IMPROVEMENT OF THE MODALITY IN BYZANTINE CHANT THROUGH *FONASKEIN* SOFTWARE

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One of the major obstacles to appreciating Byzantine music is the extensive training required to understand the special music notation (parasemantics) - which has a tradition of fifteen centuries - as also the way of pronunciation and singing on the proper mode of the sacred text. At the Music Department, University of Athens, at the special sector of Byzantine musicology, students have obstacles to understand the link between the notation which indicates a special mode and the final vocal result.

The scope of this paper is to instruct students to the modality of the Byzantine chant (8 modes); thus we have created the interactive environment *Fonaskein* for the practice of singing voice in real time with visual feedback for both equal and non-equal tempered scales [Moschos, Georgaki, Kouroupetroglou, 2016] which has already been used for tempered and traditional singing.

More precisely, in this paper we investigate the effectiveness of *Fonaskein* in improving the modality of Byzantine scales (echoi) during real-time singing and the variation of the melismatic ornaments according to the special notation; thus we calculate the pitch errors before and after the singing practice of two hymns in different modes. For this purpose we use two groups: undergraduate students which are on the first grade of Byzantine music and don't follow accurately the indications of the score and master's students which are aware of the particularity of the notation and sing closely to the mode. The statistical analysis of the results between these two groups before and after the use of the software indicate the educational and cognitive dependence of the Byzantine notation based chant and raises questions about the acoustic and cognitive aspects of the pedagogy of Byzantine Chant.