3, 6 & 9 - Their Hidden Power Revealed

by Dale Pond ©2015

Many years ago in the early 1980's I purchased my first real computer. It was a Texas Instruments 4-bit PC. It could do colors and it could run a spreadsheet and it was expensive. I wanted the spreadsheet to compute waveforms. Actually in those days I was focused on cycles and wanted to see how cycles affected each other. The spreadsheet could plot the sine/cosine of a wave form. Over the years I've played with this spreadsheet as it migrated from and to the many different spreadsheet programs and operating systems I owned to eventually find it's way onto my present iMac running Apple's Numbers spreadsheet. The application I developed still works as it did before but much faster (after many rewrites and tweaks)!

Having recently completed the "Keely's Laws of Being" book I was left with countless questions but mostly about the 3. 6 & 9 equation. 'I should know how this works by now', I said to myself - but I didn't. Perhaps if I deeply contemplated it something would come up….

Over the years I have played with these and countless other ratios on the WaveForm spreadsheet. That focus however was mostly concerned with frequency or wave length. The intensive work with the book alerted me to the importance of "tension" as Keely called it or "amplitude" or "power" as we call it. So plugging in power/amplitude figures *as ratios the same as for wavelengths* a startling development appears. The resultant waveform starts low power that builds greater and greater amplitude over time! My first impression of this phenomenon is this ever increasing power envelope is pure syntropy or Russell's power multiplication or regeneration concept. Today we call this phenomenon "amplitude additive synthesis" or "AM" for short.

This could all be true. However, in the back of my mind I question the cpu and coding of the spreadsheet software. I've seen discrepancies before in math intensive issues. But for now, until someone digs really really deep into these features, we'll accept them for what they appear to be keeping in mind there may be errors in the cpu and/or code and hence - the resulting charts.

The first chart (Chart 1) below shows ever increasing amplitude yet the wavelength remains the same over time. The input wavelengths were 3, 6 & 9 on three octaves multiplied by octaves accordingly. The amplitude figures were similarly entered (Chart 3).

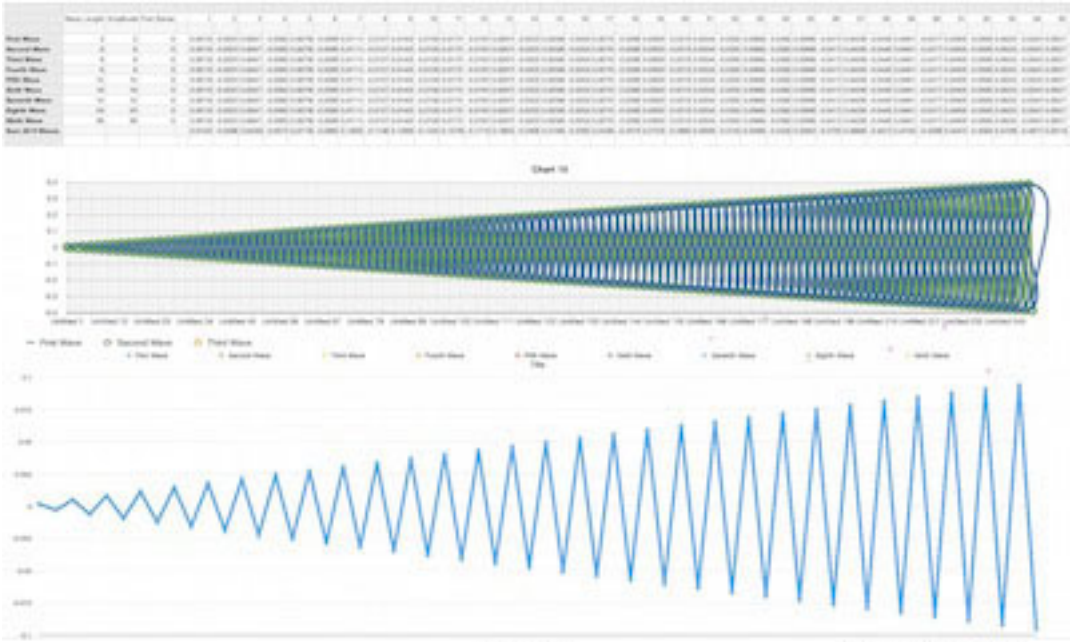


Chart 1 ©Dale Pond, 2015

That these two number series are linked together can be seen by comparing the following chart (Chart 2) where the wavelengths and amplitude numbers were matched against 3, 6 & 9 for wavelengths and 7, 14 & 21 as the amplitudes. The wave form is no longer coherent and increasing. There is little if any amplitude additive synthesis.

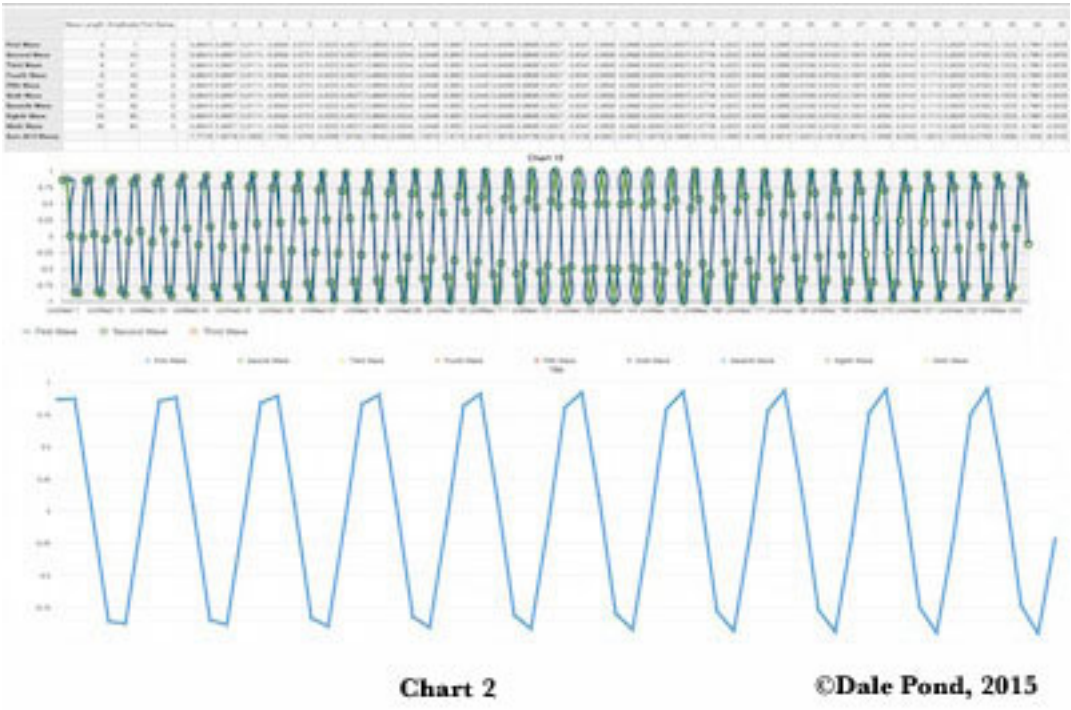


Chart 2 ©Dale Pond, 2015

The above are just two of many charts computed. It doesn't matter what number series is used as long as the ratio of 3, 6 & 9 are preserved such as 1, 2, & 3 or 2, 4 & 8 or 7, 14 & 21 for instance. The dynamic is always the same:

When the wavelengths and amplitudes follow the same ratios regardless of actual number they resultant wave form shows increasing amplitude over time. Should any of the ratios be something other than 1, 2 & 3 in relative quantity whether in the wavelength or amplitude columns the resultant wave form is chaotic or "non coherent" (for lack of a better term). Below is a chart showing the columns of matched numbers. The third column "First Series" is the sine/cosine number where the waveform is to begin. We can also say the individual wave forms are all phase locked because they begin at the same sine/cosine point which of course is quite important. These waves together could then be termed 'harmonic waves'; i.e., having the same resonance or cadence in regard to time. The phases are all the same.

	Wave Length	Amplitude	First Series
First Wave	3	3	0
Second Wave	6	6	0
Third Wave	9	9	0
Fourth Wave	6	6	0
Fifth Wave	12	12	0
Sixth Wave	18	18	0
Seventh Wave	12	12	0
Eighth Wave	24	24	0
Ninth Wave	36	36	0
Sum All 9 Waves			©Dale Pond, 2015

Back in those early days when building the WaveForm spreadsheet for the first time my Mom had an electronic organ in the living room. I couldn't really play it but I did "mess around" with notes and chords. I did notice with keen interest certain notes played together resulted in what some told me was a "feedback loop" where the sound grew louder and louder the longer the keys were held down. Some said this phenomenon if continued could seriously damage the organ and I didn't want to damage my Mom's organ so I desisted with my "messing around" with chords. I should have paid more attention.

Quite similar to this earlier experience I ran into Fractals for the first time around 1990. The math associated with fractal creation was especially interesting because of the feedback looping feature it used. That math feature intrigued me to no end. At that time I theorized it would be possible somehow to feedback heat pumps back-to-back to get very cold or hot temperatures by compounding their respective functions through feedback. I did not do the actual experiment of this but perhaps looking back I should have.

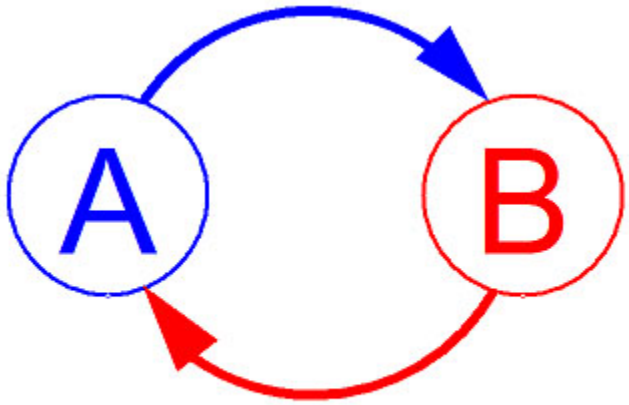
Checking around the web for “feedback” we find the following definition in Wikipedia:

Feedback occurs when outputs of a system are "fed back" as inputs as part of a chain of cause-and-effect that forms a circuit or loop. The system can then be said to *"feed back"* into itself. [Wikipedia, Feedback]

Which led to this amazing definition:

“…positive feedback tends to lead to instability via exponential growth or oscillation…” [Wikipedia, Positive Feedback]

So there is the explanation for the amplitude additive synthesis: Positive feedback.



Simple Feedback Loop
courtesy Wikipedia

The question remains “WHY?” why does this feedback occur with numbers in the ratio 3, 6 & 9? The feedback does not occur with these numbers as wavelengths else the frequency would change over time and it does not. Therefore the 3, 6 & 9 numbers as amplitudes or power do increase because it is amplitude adding to amplitude which is what the calculations and charts bear out. A “push added to a push” at just the right timing on a child on a swing will increase the swing’s amplitude of swing. Because the numbers are squares and roots of each other they would do this “push added to push” dynamic but virtue of them being multiples (squares and roots) of each other.

So there you have it. The Keely literature is replete with stories of dissociating atoms, water and minerals. These functions would require enormous amounts of power not available from the musical instruments he used. But by employing the near magical dynamics of 3, 6 & 9 he could attain whatever power levels he wanted or needed while at the same time retaining required frequencies.

Of course the greater the power in this type of situation there would be more discords developing reducing the “Q” of the process. I believe it was his Attenuators that were used to reduce the effects of specific discordant tones.

No doubt there is much more to explore and discover with this near incredible dynamic.