

Book Reviews

Asia

Rocks, radio and radar: The extraordinary scientific, social and military life of Elizabeth Alexander

By MARY HARRIS

London: World Scientific, 2019. Pp 587. Maps, Charts, Notes, Bibliography.

doi:10.1017/S0022463420000302

This biography is an extraordinary labour of love, the product of decades of diligent research across a number of different and technically demanding fields, by a daughter trying to restore to her mother the place in history from which she should never have been relegated. But it is also more than just the summary of a lifetime and a family. The title captures the book: Elizabeth Alexander was an extraordinary and accomplished woman who led an extraordinary and accomplished life, cut cruelly short by a brain aneurism as she neared her 50th birthday. In that relatively compressed span, Alexander managed to produce a family, survive a world war in often very difficult circumstances, generate important wartime professional and scientific work in two places that left lasting footprints, and produce important scholarly work in no less than three different fields. The book is as a result sometimes heavy technical going, due to the determination of the author, herself a skilled mathematician, to contextualise her mother's professional life and work as thoroughly as possible. This takes us back to the roots of modern science and scientists in early nineteenth century London, evolving through family and intellectual chains that led in the twentieth century to three generations of 'colonial orphanage', as a family lived out its collective lives in India, Singapore, New Zealand, and Nigeria, as well as 'back home' in England. That combination shapes this life and its story: empire, education, science, war, family, and above all gender.

Readers of this journal will be most interested in the detailed and admirably candid account of the years the family spent in Singapore, the author herself born there in January 1939 to academic parents. But this being 1939, one was the Professor of Physics at Raffles College, while the other, despite having been a graduate student at the celebrated Cavendish Laboratory of Cambridge University, and a highly trained geologist, was officially the 'trailing spouse'. We know much, from many accounts, of life in wartime Singapore, from the rising tensions of 1939 to 1941, to the outbreak of war, Japanese invasion, battle and bombardment, evacuation for the lucky few, occupation, captivity and/or internment for so many others. This well-researched account nevertheless adds things of interest, regarding not only the moods and people of the time but also the evolution of Raffles College, academic and general life therein, and in particular, a passionately argued but well documented defence of the commitment of the resident expatriate community to 'war service'. The Alexanders exemplified this,

confidentially taking on highly technical scientific work in assistance to the Royal Navy that led to the follow-on career Elizabeth Alexander pursued, upon evacuation with her children to New Zealand: radio astronomy and operational research on radar in the South Pacific. There is much of interest for students of the history of science herein, not to mention some genuine colour on wartime life in New Zealand.

In such a long and detailed biography, that addresses so much, there are bound to be a few minor stumbles. Slim in Burma did not order Stewart or anyone else in Singapore to evacuate in February 1942, for example. But these are few, far between, and not significant to the story, which is compelling. The two most vibrant themes of the biography should interest not just students of Southeast Asian history but students of history writ large: how scientific research shaped public policy and development, especially in Singapore, and how women who produced such research found themselves falling ‘off the record’ and ‘out of history’ after the fact. Harris presents a closely argued and soberly reasoned explanation for both themes. The lasting contribution Elizabeth Alexander made to geology in Singapore, just before and just after the war, in always difficult circumstances, and thus to all the modern development that this research made possible — for example, Bedok Reservoir, a favourite rambling site for this reviewer and his family — is a significant conclusion in the wider history of Singapore. Alexander’s impressive ability to adapt to changing circumstances and perform across a range of challenges, spanning for example wartime single parenting, underpaid administrative work to help establish the University of Malaya, and single-handedly establishing scientific geology in Singapore, shines through. All the more important for the author to explain, which she does persuasively, how and why Alexander, and other women of similar accomplishments, either fall out of or fall into secondary roles in the wider historical memory of how science and public policy evolved, in more than one field, place, and time — how a scientist of the highest calibre becomes remembered as a ‘trailing spouse’, with only a few traces for more determined researchers to uncover, despite an impressive body of published work. As the author of some of the many ‘Big Books by Blokes about Battles’ singled out by the author as dominating historical memory, I can only agree with humility how badly we needed a strong account such as this to bring vividly to life some very underexplored themes, particularly but not only regarding Singapore, regarding histories of empire, science, war, and especially gender. Those looking for an example of the value which critically ‘gendered history’ can add to any discussion are well advised to look here.

BRIAN P. FARRELL

National University of Singapore