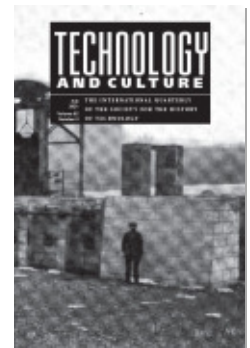The computer is female: Brilliant and visionary heroines who made computer science history by Carla Petrocelli (review)

Ginevra Sanvitale

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Il computer è donna. Eroine geniali e visionarie che hanno fatto la storia del'informatica [The computer is female: Brilliant and visionary heroines who made computer science history]

By Carla Petrocelli. Bari: Edizioni Dedalo, 2019. Pp. 136.
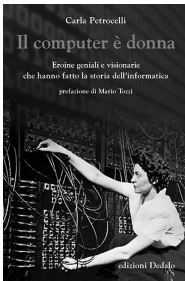
More than twenty years ago, Jennifer S. Light published her now classic article "When Computers Were Women" in *Technology and Culture*. In her article, Light discussed the centrality of women's work on the ENIAC computer, showing that the women who programmed it were written out of the institutional records and excluded from media coverage or academic publications about the ENIAC. After Light's article, more scholars took up the challenge to document the role of women in the history of computing, including the social, cultural, and political processes that hindered the recognition of their work in both the profession and historiography. Some notable examples are the collective volume *Gender Codes*, edited by Thomas Misa (Wiley-IEEE CS Press, 2010), and the monographs by Janet Abbate and Mar Hicks on the marginalization of women programmers and computer experts in the United States and the United Kingdom, *Recoding Gender* (MIT Press, 2012) and *Programmed Inequality* (MIT Press, 2017), respectively.

Carla Petrocelli's *Il computer è donna* is a condensed yet effective introduction to these themes. The book is mostly based on existing academic literature on the history of computing, and to a lesser extent on primary sources and original research. Petrocelli crafts these materials into a gendered account that attaches particular importance to the conflict between the aspirations and skills of women computer pioneers and the sociocultural factors constraining them.

Petrocelli starts with the life histories of some famous women in computer science history: computer programming pioneers Ada Lovelace and Grace Hopper, the ENIAC women, and the inventor and Hollywood actress Hedy Lamar (chs. 1–4). Then, she shows how computer technologies were "made masculine" (Oldenziel, *Making Technology Masculine*, Amsterdam University Press, 1999) in the field of librarianship (ch. 5). This process crystallized the image of the female librarian working with the public at the front desk, while the male computer experts and managers oversaw the library's technological infrastructure. The book ends with a

brief historical review of the female workforce's expansion and contraction in the computer sector (largely in the United States), followed by some biographical portraits of less known women computer pioneers: Mary Kenneth Keller, Karen Spärck Jones, Anita Borg, and Evelyn Berezin (ch. 6). Regrettably, the book's geographical focus is mostly the United States, with no mention of women's contribution to the history of computing in countries like Italy.

Although the contents are not new for those acquainted with gendered histories of computing, Petrocelli's work is valuable as an example of how to write gendered history for the nonacademic public. On the one hand, the framing of women computer pioneers as "heroines" and "visionaries" in the book's title mirrors the language used in the existing semi-hagiographic literature on men computer pioneers. On the other hand, Petrocelli does not idealize her heroines but illustrates the light and shade in these complex personalities. Lovelace's gambling issues, Hopper's struggle with alcohol, and Lamar's turbulent personal life are interwoven in their contributions to the history of computing. In this way, Petrocelli provides not only an account of marginalized historical actors but also a historiographic approach stressing both their challenges and successes.

The book also highlights the mismatch between progressive advancements in computing and the sometimes negative effects of these advancements on women's work. In the chapter on librarianship, Petrocelli explains this aspect effectively, demonstrating that the introduction of information technologies fostered an upskilling among professional men but led to a deskilling among professional women.

In a world of increasingly popular techno-fixes and positivist perspectives on technological development, it is crucial that historians engage with the nonacademic readership. Carla Petrocelli does so, producing an accessible read that can help to debunk common public misconceptions about the history of technology and women's role in its unfolding.

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Ginevra Sanvitale is a PhD candidate at Eindhoven University of Technology. She is currently completing her doctoral dissertation on the role of fear in the history of computing, investigating the intersections of technological imaginaries, political visions, and emotional practices in Cold War Italy and the United States.