

Manfred Stahnke's Innovative Meloharmonic Structures in *Orpheus Kristall* (2001)

Navid Bargrizan
University of Florida
nbargrizan@ufl.edu

In his 2001 opera *Orpheus Kristall*, Manfred Stahnke presents an Orpheus bewildered within the complexity of a multimedia environment. Stahnke borrowed the term *Kristall* from the Austrian physicist, Erwin Schrödinger's concept of "aperiodic crystal" in his influential book *What Is Life?* For Stahnke, the complicated, rigorous structure of a crystal is a metaphor of the opera's intricate microtonal system, comprising fifty-three tones per octave, which employs the partials up to the twenty-first harmonic in the overtone series. Furthermore, Stahnke's concept of "difference-tone harmony" is fundamental to opera's harmonic structure. This concept rests upon what happens naturally in our ears. As soon as we hear an interval, in our ears, its "summation tones" emerge as overtones, and its "quadratic"- as well as its "cubic" "difference-tones" emerge as undertones. Extending the scope of his microtonal system, throughout *Orpheus Kristall*, the composer builds just-tuned chords based on both sorts of the difference-tones. A third microtonal element in this opera is the slow "microglissandi," which grant the listener the chance of hearing a transforming world of the finely-tuned tones as analogous to the mutating thoughts of the autistic Orpheus. Employing these three microtonal elements accompanied by Internet as a medium which allows the participation of the remote musicians in the performance, Stahnke creates a new opera concept, all the while basing his composition on an elaborated version of the Orpheus-myth.

As I argue in this paper, in *Orpheus Kristall*, Stahnke's comprehensive meloharmony rests upon his use of a fifty-three tones-to-octave intonational system, his Difference-tone harmony, and his extensive use of microglissandi. Accordingly, I analyze the meloharmonic structure and the allegorical representation of key contemporary existential and psychological issues within *Orpheus Kristall*, made possible through composer's innovative approaches to microtonality, technology, myth, and philosophy.