Thomas Mullaney, *The Chinese Typewriter: A History*, Cambridge, Mass.:
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Thomas Mullaney's *The Chinese Typewriter* is the most comprehensive
study to date on the invention and development of the Chinese typewriter.
Whereas previous monographs such as Jing Tsu's *Sound and Script in
Chinese Diaspora* and R. John Williams' *The Buddha in the Machine: Art,
Technology, and the Meeting of East and West* devoted one chapter apiece to
Lin Yutang's Chinese typewriter in largely diasporic contexts, Mullaney
tracks the century-long conceptual challenges, precedents, prototypes,
failures, and ultimately, successes, that led to the adoption of character-
based portable writing machines as an integral part of Chinese literacy and
modernity. In his able hands Lin is, relatively speaking, a minor player in
the national quest to adapt modern technology to Chinese characters rather
than the other way around. Mullaney is a highly capable storyteller and
engaging writer, who reconstructs the broader narrative of cultural and
technological chauvinisms, as well as border-crossing endeavors in diplo-
macy, missionary work, and trade that fitfully accompanied the mecha-
nization of Chinese script. I have little doubt this monograph will become
foundational for East Asian media history.

   The Chinese Typewriter consists of an introduction, seven chapters, and
conclusion, with some useful back matter such as a character glossary
especially helpful for colleagues in Asian Studies. The book is organized
somewhat akin to the evolution of the Chinese typewriter itself. Mullaney
begins with turn-of-the-century Orientalist caricatures of an absurd and
unwieldy contraption manned by a small army of typesetters. Its inventor
was comically dubbed "Tap-Key" by photographer and columnist Louis
John Stellman in 1903 (36) in keeping with Eurocentric notions of the
Chinese script as inherently anti-modern and resistant to technological
innovation. The pipe dream of the Chinese typewriter was thus held up
against the perfection of a supposedly universal writing machine—the
single keyboard shift-key model—and found wanting. Nevertheless, as
variant models were introduced to serve other alphabetic and syllabic
languages (notably Siamese, Arabic, and Hebrew), so, too, was the

typewriter gradually reconceived for Chinese as the final, and most elusive, world script to be brought online. From the outset, in an introduction aptly titled "There is No Alphabet Here," Mullaney is determined to de-center universal alphabetization as a precondition for global order, both in terms of linguistic sequence and geopolitical hierarchies. It is a welcome corrective to a premise that one finds ubiquitous, for instance, in Friedrich Kittler's understanding of Western discourse networks. If Mullaney's example of Beijing's de-centering of the alphabet in the roll call of nations at the 2008 Olympics Games seems more ominous of late in relation to Xinjiang, Hong Kong, and the militarized "Nine-Dash Line" land and sea grab across the South China Sea, one may nevertheless find laudable his steadfast attempts to plot "a global history of modern Chinese information technology" (9) that does not kowtow to Western norms.

In actuality, the means by which the Chinese typewriter founds its form factor depended upon a thoroughgoing redeployment of first principles. Lin Yutang overcame the technical limits assumed by the standard typewriter's portable size through an ingenious series of rotating cylinders capable of combining the basic units that make up Chinese characters (radicals and phonetics), such that it was theoretically capable of reproducing "*every Chinese character in existence*" (268, emphasis in original). Nevertheless, Lin's 1947 prototype of the MingKwai typewriter was never mass-produced and ultimately came to naught due to its prohibitive manufacturing costs and the political fallout from the Communist takeover of China in 1949. In place of the familiar register and keys of QWERTY/ AZERTY and MingKwai, the standard Chinese typewriter that came into use in the 1950s introduced a flatbed tray using input methods based on predictive usage. It is here that Mullaney's project comes into sharpest view, as he lays out the argument for replacement of the inscriptive approach with input based on retrieval and search: "As distinct from the act of 'typing,' the act of 'inputting' is one in which an operator uses a keyboard or alternate input system to provide instructions or criteria to a protocol-governed, intermediary system, one that presents Chinese character candidates to the operators that fulfill said criteria" (280-281). In so doing, he describes what arises as "a new human-machine interaction that encompasses a practically infinite variety of potential approaches, protocols, and symbolic systems" (280). This marks the dawn for Mullaney of Chinese information technology that supersedes false claims of universal alphabetization.

Specialist and general readers alike will find much to appreciate in this study, from its host of witty references to American popular culture, including guest appearances by MC Hammer and Tom Selleck, to breathtaking puns such as the chapter title "The Typing Rebellion" (Chapter 7). Most importantly, its TED Talk-like accessibility renders

enjoyable subjects often unnecessarily obfuscated by technical jargon and the disciplinary equivalent of insider baseball. Mullaney deserves great credit for making complex processes legible to the uninitiated without sacrificing historiographical or critical acumen. As a Japanologist I would have liked to see more specifics with regard to the roles Japan played in advancing the typographic revolution in mid-century China, but he strikes the right keys when he observes that "Japan is inseparable from the broader history of nineteenth- and twentieth-century language reform and modernization efforts in East Asia, as well as the era's widespread critique of character-based writing" (201). This is not the whole picture, of course, but readers seeking a point of entry into Sino-Japanese relations will find helpful footholds in "Controlling the Kanjisphere" (Chapter 5) in particular. In sum, this is a book that makes valuable contributions to the field of modern East Asian media history. Since the conclusion of *The Chinese Typewriter* around the 1950s comes up rather abruptly, we should look forward to its sequel on Chinese computing to further illuminate how computer science since the 1970s has taken word processing from its mechanical origins into electronic media, personal computers, smartphones, and beyond.

References

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