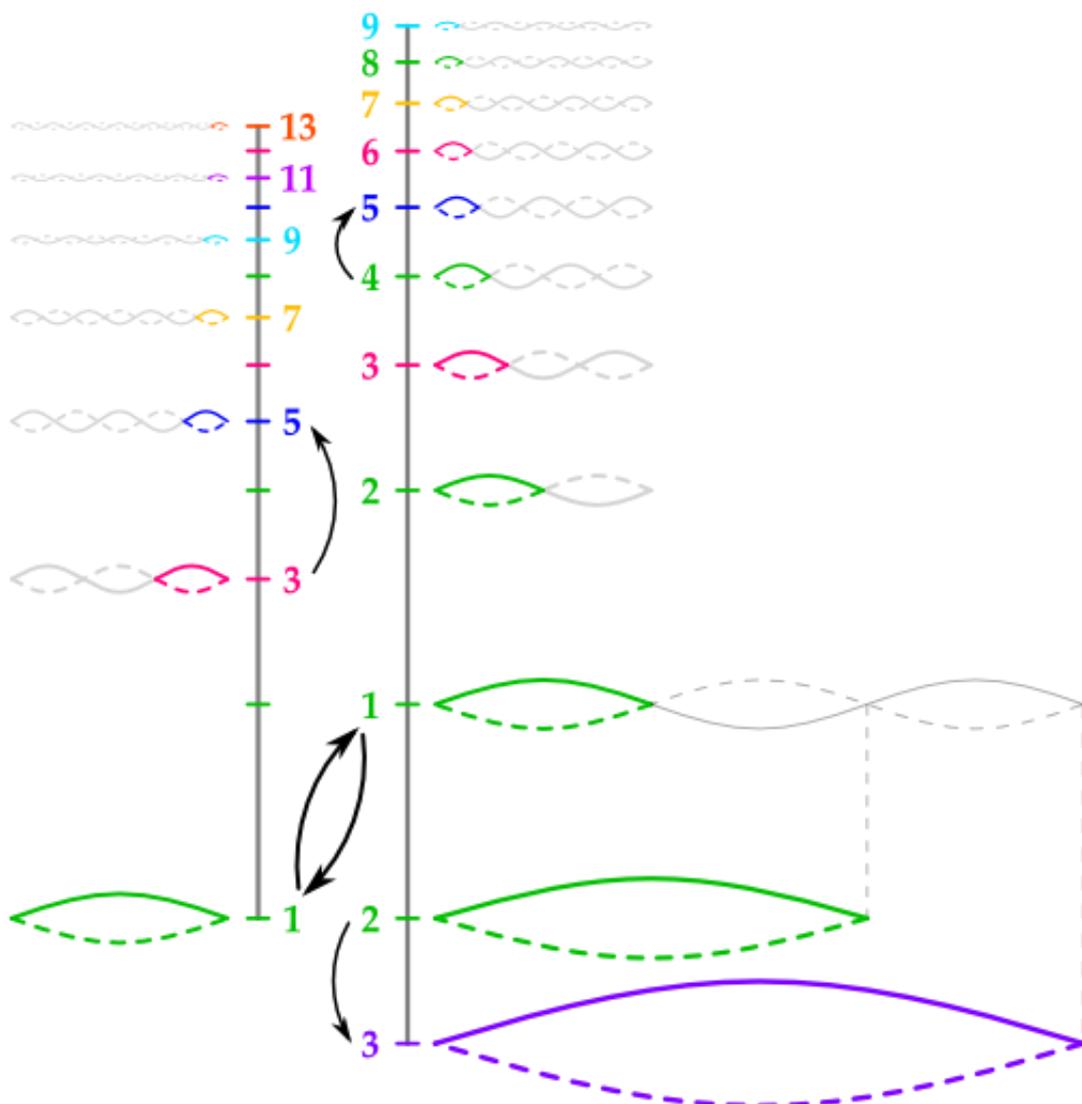


Hearing Nature

Learning How to Memorize Any State Defined by Frequency

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Perfect aural frequency recognition is the ability to remember sound, exactly as it is.

Aural means audible, and has to do with the ear, the perception of sound and the sense of hearing. Frequency is an attribute of anything cyclical, a measurement of how often movement is repeated through time. Thus aural frequency refers to that periodic movement that can be perceived through the sense of hearing. This would be more or less a definition of sound, and the perfect recognition of it points to the ability of using memory for storing acoustic events exactly as they manifest.

«Memory is a mental faculty, a distinct aspect of the mind. It is a recording mechanism which records all that falls upon it through any of the five senses. What one sees, hears, smells, touches and tastes is recorded upon the memory [..., but] does not remain in the memory as in a notebook. For as the notebook is dead, so what remains in the notebook is dead, but memory is living, and so whatever is recorded upon the memory is also living and gives a living sensation [...], for memory is not only a recording machine. It is a fertile ground at the same time. What is put there is continually creative, it is doing something there.»¹

Thus we begin to see how the seed of music, when carefully planted, has the ability to transcend any abstractization, making theoretical investigation obsolete. If we could simply hear everything that's going on inside one tone, we wouldn't need musical theory to define a set of rules for the composing, playing and enjoying of music. If the unhidden secrets of only one sound could be heard and memorized, there would be no argument whatsoever about consonance and dissonance, accord and disaccord, in-tune and out-of-tune... Conscious practice and absolute truth surpass even the most advanced form of theory; if everyone could use their ears and memory as nature intended, we would all agree: natural harmony, as it unfolds from the harmonic series, is the only principle in music.

Perfect aural frequency recognition is the ability to instantly recognize the fundamental frequency of any sound, and at the same time hear its every other harmonic component, individually. The sonic distances between different harmonics can be appreciated by cultivating harmonic interval perception.

Splitting sound into its harmonic components is just like splitting white light into a colored rainbow with the help of a prism. The difference is, the human hearing apparatus can do this naturally, with no need for an external “hearing prism”. A similar experience would be hearing the different voices and instruments in a song independently – an ability which, once gained, cannot be taken back.

As little children we learn the colors, the shapes, tastes, smells and textures of everything around us. We then learn how to instantly tell if something is hot or cold; we learn about pressure (usually by breaking things) and how to appreciate distances, time and speed of movement. But we’re never told about the intricacies of sound. Although on the surface we hear, we never really learn to listen. Instead, we believe others when they say that only Bach and Mozart were endowed with the gift of an absolute ear, and we can't have it because we have to be born with it.

The truth is, every human is born with this ability. The ear is an astonishing organ, and the sound processing centers inside the brain are capable of much more than most of us imagine. In order to learn how to properly use these natural tools, we’ll have to remember how we used our fascination, constant practice and burning desire to master walking, talking, swimming, riding a bike or driving a car. Once the specific actions for every such activity are repeated sufficiently, they get stored and can be at any time recalled from memory, to run on *auto-pilot* without the conscious mind thinking about them. What seems tough in the beginning can become second nature when properly cultivated.

The same is true for perfect aural frequency perception. Once we allow the ear to open, cultivating it gradually, an amazing new world unfolds – one that has always been there, but hitherto remained ignored. After learning sound *perception*: how to listen, and *what* to listen to, the next step is training for *recognition*: how to *store* and *access* the perceived frequency states by the use of memory. As we begin to hear the intricate parts of natural sounds, we realize there’s only one law governing (but not limited to,) everything that can be heard: the universal law of harmonic resonance.

True ear training is learning to memorize frequency. Once triggered, this process will eventually lead to the ability of instant recognition of oscillatory patterns, in the beginning in their audible form. The pinnacle of perfect frequency recognition is the ability to recall/discard at will any state defined by frequency.

«The whole of life in all its aspects is one music, and to tune one's self to the harmony of this perfect music is the real spiritual attainment», lectured Hazrat Inayat Khan to his pupils. This music is the ever-present harmonic series. It is indeed bewildering how our fabricated equal temperament is so aurally close to the harmonic series, yet so far from its natural magic, life-giving power and perfect beauty. Inayat continues: «What is harmony? Harmony is right proportion, in other words, right rhythm. And what is life? Life is the outcome of harmony. At the back of the whole creation is harmony, and the whole secret of creation is harmony.»²

It is this harmony that our ears fail to perceive in music... And this is how it happens: Close your eyes. Imagine a circle. Imagine it's red. Now try a triangle. A green one. And now a blue square. Could you tell someone who never saw these shapes what they look like? How about the colors? Could you explain to someone who never saw the colors what they *feel* like? And what's the difference between them? It is the same with sound: you need to experience the sonic nuances yourself in order to know *what* they are, and *how* they differ from each other.

A cultural aspect of perfect aural frequency recognition is “absolute” or “perfect pitch”. In the words of Siemen Terpstra, inventor of the Terpstra Keyboard, «perfect pitch is a limited form of perfect frequency perception, where the average musician is used to picking up the frequencies of a particular tuning (fixed to a standard concert pitch). But when you switch tunings, musicians get out of their comfort zone and say “it doesn’t sound right, it’s out-of tune.”»³

Sonic distance recognition is the ability to instantly recognize the relation, or acoustic interval, between two frequencies. As there is no such thing as a single-frequency-sound in nature, all sounds being a multitude of harmonic-related frequencies, sonic distance recognition points mainly to the acoustic spaces between harmonics, making possible comparing the harmonic content of single tones. A limited cultural form of harmonic sonic distance recognition is “relative pitch”, used for picking up the relations between members of a particular tuning. One of the faults of “relative pitch” is taking into consideration only the fundamental frequency of every tone, disregarding the remaining harmonic content; the biggest fault is conditioning the pitch processing centers in the brain to use as reference sonic distances based on numeric relations that cannot be found in nature.

The only *True Ear Training* lessons for the development of *Perfect Aural Frequency and Harmonic Sonic Distance Recognition* are called “Harmonic Series Hearing Study for the Liberated Ear”, labeled “What Music Really Is”. All other existing courses are drills for perfect and relative pitch establishment inside the equal tempered tuning paradigm. Training in this manner is harmonic suicide, because you’ll be conditioning the brain to enjoy dissonance as a permanent replacement for natural harmony. But getting used to dissonance does not make dissonant music more harmonious, it just impairs your hearing.

Sergio Aschero, Doctor of Musicology, inventor of the Numerofonía (Numberphonic) musical notation system, comments that «culture and nature are two models with few common points. Groups of purer ethnic origins are closest to the nature of harmony, and when this nature is “contaminated” with culture, it begins to “detune”.»⁴

Indeed, the few aboriginal cultures still in existence exhibit a harmonically pure musical heritage, in contrast to our cultural model of equal tempered dissonance. On the other hand, traditional music who managed to keep its spirit alive is now facing corruption of its core values through the introduction of equal tempered instruments, or the modification of existing traditional instruments to fit inside the equal tempered sterile standard.

The finger holes of shepherd flutes, for generations built by flute-makers on the harmonic principles of nature, are being drilled for an equal tempered approximation of their original scale, so they can play in tune with corrupted cultural folk ensembles. Overtone throat singing – one of the most harmonically pure forms of singing – accompanied by the traditional fretless *doshpuluur*, has been introduced to the equal tempered fretted version of the same stringed instrument. *Qawwāli*, the splendid Sufi devotional music designed to arouse mystical love and divine ecstasy, was introduced to the equal tempered harmonium, a kind of accordion that replaced the traditional and harmonically pure *sārangī* – an instrument said to resemble most the sound of human voice, but which had to be retuned between songs.

Throughout most of its history, *Kirtan*, the Sikh devotional music chanted as call-and-response loving songs to God, has been accompanied by traditional Indian string instruments of natural harmonic intonation like the *rabāb*, *taus* and *dirluba*. When the equal tempered harmonium took their place in practice, the official definition of *Kirtan* incorporated the harmonium as “the traditional instrument” of this music. If chanting the Divine Names of God was originally

meant to bring the audience to a state of spiritual intoxication, by the introduction of equal tempered instruments as accompaniment any contact with the Divine gets obliterated. That's because the only music that can be called "Divine" comes from the Natural Harmonic Series, while equal temperaments are artificial approximations of it, meant to hold the ever-evolving Nature inside stagnant and repeating patterns.

While the corruption of the perfect and the natural affected the musical heritage of many cultures, there are some who resisted this deceitful temptation. Byzantine Psaltic Chant – the music of the Christian Orthodox Church – refused to introduce any musical instruments into its liturgy, while keeping the centuries-old tunings and reforming the notation system. The stubbornness of the conservative Patriarchate and its hostility towards Western values paid off with one of the most exquisite and touching polyphonic vocal music on the planet.

Let us remember that the commodity of temperament, reinforced by ignoring and underestimating the ear and its incredible innate abilities, was brought about by the inquisition who rejected all forms of art meant to touch the soul under the pretext of witchcraft and "the work of the devil". Although completely vocal and harmonically pure, Gregorian Chant uses a pseudo-sterile tuning system that lacks feeling and emotion, and which is the precursor of the twelve equal tempered tones we hear in today's music.

But the most inappropriate use for equal temperament and equal tempered instruments must be sound healing and music therapy, where the effects are prone to be exactly opposite of those desired. Modern day sound healers are motivated by the best intentions, but lack of knowledge coupled with the inability to actually hear makes them confuse the truth about nature's musical harmony with the artificial construct of equal temperament which is a poisonous, nonharmonic and nonresonant product of human culture.

This shows that the superficial reason for sacrificing harmonic purity is a gain in simplicity, while at a deeper level is the ear's inability to perfectly recognize the harmonic relations between aural frequencies, coupled with utter ignorance about this fact. With other words, we're not capable of *going inside* sound, and we have no clue about being aurally handicapped. Living in artificial cities, isolated from nature, we've isolated ourselves from the perfection of harmony to the point that not only we can't recognize it when we hear it, but we're prone

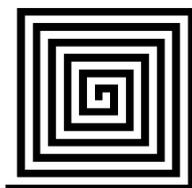
to dismiss it because our ears have been spoiled with artificiality ever since we were born.

There is a false common belief that perfect aural frequency perception is genetic and you have to be born with it. The truth is quite opposite: perfect frequency and harmonic sonic distance recognition can be cultivated and mastered by anyone. This is a difficult undertaking, because it requires relaxation and letting go, instead of concentration and focusing. And it's going to be even harder if your ears have only been exposed to the sweet poison of equal temperament. You'll have to erase your existing programming, conditioning and acceptance of dissonance, and replace that with the life-giving harmony ever-present in the natural harmonic series.

«The whole secret of esotericism lies in controlling the mind, and in working with it as an artist would work on a canvas producing whatever he likes. When we are able to produce on the canvas of our heart all that we wish, and to erase all we wish, then we arrive at that mastery for which our soul craves. We fulfil the purpose for which we are here. Then we become the masters of our destiny. It is difficult, but that is the object that we pursue in life.»¹

True Ear Training for Perfect Aural Frequency and Harmonic Sonic Distance Recognition activates the connection of circuitry allowing the ear to perceive the depths of sound, the sound processing centers in the brain to identify minute sonic components, and the memory to store vibratory states that can be recalled or discarded at will. Sound is just the initial phase – a bridge between the physical world of form and the spiritual, or quantum world of energy, built across «a rich and often neglected channel that links our inner self with the world»: our ears.⁵

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¹ **Volume II** (of XIV) from the teachings of Pir-O-Murshid **Hazrat Inayat Khan** (1882 - 1927) as transcribed by his students from his lectures and talks given between 1914 and 1926, titled **“The Mysticism of Music, Sound and Word” – Cosmic Language – Chapter VII: Memory**. Although a few publishers offer paperback versions, Hazrat Inayat Khan’s complete message can be found online, hosted integrally on several websites. One of them is “The Hazrat Inayat Khan Study Database” – <http://hazrat-inayat-khan.org/>

² **ibid.** – **(The Mysticism of Sound and) Music – Chapter XXII: Spiritual Attainment by the Aid of Music.**

³ **Notes** taken during a **video call** with **Siemen Terpstra** on 18 october 2013, while shooting material for a video called “Discovering the 1st Gen. Terpstra Keyboard Prototype”, later published on the “What Music Really is” YouTube channel.

⁴ Part of a personal **e-mail correspondence** with **Sergio Aschero**. Letter received on 23 december 2012; translated from spanish. «Te comento que la cultura y la naturaleza son dos modelos con pocos puntos de contacto. Cuanto más pura es la etnia más se aproxima a la naturaleza armónica. Cuando esa naturaleza se “contamina” con la cultura empieza a “desafinar”. »

⁵ Quote by **Jim Aikin** (Keyboard Magazine) from the back cover of **“The Listening Book: Discovering Your Own Music”** by **William Allaudin Mathieu**, first published in 1991. Current edition by Shambhala Publications, 2011.