



From the desk of Pierre Beaudry



LUDWIG VAN BEETHOVEN

PIANO SONATA No. 14, OPUS 27, No. 2

By Pierre Beaudry, 4/23/2011



"I shall seize fate by the throat; it shall certainly never wholly overcome me."

Ludwig van Beethoven

"Whoever gets to know and understand my music, will be freed from all the misery that drags down others."

Ludwig van Beethoven

"But we must come to accept the rigorous standards of political morality as governing music, or all else is lost."

Lyndon LaRouche

INTRODUCTION

What human beings have been able to accomplish in the past ten thousand years in terms of demonstrating their ability to survive, as a species, is nothing in comparison with what they are going to have to come up with, now, in order to survive the current 62 million year cycle of galactic change that the solar system is currently going through. This is not merely a scare tactic; this is a real threat. No use complaining about this fact, because it's too late. The Sun has already begun to move north of the galactic plane, and you cannot change that. So, you might ask: "What are we going to do? How are we going to protect ourselves?"

As Lyn replied during his last webcast, you may not know where you are going to end up, but you can discover how to get there. Mankind knows what direction to take. All it has to do is to take the moral step to face it and sit will be solved. As Lyn said, we don't know if mankind will succeed or not, because we don't know if humanity will have the moral fitness to survive, but we know that man is equipped to succeed, because the last ten thousand years have shown us how it is in man's nature to discover ways to accomplish axiomatic changes in his own way of thinking, and that such axiomatic changes also apply the physical universe as a whole. That is why we must study and learn to play Beethoven's music, because he is one of the greatest creative human minds ever to discover which direction to take.

However, before going into Beethoven's creative work, one thing has to be made clear: the crisis that the solar system has currently entered into does not simply happen to coincide with the moral and financial crisis that humanity is currently going through. The crisis is the same. The galactic crisis is the same as the human crisis; because both the Galaxy and humanity have the same fundamental creative characteristics and they both require the same solution. It is the same crisis, also, because man's crisis is being subsumed by the galactic crisis of the solar system.

1. THE BEETHOVEN PRINCIPLE OF AGAPE.

When [Andras Schiff](#) gave his series of master classes on the subject of Beethoven's 32 sonatas, he demonstrated how the 1801 *Sonata in C-sharp minor* was the most misunderstood of all of Beethoven's sonatas. There is like a "thick layer of false tradition on it, ..." he said, "... and the music is like a great painting that has a lot of dust on it, and a lot of dirt, and you want to restore it, so you can get to the real colors." In a way, this report on Beethoven's *Sonata No. 14 in C-sharp minor* is an attempt at uncovering the underlying principle that lay dormant underneath this romantic filth, and which has been kept hidden for over 200 years.

First, let's get rid of the first coat of fake varnish that it was covered with, since 1836, when the critic, Ludwig Rellstab, gave it the insane identification of "*Moonlight Sonata*." This fallacy imposed on

the composition was as shallow as the public opinion oriented mind of the critic who fabricated it. Unfortunately, the dirt stuck and musicians have been misled about the true meaning of the sonata, ever since. Therefore, it is high time to clean up this defilement for the sake of generations to come and to restore the truth of its principle once and for all. The truth of the matter is that this sonata was composed as an expression of the sublime love of creativity, as opposed to the romantic vagaries of pleasure and pain. If one is to understand Classical artistic composition at all, it is going to be through a Promethean victory of *agape* over *eros* that one must look for in this Beethoven composition. Moreover, it is not by accident that Beethoven's *The Creatures of Prometheus* was also written in 1801.

Beethoven left several crucial notes in his manuscripts establishing his clear intention about this sonata. According to these notes, Beethoven composed the first movement of his sonata as a funeral memorial in honor of Mozart's *Don Giovanni*. The notes refer to the specific section right after *Don Giovanni* stabbed the *Commendatore* to death. The sonata replicates the same *ostinato* triplets that Mozart used to express the death-throes of the *Commendatore*. This homage was, as I will now show, Beethoven's way of celebrating the great Lydian revolution that Mozart had made from the original seminal revolutions of Bach and Haydn. This is the message that Beethoven was delivering to Countess Giulietta Guicciardi, when he dedicated the Sonata No. 14 to her. On July 6, 1801, Beethoven wrote to her saying: "O God – so near! So Far! Our love, is it not a true heavenly edifice, firm as heaven's vault?"



Figure 1. Beethoven's *Sonata quasi una fantasia* No. 14, Opus 27, No. 2. The opening measures. Note the Neapolitan modulation in the third measure.

At the opening measures of the first movement (**Figure 1.**), Beethoven noted: "*Adagio sostenuto. Si deve suonare tutto questo pezzo delicatissimamente e senza sordini*" (Slow and sustained. One must play this whole movement with great delicacy and without dampers), that is to say, with sustained pedals on modern pianos, in order to maintain a continuous flow of the musical ideas. Furthermore, if this movement is to be understood as a *motivführung* expression of the sublime, then, it should not be played slowly, like it is usually played. The point is that the piano must express the dynamic tension between the

fear of individual death and the yearning for participation in the immortality of mankind. This is the paradoxical tension that must be maintained throughout the piece.

However, such an elementary musical idea reflecting a meditative throbbing pain is very difficult to play properly on the keyboard, because it must also contain within it, as its substance, the Lydian effect of its ordering principle of change. In other words, the last throes of a dying man, must express the continuous process of change through which new ideas will be generated. The paradox is that the dying man is attempting to stop the process of dying and is yearning for immortality at the same time. During those dying moments, the *Commendatore* sings: “Now the pains of death invade me. From my breast my soul is soaring ...” The Beethoven note is explicit about the transposition of the Mozart *ostinato* triplets in C-sharp minor referring to the lacerations of the dying *Commendatore*. It is also expressing the tragic lacerating pains of “*Mille tre*” that Don Giovanni’s perversions are causing throughout the land. This, of course, correlates with the throbbing pains of Beethoven’s own state of mind, at the time when he is losing his faculty of hearing. Once this relationship between Mozart’s moral outrage and Beethoven’s hearing condition is understood, you can no longer make the case of a romantic moonlight fantasy on the shores of Lac Lucerne. Here is the Mozart section of *Don Giovanni* that Beethoven derived his musical idea from. (Figure 2.)

Figure 2. Mozart’s *Don Giovanni*. Measures 186-189 mark the *ostinato* triplets of the *Commendatore*’s lacerating throbs after he has been wounded mortally by *Don Giovanni*. Note the singing phrase of the *Commendatore*: “*sento l’anima partir...*” (I feel my soul leaving...) and, simultaneously, *Leporello*

singing: “*palpitar il cor mi sento.*” (I feel his heart palpitating), and *Don Giovanni* who sings: “*palpitante veggo l’anima partir*” (through the lacerations, I see his soul leaving.) Thus, the perfect confusion of three different sense-perceptions.

(Report here on the three manuscript notes published by Enrich Schenker.)

Here, Mozart played on the sensitive ambiguity between the pulse of the body and the pulsating of the musical triplet idea. However, the point is not simply the internalization of the death throes of a dying man, but also the fact that this man is singing the swan song to his own body, as Beethoven is doing with his hearing. He is telling his body that his soul is leaving it behind in order to soar into immortality. That’s the common agapic quality that the two creative minds of Mozart and Beethoven are sharing in.

However, Beethoven takes it a step further. There is a crucial change, here, that Beethoven is stressing with great emphasis, and which can only be expressed as the delicate flow of the motion of a singularity passing continuously from life into death, and then, into immortality, *delicatissimamente*, as if in a phase change relationship which must take place in the great discontinuity between two axiomatically different moments of change. The flow, however, must be expressed as an extended continuity of change, without percussiveness, and in a way where the continuum of change reflects causality *Adagio sostenuto*. It was the condition of his deafness that forced those ideas of axiomatic change on Beethoven, and that had gripped all of his waking moments; the inevitable disease that crippled him and the hope to cure it was transformed into the impossible tension between an inaccessible ideal and the desire to attain it. This is why this sonata is so difficult to play.

Like Andreas Schiff reported, the whole first movement is strange because it is like a funeral theme where all of the intervals strengthen one another in such a manner that all percussive relationships are excluded and no breaks must be sensed within the entire movement between the elements and the process that cause the element to change: *the discontinuity must be continuous*, as in the Leibnizian *principle of continuity*. In other words, this Sonata is not like any other Sonata. It is a musical revolution in the sense that its method of composition pertains to universal physical principles.

As Schiff put it, dynamically, everything must be “played *pianissimo* (very softly), almost like a Bach Prelude!” Remember how Gounod’s *Ave Maria* had transformed Bach’s first Prelude into a painful funeral memorial, for his deceased friends, Felix and Fanny Mendelssohn; that is the same idea with Beethoven, except without emphasizing the effect of the discontinuity that Gounod introduced at the end. Only the Lydian tension must be maintained throughout, and then released at the appropriate moment. The first movement is not a traditional sonata movement, but an introduction to something that is completely new, a sort of prelude to the creation of a new world. On the other hand, the second movement is a brief joyful break, while the third is a furious stormy creative process.

2. THE LYDIAN MEASURE OF CHANGE.

“Let Lydian intervals be the wines that fill the cup of your soul.”

Dehors Debonneheure

The very first measures of the sonata establish the tonality of a single voice for the duration of the entire movement, the voice of lamentation with repetitive quadruple series of triplets, in the right hand, which define the *ostinato* (obstinate) characteristic of a lancinating pain, accompanied by octaves in the left hand, and using the Neapolitan to modulate the lamentation by semitones. That is the first clue that Beethoven gave as an indication for the mood orientation of the sonata. The rhythm has to be as regular as a throbbing pain, but not as fast as heart beats. The process is an almost exact replica of how Mozart wrote the score to express the dying moments of the *Commendatore*, except that Beethoven is leading the listener toward a deliberate dissonance, which is so obvious that pianists generally avoid, because they think it is a mistake. There are two such dissonances in the first movement; they are at measures 16 to 18 and 52 to 54. (See **figure 3**.)



Figure 3. The two dissonances of C#-D, and C-C# rotating around C#.

Unless this deliberate dissonance is understood and appropriately stressed, the pianist doesn't know what he is doing, and the entire piece is misunderstood and botched. Those two dissonances are the key to the entire sonata. The entire movement is uniquely pivoting around the two painful intervals between Bb-B-C in the first case, and C-C#-D in the second case. The reason for this is simple: this is

where the key signatures of C sharp minor and D flat major are decided from the ordering principle of the Lydian modality. It is the expansion of these double dissonant singularities that Beethoven used to solve the excruciating paradox he had to solve. Technically speaking, this means that E, G, Bb, C# resolve into D flat major, and Eb, F#, A, C, resolve into C sharp minor. There you have it in a nutshell.

Therefore, this singularity must be present persistently in the mind of the interpreter, like a painful sore that is conveyed as if from the inside of the modulating voice of the triplets. The dissonances are within those Lydian clusters, not outside of them. This is the reason why the elliptic wave of the torus is a better representation of the Lydian divisions of the octave than the conical spiral action, because their values are everywhere the same, and their inversions do not change those values in any way.

Here, Beethoven is forcing the listener to stretch his mind to the point that he has no choice but to discover the truth of some painful experience through the two dissonances of C#-D and C-C#, and then look for the reason why he chose the Lydian interval of the left hand to temper them. This sort of pain relief is the only way to make such an anomaly a lawful and necessary moral event in music. Similarly, the triplet intervals are intentionally written to express the same form of pain relief lawfulness, but not with the same tension, and thus, they vary in their repetitive intensities until they reach a point where the funeral March type of dotted rhythms, *tum-to-tum*, confirm that you must remain in that repetitive mode of lancinating dissonant tensions, not knowing where you are going to end up, until those tensions reach a transformation point where two Lydian wave clusters take over the process completely. Then, and only then, are you able to realize what Beethoven wanted you to discover.

So, the tension of the whole process builds up to that climax where the lancinating triplets are transformed, by an almost imperceptible series of extended inversions, into two wave series of complete Lydian clusters. Their notation is still in triplets, but now, they are releasing explicitly the emotional effects that they had been charged with and which had been building up inside of the entire process from the beginning, like the shaping of an explosive charge that had been set to trigger a great explosion. But, the explosion does not take place here. They are just precursors of an explosion to come later. This is why Beethoven chose the tonality of C-sharp minor. No other key could have such a powerful emotional warning effect.



Figure 4. First movement, *Sonata quasi una fantasia, Opus 27, No. 2*. The two series of Lydian clusters, measures 32, and 34 to 37, which have been underlying the *ostinato* triplet lancinations from the beginning.

Next, study attentively this middle section (**Figure 4.**) of ascending and descending series of Lydian waves, which musicians identify simply as diminished sevenths without any other consideration. What foolishness. Be aware of the danger of falling into the trap of using diminished sevenths simply for jazzy effects, as the current degenerate culture does. There is much more to it than meets the ear. What is hidden in the Lydian clusters is precisely the moral principle that Beethoven released as the detonator of a great explosive agapic passion for creativity in the third movement. Beethoven is showing us that such Lydian measures of change can be as quiet and delicate as they can become explosive. The explosive charge, however, will not be released in the first movement. That is the key to the actual resolution of the whole process of this sonata, the key to understanding the crucial relationship of the first and the third movements.

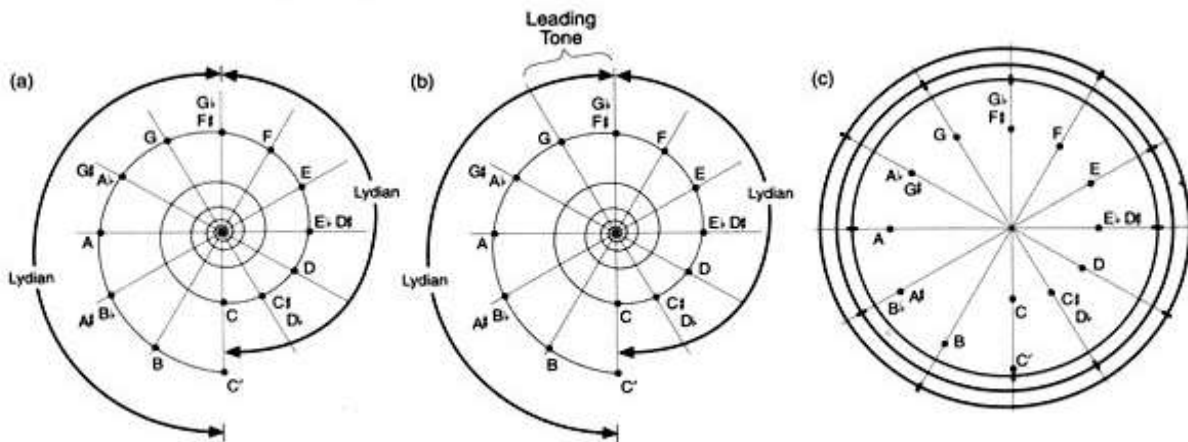
So, midway inside of the first movement, the Lydian clusters that determined the key signatures of the three movements of the entire sonata is given to the listener, and from that moment on, he must take these Lydian elliptical waves into consideration, and hear them resonate throughout the rest of the

composition. Why is this important to note? Because this is where the extraordinary lack of melody of the first movement forces you to turn to counterpoint for some solace, and forces you to rely on those modular waves as a memory function. These Lydian clusters also need to be played as triplets and as actual conscious generative quasi-inversions of the entire movement. It is because most musicians do not understand this Lydian agapic mood that they generally play this movement too slow, and in a syrupy romantic manner. In so doing, they completely miss the *motivführung* unity of effect of Beethoven's agapic principle of composition.

I cannot emphasize enough the importance of these Lydian wave clusters, because the entire sonata is held together by their counterpoint. This was the most revolutionary aspect of counterpoint coming out of Bach, Haydn, and Mozart; and this is what sealed their common *motivführung* affinity with Beethoven. This is the process that made Beethoven most happy at that dark period of his difficult life, especially when he realized with horror that he was going to become permanently deaf.

The way to look at those Lydian clusters of minor thirds, therefore, is to look at them as Plato looked at generating agapic mean proportionality; that is to say, in a manner such that one cannot be generated without the support of another; the first creating a second, and the second generating a third which, in turn, is what gave birth to the first. Thus, all three clusters are so intertwined among each other that they are all means of one another, and, therefore, they are all come to be one. Note, at this point, that Beethoven has used only two of those three well-tempered Lydian elliptical wave functions. Where is the third one?

Figure 5. (a) The “Lydian” interval. (b) Leading tone F# - G in the key of G major/G minor. (c) Possible Lydian intervals in the Well-tempered system.



“The [Lydian interval](#) is the only interval which cannot be generated by the principle of inversion of complementary intervals within any given key. This interval uniquely divides the octave exactly in half: that is, the interval from the tonic to the Lydian tone is the same amount of change as the interval from the Lydian tone to the octave. In the key of C major/minor, for example, this corresponds to the interval between C and F#, which also corresponds to the physical singularity of the register breaks in the soprano and tenor singing voice [Figure 5(a)]. (above)

“Divide an octave in half. This generates a Lydian interval. In the major/minor mode, the Lydian interval is a dissonance with respect to any given key. For example, in the key of C major/minor, the interval C-F# is such a dissonance. Yet this Lydian interval has the unique property of being a pathway from one key to the next, by way of the leading tone of that next key (F#-G in the key of G major/G minor) [Figure 5(b)]. It is a type of singularity to be resolved through the development of the composition.

“When the octave is divided in half again, two Lydian intervals are created. There are only three such combinations possible in the well-tempered system [Figure 5(c)]. (above)” (Bruce Director, *What Mathematics Can Learn from Classical Music*, Fidelio Magazine, Winter 1994.)

3. THE GOVERNING MORAL PRINCIPLE OF MUSIC

As Beethoven wrote to his dearest friend Carl Amanda on July 1, 1801: “A sad resignation must be my refuge, although, indeed, I am resolved to rise above every obstacle.” (Beethoven letter to Amanda, July 1, 1801 in Op. Cit, p. 282.) This, without a doubt, was the time when Beethoven had no choice but to settle his account with the domain of sense perception and consecrate the rest of his life to the domain of musical ideas. It was not an easy decision to make. As his so-called *Heiligenstadt Testament* of 1802, attests, the year when he composed this sonata was THE turning point in his life, because he knew he was becoming completely deaf. Again, the singularity, better still the paradox, was the absolute tension between something that was inevitable and the relentless urge to obey his destiny. As he wrote in his testament:

“But, what a humiliation for me when someone standing next to me heard a flute in the distance and I heard nothing, or someone heard a shepherd singing and again, I heard nothing. Such incidents drove me almost to despair, a little more of that and I would have ended my life – it was only my art that held me back. Ah, it seemed to me impossible to leave the world until I had brought forth all that I felt was within me. So, I endured this wretched existence”... “Divine One, thou seest my inmost soul, thou knowest that therein dwells the love of mankind and the desire to do good. – Oh fellow men, when at some point you read this, consider that you have done me an injustice; someone who has had misfortune may console himself to find a similar case

to this, who despite all the limitations of Nature, nevertheless, did everything within his power to become accepted among worthy artists and men.” (Op. Cit., p. 305)

This was the principle, as he exposed it in his last will and testament. Although the letter was written to his two brothers, it was never delivered to them. In reality, he had written it for the future generations. In that sense, however painful it must have been for him to accept his infirmity, his resignation before the fact that he would not become a virtuoso, or a famous conductor might have been a God sent gift to humanity. As he wrote: “Necessity compels him *owing to others* to think and to *work for others*.” This is what led Beethoven’s biographer, Alexander Wheelock Thayer, to raise the terrible question: “Who can say that the world has not been a gainer by the misfortune which stirred the profoundest depths of his being and compelled the concentration of all his powers into one direction?” (*Thayer’s Life of BEETHOVEN*, revised and edited by Elliot Forbes, Princeton University Press, Princeton New Jersey, 1973, p. 282.)

These are the historically specific conditions under which it can be said with a fair amount of certainty that during the short period of 1800-01, Beethoven made one of the greatest breakthroughs in Classical artistic composition by writing the *Sonata quasi una fantasia*.

[[[[I was reminded recently about Lyn’s Memorandum on *Truth is Beauty, and Beauty is Truth: Understanding the Science of Music, September 1986?...* and the double-connectedness of the musical scale that Lyn referenced in that piece with respect to the science of music, especially to Abelian-Riemannian functions. (Quote from Lyn on Truth is Beauty...)]]]

People have a wrong sense of what change is, because they think of change as movement. That is the wrong way to look at change. You don’t look at change as the motion of a man going around the block, or of a woman changing the baby’s diaper. No, change means transformation, that is, the transformation of something that becomes something completely different, like a change to a higher species. From that vantage point, change represents a fundamental creative transformation in which your identity has been modified completely to the point you are no longer recognizable; a change about which your schooldays friends would say: “That’s not him!”

So, when this happens to an entire society, such an axiomatic change implies that you no longer recognize the former laws that governed that society; or that you recognize those laws as no longer being valid. That change is such that nothing is the same anymore. That’s what change is about, ontologically speaking, and that is the source of every other form of change or movement. That is the form of change that Beethoven was introducing with the *Sonata quasi una Fantasia*. So, you can only begin to understand this more profoundly when you think of music in terms of the Lydian modality of change as Lyn has been emphasizing about the division of the octave since the in 1980’s. In 1987, Lyn stated most emphatically:

“Hence, again, I state, that all apparent divisions of the octave, excepting those defined as fundamental from a Kepler-Riemann standpoint, must be examined by the musician from the

added standpoint of vocal polyphony as such. The coherent conjuncture of precisely-determined voice registration with the Kepler-Gauss-Riemann harmonics, represents a set of quasi-axiomatics.” (Lyndon LaRouche, Message to NEC and MUSIC COMMITTEE, Wiesbaden, 8/12/87.)

The pedagogical point that Lyn was making in the case of music teaching was that you could not divide the octave liberally into three major thirds, for example, but that you could and had to do it, morally, into four minor thirds. Why? Because it is only those Lydian divisions which can express an agapic emotion as opposed to an erotic one. This is the reason why the Lydian question becomes paradigmatic of change in the universe. It is the emotional mood of agape which determines change in the universe as a whole. As Lyn put it:

“Thus, from this we should situate within the principles of vocal polyphony, the notion that the Lydian mode can be employed to address more directly the agapic mood. The question is, is it paradigmatic of modes of the same general quality? Can the Lydian mode’s singularities oblige us to encompass the full potentials of vocal polyphony, with included emphasis on the problem of intervals among the absolute tone-values of voice register passage respecting all species of singing voice? If so, then Beethoven, whose moral view of music was powerfully centered in the notion of the agapic, would have viewed the Lydian mode’s development potentials as paradigmatic.” (LaRouche, Idem.)

This is the heart of the matter of all music, Classical artistic composition in general, and science. Art, like science, is a moral issue, and, therefore, this is the underlying axiomatic modality from which you can say with absolute confidence that “*Truth is Beauty and Beauty is Truth.*” However, Lyn went one step further by identifying a higher efficient interval of action. What he identified as “*an interval of intervals,*” is the primary expression of axiomatic anti-entropic change which causes causality. In an interview that he gave from Jail in November of 1993, Lyn reported:

“You have to see that causality is determined by this type of change. This type of change is ontologically primary. Now, for example in music, which a lot of people are having good fun with, now at least in the music work on conceptualizing the interval between intervals, where the interval is considered the primary sensory phenomenon – the interval as located in the domain – in its analysis situs – upward and downward. So, it’s not a physical interval because upward and downward are two different intervals, even though they are the same distance, so to speak, they have different intervals. So, the interval between intervals which takes you completely above the sensory domain – forget the overtones have nothing to do with music, as such, they are simply an imperfection of music, if you focus on them and try to work with them. So, this type of change – and as I’ve stressed – there’s another aspect to this, if we can map, using this interval between intervals, as a root of counterpoint, and we can map the *motivführung* elaboration, implicitly. The best way to map is to take a number of major compositions, which are *motivführung* compositions and map those, and do it for a number of different kinds of compositions, and now you’ve got a sense of what it is to map a composition from the *motivführung* standpoint. And you’ll see those that do and don’t map.” (Lyndon LaRouche, DOCS: [61] 93393PR_001.DOC-INTERVIEW_WITH-LHL_PHIL_KHUSRO;1)

This palimpsest mapping of compositions is precisely how you change the past from the future. What Lyn identified, with the “mapping of a composition from the *motivführung* standpoint,” is not only the ability to establish the physical musical intervals that Beethoven’s *Sonata quasi Una Fantasia* represented with respect to Mozart’s *Don Giovanni*, but also the underlying unity of composition as the epistemological interval of intense mental charge that both composers are building on in preparation for some future explosion. Therefore, the *ostinato triplet lancinations* that I have identified above must be understood as such measures of tension that both Mozart and Beethoven have stored up inside of their compositions for the purpose of solving a real existential problem, a real life and death problem. This is why the last measures of the first movement of the sonata mix the Lydian intervals with the tempo of a funeral march. Something ominous is to be expected after that; but what?

4. A BRIEF IRONICAL PAUSE.

After having brought the listener to the threshold of the most profound and darkest emotions of the human soul in the key of C-sharp minor, which is the most suitable key for that purpose, Beethoven opened the second movement in D Flat Major, as if he were opening the window of your mind to a heavenly breath of fresh air, a brief *Allegretto e trio* relief, a joyous moment in which the main motif is the inversion of the scale of B Minor repeated almost twenty times within the very short time of two minutes. But, this short moment is deceptive, because it is actually a Prandtl-Meyer expansion flow. There is no real melody, here, only an angular pause in the flow that is preparing the listener to take on the extraordinary challenge of the higher dimensionality of the jubilating third movement. I like to look at it as a sweet taste of mental honey that one might enjoy between clashing dishes in a love-feast where old friends share their “*agapes*.”



Figure 6. Opening measures of the second movement.

Technically speaking, the second movement is not really a sonata movement in any traditional sense of the musical form; it is the connector between two C-sharp minor movements, a sort of Neapolitan *intermezzo* rotating around C-sharp minor by continuously resonating the inversion of the B scale. Epistemologically speaking, this short sparkling mental pause that Beethoven introduced between the two contrasting movements, thus attaching two extremes of the agapic emotion, reminds me of the diplomatic function that Charles de Gaulle had to play, in 1943, within the Mediterranean Commission for the affairs of Italy, in advising measures aimed at either “sanctioning the Italian mistake or overcoming its misery.” Similarly, Beethoven had to find reconciliation with his own physical shortcoming.

5. THE SHAPED CHARGE OF A JOYOUS ELLIPTICAL WAVE EXPLOSION.

“The tension between something that is unattainable and the yearning for its reach is the nature of the irony that every poet hates to cherish. Why? Because, as he is navigating on an ocean without a shoreline, he is constantly subjected to the ebbs and flows of his sense-perceptions, so, he is forced to steer his course from the higher principle of the stars.”

Dehors Debonneheure

The third movement, also in the key of C-sharp minor, is vigorous and most powerful. In contrast absolutely with the first movement, its progression is *Presto agitato*. (Very quick and with excitement) However, by the fact that they use the same Lydian material, the first and the third movements establish the range of two emotional extremes; one of excruciating despair, and the other of enthusiastic hope. Here, the triplets are interlaced with quadruplets as if to confront the listener with two very strongly opposing emotions, one very soft and delicate, the other very tempestuous and earth-shaking, one very sad and filled with self-pity, the other very joyful and filled with love of mankind; both of which come together from two opposite directions and they become intertwined into a single unity of effect, with the mixture of the same musical material through which the paradox is solved. So, the question is: How can you express both sadness and joy with exactly the same musical material? For instance, the same three-note-motif of the opening first movement, notably G#, C#, E is reintroduced at the beginning of the third movement, but in an expanded development, as if each note of the first movement, somehow, became the generator of the rapidly agitated quadruplets of the third movement.

3rd Movement

L. VAN BEETHOVEN
Op. 27, No. 2

PRESTO AGITATO

Figure 7. Opening measures of the third movement.

Beethoven marked the third movement as *presto agitato*, as if to emphasize the point that a funeral march can be transformed into a fiery Promethean force of change which is what this sonata's intention was all about to start with. In other words, the subject matter is how to conquer your fears. Here, Beethoven is giving a most beautiful proof that the fears of mankind can be turned around, but only if you summon the passion of the creative potential of the species. That idea was already in Beethoven's mind even before he began to compose the first triplet of the first movement. Look at this third movement, therefore, as a most passionate agitation for the awakening of this creative potential. Look at it as epistemological warfare against his own personal shortcomings. This is the subject matter that Lyn was addressing to the Basement team, on April 23rd, 2011, when he said: *“It's creativity, true creativity, of which mankind has demonstrated to be capable, which is the only thing that is more powerful than the forces that we have to deal with, in this universe [..] Mankind contains the faculty of creativity which is more powerful than the Solar System, but you've got to work at it!”*

The process of creativity, therefore, was only momentarily touched on by way of the lamentation of the first movement, and then the situation was changed through the Neapolitan effect of the second movement. Now, you are progressively led with enthusiasm to a great cluster of Lydian singularities near the end of the third movement. Thus, Beethoven wrote the instruction of *presto agitato* in order to express

the fiery explosion of the agapic emotion that the Lydian detonator had prepared during the first movement. Now, ask yourself: Why the same Lydian intervals of the first movement would be found, again, at precisely the location of the most significant cluster of Lydian singularities inside of the third movement? Because that was, for Beethoven, the only way to take away the fear of deafness, which for him meant deathness. Face it, as loud and enthusiastically as you can: shake up the whole rafters.

Study closely the following playful and well ordered singularities of measures 164-165 of the third movement, and you will get the point. If ever there were a musical form of harmonic axiomatic change, this would be the one you should be listening to. If you wish to hear what a high density of singularities inside of a small moment sounds like, click [here](#) and scroll down to the third movement section, at measure 164; and then, click on the pointer. After hearing the end part of the complete reprise of the main subject, you are shocked by this sudden wave of Lydian singularities, which even have the shape of shock waves. (**Figure 8.**)



Figure 8. The great Lydian density of singularity of the third movement. Measures 164-165.

Note that all of the intervals of **Figure 8** are minor thirds. Each cluster represents an octave of four minor third intervals, repeated five times, horizontally and vertically. Each octave defines the fluid motion of a wave which ends and begins with the shock front of the same octave marked as a chord. These octave formations C, Eb, F#, A, are the same as elliptic wave functions. (See my previous report in the Art section of LaRoucheNET, [Lydian Singularities of Galactic Thinking](#), 3/25/2011.) Each elliptic wave is formed by two motions: one horizontal (toroidal) and the other vertical (poloidal), as if they were generating the process of a shock front within a torus! That is the essence of the counterpoint memory function. This is the characteristic precursor sign that an axiomatic change about to take place; that is to say, a high density of singularities within a very short period of time.

	C	C		C	C		C	C
	A	A		A	A		A	A
C – Eb – F# - A - F#	F#	C – Eb – F# - A - F#	F#	C – Eb – F# - A - F#	F#	C – Eb – F# - A - F#	F#	
	Eb	Eb		Eb	Eb		Eb	Eb
	C	C		C	C		C	C

Measures 164-65.

Each Lydian interval of a minor third gets configured into a octave cluster of four intervals between C – Eb – F# – A – C (horizontally); each octave is forced into the shock front of an elliptical cluster of the same eight intervals (vertically). Each elliptical cluster of eight intervals is then exploded three times (horizontally). This should suffice to demonstrate the nature of the power packed axiomatic Lydian measure of change that Beethoven generated to express his creative process of composition, the shadows cast from his higher hypothesis. The whole principle of his sonata composition is expressed in the shadow-intervals of this explosive manifestation. Next, compare the same process with what is going on inside of the crater of a volcano.

But, before looking at the volcano section, ask yourself: “How does an axiomatic singularity shape itself in the mind?” Think of how a new idea emerges suddenly as something that did not exist before. In fact, it had the potential to exist, but it did not exist in any given form. The question is, how does the form of that new idea take shape? The hypothesis that I propose to you corresponds to what Lyn used to call the *White Owl effect*, an effect that was also implied recently in the LPAC interview given by our Ukrainian friend, Sergey Pulinets.

Think of this effect as a metaphor for generating new ideas, that is, as a shock effect signal of something that does not yet exist, but which is about to come into existence in the near future. Such an idea is an product that is of the domain of the Riemannian and Abelian functions, which is not mathematical, but which announces the coming into being of a new type of science that was not properly understood before; that is, the science of an elliptical wave phenomenon like the one Beethoven generated through measures 164-167 of his *Sonata quasi una Fantasia*. So, now that the dirt has been cleaned from this old masterpiece, let’s have a peek at volcanoes.

6. THE “*WHITE OWL EFFECT*” AS AN AXIOMATIC SINGULARITY.

In September of 1996, Lyn wrote a series of reports on Time-Reversal and the role of Riemannian mathematics especially in congruence with music. During the September 14, 1996 intelligence meeting, he stated:

“So, as long as you have a consistent principle of discovery, one can deal with a discontinuous series with the same facility which one attributes to an analytical series in mathematics, in generally accepted mathematics. This function, which takes us from one term of such a discontinuous series, is Plato’s notion of *higher hypothesis*, a method of discovery which takes you to a new hypothesis as a series. And, the succession of hypothesis is a discontinuous series, that is, a discontinuity between each and all the terms of the series, taken in permutations or in simple series. And the generating principle which is consistent in going from one member of the series, one hypothesis to the next in the series, is *higher hypothesis*. So, that notion of function exists in music.” (Lyndon LaRouche, *Leesburg Intelligence Meeting*, September 14, 1996.)

Now, as Lyn later realized, there was no such analytical series to be found in mathematics, because mathematics could not express such a creative process. On the subject of such Riemannian singularities, however, Lyn had previously challenged the scientific community, and especially our own, now defunct, *Fusion Energy Foundation*, with the provocative idea of the *White Owl effect*. Lyn’s provocative hypothesis came from Riemann’s Doctoral Dissertation in which the author had formulated a hypothesis which did not merely measure the curvature of primitive roots and biquadratic residues, but provided, as well, a geometrical framework for understanding what Lyn later identified as singularities of a higher hypothesis series, through a *White Owl Effect*.

(Cf. Ernie and the construction of an n-fold manifold)

Now, I want you to concentrate on the emergence of an axiomatic singularity that takes place inside of this torus, as if it were happening from inside of your mind. The best pedagogical device I have found to express that ontological effect can be viewed as a Beethoven great dissonance that produces a tension inside of the relationship between two opposing motions, the poloidal and the toroidal waves of a doubly connected mental process, such as manifested by the steam rings of Mount Etna.

In the 1970’s, Lyn used the example of the *White Owl Effect* to describe the process of formation of the planetary orbits inside of a solar system, a process that was announcing the coming into being of solid and gas planets orbiting around the Sun. He was right, one more time, in his forecasting. Such an early warning system can be applied to almost any anticipated phenomenon of axiomatic change in the universe today; and most notably at the time of the 62 million year cycle, when the solar system travels northward outside of the galactic plane.



Figure 9. *The White Owl Effect* coming out of the steaming crater of the Mount Etna, Italy, 2007.

The [steam rings of Mount Etna](#) (vapor and sulfuric dioxide) are warning signs that the volcano is about to erupt. They are produced by pressured gas and are generated by shock waves through a narrow cylindrical conduit of the crater. Some of those rings last up to 10 minutes and appear to be formed within a mushrooming ring which also generates poloidal steam rings around the main toroidal ring. The most interesting feature of the rings' behavior is that, after they have gone through an initial shock, they are measurable by the change of temperature they produce through a series of contractions between two forms of circular action, the toroidal (horizontal) and poloidal (convection) motions of double connectedness. Such vortex ring phenomena are rarely understood as reflecting the complexity of generating ideas, but they do, and they are especially pertinent in the domain of music, as Beethoven demonstrated.

Moreover, it is always useful to compare your mental process with a physical phenomenon that reflects the same anomaly. Since a compression shock induces a wave motion in opposition with a rotating motion in any given flow, the wave dynamics of the whole process is propagating in two different directions at the same time, throughout the whole process. In the case of a volcano, the pressure inside of the tubular whole is different than the atmospheric pressure outside of it; therefore the wave which then comes out of the nozzle is initially a Prandtl-Meyer expansion flow (See **Figure 10.**), then, the wave-system changes into a closed circular helix as it hits the shock front of the cooler atmosphere.

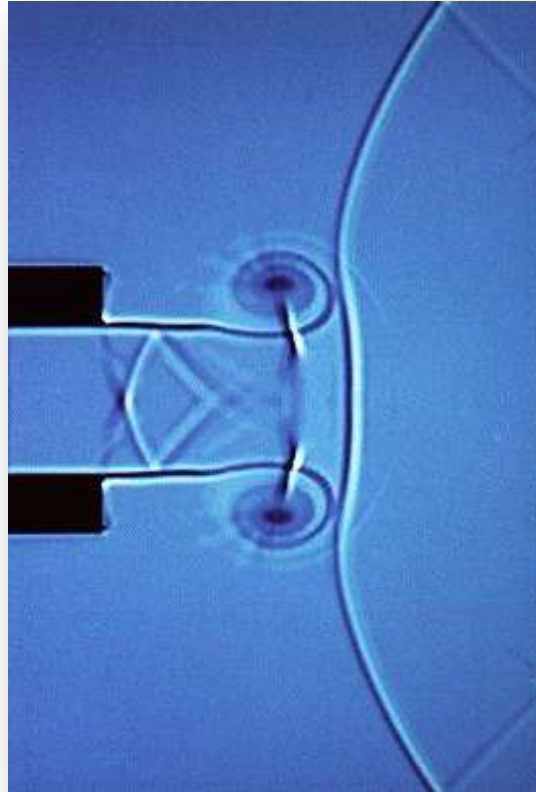


Figure 10. Fluid dynamic cross section of a shock wave effect generating a vortex flow. From Professor of Fluid Dynamics, T. T. Lim, University of Melbourne, Australia.

The point to be made, here, is to properly understand this conception of double-connectedness of rotary action as a moral question. As you look into your own mind to study your mental process, think of an idea that you want to create that did not exist before, and willfully establish that such an idea is necessary for the improvement of mankind. That is the moral precondition of principle required for understanding the *While Owl Effect* in physics as well as in artistic composition. The social tension of the idea will do the rest.

This implies the interaction of two different moral contents of ideas; one is the orbiting field of the history of ideas that comes from the Platonic tradition that you have to master in your own mind and the other is the new idea. This includes primarily, Pythagoras, Plato, Nicholas of Cusa, Leonardo da Vinci, Kepler, Leibniz, Riemann, and Vernadsky. The other moral content is the emergence of a new idea that you generate and which is morally in tune with that field, that is, an idea that demonstrates you are willfully determined to follow that line of progress, that is to say, you are morally fit to survive. Otherwise, you will simply die and be forgotten. It is the moral congruence between those to motions that you want to develop as the measure of change of a doubly-connected manifold, not some popular opinion effect that you wish to create. That will kill you. This is where “Beauty is Truth and Truth is Beauty” gets realized. This is the moral view that Riemann implied in this theorem from his Dissertation. As he said:

“For determining the metric relations of an n -fold extended manifold representable in the prescribed form, in the foregoing discussion, $n(n - 1) / 2$ functions of position were found needful; hence, when the measure of curvature in $(n - 1) / 2$ surface-directions is given, from them can be determined the metric relations of the manifold, provided no identical relations exist among these values, and indeed in general this does not occur.” (Bernard Riemann, *On the Hypothesis which Lie at the Foundation of Geometry*, from David Eugene Smith, *A Source Book in Mathematics*, Dover Publications, New York, 1959, p. 418.)

Thus, we find, with this Leibnizian analysis situs method, a geometric construction which can satisfy the requisite of any Riemannian n -fold extended manifolds which can be applied to the generation of new creative ideas of the Platonic tradition.

Next, before it gets to be completely formed, evaluate the content of this new moral idea by going through the historical memory of mankind, as if you were testing its value through the lens of old friends that you are in communication with, and in the light of the new discovery of principle that you have just made. If your old friends all say: “Of course!” Then, go ahead with it, and make it public. You will discover that, as you go along, other ideas you had formed in the past either reject the new idea or have been changed dramatically by it, as it comes into contact with them through the toroidal wave that carries each one of them, from the back to the front of your mind. Such is the double connectedness principle that Beethoven has been working with throughout all of his compositions, and that he applied with special attention to the composition of his *Sonata No. 14 in C-sharp minor*.

As Lyn indicated with respect to the report from Sergey, the amount of charge that is being built up inside of the planet, and which is coming from the galaxy, is a similar explosive process. The Sphere of the Earth is attempting to become a Torus. That is precisely what happens when you have a hot idea to develop, and nobody wants to listen to you. So, a word of caution: you must take a lot of time to think through how you are going to deliver such a two punch effect to change your neighbor’s way of thinking. Bonne Chance!

