third octave

"Third Octave is Golden." Keely

Keely

With his Generator, which was invented for the purpose of multiplication of vibrations, he secured higher frequencies by disturbance of equilibrium of mediums of different specific gravities, air as one, water as the other.

In the disintegration of water in his "Liberator" he produced the "etheric order of ozone." This he is said to have used in a "carbon register" to produce a high vibratory circuit that proved sufficient to break up cohesion, which he states is simply molecular magnetism. At that time he used, in molecular dissociation, one tuning fork of 620 per second, setting chords on the first octave, in atomic separation, two forks, one of 620 and one of 630, setting chords on the second octave, and in etheric separation used three forks, one of 620, one of 630 and one of 12,000, setting chords on the **third octave**. [VIBRATORY MULTIPLICATION]

Russell

"The invisible space octaves beyond our range of present perception may be considered three and one half in number: if one considers 1) the last half of the ninth octave to be part of the first, invisible, space octaves, and 2) all of the **third octave** elements to be unknown, though only four elements are yet undiscovered. The last half of the ninth octave includes the elements tomion, alberton, blacton, and boston. The four yet keynote inert gas alphanon. See page 272. [The Secret of Light, page 292]

"The reverse of this principle applies in depolarizing bodies. Depolarizing bodies on the radioactive half of any cycle project time accumulations from them at tremendous speeds. Helium and other inert gases explode outwardly from tungsten at approximately half the "speed of light" while similar "rays" explode outwardly from radium, actinium, thorium, uranium and uridium at almost the speed of light.

Conversely, generoactive rays explode inwardly at tremendous speeds in the **first three invisible octaves**. Alpha, beta, gamma and "cosmic" rays explode inwardly to center invisible generating matter as they and the older inert gases explode outwardly from degenerating visible matter." [Walter Russell, A New Concept of the Universe, pages 112-117]

Ramsay

A musical sound, thus illustrated, is composed of 25 circles of vibrations, and each circle is a more or less developed sound. There are, therefore, 25 sounds in one musical sound.¹ When these 25 sounds, with 19 different ratios, are fully developed and standing in the same order and in the same proportions as that in which they naturally arise in a single sound, and in this fully developed condition all heard together, they produce one grand harmonious chord of chords.² The reason is obvious; these 25 sounds are distributed over six octaves. As B, the seventh in the octave-scale, cannot be developed save at the distance of five and a-half octaves above the fundamental sound, so on that account it has no octave in the chord, having only one circle of vibrations in Nature's grand fugue. D, the second of the octave-scale, arises at nearly five octaves up, and has only two circles of vibrations; G and E arise in the fourth octave, and have three circles each; A arises in the **third octave**, and has four circles; C arises in the second octave, and has five circles; while F, the fundamental sound, the genetic root of the whole system, has the first octave entirely to itself. It has also the seven circles of vibration which embrace and enclose the whole six octaves, and give unity of structure to the whole system of vibrations. [Scientific Basis and Build of Music, page 17]

Six Octaves required for the Birth of the Scale

EXPLANATION OF PLATES. [BY THE EDITOR.] PLATE I. "NATURE'S GRAND FUGUE."

THIS plate is a Pendulum illustration of the System of musical vibrations. The circular lines represent Octaves in music. The thick are the octave lines of the fundamental note; and the thin lines between them are lines of the other six notes of the octave. The notes are all on lines only, not lines and spaces. The black dots arranged in these lines are not notes, but pendulum oscillations, which have the same ratios in their slow way as the vibrations of sounding instruments in the much guicker region where they exist. The center circle is the Root of the System; it represents F1, the root of the subdominant chord; the second thick line is F2, its octave; and all the thick lines are the rising octaves of F, namely 4, 8, 16, 32, and 64. In the second octave on the fifth line are dots for the three oscillations which represent the note C3, the Fifth to F2, standing in the ratio of 3 to 2; and the corresponding lines in the four succeeding Octaves are the Octaves of C3, namely 6, 12, 24, and 48. On the third line in the third Octave are 5 dots, which are the 5 oscillations of a pendulum tuned to swing 5 to 4 of the F close below; and it represents A5, which is the Third of F4 among musical vibrations. On the first line in the fourth Octave are 9 dots. These again represent G9, which stands related to C3 as C3 stands to F1. On the seventh line of the same octave are 15 dots; these represent the vibrations of E15, which stands related to C3 as A5 stands to F1. On the sixth line of the fifth Octave are 27 dots, representing D27, which stands related to G9 as G9 stands to C3, and C3 also to F1; it is the Fifth to G. And last of all, on the fourth line of the sixth Octave are 45 dots, representing B45, which, lastly, stands related to G9 as E15 stands to C3, and A5 to F1; it is the Third to this third chord - G, B, D. The notes which arise in each octave coming outward from the center are repeated in a double number of dots in the following Octaves; A5 appears as 10, 20, and 40; G9 appears as 18 and 36; E15 appears as 30 and 60; D27 appears as 54; and last of all B45 only appears this once. This we have represented by pendulum oscillations, which we can follow with the eye, the three chords of the musical system, F, A, C; C, E, G; and G, B, D. C3 is from F1 multiplied by 3; G9 is from C3 multiplied by 3; these are the three Roots of the three Chords. Their Middles, that is their Thirds, are similarly developed; A is from F1 multiplied by 5; E15 is from C3 multiplied by 5; B45 is from G9 multiplied by 5. The primes 3 and 5 beget all the new notes, the Fifths and the Thirds; and the prime 2 repeats them all in Octaves to any extent. [Scientific Basis and Build of Music, page 102]

Richard Merrick

"This belief in perfect geometry, natural order and predictability was central to the Pythagorean worldview, as it had been to civilizations long before the Greeks. So when it was discovered that a stack of five perfect 5ths does not close to form a regular pentagram at the **third octave** as expected – forming instead an open and warped pentagonal shape in logarithmic pitch space – this was taken as a profound error in nature.

"What Pythagoras found during his musical experiments was the last interval must be stretched up by a messy ratio of 128:81 (instead of the perfect 5th ratio of 3:2) to align with the **third octave**. In music lingo, the last interval must become an augmented 5th instead of a perfect 5th.5 While very close to creating a pentagram, it still fell short of the perfection expected.

"This imperfection is central to understanding the Greek worldview because it reveals a conflict, a paradox really, between the cyclic geometry of a regular pentagram and the Spiral of 5ths as it occurs naturally in sound. Philolaus (c470 BC – c385 BC), a "most ancient" follower of Pythagoras, referred to this paradox in the opening of his book Peri physeos, or On Nature:

"Nature in the cosmos is composed of a harmonia between the unlimited and the limited and so too is the whole cosmos and everything in it.

"This gap between the closed or "limited" octave cycle and the infinite or "unlimited" spiral of pitch was a major embarrassment to the Pythagoreans because it undermined the purity of their philosophy of numbers and simple proportions. Given the importance placed on numeric proportions by the Pythagoreans, we have to wonder how they might have reconciled this error within their belief system.

"With many early Pythagorean treatises lost or stolen, we are left with only the accounts of later Greek philosophers such as Philolaus, Nicomachus and Plato. From these accounts we know about Pythagoras' theories of numerical proportion, his tuning methods, the Greek modes and the supreme importance of his adopted symbol the pentagram.

"As for the pentagram, Pythagoras appears to have first learned of it from his closest teacher, Pherekydes of Syros, who wrote a treatise entitled Pentemychos describing what he called the "five hidden cavities" of the soul. Of course, the notion that a geometrical shape could somehow be related to our "soul" sounds very mystical and unscientific to modern ears, but he was essentially correct about the pentagram playing a very important role in how nature organizes itself.

"Beyond the obvious organizing principle of the number 5 in such things as roses, starfish and the human anatomy, the pentagram contains a very special numerical proportion known as the "golden ratio." If you have not heard of it before, the golden ratio is an infinite non-repeating proportion of about 1 to 0.6 usually represented by the Greek symbol Phi or "?" (pronounced either "fi" or "phee"). The most important thing about this ratio is that it is found approximated everywhere in nature" [INTERFERENCE - A Grand Scientific Musical Theory, Richard Merrick, 2011, Third Edition]

See Also

B flat 3rd octave Law of Octave Figure 11.01 - Octave composed of Equal Thirds and Triads Figure 12.11 - Russells Locked Potential Full Ten Octave Gamut Figure 12.12 - Russells Multiple Octave Waves as Fibonacci Spirals Figure 12.12 - Russells Multiple Octave Waves as Fibonacci Spirals - See Also Figure 17.03 - Analysis of the Octave Gravity Bar Figure 7B.10 - Russells Periodic Chart of the first four octaves of proto-matter Figure 9.16 - Russells 1-4 Octaves of Matter as Integrated Light - The Universal Constant Figure 9.17 - Russells Ten Octaves of Matter as Integrated Light - The Universal Constant **Golden Mean Golden Number golden ratio** Octave **Octave Relationships** Part 14 - Keelys Mysterious Thirds Sixths and Ninths **Perfect Octave** PHI **Pythagorean Comma** Pythagorean Komma **RULE OF THE OCTAVE** Scale of the Forces in Octaves second octave Table 1 - Relations of Thirds The Russell Nine Octave Chart of the Elements **Three Octaves** 12.17 - Note about Octave Relationships in Russells System 12.18 - Multiple Octave Progression