

Abstract

The ceremonial music of ZHU Zaiyu

朱載堉的禮樂

by

WOO Shingkwon 胡成筠

The Chinese music theorist, composer, mathematician, and scholar ZHU Zaiyu 朱載堉 (1536–1611) is well-known in music history as the creator of the mathematical theory of 12-tone equal tuning (equal temperament). The major part of his writings is collected in the *Yuelü quanshu* 《樂律全書》 [Comprehensive treatise on music and music theory], an encyclopaedic work comprising 14 separate titles, and written over a number of years from before 1581 to 1607. His music theory is mainly presented in *Lülü jingyi* 《律呂精義》 [Precise principles of the musical pitches] (Preface dated 1596), which is the single most important treatise within the *Yuelü quanshu*, and this topic has been the focus of most studies on Zhu Zaiyu to date. The principal music scores of Zhu Zaiyu constitute another sub-opus within the *Yuelü quanshu*, whose titles are comprised in the *Caoman guyue pu* 《操縵古樂譜》 [Ancient music with zither figurations], *Xuangong heyue pu* 《旋宮合樂譜》 [Concerted music / transposable through all 12 pitches], *Xiangyin Shiyue pu* 《鄉飲詩樂譜》 [Songs of the 《Shijing》 for performance at the Country Banquet], and *Xiaowu xiangyue pu* 《小舞鄉樂譜》 [Music of the country to accompany the minor dances]. (Due to time constraints, the 4 very interesting songs in *Lingxing xiaowu pu* 《零星小舞譜》 [Choreography for the minor dances at the Lingxing Temple] are not included in the present study.) The musical compositions in these works were written over a period of years dating from not long after 1567. They have lain mutely under the shadow of Zhu Zaiyu's extraordinary achievements in theory, and have never been fully studied. These musical compositions are the subject of the present dissertation. The research aims to understand the music, to transcribe the scores, and thus help to bring them back to sounding life.

The core of the work comprises the music transcriptions of Ch. 7. These aim to come as close to Zhu Zaiyu's Urtext as a transcription can, and for those scores furnished with instrumentation, they should be sufficiently explicit in all details to be directly performable in a manner as Zhu Zaiyu intended. Ch. 1–6 present supporting studies which help to understand the music in its historical and

theoretical contexts, but extensive analysis is not attempted. For orientation, Ch. 1 provides a review of Zhu Zaiyu's life and musical works. It appends a translation and study of a rather neglected primary document which played a crucial part in Zhu Zaiyu's life, his 〈Rangguo zhenglun shu 讓國正倫疏 [Petition to relinquish the principality and rectify family relationships]〉, most likely written in 1593. Ch. 2 describes the ceremonials of the classic text *Yili* 《儀禮》 [*Protocol and ceremonial*] for which Zhu Zaiyu composed much of his music. Ch. 3 surveys Zhu Zaiyu's music notation, and includes a special study of his zither figurations called *caoman* 操縵. Ch. 4 appraises Zhu Zaiyu's music tuning, with the immediate purpose of determining the sounding pitch of his *huangzhong* 黃鍾, and it naturally impinges on facets of his music theory. Ch. 5 and Ch. 6 furnish information and particulars about the instrumentation and orchestration of the compositions transcribed in Ch. 7.

An incidental finding uncovered by these investigations is the re-discovery of a fragment of a treatise or essay by Zhu Zaiyu which has long been lost (at least since 1825). It is the *Xiantiantu zhengwu* 《先天圖正誤》 [*Correcting errors in the a priori diagram of the 《Yijing》*]. I mention this re-discovery in Ch. 1, but time constraints do not permit a fuller discussion. This must await a later study. In more ways than one, the present dissertation is better regarded as a work in progress, than as a finished piece of research.