The large number of translation terms coined in late Qing China make word formation during this period an attractive area of study. Works in English addressing this topic have been authored by David Wright, Lackner, Amelung and Kurtz, and, more recently, Joshua Fogel.¹ Such studies offer more than a rehashing of the lexicological challenges of translation. Indeed, in this study of The Translator’s Vade-mecum, Gabriele Tola asserts that terminology is no less than a “vehicle” for “interpret[ing] history and human society” (p. 227). The Translator’s Vade-mecum refers to the expansive bilingual English Chinese glossary of scientific and technical terms compiled by John Fryer, and published in 1888. The TVM, as Tola refers to the Vade-mecum throughout his work, brought together translation terms on chemistry, materia medica, mineralogy, and the steam engine, coined mainly (but not exclusively) by Protestant missionary translators in late imperial China.² Crucially, and hence Tola’s interest, Fryer did not simply copy terms that others had used, he modified many of them in accordance with his strongly held views about the capacity of the Chinese language to convey scientific ideas.

John Fryer (傅蘭雅, 1839–1928) is already well known to historians of late imperial China. Born into a religious family in the south-east of England, Fryer arrived in Hong Kong in 1861. Two years later he took up a post as professor of English at the Tongwenguán 同文館 in Beijing, but then left in 1865 to establish the Anglo-Chinese School in Shanghai. In 1868, he was hired by the translation department of the Jiangnan Arsenal. It was there that Fryer collaborated with Xu Shou (徐壽, 1818-1882) to translate various works, such as David Ames Wells’ Principles and Applications of Chemistry, which would seal their reputations as master linguists. In translating Wells’ work, Fryer and Xu created new Chinese terms for all the then-known 64 chemical elements, and these went on to gain widespread acceptance and use. After decades of activity at the Jiangnan Arsenal, during which he devoted considerable efforts to compiling the TVM, Fryer left for the United States in 1896 to take up the first Agassiz professorship of Oriental Languages and Literature at the University of California in Berkeley.

The archives that Fryer left at Berkeley comprise the primary sources for this study. Fryer’s collection includes manuscript versions of the constituent glossaries of the TVM. By comparing these manuscripts with the published versions of the TVM, Tola is able to peer behind the finished product

² Later versions of the TVM were published under the names Chinese and English Technical Vocabularies (1889), and Translator’s Vade-mecum (n.d.). The order of the constituent glossaries differs in these two versions.
to reveal the intellectual labour involved in Fryer’s project. The manuscripts allow Tola to discern, for instance, where Fryer made modifications to terms coined by others. And, by analysing these modifications alongside Fryer’s various pronouncements on translation, Tola is able to make persuasive hypotheses about Fryer’s motives for these changes. To give one example, Fryer’s insistence that phonemic loans should be avoided as much as possible likely explains why he replaced *yidukelasi* 以度可拉司, the phonetic rendering of the mineral ‘idocrase’, with *zaxing shi* 雜形石, a more descriptive translation. However, Fryer’s prioritisation of uniformity ahead of accuracy meant that he left untouched many terms that he found unsuitable, simply because they had already gained wide currency.

Fryer’s archives also include manuscripts of a never-published second volume of the TVM, which was to cover the fields of naval architecture, botany, geology, and geography. Tola’s analysis of these manuscripts provides, for me, the more fascinating insights of his study. Fryer compiled manuscripts by handwriting (or, in a few cases, typing) terms onto strips of paper to which he added colour depending on the source of the term, and then gluing these strips to pages in alphabetical order. This allows Tola to identify the source of each term. While the sources of Fryer’s glossaries are already explicit in the first volume of the TVM (each of its constituent glossaries contains a preface providing such information), it is highly revelatory in the case of the second volume, and draws attention to the wide range of sources that influenced the scientific lexicon of late imperial China. Take, for example, the ‘List of Botanical Terms’. This glossary includes words coined not only by Protestant missionaries in late Qing China, but in works composed by the Portuguese Jesuit missionary João de Loureiro (1710-1791) during the early Qing era, as well as terms created in Japan by *honzōgaku* (materia medica) luminaries such as Udagawa Yōan 宇田川榕菴 (1798-1846), Itō Keisuke 伊藤圭介 (1803-1901) and Iinuma Yokusai 飯沼慾斎 (1782-1865). De Loureiro’s work drew extensively, if indirectly, on many European sources, and Fryer’s Japanese sources were themselves translations of Dutch works imported via Nagasaki. To further convolute matters, the impetus for the Japanese translations of Dutch works was a desire to extend knowledge in the field of *honzōgaku* 本草學, which had itself been introduced to Japan in the early seventeenth century through Li Shizhen’s 李時珍 (1518–1593) *Bencao gangmu* 本草綱目.

In the latter part of his work, Tola examines the influence of TVM on subsequent scientific and technical works in Chinese, mainly other glossaries and dictionaries. He argues that the TVM exerted widespread influence, stating that “this underestimated text is a milestone in the lexicological and philological production of late Qing China” (p.226). However, this claim falls somewhat flat because although Tola does identify some terms in subsequent works that are similar to those the TVM, there
is little indication of what proportion of the terms are similar. Moreover, there is little in the way of evidence in these works of direct influence by the TVM, a point that Tola himself concedes (p. 223). Indeed, many of the terms in the TVM did not stand the test of time. As Tola points out, the Sino-Japanese War proved to be a turning point, after which “Japanese texts would contribute the most to completing the evolution of Chinese scientific and technical nomenclature” (p. 225). Perhaps then, the significance of Fryer’s work lies less in its impact on the modern Chinese lexicon than in the considerable insight it provides into the tenacious quest by Fryer and many of his contemporaries to find translation terms that would fit harmoniously into the written Chinese language.

The historian Michael Wintroub once asserted that “what makes translation possible is prior acts of translation.” He argues that “the only way to reliably move things from one place to another” is through reference to “universally accepted measures.” In other words, the linguistic act of translation is but the tip of an iceberg of a mass transfer of objects, actors, and discourses. To extend Wintroub’s argument, one might say that glossaries are themselves rendered possible only through the colossal effort of those who translate the books from which glossaries derive their terms. Notwithstanding Fryer’s interventions, much of the achievement of the TVM lies in the scholarly endeavours of those translators on whose works Fryer relied (one of whom, it should be highlighted, was Fryer himself). However, this does not detract from the significance of Fryer’s work, or from Tola’s study of it. The Translator’s Vade-mecum does indeed serve as a vehicle for understanding. It renders visible how Fryer and his contemporaries implemented their resolute belief in the capacity of the Chinese language to generate and express scientific and technical ideas.

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3 Wintroub 2015, p. 1194.
4 Wintroub 2015, p. 1195.