

Preface

I met Gabriella Logan for the first time in the late 1980s, when she took my undergraduate women's history class. As an older student with steel grey hair and a habit of peppering the instructor with questions, she did not go unnoticed. She approached me shortly afterwards with her plans for a master's research paper: a study of a woman who became a professor of experimental physics at the University of Bologna in the late eighteenth century. Laura Bassi was first given an honorary lecturer position in 1732, but she was appointed to the Chair in Experimental Physics in 1776, over her husband who was a physician with some interest in experimental physics; he became her assistant until her death in 1778. This was certainly an attention grabber—I knew about eighteenth century high-level female scientists (mostly French ones like the marquise du Châtelet), but those were elite women who preferred spending their spare time stargazing or conducting experiments in their own laboratories than to pursue intrigues at Court—and their activities were not very different from the ones of men of their rank who also engaged in science: they were not professionals.

Gabriella still had family in Bologna and this allowed her to use the Bassi Veratti family papers at the city's library (Biblioteca Comunale de'II Archiginnasio), the first researcher to do so as evidenced by the list of patrons who took out the material, as well as in other local archives. She was also unusually well-equipped to handle such a project as she was fluent in Italian, had a Bachelor of Science, and could read Latin with ease. She was thus able to read the eighteenth century scientific literature (normally written in Latin) and understand the content and the way it fitted into contemporary scientific development. Scientists who know Latin and Latinists who understand sciences are a rarity nowadays. Gabriella was this rarity and a good historian who knew how to ferret information in obscure archives or hidden corners of better known ones.

This allowed her to produce a first rate master's research paper which was published in the prestigious *American Historical Review*. She then segued into a Ph.D. thesis on Italian women in science from the Renaissance to the nineteenth century. Unfortunately, Gabriella was stricken by cancer and lost that battle before she could disseminate her findings through scholarly articles and possibly a book which would have been accessible to a larger public. (One can however access the

dissertation through the Canadian National Library at http://www.nlc-bnc.ca/obj/s4/f2/dsk1/tape9/PQDD_0018/NQ46531.pdf). Italian women of science stood a great risk of relapsing into obscurity.

I was therefore quite excited when Monique Frize contacted me to explain that she wanted to make the results of Gabriella's work accessible to a wider audience. Monique began with Laura Bassi, a woman who fascinated her, perhaps because they shared at least one thing in common: both had been pioneers. Coming out of Convent school in 1959, 17-year-old Monique enrolled at the University of Ottawa to study general science, alongside 7 other young women in a class of 150 students. By Christmas, she was one of two females left in the programme. She did not intend to become a school science teacher, as many probably assumed. By the end of her second year, she had discovered engineering through a student in the field. As far as the university administration was concerned, however, engineering was not a woman's place. Why did she not want to study chemistry, for instance? Wasn't chemistry akin to cooking, something girls are naturally good at? Despite official scepticism, Monique received her BASc in Electrical Engineering in 1966, the first woman in that field to graduate from the University of Ottawa.

After an extensive career in biomedical engineering and several advanced degrees, including a Ph.D. from Erasmus Universiteit in Rotterdam, Monique was appointed Professor in the Electrical Engineering Department and first holder of the Northern Telecom/NSERC (Natural Science and Engineering Research Council) Chair for women in engineering at University of New Brunswick in 1989. This was followed with an appointment as holder of the NSERC/Nortel Chair for women in Science and Engineering for Ontario (1997–2002). In both positions, her mandate was to encourage young women to study science and engineering. The writing and publication of *The Bold and the Brave: A History of Women in Science and Engineering* (University of Ottawa Press, 2009) was the last step she took to share what she had learned with everyone. Monique's first encounter with Bassi was during the research for her book: she came across Londa Schiebinger's book *The Mind has no Sex?* where Bassi is mentioned, and this in turn led her to Gabriella's thesis, done at no other place than one of the institutions where she finished her career.

Bassi deserves a prominent place in the history of female scientists. First, of course, is for her professorship in experimental physics. A few other women had been given a lectureship at northern Italian universities, but the positions were purely honorific: they were not expected to teach or even to do research. Bassi had been given a similar appointment in 1732, immediately after being awarded a Doctor's degree by the University of Bologna. In return for her title and honorarium, she was only expected to deliver public lectures when asked, and not to teach students on a regular basis. Nonetheless, she did, mostly in a private capacity in her home. Bassi thus had been an active lecturer before her appointment, and continued teaching afterwards. Secondly, her contributions to science, especially the science of electricity then in its infancy, were significant. In her day, Bassi achieved the same level of notoriety as Volta or Galvani, but while historians still remember these two men today, Bassi fell into obscurity shortly after her death,

even though she had presented original papers at the Academy every year and made some significant discoveries.

Finally, Bassi was also an independent minded woman, who seized opportunities offered to her, and bent them to her own goals. As a bright adolescent whose talents were recognized early by her tutor, she was only expected to bring prestige to her city through the public display of her talents. The city's elite reasoning was straightforward: they believed, like their contemporaries, that women are by nature less intelligent than men; the presence of exceptionally bright women in a community was therefore proof that the men of the said community had to be superlatively gifted. Like all "exceptional" women who had preceded her, Bassi was displayed through elaborately choreographed ceremonies, including her public lectures, and expected to produce on command pieces of literature to commemorate or celebrate civic events for important city denizens and families. She was expected to remain celibate, thus be available to perform this role, or return to obscurity should she choose to marry. But Bassi wanted to be an active scientist, not some civic decoration, and to do so, she came to the conclusion that she had to marry to escape the restrictions placed on single women's association with men. This also meant finding a husband who shared her interests, who did not expect her to abandon science for housekeeping, and who would not take umbrage of her celebrity status. She found him in Giuseppe Veratti. The couple set up a laboratory in their home and tutored students for 30 years, building a reputation that justified her eventual appointment to a professorship. Groomed to be an old style "exceptional" woman whose activities were subordinated to civic needs and politics, Bassi seized the opportunity her status offered to become a genuine and modern scientist—and an early career woman. She proved that women had agency, and could use it to their own end. She also created a precedent which the Italians, proud of their 'exceptional women', should not forget.

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