

Kathleen Schlesinger and Elsie Hamilton - Pioneers of Just Intonation

Introduction

In Harry Partch's "Genesis of a Music" (Da Capo Press 1979), there are references to a British musicologist by the name of Kathleen Schlesinger (1862-1953) who had analysed flutes in various museums around the world and come up with what she considered to be a sort of Urstimmung, an original tuning system common to many different cultures.

This tuning system was similar to Partch's in that it was a Utonality (undertone) system with a prime limit of 13. Whereas Partch's 43 note to the octave system combined both Utonalities and Otonalities (based on undertones and overtones respectively) with a prime limit of 11. That the same idea was appearing in two unrelated places seemed like some sort of Zeitgeist at work.



Elsie Hamilton

In her book "The Greek Aulos", in Appendix III, Schlesinger refers to a composer who was using this system of tuning, an Australian by the name of Elsie Hamilton (1880-1965). Schlesinger quotes a few brief bars from Hamilton's compositions and that's all we know about her.

This reference has tantalised many who have ploughed through "The Greek Aulos". A composer who was using Just Intonation in Britain in the 1920s!

The only clue I had was that Elsie Hamilton had been in the Anthroposophical movement. This movement was started by Rudolf Steiner (1861 -1925) as a breakaway from the Theosophical movement of Helena Blavatsky (1831 - 1891).

Historical and Metaphysical context

Blavatsky is a controversial figure. Her philosophy took many elements from the Indian traditions, notably Vedanta (the philosophy of the Upanishads) and integrated them into a wider system that saw all religious paths leading ultimately to the same end. She also took on board the historical perspective of Vedanta, namely the concept of ages. In Indian philosophy these are immense timespans of man's evolution representing only moments in a day of the creator god Brahma. Into this timescale Blavatsky, in her syncretic manner, weaves other narratives including the legendary civilisations of Atlantis and Lemuria and material she gleaned from channelled entities and psychic investigation.

Theosophy has been part of the world view of many internationally renowned artists such as the painters Kandinsky and Roerich, the composers Scriabin and Dane Rudhyar.

Steiner broke with Theosophy when Blavatsky's heir, Annie Besant declared Krishnamurti to be the second coming of Christ (a claim which Krishnamurti later repudiated).

Steiner's philosophy, known as Anthroposophy, although mystical, was more rooted in Christianity and the scientific theories of Goethe. What it kept however, among other things, was the Theosophical concept of time and the idea that we are living in the post-Atlantean age (the time since the legendary continent of Atlantis sank beneath the waves). Steiner further developed ideas of the relationship between these ages and the evolution of human consciousness.

This is the philosophical background to the thinking of both Schlesinger and Hamilton. From reading Schlesinger's work, my impression is that her search was for this *Urstimmung*. This she thought she had found in the measurements of flutes from various cultures. The analysis of these measurements led her to construct her system of Harmoniai. This system she then overlaid with philosophical and mystical concepts from Anthroposophy such as the association of each mode with a particular planetary energy in the astrological sense.

Inevitably her theories came under criticism from other academics. Even Dane Rudhyar, no mean mystic himself, asserts that Schlesinger "totally misunderstood the early development of music." (*The Magic of Tone and the Art of Music*. Dane Rudhyar. Shambhalla Publications. Boulder CO. 1982)

According to American musicologist, John Chalmers "Although Schlesinger's theories are considered incorrect by most scholars of classical Greek music, her scales form a fascinating musical system in their own right."

For me, however, as a composer working with non-standard tuning systems, I find Schlesinger's system the most satisfying and useful. There is an internal consistency and mathematical rigour and elegance that I like. In addition, it is easy to explain to musicians and non-musicians alike.

In my own research I have expanded the idea of Modal Determinants (MDs) to higher numbers so that lower MDs become subsets of those higher. I have however stayed within the prime limit of 13 used by KS and EH because I cannot *feel* the quality of higher prime numbers such as 17 or 19. I don't get their sense of identity.

What counts in music

This raises a major point and links us back to Steiner's work on Goethe's scientific theories. For Goethe and for Steiner, western science has made the mistake of concentrating solely on quantitative aspects (that which can be measured) and ignoring quality.

Albert Einstein had a sign hanging in his office at Princeton that read: "Not everything that counts can be counted, and not everything that can be counted counts."

But number is more than just a system of counting things. To a Jungian analyst, numbers are archetypes with symbolic associations. To the synaesthete, numbers are identities with their own individual qualities: tastes, textures, smells and personalities. But synaesthesia is in fact a continuum; something we all partake of to a greater or less extent. The ability to perceive the emotive, textural, sensory etc quality of number is not restricted to an odd few.

Through working with tunings, many people have come to this sense of vibrations as identities. Partch talks of odentities and uidentities. Alain Daniélou (*Music and the Power of Sound: The Influence of Tuning and Interval on Consciousness*. Inner Traditions International 1965) talks of the metaphysical qualities and effect on consciousness of different prime numbers.

This right-brained way of appreciating number is fundamental to the way of working with tunings and is the complete antithesis of Schoenberg's twelve tone system. As Lou Harrison puts it in his *Music Primer* of 1970, "Thus, he [Schoenberg] substituted an order of succession for a hierarchy of relationships."

It is the Cartesian paradigm of the split between the observer and the observed (based on the thinking of Aristotle) that has taken us out of relationship to nature. Nature has become a thing out there, an "it", something we are not a part of. This dualistic thinking has led to our delusion of

dominance over nature and is at the basis of the ecological crisis we find ourselves in. It is no coincidence that Descartes and the so-called "Age of Enlightenment" was contemporary with the introduction of Equal Temperament where the harmonic relationship between notes is severed.

(Twelve tone equal temperament which predominates in the west, is based on an irrational number, the twelfth root of two - the number which has to be multiplied by itself 12 times to make 2 - or approximately 1.0594630943593.)

In the non-dualistic paradigm, the observer is not separate from what is observed. This paradigm is fundamental to subatomic physics since Heisenberg and Schrödinger. At the human scale, it means looking at nature as a "you" rather than an "it", the word "you" implying relationship.

In Just Intonation, the notes relate to each other in simple whole-number ratios. Relationship is built in to the fabric of the tuning. It only has to be revealed in the course of a piece of music. And as there is harmonic relationship between the notes, there is an intrinsic relationship between the music and the audience.

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Reading the written works of Schlesinger and Hamilton elsewhere on this site:
The Nature of Musical Experience in the Light of Anthroposophy by Elsie Hamilton
The Modes of Ancient Greece by Elsie Hamilton
The Language of Music by Kathleen Schlesinger
The Return of the Planetary Modes by Kathleen Schlesinger

will give deeper insights in to the world view of these two pioneers of alternative tuning.

Schlesinger's magnum opus "The Greek Aulos" (Methuen. London. 1939) is out of print but a copy is available on inter-library loan from the British Library in Boston Spa to readers in the UK.

On this site as well are reproductions of scores in pdf format some kindly photocopied by John Wood of Stroud others made available by the library in Dornach, Switzerland.

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Of Elsie Hamilton we know very little. She was born in 1880 in Adelaide, South Australia where she knew Hooper Brewster-Jones, a pioneering Australian modernist. Came to Britain in 1906. Was a concert pianist and composer in equal temperament (her only extant composition in Equal Temperament is Feuilles D'Automne for piano) before meeting Schlesinger and deciding to devote her life to composing using Schlesinger's Harmoniai. Her key written work is "The Modes of Ancient Greece", a booklet where she describes 7 scales relating to the seven planets known to the ancients.

She travelled around Europe (Germany, the Netherlands, Finland) demonstrating and talking about the tuning system and her compositions. Later she took on a position as music teacher at a Steiner school in Stroud, Gloucestershire, UK. After which she returned to Australia.



Elsie Hamilton (right) conducting an ensemble of lyres, cello and flute

Some of the scores presented here were donated by John and Daisy Wood who taught with Hamilton at the school. Also the copy of her summary of Schlesinger's tuning system "The Modes of Ancient Greece" which is e-published here for the first time in pdf format. The articles: The Nature of Musical Experience in the Light of Anthroposophy by Elsie Hamilton, The Language of Music by Kathleen Schlesinger, and The Return of the Planetary Modes by Kathleen Schlesinger were found in the Library of Steiner House, Park Street, London, UK.

It is believed that Elsie Hamilton returned to Australia after retiring from teaching and died in 1965. Despite attempts to contact Anthroposophical institutions in Australia, we have no further knowledge of her or her heirs. The texts and scores available here are presented free of charge as the copyright of them is unknown. They are presented with an intent with which I believe Elsie Hamilton would have concurred: to harmonise humanity with the cosmos through music. May her work continue.

Brian Lee, London UK, 2006

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Elsie Hamilton (with her back to us)
conducting an ensemble