did not work that well and, despite favourable peer-review, the grant application was rejected. This meant that my spell in Manchester only lasted for six months, but the consequences for

2. The relevance of *WoKs* and *WoWs* for the study of contemporary biomedicine was further reflected in a 2011 special issue of *History of Science* edited by Pickstone. In it, Bruno Strasser and Soraya de Chadarevian highlighted the importance of exemplars and comparative frameworks in the experimental practices of molecular biology: Strasser, Bruno J.; de Chadarevian, Soraya. The comparative and the exemplary: revisiting the early history of molecular biology. History of Science. 2011; 49 (3): 317-336.

my career were far reaching. The key for this was the active community at the department and, particularly, Neil Pemberton, another postdoc working with Mick Worboys. One day, shortly before I was leaving, he told me over drinks «do you know that John has got a book series with Palgrave?» This gave me the idea of proposing Pickstone to transform my thesis into a book. His reaction was initially cautious: I would have to write a formal proposal to the publisher. This was probably my first piece of writing in my new postdoc at the Institute of Philosophy of the Spanish National Research Council (CSIC).

I was worried that, after leaving Manchester, Pickstone's support would turn less enthusiastic. Quite the opposite, after the proposal was accepted, Pickstone took personally the editing of the book and read word-per-word the 200-page manuscript for three times. Knowing of his busy schedule, I was embarrassed of sending him drafts, especially after his health got weaker. His feedback was crucial for the book being published and, by coincidence, I received the hard copies a few days before the interview for my current job in Edinburgh. I had the inspiration of taking the book with me and subtly displaying it to the selection panel. It was a much more formal interview than the one with Pickstone-incarnated-in-Harwood, and the book surely helped because I got the job and am now based in the Department of Science, Technology and Innovation Studies (STIS). A recent review of the book defined me as someone «under the influence of John Pickstone»[3]. It is a great honour to be regarded like this!

Epilogue: support and legacy

A feature of Pickstone was that he never gave in. He continued to pursue his interest in the recent transformation of biomedicine and, a few years after my departure, he supported Niki Vermeulen to acquire a Wellcome fellowship to study the emergence of systems biology. Vermeulen has recently been appointed lecturer in Edinburgh after a highly competitive selection

3. Cowan, Ruth Swarth. Review of: Müller-Wille, Staffan; Rheinberger, Hans-Jörg. A cultural history of heredity and Miguel García-Sancho. Biology, computing, and the history of molecular sequencing: from proteins to DNA, 1945-2000. The American Historical Review. 2013; 118 (3): 827.

process. Her office is one floor above mine and we always remember Pickstone in our conversations.

It has now been a year since Pickstone, sadly and prematurely, passed away. His memorials have offered a detailed portrait of a career which started with Pickstone's interest in nineteenth century physiology and finished with his work on contemporary biomedicine. One should also emphasise the continued support of Pickstone to young scholars, such as Vermeulen and myself. In my case, the entrance into Pickstone went the other way around, starting with his latest work and then realising that the *bigger picture* —as he liked putting it— provided the necessary historical texture to my work.

I have often wondered about the reasons why Pickstone, a consolidated academic, provided such a generous support. A possible answer is that he never stopped being the «chap from Manchester», as much as I was the chap from Imperial. I hope that, as was the case with Harwood, I suffer a Pickstone reincarnation every time I talk to students. This would ensure that I teach them to never lose their enthusiasm and, especially, always remember the circumstances they come from. ▮