

## ***Revelation: Music in Pure Intonation*** **Program Notes by Stuart Isacoff**

There are moments in every age when a new artistic direction seems to sprout and flourish. We can trace the slow germination and multiple sources that gave rise to it, yet a specific work or artist often comes to symbolize the break with the old. Think of Wagner's *Tristan* chord, Debussy's *Prelude to the Afternoon of a Faun*, Schoenberg's *Op. 23 Piano Pieces*, or Cage's *Sonatas and Interludes for Prepared Piano*.

Each created new sound possibilities for their day, transforming the musical soundscape far beyond its traditional boundaries. The same can be said of Michael Harrison's music. "In Michael's music, the sound of one note has its own positive beauty and life force," reports pianist Joshua Pierce, who has played this composer's magnum opus for piano, *Revelation*. "When I play it I'm transported to another world. Of course, this music is very difficult to perform: you have to enjoy wading through the circuitous patterns of the work to find its essence." What's more you have to have both pianistic virtuosity and a keen sense of harmonic possibilities beyond those found in the Western canon.

This composer, who, like his early mentor, La Monte Young, is deeply influenced by the East, has created an art form that allows the piano to probe territory normally outside of its range: the "overtones" generated naturally by vibrating strings -- that is, the series of natural pitches that resonates softly above every "fundamental" tone. Out of acoustical necessity, these are purposely altered in the modern pianos' tuning. The intricate textures and remarkable effects of *Revelation* are the result of Harrison's desire to resurrect the pure harmonies that have thus been lost, and thereby to "emancipate the comma."

A comma is the difference between two intervals with the same name -- a third, for example, or an octave -- arrived at through different tuning systems. For example, a major third (Do to Mi) produced in a tuning based on a series of pure fifths (Do to Sol) is wider than one produced by two strings that are in a "pure" major third relationship (that is, one resulting from two strings vibrating in the ratio 5:4). Play these two "major thirds" at the same time and a clash will result. A problem arises in tuning a keyboard with fixed pitches because it can be tuned to offer pure fifths or pure thirds but not, over the entire length of its range, both. Over the course of history, many different approaches to tuning were tried in order to avoid these inevitable clashes. Our modern tuning, known as equal temperament, does away with these collisions altogether -- but at the cost of losing the purity and color of naturally-produced harmonies.

Instead of avoiding them, Michael Harrison incorporates into his music the clashes that occur when completely pure (or "just") intervals are allowed to coexist in a piano's tuning. In some ways, his vision represents the flip side of Arnold Schoenberg's. Schoenberg broke down conventional harmonic models by "emancipating the dissonance," ordering music through artificially chosen rows of tones rather than through the gravitation of natural tonal movement. Schoenberg freed music horizontally,

and Harrison frees it vertically. His music uses harmony built on subtle harmony, with overtones wrestling or reinforcing each other -- often producing a concoction of otherworldly resonances. Schoenberg dissolved the distinction between consonance and dissonance. In similar fashion, Harrison rehabilitates the comma into a newly welcome constituent of the harmonic universe.

The results are often wondrous. In the midst of clouds of dense clusters rapidly drummed in the bass end of the instrument, an astute listener can perceive high ghost tones -- sometimes bell-like, at other times vaporous -- as if a choir of angels were singing along. From Michael Harrison's perspective, the acoustic piano, which had evolved continuously since 1700, has now remained virtually unchanged for 125 years. In each age, composers have transformed the piano according to their needs; and his is the next great step in that development. The instrument you will be hearing is what he calls a "harmonically tuned" piano.

A complete performance of *Revelation* consists of 12 intertwined sections, and lasts about 75 minutes. It was begun in 1999, when the composer was one of four Americans to perform at a festival in Rome (the others were Philip Glass, Terry Riley and Charlemagne Palestine). "The intensive experience of rehearsing and performing my own work, as well as hearing the music of my colleagues was extremely inspiring," he remembers. "As the week progressed, I found myself contemplating the sonic effects that result from working with commas, or very minute, mathematically, and precisely tuned intervals. I woke up on the morning following the last concert with a radical new tuning in my mind. It came to me very clearly, seemingly with no planning or effort, with all of the mathematical proportions worked out in a well-balanced symmetrical configuration. It felt like a gift; however, I am aware that this moment could only have happened as a result of twenty years of working with just intonation tunings." The resulting work continued to evolve; the present version was 5 years in the making.

*Revelation: Music in Pure Intonation* is an astounding and exquisite piece. And it may well be one of those seminal works that mark a new direction in musical history.

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