



## THE BEHOLDER - A SYMPHONY OF LIFE IN MEDICINE

### Music

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### ABSTRACT

The holistic medicine movement of the 1980s expanded healthcare perspectives beyond traditional boundaries, coinciding with a parallel holistic movement in the humanities. The interconnections between music, art, physics, and medicine reveal intriguing parallels and unifying principles that tie together these synchronous evolutions. Clear symmetries exist between sound, visual art, and quantum wave phenomena, hinting at a unifying framework that integrates sciences with the humanities. This journey toward harmonic convergence has integrated artistic, scientific, and humanistic viewpoints, illuminating a remarkable tapestry of interconnected knowledge.

### KEYWORDS

Holistic, Waves, Music, Quantum Field Theory, Medicine, Harmony, Healing

The Beholder came to life during my time as a music student at the University of Washington. Although focused on programming computer music, I continued composing and playing the piano and trumpet. At that time, we composed music scores with an old-fashioned ink-fountain pen. It was a fully immersive process. Today, it's fascinating how modern computer composition software programs now produce just as beautiful scores, rivaling the beauty of traditional handwritten notes.

During those college years, I also delved into the sciences, exploring computer programming and the physics of music. Quantum mechanics were fascinating, leading to the realization that waves manifesting as quantum fields were the very essence of our reality (1). Music, art, and physics, each dealing with different types of waves, shared the same fundamental beauty. This connection between music and physics was inexorably compelling.

Thus began my journey into holistic music, where beautiful waves were not limited to sound. Medicine seemed a natural progression, caring for the body like music for the spirit. It was surprising to discover that this view of holistic music in the 1980s corresponded with a movement in the medical field toward a growing recognition of holistic care (2).

This approach to holistic music started gradually. First, water-coloring was incorporated into my scores to create a synergistic harmony between beautiful sound and visual waves. The Beholder was the first score I painted in such a fashion. Then harmony seemed everywhere, and nutritional sciences seemed a natural extension of holistic music. Further symmetries were found after a deeper exploration into biology, chemistry, and medicine. The more music appeared to be intertwined throughout life, the more I was drawn to medicine as a way to create beauty of great power and significance. As a holistic musician, studying medicine and becoming a healer was a fascinating symmetry, a harmonic convergence. With time, it became apparent that clinical medicine was my musical path, and so began the integration of music into my medical writings (3). It was my way of doing something as profound for people as traditional musicians do through music. The Beholder began this journey into a profoundly gratifying medical career.

Decades later, it came as no surprise to read a research study on the use of music in the ICU. The regular beats of the music improved heart rates, helping patients heal (4). It was nice to see research prove this, but such a finding was already true, as I recalled that years ago, my heart rate would match the musical tempo when playing the Moonlight Sonata.

As I continue to explore the confluence of music and medicine, there remains a profound sense of awe when encountering individuals who radiate their innate beauty to the world through their chosen paths, whether their careers, personal hobbies, or passionate pursuits. Professional musicians, with their unwavering dedication, commitment, and focus, have consistently been a remarkable source of inspiration. Yet, every person possesses that same ability to radiate

their distinctive beauty to the world. And when people come together, they create a symphony of unparalleled magnificence.

A Symphony of Life  
Eternal melodies filled my soul.  
Composing a tranquil stream.  
Exploring rhythms and harmony.  
Spirit and life overflow.

Waves and particles together,  
Nature's pulse entwined.  
Music fused with medicine.  
Body, spirit, and mind.

A rhythmic song  
Keeps strong the heart.  
In harmony, we belong  
We all play our part.

Science, music, and medicine align  
Coming together in symphonic grace  
Finding a synchrony of healing signs.  
In wondrous ways, inspiring and emerging

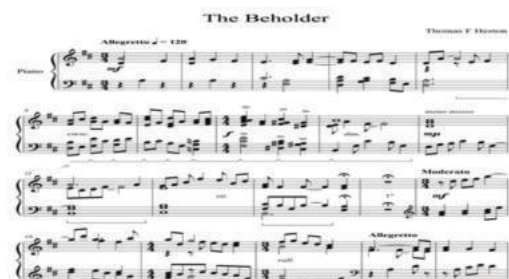
A holistic view of waves  
Brings beauty to all we do  
From moonlit sonatas to ICU wards  
Music gives our souls' rewards

In each person lies within  
A talent's impassioned flame  
Unified, glorious music we make  
Masterpieces for humanity's sake

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**Ethical Approval:** This study did not involve human or animal research.



The Beholder 3

Musical score for 'The Beholder' page 3, measures 41-45. The score is in G major (one sharp) and 3/4 time. It consists of five systems of piano accompaniment, each with a treble and bass staff. Measure 41 starts with a treble clef and a key signature of one sharp. The melody in the treble staff is: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter). The bass staff provides a steady accompaniment with eighth notes.

The Beholder 3

Musical score for 'The Beholder' page 3, measures 46-50. This section continues the piano accompaniment from the previous page. It consists of five systems of piano accompaniment, each with a treble and bass staff. The melody in the treble staff continues with: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4-A4 (beamed eighth notes), G4 (quarter). The bass staff continues with eighth notes.

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Musical score for 'The Beholder' page 4, measures 59-60. Measure 59 continues the piano accompaniment. Measure 60 is the final measure of the piece, marked with a double bar line and a fermata. The treble staff ends with a G4 (quarter) and a whole note chord of G4-B4-D5. The bass staff ends with a G2 (half) and a whole note chord of G2-B2-D3.

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