

Harmonic Resonance

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In our analysis of vibrations we must be able to discern the concept of harmonicity, and also explain the concept of resonance.

The concept of resonance is that of power being rhythmically added to a system. If the power is added at a certain interval that corresponds to the correct interval needed within the system, the system will produce resonance. The system gains more and more in power. The concept of resonance is very similar to that of a child riding a swing. If the pumping action of the legs and the distribution of the weight to gravity is in a resonance harmony with the swing action, then the child will gradually increase the swing to a higher and higher degree, until the amount of energy displaced by the pumping action has reached its maximum, meaning that the swing action has reached its highest zenith. This action describes resonance.

In Tacoma, Washington a bridge was built without the ability to counteract resonance. A resonant frequency built up in the wind one day that allowed the swinging bridge to increase its push a little more and more, until finally the entire bridge snapped and crumbled because of the pressure of the resonant force of the wind. Since then all bridges have been built to have no structural resonance, in that they would have separate entities that would resonate at different times.

So when a system that has a certain periodicity is pushed by another type of periodic waveform, resonance can occur if there is a compatibility between the existing structure and the inputted push.

Another example of this is seen when a singer shatters a glass by singing a certain pitch. If the glass's shape has a certain type of periodic structure, the resonance between the note and the structure can produce an ever-increasing vibration fed by the push of the singer. This can destroy the glass by making it vibrate past its stable level.

In biological terms many resonances can happen in various ways. Viruses, bacteria and fungi all have resonant frequencies. If the virus is put into a certain resonant frequency, it could effect the body. In psychology a certain set of neurons could be sensitive to a resonant condition if the rhythms are present. Agoraphobia might produce a resonant factor within the neurological circuits, pushing the organism to extremes and often inducing an anxiety or panic attack. Obsession, compulsion, and many other psychological problems can also be seen as resonant factors, in which a certain ideation cannot be let go of because of its vibrational sticky quality. Ideas get caught in resonant circuits within the brain.

Of the millions of neurons in the brain, certain ideations and thought patterns can be amplified through resonance if an individual has these thought patterns too often or in inappropriate circumstances. These resonant thought forms can have increasingly larger and larger effects, and be imprinted into the engrams of the human being. Certain humans will be sensitive to certain types of thoughts. So a person might inherit a tendency towards depression, or the inherited tendency might be amplified by the living conditions, in which the mother and father might teach depression techniques to their child as a means of coping. Then the child, having resonant effects, can build this depression into his brain, making it impossible for him to break

free from it without large-scale help. This is one of the keys to developing a new-age type of psychology; being able to defeat the resonant patterns within the brain.

This resonance is also one key to understanding behavioral psychology. In behavioral psychology what we reward we get more of; what we ignore we get less of. This is a display of neurological resonance reaching into the psychological world of treatment.

Harmonicity, or the production of various harmonics, is something else we must analyze in vibrational medicine. A note produced by a sound has harmonics produced at certain intervals. Thus a certain generated note will have a harmonic at a higher note that is the same or similar note in a different octave. This is different from the resonance we have discussed, because the true, pure resonance seeks rhythmic similarities. In harmonic resonance we often do not need to have extremely similar vibrations to induce harmonic resonance. Harmonic resonance can be induced often by other notes that are at harmonic levels to the original pattern.

If we hammer a piece of steel, we will see that this produces a certain note. There is a harmonic note that can be produced by a hammer of *another* size, and even higher harmonics produced by other hammers. Harmonics have infinite numbers of series, but often are limited to seven series, in the case of octaves in music. All vibrations, whether they be photon, electron, neutron, etc., have harmonicity at various levels. These harmonic frequencies have interference and amplitude factors on other carrier waves. Harmonics work in many strange and wondrous ways. The effects extend to other dimensions.

As we look at the wide variety of vibrations that occur within the cells of the body and the vibrations that occur later within the networking of the cells, we can see a tremendous number of opportunities for harmonicity interaction. Various harmonics can interplay not only in photons but electrons, sound, and other energetic activities. Our best example of harmonicity is that of the barbershop choir, where three or four singers can develop different notes and blend them into a harmonic, producing a much more pleasant-sounding note. This is known as a *consonant harmonic resonance*. This is very important for the factors of biology in helping to produce various states for biology and health.

In producing a calming, stress-reducing environment, we will need to involve many types of vibration including pleasant sounds, pleasant lighting for photons, and pleasant ionization. In *Bio-Quantum Matrix* we described a paradise in which the negative ion factors produced a maximum health-generating environment. Here we can see that in a harmonic way these factors can be additive, and that the sum can be greater than the sum of their parts. This is another way of describing the factors of harmonic resonance, where the summation of forces interacting can become greater than the sum of the individual forces themselves.

We can find that interference patterns are also produced, and that certain vibrations can be used to cancel out or negate other types of bad frequencies. Here we have the development of a Rife-type machine. Rife was rumored to have developed a machine that could generate various types of vibrations that could break up viral, bacterial and other microorganisms. This was done through developing a pattern forced into the body at these various frequencies that would attempt to harmonize with the microorganism intruder, and through the factors of resonance, shatter them.

As we have pointed out, we are not sure if Rife really did develop this to its full extent. The amount of energy it would take to shatter a virus would be dramatic

according to our calculations, and seemingly above that which a Rife instrument could develop. Perhaps the harmonic instruments he used had stimulating effects on the immune system and its ability to deal with these frequencies.

Also it must be pointed out in our discussion of vibrational medicine that almost any type of electrical photon or sound vibration given to the body can have positive effects. We speak in psychology about the *Westinghouse effect*, in which a researcher went into a Westinghouse plant to try to find psychological ways of improving production. He found that when he moved the cafeteria, he had an increase in production. When he moved it again, he also had an increase in production. He found that whenever he set up studies and did operations, production seemed to increase. In other words, the final conclusion of the Westinghouse effect was that attention given to the system of the plant seemed to increase of productivity; the people liked the attention.

This is often the case with the body itself. The body likes to have attention. When it is given photon, electron, sound or ionization attention, it seems to respond. Often this response is interpreted by certain experimenters as being more profound in its effects, and they build machines to use universally. The machines do not always work differently from placebo.

We must develop a more scientific vibration theory, which is the purpose of this book on vibrational medicine. As we look into the factors of various waves, we must be able to chart out and statistically evaluate the types of vibrational medicine we are going to use. It is the plan of this book to help to open new dimensions for scientific thought in vibrational medicine, and to dispel some of the rumors and ploys evident in other events.

Many researchers have developed equipment that have attracted rumors, and it has become a strong factor in alternative medicine. Many of these inventions have true potential; many are just flim-flam operations that really do not have a strong basis in science. We attempt in this book to develop a firm scientific understanding of these vibrational factors, and then challenge them through statistical measurement endeavors to produce more refined and dynamic healing techniques. Many alternative practitioners will be put off by the fact that there are numbers, physics, statistics and mathematics in this book. It is with great dismay that I wish to challenge them, because it is numbers that have given us so much of our technology. Some of this technology has gone unchecked and needs humanization. So we have tried to involve human qualities in our technology as well as the science and statistics, so that we do not dispel or throw away any of our factors. We try to control them in human ways, and let science be our servant, not our master.

In Dr. Isaacs's "Matrix" we are shown that numbers exist that dictate interplay of matter as well as interplay of forces. This interplay of forces is key to our understanding of biology.

We have shown in the *Bio-Quantum Matrix* book that the factors of harmonicity and resonance have possibly been built by nature, or God Himself. This matrix seemingly has harmonic and Fibonacci relationships built into the system. The *Bio-Quantum Matrix* should be reviewed at this time for an understanding of some of the mathematical relationships built into the matrix that determine reactivity. These mathematical relationships allow for biology, and will dictate our vibrational medicine.

Harmonic resonance also dictates and shows us another form of reverence that we must build into our system. The total knowledge of all the resonance factors and the ways that a cell or set of cells in an organism can interact is infinite. As one organism interacts with another and with the environment, it goes past our understanding. This should produce some reverence; a way for us to look at natural systems of medicine in our vibrational medicine model. We do not want to just develop synthetic waveforms and think that their mathematical formulae are all we should consider in vibrational medicine.

The best vibrational medicine technique we can use on a system is the vibration of medicine in nature; the gentle waterfall, the pleasant wind, the non-toxic air, the gentle refrain of a loved one, the reassuring touch of a doctor with a good bedside manner. These are the factors that really should be looked at in vibrational medicine. Our development of harmonic frequency generators and function generators are merely side issues in comparison to the true healing factors of the human.

As we develop various mathematical precepts and devices, please let us not lose sight of some of the more dynamic healing factors that biology can assail. These devices should only be secondary, if not tertiary, in our treatment modality plan. Reverence of God and nature should always be our primary directive in setting our healing forces and directing our medical intervention (see the *Natural Compendium* of Dr. Nelson).

If we calculate a sine wave by frequency domain analysis, we can see that this type of wave will generate harmonic series. The harmonics will be raw integer multiples of the frequency. So if we see that the frequency equals 1 over the period, this will tell us what the basic frequency is that establishes the fundamental or lowest frequency of our proposed harmonic series.

Fourier found that if we superimpose these harmonic sine waves onto themselves, we can produce any type of wave within the structure. Thus we can produce a sawtooth wave, a triangular wave, a half-rectified wave or even a diamond-shaped wave. The dramatic complexity of waveforms in biology results from a vast number of interfacing waveforms. These are interactions between electron, photon, sound, and chemical waves, etc. These can be of a positive health-enhancing, derogatory, or disease nature. This difference is between entropic-type waves or organized quantum waveforms. If these waves are in harmonic action, meaning that they are multiples of each other, they will still have the same intersections. But we can produce a wide variety of shapes. In Fourier analysis, if the waveforms combined with each other are not in a harmonic series, then we can produce random shapes that also can be delineated into their Fourier components.

The Fourier theorem is the key to our understanding of frequency domain analysis. We already know a great deal about our sine waves. It is also possible for us to reduce periodic waves to their sine wave components. Analyzing these sine waves allows us to analyze the periodic wave.

Thus two approaches of nonsinusoidal circuit analysis can be developed. We can calculate the periodic wave and what it does at each instance in time or we can calculate what each harmonic does. Sometimes our first approach, which is dependent on time-domain analysis, is faster; and sometimes the second approach of frequency domain analysis is superior.

We have an example of a sinusoidal voltage producing a large swing along a transconductance curve. The nonlinearity of this curve will then produce current that

is no longer sinusoidal. So the shape of the output curve is no longer a true duplication of the input shape. Since the output current flows through a load resistance, the output voltage will also have nonlinear distortion. This happens in cellular biology through membrane resistance, which affects the output capacities. This happens in the mega system of the body in acupuncture point resistance changes that regulate meridian voltage.

Below is shown nonlinear distortion from the time domain viewpoint.

The input sine wave drives the amplifier. The operation if a large signal will allow for an amplified output voltage that is no longer a pure sine wave. We can see now that there is more gain on one-half cycle than on the other. This kind of distortion is often called *amplitude distortion*. This happens in overloaded systems such as muscular fatigue or stress syndromes.

The frequency domain will give us insight into the amplitude distortion. In the above diagram we will see that the same situation can be shown from frequency domain. The input spectrum is at a single line of our fundamental frequency f_1 . The output signal is distorted, but is still periodic. Therefore it contains the dc component and the harmonics shown. We have stopped with the fourth harmonic. The point is that the waveform with the amplitude distortion contains a fundamental and harmonics. The strength of the higher harmonics then is the clue as to how bad distortion will be. Stress distorts the higher harmonics of the human system by enhancing their strength. This results in higher-dimension sensitivity in stress-related diseases.

Amplitude distortion is also termed *harmonic distortion*. In developing our vibrational medicine model this will be extremely important for us to be able to deal with these distortion models. The larger the peak values of the harmonics the larger the harmonic distortion. Stress treatments must be system-wide to be effective.

The simplest way to compare the amplifiers is to take the ratio of the harmonics to the fundamental. This will help us to calculate the harmonic distortion. The total harmonic distortion will be equal to the square root of the second distortion squared plus the third distortion squared plus the fourth, and all the way up to the n th distortion squared. This is developed in the system of mathematical analysis developed by The Quantum Med C.I. *. This allows for waveform analysis through Fourier techniques. Reactivity is then charted as the log of total harmonic reduction.