THE RABELAISIAN METHOD OF AXIOM BUSTING

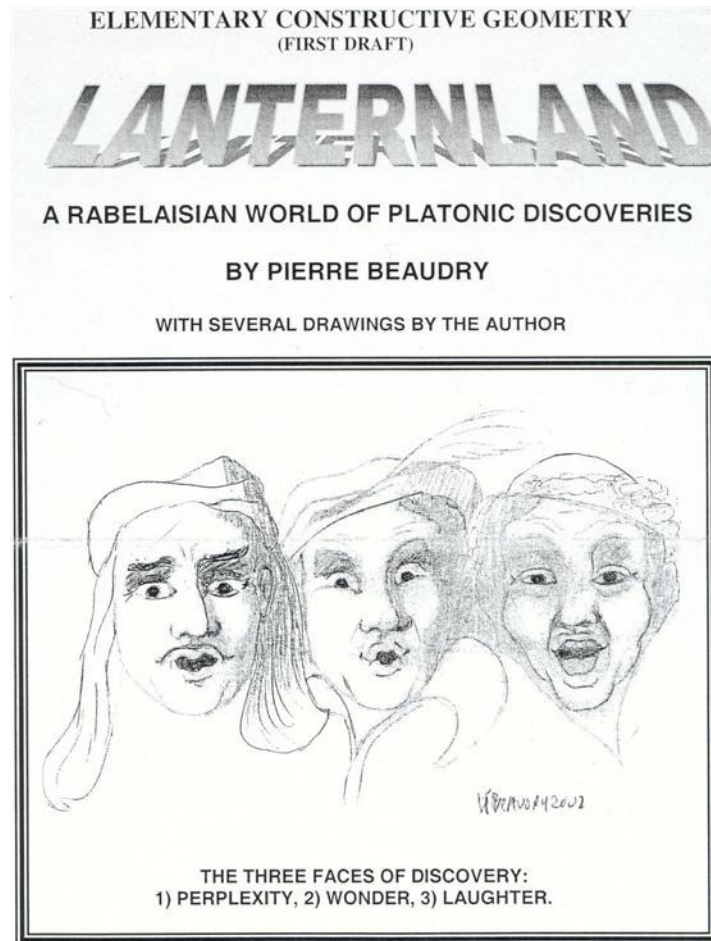[14. Bogotá LYM class: Wednesday March 28, 2007.]

1- AXIOMATIC CHANGE OR THE THREE FACES OF DISCOVERY

I'm going to start today with a lot of questions, and I don't know if I am going to be able to cover them all. So, I hope you will help me as we go along. For example, is universal history like a great river, which flows and changes all the time in unpredictable directions or is its course changing in foreseeable and knowable ways? If the course of human history is predictable, is it in a form of predestination or in some other fashion? Also, how is the universe changing? In other words, if what Heraclites said is true, that you couldn't swim in the same river twice, then how can one forecast its principle of change? If you say that everything changes except change itself. How do you know that? What if we concentrate on the nature of change itself? How can we do that? LaRouche gave us means to do that in exactly the same way that Leibniz did. He said you can make economic forecasting, not prediction, by "{*hammering your personality*}" into changing your own axioms, postulates, and definitions. In other words, what we have to rediscover is the principle that Leibniz called the {*principle of continuity*}, which is reflected in what I would call the psychophysical principle of change in the universe as a whole.

Now, 475 years ago, Francois Rabelais (1494-1553) had made that same discovery. That is where I first learnt it. And Rabelais said that you could discover this by following the {*psychogony of Plato*}. And, by {*psychogony*}, he meant the science of the origin and of the functional development of the mind. Rabelais formulated this science of psychogony in a sort of prophecy, which said: "{*Destiny leads the willing, but the unwilling drags*.}" Now, to me, this sounds a lot like the responsibility that the LYM has vis-à-vis the world of the Baby-boomers today. It means that the willing is destined to win and the unwilling is destined to be dragged along whether he likes it or not? But, there is possibly another meaning here. Maybe Rabelais is converting to Calvinism, to the reformist notion of predestination? How can you recognize if the changes are coherent with those of economic forecasting or with predestination?

When Lyndon LaRouche speaks of an infinitesimal singularity or discontinuity in universal history, this is what he is talking about; and, this is what you want to look for in history because a true discontinuity is like a paradox or an anomaly in the infinitesimally small. It always identifies an axiomatic change that is the passing from a lower to a higher geometry. It is those axiomatic changes that give you the directionality of history. That is what I am going to show you with Rabelais today. But first, let me show you the three faces of an axiomatic change, so that we are clear on what we are talking about: **PERPLEXITY, WONDER, AND LAUGHTER**. Look at **Figure 1** and examine the three faces of an axiomatic change on the cover of my geometry book for children, {*Lanternland*} that I wrote back in 2001. For further reading, I also refer you to my article on {*What Does It Mean To Be Rabelaisian?*}, and the article of Francois Calentier, {*Are You Gargantuesque?*}, Fidelio Magazine issue of Winter 2000.

Figure 1. The Three Faces of Discovery

ELEMENTARY CONSTRUCTIVE GEOMETRY
(FIRST DRAFT)

LANTERNLAND

A RABELAISIAN WORLD OF PLATONIC DISCOVERIES

BY PIERRE BEAUDRY

WITH SEVERAL DRAWINGS BY THE AUTHOR

THE THREE FACES OF DISCOVERY:
1) PERPLEXITY, 2) WONDER, 3) LAUGHTER.

Leesburg Va. August 2, 2001

In a way, these are the three shadow expressions of the sublime that the human mind goes through in a discovery of universal physical principle. In classical Greek theater, these different emotions were represented by different masks, which came to symbolize, through the deformity of time, tragedy and comedy. But, that is a wrong way to look at those masks. In reality, such masks represented different moments of the sublime, that is, perplexity, awe, and laughter. Note that between the two extremes, perplexity and laughter (**Figure 1**.), there is an inversion, which expresses the unique ambiguous characteristic of the sublime as an axiomatic change. That is the key. This means that, in an organizing situation, whenever a sign of distress and perplexity does not turn to laughter and joy, you have a tragedy. On the other hand, whenever a sign of distress and perplexity turns to laughter or joy, then you have a sublime moment or irony; that is to say, a tragic moment in which the actors on the stage of history laugh at themselves. That is what a true comedy is. From that vantage point, tragedy and comedy are not opposed genres. They are both derivatives of the sublime as a higher species. This, in essence, is also the way things change axiomatically on the stage of history; and when a necessary change does not occur, humanity is plagued with tragedies, as exemplified by the great tragedies of Aeschylus, Shakespeare, and Schiller. Now, while you are thinking about that, let's investigate Rabelais's statement from that standpoint.

2- {*DESTINY LEADS THE WILLING, AND THE UNWILLING DRAGS.*}

This statement is found in Book Five, the last book that Rabelais wrote about the final expedition of Pantagruel, Panurge, and Friar John to the Island of Lanternland. I refer you to Chapters 32 to 48 of that volume most emphatically. Whenever I think of Rabelais, I think of this prophecy that Pantagruel discovered engraved at the entrance of the Temple of the Holy Bottle on the Island of Lanternland, just after Panurge made his axiomatic breakthrough at the register shift of the Pythagorean Tetrad. Though Panurge was a total coward, like Sancho Pansa, it took several years and many tragic adventures before Pantagruel and Friar John succeeded in having Panurge make the giant step of breaking through his fears and his cynicism. Panurge was a typical cynical Baby Boomer.

However, Rabelais treated the question of destiny very much like the other great American Rabelaisian philosopher, Yogi Berra, who once said: {*When you come to a fork in the road, don't hesitate one minute: TAKE IT!*} We are at such a turning point in history today, just as Rabelais was during his own lifetime; and, like he did, it is our duty to take that great challenge which calls for an axiomatic change in every one of us. The problem is that most of the Baby Boomers who are running our society today have no idea what to do when they come to such a historical fork in the road. They don't know what to do because such a moment demands that they {*abandon the known for the unknown*}. As LaRouche has emphasized so many times, Baby Boomers only wish to cling to what they already know and want to make changes only under conditions that it does not disturb {*their comfort zone*}. As you all well know in your own organizing, Baby Boomers have a total fear of axiomatic changes. So, I think Rabelais can help us in our political task of changing those Baby Boomers.

On the other hand, the new generation of youth, those between 18 and 35 years of age, has to face the {*unknown*}. As a youth, today, you have to learn to navigate the unchartered waters of the future, while the Boomers like to peddle back to their nostalgic past. This is what Rabelais was also faced with, when he wrote his famous five books on the extraordinary stories of Gargantua and Pantagruel. The axiomatic change he was faced with was very much like what we face today: either go into a dark age with the old feudal regime, or create a Renaissance. So, let's look at that fork in the road that Rabelais took 475 years ago, and see what he did with it.

In 1532, after his protector and personal friend, king Francois I, had been forced by the Habsburg Emperor to accept the 1529 Franco-Spanish peace of Cambrai, which was a piece of shit, une grosse merde, Francois Rabelais published his first book, {*Pantagruel*} at the same time that the Toulouse professor, Jean de Cahors, was accused of heresy and was burnt at the stake for having criticized the clergy. Rabelais did not feel safe at all and had Pantagruel declare: {*Better to laugh, than to end up roasted like grilled herrings.*}" Rabelais also realized that the Protestant reform of Luther (1483-1546) was not going to be a solution either. Though he was very critical of the Catholic Church, Rabelais refused to join the ranks of the Protestant reformists and decided to confront the excesses of the Church of Rome by constantly holding up the banner of truth rather than debate matters of doctrine. He was a priest and a physician by profession, so his role was to cure people of all sorts of diseases, not to create new diseases. His axiomatic weapon against the abuses of the Catholic Church was the most powerful weapon of all: laughter. And, with that weapon of laughter, Rabelais developed the art of axiom busting, that is, the art of turning little people into giants. As a doctor, he knew

that if people could laugh at their own stupidity, they could be cured. But the first step was to get people to become perplexed. This was the role of giants.
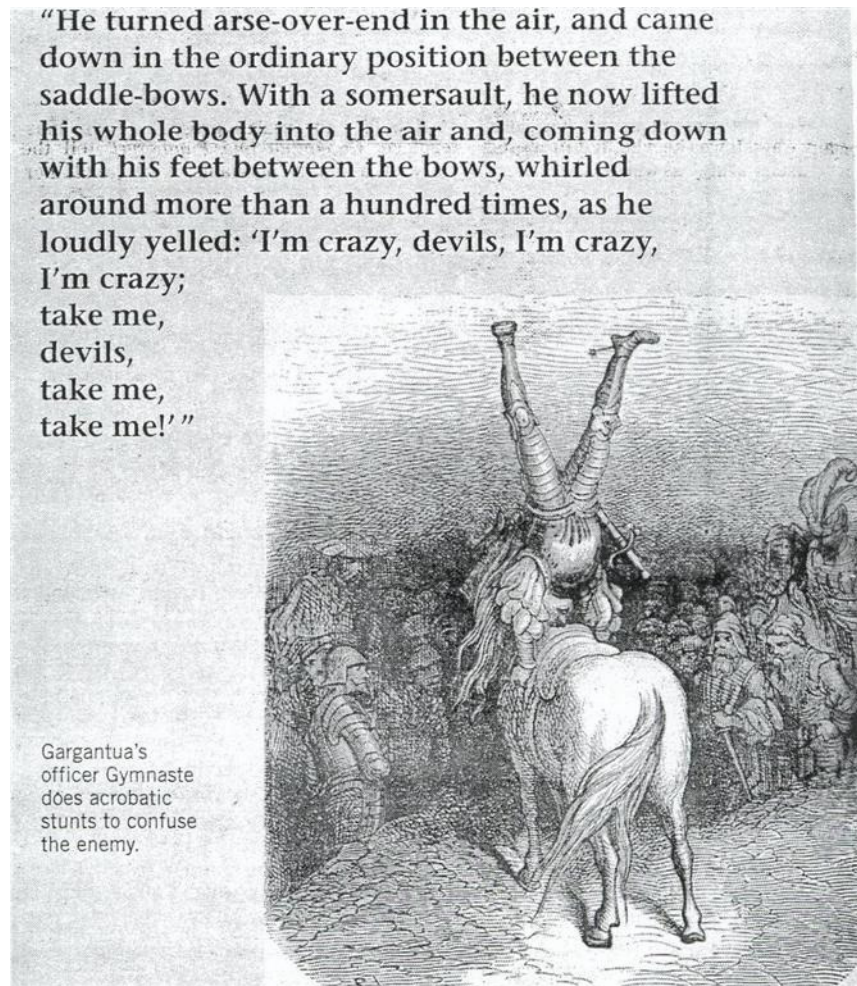
In fact, the role of giants, as Rabelais saw it, was to muster the courage to attack the corruption and tyranny of unjust institutions, as well as to go after the ignorance and banality of the common people who believed in such institutions. The little people did not dare criticize the Church, for example, but giants were courageous enough. The world has not changed that much since then: has it? We still have to do the same job, today. So, Rabelais attacked mercilessly those institutions, Church as well as Education institutions. He hated lies and banalities and was always totally outrageous with confronting people with the truth. That was his method. This was Rabelais' way of restoring the role of Prometheus, and his giants were very much like Cervantes's Don Quichote.

In order to illustrate Rabelais' method of axiom busting, I have chosen for you two examples. The first is the case of how Gymnaste confronted the enemy in the {***First Book***}, and the second is the case of the Pythagorean approach to the fallacies of the Oracle of Delphi in the Lanternland section of the {***Fifth Book***}.

Just to briefly situate you with his works, Rabelais has written five books, which can be summed up in a single intention: the quest for truth and humanist knowledge. The First Book is on the education of the giant Gargantua, the Second Book is on the education of his son, the giant Pantagruel, the Third Book is about the adventures of Panurge, a mischievous and cowardly sort of Sancho Pansa, the Fourth Book is about the travels of Pantagruel, Panurge and Friar John in search for the Oracle of the Holy Bottle, and the Fifth Book is on the discovery of the Oracle in Lanternland, where Panurge finally gets the answer he was seeking all along and had traveled so long to obtain. His question was "will I ever get married?" A very serious question, indeed, and the answer of the Oracle was: **"TRINK",** that is to say, "drink", to the source of truth and knowledge. A very appropriate answer, indeed! Now, let's look at Gymnaste.

3- GYMNASTE AND THE RABELAISIAN FLANK

Figure 2. How Gymnaste Met the Enemy.

"He turned arse-over-end in the air, and came down in the ordinary position between the saddle-bows. With a somersault, he now lifted his whole body into the air and, coming down with his feet between the bows, whirled around more than a hundred times, as he loudly yelled: 'I'm crazy, devils, I'm crazy, I'm crazy; take me, devils, take me, take me!'"

Gargantua's officer Gymnaste does acrobatic stunts to confuse the enemy.

What I am now going to go through is what I consider the most important Rabelaisian flank to use against an enemy. Think of the Rabelaisian giant as an unbounded and unhinged masterful Promethean man. A good example of his axiom busting method is represented by the case of the Gargantua officer, Gymnaste, in the First Book, Chapter 34: {*How Gymnaste met the enemy*} and Chapter 35: {*How Gymnaste neatly killed Captain Tripet and others of Picrochole's men*}. Consider how Gymnaste confronts the enemy in the same way that Jeanne d'Arc confronted and routed the English Army at Orleans. Gymnaste goes through a whole series of acrobatics while Jeanne d'Arc stood absolutely still on her horse. This is the essence of psychological warfare. This is also the manner in which the LYM have recently confronted Al Gore in Montreal. [See Morning Briefing, Sunday, March 25, in the Ops. Bulletin.] The trick is to build the momentum to a climax at which point the enemy is hit with full force with the truth and is not able to recover from his perplexity. After planting a seed in the mind of his enemy by saying "{*I am only a poor devil*}{*Je ne suis qu'un pauvre diable*}," Gymnaste went through his masterful acrobatics by making extraordinary summersaults on the back of his horse, and at the end of which he yelled in an extremely devilish loud voice:

"{*I rage, devils, I rage, I rage! Hold me, devils, hold me, hold me!*}"

"{*J'enrage, diables, j'enrage, j'enrage! Tenez-moi, diables, tenez-moi, tenez !*} »

So, as a result, the entire enemy army ran off in fear, thinking that Gymnaste was really possessed by the devil, just like the English thought that, by sitting still on her horse, and not following the traditional rule of engagement, Jeanne d'Arc was bewitching them outside of the walls of Orleans. This is an important lesson, because it gives you a direct insight into what LaRouche calls the discovery of an underlying assumption. In both cases of Jeanne d'Arc and of Gymnaste, the idea is that they have discovered a way to flank the enemy by having an insight and finding their underlying assumptions, their weakness. For example, if public opinion has it that someone who does extraordinary things, even impossible things, is a devil or a sorceress, then this weak flank can be exploited because their psychological behavior can be controlled and manipulated. That is how you can outsmart your enemy.

Similarly, every one of us has certain underlying assumptions that are used as excuses for doing or not doing something. I remember saying a number of times something like: '{*I can't go out and organize today because I don't feel good.*}" I am sure this never happened to you. So you see, it is always good to have an insight into such behaviors and expose them for the fallacies that they are. This is the reason why rationalization is always something equivalent to covering up the truth as Panurge discovered in **Figure 3**.

Figure 3. Panurge discovering that an underlying assumption is always covered up.

4- RABELAIS AND THE SINGULARITY OF PYTHAGOREAN SPHAERICS

This aspect of Rabelais is very special and I fear that even some people inside our own organization might not want to see it published. You will soon understand why. Now, when Pantagruel, Panurge and Friar John arrived in Lanternland, they were greeted by Midnight-Oilers (Lanternois). These are people who stay up all night and feed themselves only with ideas that are generated from their lanterns, otherwise known as Pythagorean {*Sphaerics*}. Take Book Five, Chapter 36: {*Our Descent of the Tetradic Steps; and Panurge's fright*}. Here, Rabelais brings the reader into making a fundamental discovery of universal physical principle by using the Leibniz {*principle of continuity*} to discover the Pythagorean Tetradic degrees of knowledge. Now, make sure you don't get confused on this subject. We have discussed this principle before as a metaphor of an axiomatic change, when Leibniz had us pass from the ellipse to the parabola. Something similar to what LaRouche identified in Riemannean manifolds is going to happen here.

The Temple of the Holy Bottle, when properly understood as Plato's Cave, can only be reached through a spiral staircase that is constructed like a stereographic conical musical scale based on the Pythagorean degrees of the Tetrad, and in the complex middle of which, there is a crucial discontinuity, and of which you can find the conical illustration in LaRouche's {*So You Wish to Learn all About Economics*}, page 51-52 on thermodynamics. You can think of this downward process as a spiraling well-tempered solar system, or as a spiraling well-tempered musical system or as the progress of universal history as a whole. It is actually all three. In the three cases, the idea that Rabelais is reconstructing reflects the metric of how the different Pythagorean domains of ancient Egyptian {*Sphaerics*} reflected the universe as a whole, the Cosmos, as a four degree expanding and axiomatically changing continuous manifold. Now, the numbers that I am going to go through with you will appear as pure numerology, but they are not. That is just an illusion that Rabelais is playing with. They are metaphors for expressing different levels, or different changes in degrees of powers. Now, at this point, those of you who are afraid of numerology, better get out of the class right now!

In the Pythagorean Tetrad construction, one finds the principle of growth; the point is 1, the line is 2, the surface is 3, and the solid is 4. These are different dimensionalities and the passing from one level to the next requires a non-linear leap, a qualitative change, and an epistemological jump. This is what Satanists like Madame Blavadsky have twisted into mystical numerology mumbo-jumbo, but pay no attention to that nonsense. What Rabelais developed in *Chapter 36* is the actual Pythagorean Sphaerics ordering of the Tetrad ordering principle by means of a conical spiral action in such a way that you really don't know if he is joking or if he is serious until you have reconstructed the Tetrad-quadratic function for yourself. So, as LaRouche used to say: "{*Believe nothing that for which you cannot give yourself a constructive proof.*}" Just repeat the Rabelais construction after me and you will see what I mean.

Figure 4. Panurge jumping over the register shift of the Pythagorean Tetrad.

Book Five, Chapter 36: {*Our Descent of the Tetradic Steps; and Panurge's fright*}

{*Then we descended an underground marble staircase, and came to a landing. Turning to the left, we went down two other flights, and came to a similar landing. Then there were three more to the right, ending in a similar landing, and four to the left again.*

{*How many flights have you counted?" asked our splendid Lantern.*
'One, two, three, and four' answered Pantagruel.
'How many is that?' she asked.
'Ten' answered Pantagruel. [That is, 1+2+3+4 = 10]
'Multiply this result by the same Pythagoreal Tetrad,' said she.
'That's ten, twenty, thirty, forty,' answered Pantagruel.
'How many does that all make?' she asked.
'A hundred, answered Pantagruel.
'Add the first cube,' she said, 'which is eight. At the end of that foreordained number of steps we shall find the Temple door. And note most carefully that this is the true psychogony of Plato, which was so highly praised by the Academicians, but so little understood. The half of it is made up of unity, of the first two plane numbers, two squares, and two cubes. [That is, 1+2+3+4+9+8+27 = 54 x 2 = 108]

In descending these numbered stairs, underground we had good service from, firstly, our legs, for without them we could only have rolled down like barrels into a cellar; secondly, our illustrious Lantern, for we saw no other light as we descended, any more than we should have done in St. Patrick's hole in Ireland, or in the cavern of Trophonius in Boëtie. When we had gone down seventy-eight [78] stairs, Panurge cried out to our most luminous Lantern:

'Most wonderous lady, I beg of you with a contrite heart, let us turn back. For by God's truth, I am dying from sheer fright. I agree never to marry. You have taken great pains and trouble for me, and God will reward you for it in his great rewarding-place. I shan't be ungrateful either, when I get out of this Troglodyte's cave. Let's turn back, if you please. I'm very much afraid that this is Taenarus, which is the way down to hell. I think I can hear Cerberus barking. Listen, that's he, or I have a signing in my ear. I've no liking for him at all, for there's no toothache so bad as when a dog has got you by the leg. And if this is only Trophonius cave, the ghosts and goblins will eat us alive, as they once devoured one of Demetrius's bodyguards, for lack of scraps. Are you there Friar John? I beg of you, old paunch; keep close to me, I'm dying of fear.}"

Now, after this weird occurrence, concentrate on the three numbers that Rabelais has generated. What are they? Look for their shadows on the wall of Plato's cave. They are 108, 54 and 78. Have a look at the e-mail that I just sent you on the arithmetic-geometric mean. What is the significance of those numbers? How do they relate to what Panurge has gone through? What is the geometric relationship to the epistemological behavior of Panurge? If you take the total number of steps in the spiral staircase, the conical function as a whole is 108, as forming a musical octave with 54, then the complex halfway rotating step between them, 78, represents the singularity that Panurge is jumping over. It is, as in the {*So You Wish…*} thermodynamics example of LaRouche, the arithmetic-geometric mean function of the whole spiral action progression, that is, more precisely, 78.666! This is the passing tone of a voice register shift, known during the renaissance as the {*devil's interval*}. That is where the Satanists got their 666 numbers. This is also the experimental procreation (psychogony) of the soul by means of which discoveries are made in the development of the mind.

 Now, what is interesting, here, is that this singularity of an axiomatic change describes and explains the great fear of Panurge; because, at the point where he has to make an axiomatic change in his lifestyle (the life threatening decision to get married), Panurge became totally perplexed, freaked out, and wanted to go back to his {*comfort zone*}, for fear that he would not be able to break through to the next higher degree, or dimensionality. This must raise some questions in your minds about how Plato's psychogony works throughout all of his dialogues. I won't be able to go through that at this point, but you can find one of the greatest examples in the case of the slave boy and his discovery of principle for the doubling of the square in the {*Meno*} dialogue. Besides, all of you have already gone through such experiments of boundary barriers in the organizing process, or else you would not be here today.

However, this is a nice little axiomatic problem that Rabelais posed as an axiom buster to the reader, about 300 years before the young 20-year-old Gauss developed the same problem in astrophysics and made the astonishing discovery of the first asteroid, Ceres. Now, if you have done some Bel Canto voice exercises, you will know what I am talking about because you will have constructed it yourselves by placing your voice. You know that such a register shift exists in each and all of the six human voices, especially

when you do your warm-ups with Maestro Briano. Similarly, if you have constructed the Keplerian orbits of the solar system, you will also know that the harmonic position of the asteroid belt between Mars and Jupiter, the harmonics of the harmonics, represents a similar register shift between the arithmetic mean and the geometric mean of the solar system spiral action. Does that raise any questions for you?
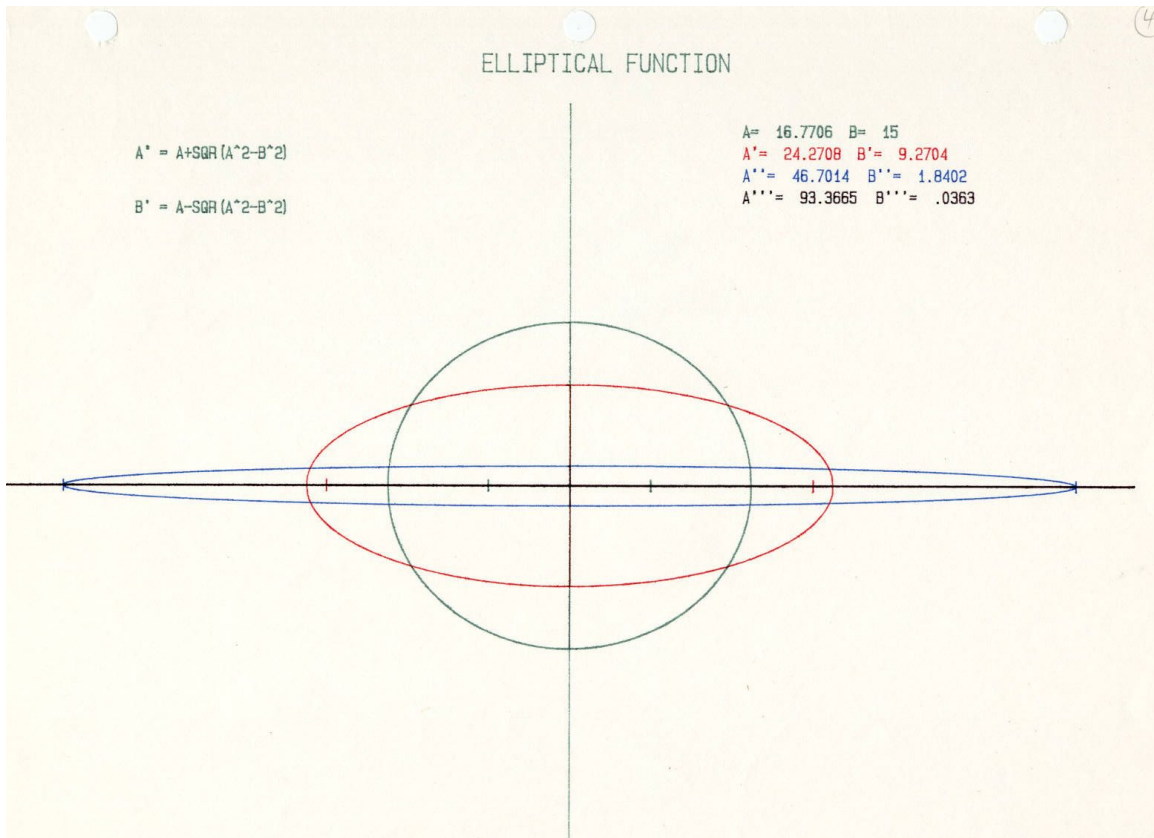
The point here is that the secret of passing through such a register shift by Panurge represents the will to change; that is what destiny is oriented to in leading the willing. Panurge has not yet come to discover that {*Destiny leads the willing, but the unwilling drags*}. So, he told the Lantern that he was no longer willing to get married and wanted to go back to his {*comfort zone*}. That is why at the end of the chapter, he claimed his victory by saying that he was willing again: "{*Let's go on, then,' said Panurge, 'and charge ahead foremost through all the devils. We can but perish, and that is soon done. I have always been preserving my life for some battle. {that is, getting married] Let's move, let's get moving, let's press onward. I have enough courage and more. It's true that my heart is pounding. But that is from the chill and staleness of this cave. It's not fear, oh no, it's fever. Let's move on, let's pass on, push on, piss on. My name is William the Fearless.*}" That conclusion represents the inversion between perplexity and laughter, which shows how Panurge has broken through his fears and has made the discovery of principle. Some of you may have to go through the same process when you decide to get married, and I'd like to be there to see this. If I can't go, you can send me a postcard. Do you have any questions?

The point I want to emphasize, in ending, is that the works of Rabelais are not just works of fiction. They represent a major breakthrough in science, especially in the domain of epistemology and therefore represent a crucial medical contribution to the health of mankind as a whole, especially with respect to the necessary progress that each human being has to go through from childhood to maturity. So, in this connection, the necessity to make axiomatic changes is very real and very urgent for the sake of humanity as a whole. Therefore, as LaRouche said in {*The Cult of the Oligarchy: The Gore of Babylon*} on March 16, 2007, it is high time that humanity grew out of it's childhood diseases like environmentalism, and that the current infantile greeny schemes of Prince Charles, George Schultz, and Al Gore be stopped at once.

In this regard, I would like to make a small forecast. The Noosphere and the Biosphere of mankind are filled with axiomatic changes such as we have just seen with Rabelais, and it is our role to discover them and to bring them to effective fruition for the future generations. For example, some of you are quite capable of applying the Rabelaisian method of axiom busting to the dynamics of isotopes and to discover how they chemically interact between the two domains of non-living and the living, in the Vernadskian Biosphere. That is definitely within your capabilities and that represents one of the next steps of fruitful discovery for the survival of humanity. So, I forecast that one of you will soon make such a discovery, including the function of the role of the Crab Nebula for the Earth's atmosphere. Which one of you will it be? I don't know. All I know is that this next discovery will have similar characteristics as those described by Rabelais when going down the Pythagorean Tetradic steps through Plato's cave. Thank you for your kind attention. Are there any more questions?

QUESTION ON THE PROPORTIONALITY OF THE ARYTHMETIC-GEOMETRIC MEAN ITERATION.

In answer to a question on the proportionality of the implied Rabelais arithmetic-geometric mean iteration, you can construct the equivalent of the spiral action range by using an elliptical range and look at the harmonic relationship between the minor and the major axis of each ellipse for determining your measurements. It is the iteration of those pairs of axis, taken two by two, which forms the proportionality of the iteration between the different ellipses and the two different means. Take the following example of a minimum-maximum elliptical range and follow how rapidly the rate of change occurs from a quasi-straight line to a quasi-circle.

ELLIPTICAL FUNCTION

$A' = A+SQR(A^2-B^2)$

$B' = A-SQR(A^2-B^2)$

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A=  16.7706  B=  15
A'=  24.2708  B'=  9.2704
A''=  46.7014  B''=  1.8402
A'''=  93.3665  B'''=  .0363
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The harmonic relationship of the ellipses in the series is such that the major axis minus the minor axis of one ellipse is equal to the distance between the two foci of the next ellipse in the series. This is how they are harmonically connected together. This reflects a proportional rate of change between them, a harmony of harmony. That rate of increase in the iteration can be expressed as follows.

$$\frac{A - B}{A' - B'} = E.$$

Because

$$\frac{E}{\ \ \ } = \frac{(E')^{\frac{1}{2}}}{\ \ \ \ } = 1$$

(E')½   (E'')¼

The inverse of the function is also very nice. It can be constructed by the simple equation:

A' = A + SQR (A² - B²)

and

B' = A – SQR (A² - B²)

This is as far as I have gone in constructing this elliptic function from proverbial scratch with Marc Fairchild, a number of years ago. Anyone who wishes to bring an improvement to it is quite welcome. Here is a challenge for you: How do you construct on your computer an audio-visual animation where the above arithmetic-geometric mean shows this harmony of the harmony in relationship with the appropriate musical proportionality?

Lastly, my hypothesis is that the rate of impact of the particle showers affecting our atmosphere from as far as the Crab Nebula must also follow an analogous elliptical process in its rate of propagation.

POSTSCRIPTUM

Here is how to do the mathematical calculations for the arithmetic-geometric mean function of the Rabelais construction of the Pythagorean Tetrad, from Book Five, Chapter: 36 {**Our Descent of the Tetradic Steps; and Panurge's Fright**.}

Take the minimum and maximum that Rabelais gives, 54 and 108.

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1) First take the arithmetic mean of those two values, which is:

54 + 108
------------   = 81. Then take the geometric mean, which is the square root of
    2

54 x 108 = 76.36753...

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2) Secondly, take the arithmetic mean of the last two values, which is:

81 + 76.36753
--------------------- = 78.6837... Then take the geometric mean, which is the square root of
        2

81 x 76.36753 = 78.6496...

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3) Lastly, take the arithmetic mean again of the last results: which are:

78.6837 + 78. 6496
------------------------- = 78. 666... Then take the geometric mean, which is the square root of
         2

78.6837 x 78.64966 = 78.666...

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Thus, you have arrived at an apparent limit, 78.666... which is the delta volume of Leibniz, the singularity of the quantum of action, which had been associated with the fearful devil's interval. This is the best pedagogical representation for the Kepler explanation as to why a planet must have exploded and disintegrated in the solar system register shift region that generated the asteroid field. I is also the best thermodynamic representation for the voice register shift in Bel Canto singing.

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Modern French Translations from the original ancient French.

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"LIVRE PREMIER, CHAPITRE 34 : {*Comment Gargantua laissa la ville de Paris pour secourir son pays, et comment Gymnaste rencontra les ennemis*.}

A cette même heure, Gargantua qui avait quitté Paris immédiatement après avoir lu les lettres de son père, avait déjà passe le pont des Sœurs et monta sur sa grande jument ; et avec lui se trouvaient Ponocrates, Gymnaste et Eudemon qui avaient pris des chevaux de poste à bride abattue pour le suivre. Le reste de son train venait à journées normales, amenant tous ses livres et ses instruments philosophiques.

Quand il arriva à Parilly (près de Chinon), il fut averti par le fermier Gouget que Picrochole s'était fortifié à La Roche Clermaud et qu'il avait envoyé le capitaine Tripet pour assaillir le bois de Vede et de Vaugaudry avec une grande armée et qu'ils avaient éliminé toutes les poules jusqu'au pressoir Billard, et que c'était chose étrange et difficile à croire à quel point tous commettaient des outrages partout le pays. Ces rapports avaient tant alarmé Gargantua qu'il ne savait que dire ou que faire. C'est alors que Ponocrates suggéra d'aller chez le seigneur de Vauguyon, qui de tout temps avait été leur ami et confédéré, et qu'ils auraient de lui un meilleur avis de tout ce qui se passe. Son avis était que Gargantua envoya un de ses hommes faire la reconnaissance du pays afin de découvrir en quel état se trouvait l'ennemi, afin qu'ils puissent faire des plans basés sur une évaluation du terrain. Gymnaste proposa d'y aller seul ; mais il fut conclut qu'il vaudrait mieux qu'il amena avec lui quelqu'un qui connaisse les voies et détours ainsi que les rivières des environs.

Alors l'écuyer de Vauguyon, Prelinguand, partit avec lui, et sans bruit ils se mirent à espionner de tout coté. Entre-temps, Gargantua se rafraîchit et pris quelque repos avec ses gens, fit donner à sa jument un picotin d'avoine ; c'est-à-dire soixante quatorze muys et trois boisseaux.

Gymnaste et son compagnon chevauchèrent jusqu'à ce qu'ils rencontrassent les ennemis tous éparpillés et en désordre, pillageant et dérobant tout sur leur passage. Alors, au premier aperçu dans la distance, ils accoururent vers lui pour le dérober. Mais les voyant venir, Gymnaste leur dit :

« Messieurs, je suis un pauvre diable : je vous en prie, ayez pitié de moi. J'ai encore quelques écus : nous les boirons ensemble car c'est un {*aurum potabile*}(or potable), et ce cheval-ci sera vendu pour payer ma bienvenue. Ensuite, engagez-moi comme un des votres, car jamais homme ne sut mieux attraper, larder, rôtir et apprêter, voire par Dieu, démembrer et gourmander une poule que moi-même. Et maintenant, pour payer ma bienvenue, je bois à votre santé, bons compagnons. »

Alors il découvrit sa gourde et, sans même mettre le nez dedans, il en prit une bonne gorgée. Les maroufles le regardaient, en ouvrant la gueule béante comme un pied et tirant la langue comme des lévriers, en attente de boire après lui, mais sur ce point, le capitaine Tripet accourut voir ce qui se passait.

Alors Gymnaste lui offrit sa gourde en disant :

« Tenez, capitaine, buvez-en bien hardiment, j'en ai fait l'essaye, c'est du vin de La Faye Monjau.

-   « Quoi, » dit Tripet, « ce paysan se moque de nous ! Qui es-tu ? »
-   « Je suis un pauvre diable, » dit Gymnaste.
-   « Ha ! » Dit Tripet, « puisque tu es un pauvre diable, tu peux passer ton chemin sans payer d'impôts, mais ce n'est pas coutume de voir des pauvres diables avec une aussi belle monture. En conséquence, Monsieur le diable, descendez et laissez-moi votre cheval de charge. Et s'il ne me porte pas bien, alors vous, Maistre diable, vous me porterez, car j'aime bien l'idée qu'un diable comme vous m'emporte. »

« LIVRE PREMIER, CHAPITRE 35 : {*Comment Gymnaste souplement tua le capitaine Tripet et autres gens de Picrochole*.}

Ces mots entendus, plusieurs d'entre eux commencèrent à s'effrayer et se signaient de toutes les mains, pensant que c'était un diable déguisé. Et quelqu'un parmi eux, nommé Bon Joan, capitaine des Franc Topins, tira ses heures de sa braguette et cria assez hault :

« {*Agios ho Theos*} (Dieu est saint) Si tu es de Dieu, alors parle! Si tu es de l'Autre, alors va-t'en d'ici ! »

Et il ne s'en allait pas. Alors plusieurs entendirent cela et se départirent de la compagnie ; ce que Gymnaste avait bien noté et considéré.

Voilà pourquoi il fit semblant de descendre de cheval, et, s'étant posé du coté ou l'on monte, il fit souplement le tour de l'étrier, avec sa courte épée à son coté, et, passant en dessous de son cheval, se lança en l'air pour retomber les deux pieds sur la selle, le cul tourné vers la tête du cheval en disant : « Mon cas va à rebours. »

Ainsi, depuis la position ou il se trouva, il fit la gambade sur un seul pied dans la direction gauche et réussit à retrouver la juste position de son assiette sans ne rien varier. En voyant cela, Tripet dit : « Ha ! Je ne ferai pas ce truc à ce moment-ci et pour cause. »

- « Bien ! » Dit Gymnaste, « j'ai manqué mon coup ! Je vais maintenant défaire mon sault. »

C'est alors qu'avec une grande force et agilité, il se fit tourner de la même façon qu'avant, mais par une gambade par la droite. Ceci fait, il mit le pouce de la main droite sur l'arçon de la selle et éleva tout son corps en l'air, se soutenant tout le corps uniquement sur le muscle et le nerf de son pouce, et ainsi il fit trois pirouettes. A la quatrième fois, il renversa tout son corps sans ne rien toucher, puis se dressant entre les deux oreilles du cheval, tout en maintenant son corps rigide, il s'éleva sur le pouce de la main gauche et de cette position fit le tour du moulinet ; et alors il frappa au milieu de la selle du plat de la main droite, se donnant ainsi un tel branle qu'il se rassit sur la croppe, comme font les demoiselles.

Alors, ceci fait, il passa la jambe droite par-dessus la selle de la façon la plus aisée et se mit en état de chevaucher sur la croppe.

« Mais, se dit-il en lui-mme, il vaudrait mieux que je me mette entre les arçons. »

Alors, se supportant sur la croppe devant lui en poussant les pouces de ses deux mains, il fit un sault en arrière en se renversant en l'air cul sur tête, pour se retrouver solidement entre les arçons. Puis d'un soubresaut se leva tout le corps en l'air, en se tenant les pieds joints entre les arçons, il tournoya plus de cent fois les bras étendus en croix, et criant d'une forte voix :

« {*J'enrage, diables, j'enrage, j'enrage ! Tenez-moi, diables, tenez-moi, tenez !*} »

Alors qu'il voltigeait ainsi, les maroufles tous ébahis se disaient les uns les autres : « Par la Mère de Dieu, c'est un lutin ou un diable qui s'est déguisé. {*Ab hoste maligno, libera nos, Domine*} (Seigneur délivrez-nous de l'ennemi malin.) Ainsi ils prirent la fuite en toute vitesse, se tournant en arrière comme fait un chien qui emporte un poulet.

Alors, voyant son avantage, Gymnaste descendit de cheval, dégaina son épée et chargea à grands coups sur les plus huppés, et se ruant sur eux à grands coups, les entassant en paquets de blessés, navrés et meurtris, sans que nuls ne puissent lui résister. Ils étaient convaincus qu'il s'agissait-la d'un diable affamé, non seulement parce qu'il avait fait tant de merveilleuses voltiges, mais aussi à cause des propos que lui avait tenus Tripet en l'appelant {*pauvre diable*}, et à cause de cela, Tripet voulut traîtreusement lui fendre la cervelle de son épée à double tranchant.

Mais Gymnaste était bien armé et ne sentit que le poids du coup que lui donna Tripet. Alors, il se tourna soudainement et lança un grand coup de pointe contre Tripet qui, au moment ou il se protégeait la tête, lui taillait d'un coup l'estomac, le colon et la moitié du foi, ce qui le fit tomber par terre, et, tombant, rendit plus de quatre potées de soupe et l'âme mêlée dans sa soupe.

Ceci fait, Gymnaste se retira, considérant que dans des cas de hasards il ne faut jamais poursuivre sa chance trop loin, et que tout chevalier doit traiter sa bonne fortune avec modération, sans la molester ni la tourmenter. Alors, il remonta son cheval et lui donna l'éperon, tirant droit son chemin vers Le Vau Guyon, avec Prelinguand à son coté. »

« LIVRE CINQUIEME, CHAPITRE 35 : {*Comment nous descendîmes les degrés tétradiques, et de la peur qu'eut Panurge*.}

Alors nous descendîmes sous terre par un premier degré en marbre et la nous trouvâmes un premier repos. Tournant sur la gauche, nous descendîmes par deux autres degrés et la nous trouvâmes un deuxième repos. Puis, nous en descendîmes trois autres sur la droite qui aboutissaient à un troisième repos, puis quatre autres de même.

- 'Est-ce ici ?' Demanda Panurge.
- 'Combien de degrés avez-vous comptés ? Répondit notre magnifique Lanterne.
- 'Un, deux, trois, quatre,' répondit Pantagruel.
- 'Combien est-ce que cela fait ?' Demanda-t-elle.
- 'Dix,' répondit Pantagruel.
- 'Multipliez cette somme par cette même Tétrade Pythagoricienne, dit-elle.
- 'Ceci fait dix, vingt, trente, quarante,' répondit Pantagruel.
- 'Combien est-ce que cela fait en tout ?' Demanda-t-elle.
- 'Cent,' répondit Pantagruel.
- 'Alors, ajoutez le premier cube, ce qui fait huit,' dit-elle. Au bout de ce nombre fatal, nous trouverons la porte du temple. Et notez prudemment qu'il s'agit ici de la vraie Psychogénie de Platon tant célébrée par les Académiciens, mais si peu comprise. De ce total, la moitié est composée de l'unité, des deux premiers nombres pleins, des deux premiers quadrangulaires et des deux premiers cubiques. [Le total est de : 1+2+3+4+9+8+27 = 54.]

D'abord, en descendant par ces numéros sous terre, nous avons eu bien besoin de nos jambes, car sans elles, nous ne serions descendus qu'en roulant comme des tonneaux dans une cave. En second lieu, notre tres lumineuse Lanterne nous dirigeait, car nous ne vîmes en descendant aucune autre lumière, pas plus que si nous eussions été dans le trou de saint Patrice en Irlande ou dans la fausse de Trophonius en Boëtie. Lorsque nous fumes rendus a environ la soixante dix-huitième marche, Panurge s'écria en adressant la parole a notre luisante Lanterne :

«{*Dame mirifique, je vous prie d'un cœur contrit, retournons en arrière. Par la mort bœuf, je meurs de malle peur. Je consens à ne jamais me marier. Vous avez pris beaucoup de peine et de fatigues pour moi et Dieu vous le remettra dans sa grande remise. Je ne serai pas sans vous remercier non plus quand je serai sorti de cette caverne de Troglodytes. Retournons de grâce. Je crains fort que ce soit ici le Ténare par lequel on va en Enfer, et il me semble que j'entends Cerbère aboyer. Ecoutez, c'est lui, ou les oreilles me trompent. Je n'ai pour lui aucune dévotion, car il n'existe pas de*

mal de dents aussi grand que quand les chiens vous tiennent aux jambes. Si c'est ici la fausse de Trophonius, les Lémures et les Lutins nous mangerons tous vifs, comme jadis ils mangèrent un des hallebardiers de Demetrius, par faute de bribes. Es-tu la frère Jean ? Je te prie mon bedon, tiens-toi près de moi, je meurs de peur. As-tu ton gourdin ? Pour ma part je n'ai aucune arme, ni offensive ni défensive. Retournons.} »

« Je suis la, » dit frère Jean, « je suis là. N'ai pas peur. Je te tien au collet et dix-huit diables ne t'emporteront pas de mes mains, encore que nous soyons sans armes. Des armes jamais au besoin ne faillirent quand bon cœur est associé de bon bras ; que des armes du ciel pleuvent plutôt, comme au champs de La Crau, près du canal de Marius en Provence, tel que jadis il pleurèrent des cailloux (ils y sont encore) pour aider Hercule, n'ayant autrement de quoi combattre les deux enfants de Neptune. Mais Quoi ? Descendons-nous ici dans les limbes des petits enfants (par Dieu ils nous conchieront tous) ou bien allons-nous en enfer a tous les diables ? Par Dieu, je vous les rosserai, maintenant que j'ai des feuilles de vignes dans mes souliers. O que je me battrai vertement ! Ou allons-nous ? Ou sont-ils ? Je ne crains que leur cornes. Mais les deux cornes que Panurge portera, une fois marie, me protègeront contre eux. Je le vois déjà, par mon esprit prophétique, un autre Actéon cornant, cornu, conrnancul. »

- « Prends garde, frater, » dit Panurge, « que lorsque le temps viendra ou les moines se marieront, tu n'épouse la fièvre quarte. Et si cela devait arriver, que je ne sorte donc jamais sain et sauf de cet Hypogée, a moins que je la ballonne moi-même, seulement pour te faire cornigere, cornipétant. De plus, je pense que la fièvre quarte est une assez mauvaise affaire. Je me souviens que Grippe-minaud te la voulut donner pour femme, mais tu l'appelas hérétique. »

Ici, le propos fut interrompu par notre splendide Lanterne, nous faisant remarquer que nous étions arrivés dans le lieu ou nous devions observer un silence religieux, tant par la suppression des paroles que par la retenue des langues. Et pour le reste, elle nous assura catégoriquement que nous n'étions pas en danger de retourner sans avoir entendu le Mot de la Bouteille, puisque nous avions déjà feutré nos chaussures avec de feuilles de vignes.

« {*Passons donc, » dit Panurge, « et donnons de la tête a travers tous les diables. Nous ne pouvons périr qu'une fois. J'avais toujours préservé ma vie pour une certaine bataille. Allons-y, poussons, passons outre. J'ai du courage tant et plus. Il est vrai que le cœur me tremble, mais c'est à cause de la froideur et des relents de cette caverne. Ce n'est pas la peur, oh non ! C'est la fièvre. Allons-y, que ça bouge, passons, poussons, pissons : je m'appelle Guillaume sans peur.*} »

FIN