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J.-P. Jeff Chen* (jjchen@stcloudstate.edu), ECC 226, Department of Mathematics & Statistics, 720 4th Avenue South, St. Cloud, MN 56301. *"Symbolic Algebra" in China.*

Some consider the Jesuit-introduced cossic algebra in the 1690s as the first appearance of symbolic algebra in China. Some credit Jean-François Foucquet for his 1711 manuscript for the emperor, the New Method of Algebra, in which Chinese characters were used to represent variables. The emperor ultimately dismissed this work as utter nonsense in spite of initial enthusiasm. Consequently, the content is not included in the mathematical compendium, The Essence of Numbers and Principles, commissioned by the emperor and published in 1723. Although this work contains sections on operations of the "symbolic" expressions, historians of Chinese mathematics generally consider that symbolic algebra was not part of mathematical practice in China until after the translation of Elements of Algebra in 1859. Recently, we uncovered records of usage of "symbolic algebra" in two early 19th-century treatises. In one case, the text explicitly describes expanding squares of the sum of three terms, squares of fractional expressions, and cancellation of common factors on both sides of an equality. This paper examines the practices of "symbolic algebra" recorded in Chinese mathematical treatises, showing the need to reevaluate the uses and impact of symbolism in algebra in 19th-century China. (Received July 22, 2014)