
GRATUITOUSNESS: RABELAIS' ECONOMICS OF PEACE

by Pierre Beaudry, August 9, 2023

INTRODUCTION

« Si ne le croyez, le fondement vous escappe ! » (You better believe it, because you're going to lose your ass if you don't!)
François Rabelais, First Book, Chapter 4.

When the reason for war is not found to be a deliberate Malthusian reduction of human lives, you may think it is for some other economic reason. However, that reason might be another cover up.

Since peace is much more economical than war, it is clear that war can never be declared for economic reasons, but, rather, because of a lack of intelligence on the part of the two warring parties. This paper is about finding out the intelligence behind François Rabelais' advocacy of peace over war.

If the reason to go to war is never truly told, it is because there is always a lack of intelligence behind the conflict that both enemy camps refuse to admit openly and publically. Rabelais, for instance, chose an apparently insignificant pretext to start Picrochole's war, when a baker refused to sell his bread to a shepherd from Lerné. But that was not the reason.

When war comes to an end, it tends not to be because the two fighting forces wish to make a durable peace, but, rather, because the two enemies wish to see who can benefit the most from the other. But then, ask yourself the question: why do people want to take advantage of each other? The reason is that they want to be perceived as being smarter than the other. Aha! That's the reason.

Rabelais makes the point that if we want lasting peace, we should put forward the benefit of the other and put peaceful bankers everywhere at the service of debtors, in order for them to become the most remembered and honored people in the world. That's how you become smarter.

Pantagruel asked Panurge: "When will you pay your debt?" – "At the Greek Kalends," replied Panurge. Which means never, because "then, there will be prayers continually offered up to God to grant you a long and happy life. Through fear of losing his money, your creditor will always speak well of you in all company." (See **BOOK THREE, Chapter 2.**) That's how you become smarter.

Thus, borrowers are the most important people to protect, because they are like farmers who water their gardens equitably. They replicate the immortal growing power that nature has harnessed for the whole of society by borrowing and redistributing, free of charge, all of the life giving waters they can muster. Such must become the generosity of our banking system in a peaceful world; that is, the most natural form of universal fixed exchange rates between bankers and their debtors, between workers and their salaries.

Gratuitousness is the most natural form of peaceful economics because it is the most intelligent state of mind which will make you achieve development for everyone in the world. Since intelligence is the cause of war, intelligence must also be the reason for peace because its higher hypothesis is a state of gratuitousness.

THE GRATUITOUSNESS OF GARGANTUA

There are a few moments in history when you wonder if things could get any worse than they are. Today is one of those moments. And the reason it is so bad is because bankers from around the world have undermined the monetary system we live in; they have cheated by not having watered the world's gardens equitably.¹ However, it is also because you have not had the right state of mind to change things for the better when it was required. But, it is not too late to change that.

¹ Helga Zepp-LaRouche, FAITES FLEURIR UN JARDIN PARMI DES MILLIONS DE JARDINS, https://youtube.com/playlist?list=PLHlrshPw0YshmX5bjFABm8Dwhfo_CLmXp.

Take, for instance, the birth of Gargantua (**BOOK ONE, Chapter 6: *The very strange manner of Gargantua's Birth***). If you don't believe how Gargantua was born, it is not because it was so unusual; it is because you missed what is fundamental; that is, the opportunity to make a discovery of principle that was required. So, if you take the time to investigate how Gargantua was born, you might understand why his mother Gargamelle's fundamentals escaped her. But, do not be deceived. The true reason is as Lyndon LaRouche stated about the fundamentals of human intelligence: "There is no freedom without truth, and there is no truth without freedom."²

Furthermore, one look at the lasting peace that Gargantua offered to Picrochole's vanquished army and it would not be an exaggeration to say that François Rabelais was proposing a Peace of Westphalia between King Francis the First and Charles V, Holy Roman Emperor, 106 years before that peace treaty took place. At the very least, the fictitious historical institution of gratuity and gratitude between Gargantua and Alpharbal can be viewed as an extraordinary lesson of Love of Mankind (*agapè*).

Gargantua's reason for bringing the end of the war against Picrochole was not based on physical economic gains, *per se*, but on intelligence gains. What triggered the war was the statement made by one of the shepherds, Forgier, who replied to the cake-baker: "*Since when have you sprouted horns that you've grown so fresh?*"³ The mistake that Forgier made is that he proved his lack of intelligence by accepting the challenge. So, as a result, the Chinon people went to war because certain people could not accept the fact that their adversaries might have been more intelligent than they were. That misjudgment was the unfortunate cause of the war.

However, since knowledge can be traced quite a ways back to ancient times, Gargantua's peace also goes back even further in history, even before the quadrivium of Pythagoras and its quadratic power which can take us as far back as the Atlantis Sphaerics.

² [The Grain Deal: Time to Dissolve NATO's Depopulation Lobby! - YouTube](#)

³ François Rabelais, *GARGANTUA AND PANTAGRUEL*, Penguin Classics, translated by J. M. Cohen, 1955, The First Book, Chapter 25: *How a great Quarrel arose between the Cake-bakers of Lerne and the People of Grandgousier's country, which led to great Wars*, p. 94.

In fact, during those very ancient times, those four fundamental pillars of universal intelligence were assimilated as a single integral form of knowledge which we can identify today as **GAMA**; that is, **Geometry, Arithmetic, Music, and Astronomy**, which represented the unity of the four intelligent elements of the soul of the universe: form, number, harmony, and motion; all four being the primary constructive principles of the creative power of axiomatic transformations. It was this that Panurge discovered at the end of Rabelais's fifth and last book.

However, before going into this axiom busting moment, let's have a bit of an overview of this Rabelaisian axiomatic matter of economics by reading a few crucial sections of **BOOK ONE, BOOK THREE, and BOOK FIVE**. Let's first start with the quintessential question of gratuity, or the benefit of the other, in the Peace of Gargantua.

“BOOK ONE, CAPTER 50: *Gargantua's Address to the Vanquished*⁴

“Our fathers, grandfathers, and ancestors from time immemorial have been of such nature and disposition that as a memorial to the victories and triumphs they have won in the battles they have fought, they have preferred to erect monuments in the hearts of the vanquished by display of clemency [rather] than to raise trophies in the form of architecture in the lands they have conquered. For they have valued the lively gratitude of men, won by their liberality more highly than mute inscriptions on arches, columns and pyramids, which are subject to the injuries of climate and all men's spite.

“You may very well remember the clemency they showed towards the Bretons on the day of Saint-Aubin-du Cormier and at the dismantling of Parthenay. You have heard – and as you heard admired – of the generous treatment they extended to the barbarians of Spagnola, who had pillaged, depopulated, and sacked the maritime borders of Olonne and Thalmondais.

“This whole hemisphere has resounded with praise and congratulations extended by yourselves and your fathers when Alpharbal, King of Canaria,

⁴ François Rabelais, Op. Cit., pp. 145-148.

not satisfied with his own fortune, made a furious assault upon the land of Aunix, practicing piracy among all of the Armorican Islands and down the neighbouring coast. He was taken and defeated in fair naval battle by my farther – God preserve and protect him! – But what did we see?



Figure 1. Grandgousier confronts Picrochole's army, by Gustave Doré

“Whereas other kings and emperors, even such as call themselves *Catholic*,⁵ would have miserably ill-treated him, my father treated him courteously and kindly, lodged him near to himself, in his own palace, and with incredible generosity sent him back under safe conduct, loaded with gifts, loaded with favors, loaded with every evidence of friendship. And what was the result? When he got back to his country, he summoned all of the princes and estates of his Kingdom, explained to them the humanity he had met with in us, desiring them to deliberate on this, and consider how to show the world an example of gracious honor to match the example we had shown of honorable graciousness. Whereupon it was unanimously decreed that an offer should be made to us of their entire lands, dominions, and kingdom to be disposed of according to our discretion.

“So, Alpharbal immediately returned in person with nine thousand and thirty eight large ships of freight, bearing the treasures not only of his house and the royal line, but almost of his entire country. For as he was embarking, to set sail with a west-north-east-wind, everyone in the crowd threw on board gold, silver, rings, jewels, spices, drugs and aromatic perfumes, parrots, pelicans, apes, civet-cats, spotted weasels, and porcupines. If anyone did not throw in anything rare that he possessed he was accounted no good mother’s son.

“When Alpharbal arrived, he wished to kiss my aforesaid father’s feet; but this act was considered unworthy and was not permitted. So, they exchanged the embrace of allies. The King then offered his presents, which were not accepted, being excessive by far. Then he yielded himself voluntarily as servant and vassal, himself and his posterity; and this gesture was not accepted, since it did not seem an equitable one. By virtue of his estates’ decree, he then surrendered his lands and kingdoms, proffering the title and

⁵ Rabelais is referring here to Charles V, Holy Roman Emperor, Archduke of Austria, and King of Spain who imprisoned King Francis the First at the outcome of the Battle of Pavia and held him captive for several months in a Madrid prison, in order to humiliate him and show the world how he was more intelligent. Francis was forced to make major concessions to Charles at the Treaty of Madrid, in January 1526, leaving his two sons as hostages in guise of guarantee for his freedom and to show how trusting he could be.

conveyance, signed, sealed, and ratified by all those whose concern it was; but this was refused outright and the documents were thrown in the fire.

“The end of it was that my said father began pitifully to lament and to weep copious tears, when he considered the frank generosity and the simplicity of the Canarians. Carefully choosing his words, he made a speech conceived to minimize the favor he had show them, saying that the good turn he had done them was not worth a button, and that if he had treated them with any kindness, this was no more than he was by duty bound to do. But Alpharbal only insisted the harder.

“What, then, was the outcome? Whereas for his ransom, levied at the highest rate, we might by some exercise of tyranny have exacted two million crowns and kept his eldest children as hostages, they had voluntarily made themselves perpetual tributaries and undertaken to deliver to us each year two million crowns of twenty-four carat gold. These were paid to us here in the first year; in the second year paid of their own freewill two million three hundred thousand crowns; in the third, two million six hundred thousand; in the fourth, three millions; and each year they so increase their payment out of sheer good will that we shall soon be compelled to forbid their bringing us anymore.

“Such is the nature of gratitude [gratuitousness]. Time, which gnaws and fritters all things away, only augments and increases the value of benefits. For one good turn freely done to an intelligent man grows continuously by his generous thoughts and remembrances.”

“Being unwilling, therefore, in any way to fall short of the hereditary graciousness of my parents, I now absolve and deliver you, and make you as free and independent as before. Moreover, as you go out through the gate, everyone of you shall be given three months’ pay, so that you may return to your homes and families; and you shall be safely escorted by six hundred men-at-arms and eight thousand foot [soldiers] under the command of my squire Alexander, so that you shall not be molested by the peasants. God be with you!” [...]

RABELAIS' IDEA OF TEMPORAL ETERNITY

When you find yourself traveling round and round like a moving center going everywhere with a perimetrical action that is nowhere to be located, you enter into a state that Rabelais identified as a motion of doubly-connected circular action; that is, a mental state of the dreaming soul traveling around the universe as if it were in the center of the Earth moving around the Sun and the Galaxy. When conceived as a simple circle, the image becomes absurdly confusing. But Rabelais continues clarifying the galactic motion of the soul as follows:

“In the same way, once our body is sleeping and the digestion is everywhere complete, nothing more being necessary till it awakes, the soul enjoys itself and revisits its own country, which is the heavens. There it receives intimations of its first and divine origins. There it contemplates that infinite, intellectual sphere, *the center of which is at all points in the Universe and the circumference nowhere* [emphasis added] – which sphere, according to the doctrine of Hermes Trismegistus, is God. Nothing new befalls the soul, nothing in the past escapes it, it suffers no diminution. To it, *all time is present* [emphasis added]. It notes not only events in this lower world of motion, but also future happenings; and when it reports them back to the body and, through the body's senses and organs communicates them to its friends; it is called vaticinal and prophetic.”⁶

Rabelais' treatment of this idea of the *simultaneity of temporal eternity* is akin to that of a mind in tune with the astronomical laws of the universe that the ancients called Sphaerics. This is not to be mistaken with any mystical numerology like Euclid was involved in.

However, the mind's motion is not relaxed and located as if it were sitting on a beach of a rotating planet, but rather it is active and in constant motion as if it were traveling at the center of such a doubly-connected rotation, which, according

⁶ François Rabelais, *Gargantua and Pantagruel*, Book Three, Chapter 13, p. 321. See [Pensées de Pascal - Blaise Pascal - Google Books](#).

to the preface writer of the 1969 French Gallimard edition of *GARGANTUA*, Michel Butor, the complex motion reflects the creative process of the human soul, or more specifically, the Platonic psychogony of the human soul, which Butor described as follows:

“... at the center of the earth as the efficient hieroglyphic sign of knowledge, in such a way that it is by approaching it that one will discover the means of attaining that true paradise of the intellect, where the pathways are the same as in the Isle of Odes, guided by the discourse of nature, and in the company of human beings, because it is within the heart of minerals that lies at our disposal the thunderbolt that Prometheus had stolen [and transformed] from alchemy to industry, that *hieroglyph of time vanquishing time* (emphasis added); because the intoxicating verbal action which springs from that center, according to Rabelais, the ‘beautiful biblical text in French,’ is that the world is in its infancy and our human society has barely made it out of its unknown mother, which is the absolute opening of time (which was already being recognized by Panurge about the fundamental character of our indebtedness to time): ‘So, you philosophers, with God’s guidance and in the company of some clear Lantern, give yourselves up to that careful study and investigation which is the proper duty of man – and it is for this reason that men are called *alphestes*, that is to say, searchers and discoverers, by Homer and Hesiod – they will find the truth of the sage Thales’ reply to Amasis, king of the Egyptians. When asked wherein the greatest wisdom lies, Thales replied: ‘In time.’ For it is time that has discovered, or in due course will discover, all things which lie hidden; and that is the reason why the ancients called Saturn or Time the Father of Truth, or Truth the Daughter of Time. They will also infallibly find that all men’s knowledge, both theirs and their forefathers’, is hardly an infinitesimal fraction of all that exists and that they do not know.”⁷

This memory function, or *hieroglyph of time vanquishing time*, is the case in point, because an act of gratuity which comes from the heart has the power of

⁷ Rabelais, *Gargantua*, Gallimard, 1969, pp. 34-36. English translation from François Rabelais, *GARGANTUA AND PANTAGRUEL*, Penguin Classics, translated by J. M. Cohen, 1955, The Book Five, Chapter 48, p. 710.

inversing the ravages that time causes in the demise of mankind by increasing the benefits given freely to others for all time to come, provided they are intelligent enough to realize it.

THE SECRET FOUND IN THE VERDICT OF THE DIVINE BOTTLE

The mental configuration required to understand the enigmatic idea of an infinite creative sphere is that of “*a sphere whose rotating center is everywhere and whose circumference nowhere.*” This process can be approximated by the following modular wave function, which can be best handled after drinking a chilled glass of *Vouvray* from Rabelais’ Loire Valley.

This verdict requires two different types of geometry as Lyndon LaRouche recommended in order to be able to explain the existence of singularities in both the physical and epistemological domains. LaRouche proposed the following:

“The proof that the universe contains efficient universal principles which are not themselves directly objects of the senses, presents us with the need to think of the individual’s relationship to nature around us in terms of two geometries. The first of those is what I have defined, in the preceding pages, as the anti-Euclidean form of the geometry of the universal *Sensorium*; the second is a geometry based on nothing but an experimental reading of the measurable relations within a set of inter-relationships among those discoverable, and experimentally validated universal physical principles, which are generated by Plato’s method of hypothesis. The first is approximately the shadow-world geometry of sense perceptual space-time. The second is the unperceived universe of those actual principles which produce those paradoxical sensory effects which prompt the recognition of the existence of the unperceived, but efficiently existing universal physical principles. The two geometries are everywhere interacting.”⁸

⁸ Lyndon H. LaRouche, Jr., Science for Teachers: [Visualizing the Complex Domain](#), EIR, Vol. 30, No. 27, July 11, 2003, p. 27. Another publication by LaRouche on this same subject can be found in, Lyndon LaRouche, [Cold Fusion: Challenge to U.S. Science Policy](#), Schiller Institute, August 1992. Lyn wrote: “In the experience represented by the Gaussian complex domain, we combine the notion of the sensed object with the notion of the effect on its motion generated by the unsensed, but efficiently manifested principle. One component is, on principle, a view of the relevant phenomenon within the domain of a spherical universal space-time of sense-experience. The

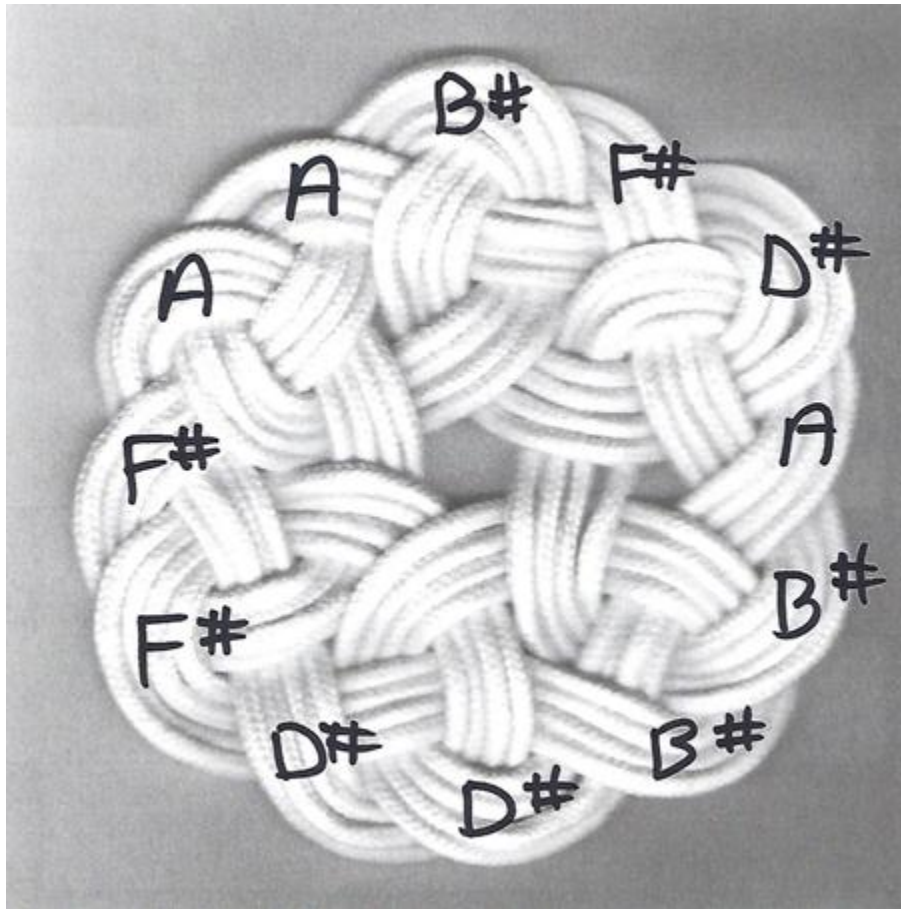


Figure 2. The center of the rotating action of this modular wave is everywhere in the complex domain, but its circumference is nowhere to be found

Such a process of transformation between the domain of the unseen and the domain of perception can be expressed by a doubly-connected form of circular action such as the double motion of a planet rotating and orbiting around the Sun, provided that your mind is at the center of the moving process of change and your circumference nowhere to be found. This pathway can also be attributed to the

other component is the unseen, but actual universal physical principles acting upon the object of perception. The modern typification of this relationship is the argument underlying Cusa follower Kepler's uniquely original discovery of a principle of universal gravitation, a discovery which marks the modern transformation of mere astronomy into a subject of astrophysics. After that, no longer can motion within the observed universe be attributed to the repeatable regularity of motion, as by the modern defenders of the hoaxster Claudius Ptolemy, but must be traced to the power exerted by an unseen, but efficient and knowable universal physical principle. When we trace the intellectual history of the idea of the complex domain from the practice of Sphaerics by the Pythagoreans and Plato, we proceed in mathematical constructions through the anti-Euclidean, geometrical doubling of the square, to Archytas' geometrical doubling of the cube." Lyndon H. LaRouche, Jr., [*On the Noetic Principle: Vernadsky and Dirichlet's Principle*](#), EIR, Vol. 32, No. 22, June 3, 2005, pp. 41-42.

mathematical mind of Riemann but also to the poetical frame of mind of Panurge after he discovered the meaning and significance of the sacred “WORD” spoken by the Holy Bottle inside of the Temple of Lanternland.

As one approaches the Temple of the Bottle in Lanternland, one should remember the wonderful gesture of generosity that Gargantua’s grandfather had given to his enemy (See above: *Gargantua’s Address to the Vanquished*, First Book, Chapter 50), from the goodness of his heart, and which was the original formulation of the Peace of Westphalia principle as the benefit of the other, 114 years before its time. As Rabelais wrote:

“BOOK FIVE, CHAPTER 35: *How we approached the Temple of the Bottle by an Underground Way and why Chinon is the finest City in the World.*⁹

“Then we went underground, through a plaster-line vault, roughly painted at the entrance with a dance of women and satyrs around an old laughing Silenus on his ass.

“This entrance reminds me of the painted cellar in the first city in all the world,” said I to Pantagruel. “There are paintings like these there, and they are just as fresh as these.”

“Where is this first city you refer to?” asked Pantagruel, “and which city can it be?”

“Chinon – or Cainon” – said I, “in Touraine.”

“I know where Chinon is,” said Pantagruel, “and I know the painted cellar. I’ve drunk many a glass of fresh wine there, and I don’t doubt that Chinon is an ancient city. Its motto proves the fact for it runs:

“Chinon, Chinon, Chinon, Chinon,
Little city, great renown,
Perched upon its rocky brow
The woods above, the Vienne below.

⁹ Chinon in the Loire Valley is the birthplace of François Rabelais, where his father was a well established lawyer.

“But how can it be the first city in the world? Where do you find that written?”

“I find in Holy Writ,” I replied, “that Cain was the first builder of cities. Now it is very probable that he called the first one of all after his own name Cainon, as all other founders and restorers have done since his time, in imitation of him. For Athene – that is in Greek, Minerva – gave her name to Athens, Alexander to Alexandria, Constantine to Constantinople, Pompey to Pompeiopolis in Sicilia, Adrian to Adrianople, Cana to the Canaanites, Saba to the Sabaeans, Assur to the Assyrians; and there are also Ptolemais, Caesaria, Tiberias, and Herodium in Judaea.”

“As we were thus chatting, the great Flask – our Lantern called him the Flash – Governor of the Holy Bottle, came out, escorted by the Temple guard, who were all French bottle-men. Seeing that we bore vine-leaves, as I have said, and were crowned with ivy, and recognizing our illustrious Lantern as well, he brought us safely in, and commanded that we should be led straight to the Princess Bacbuc, Lady-in-waiting to the Bottle and priestess of all the mysteries; and this was done.”

“BOOK FIVE, CHAPTER 36: *Our Descent of the Tetradic Steps; and Panurge's Fright*¹⁰

“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.

‘Is it here? Asked Panurge at this point.

‘How many flights have you counted?’ asked our splendid Lantern.

‘One, two, three, and four’ answered Pantagruel.

‘How many is that?’ she asked.

¹⁰ See my report: [HOW PANURGE DEALT WITH HIS AXIOMATIC CHANGE](#), November 29, 2007.

'Ten' answered Pantagruel. [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 [108] we shall find the Temple door. And note most carefully that this is the true Psychogony¹¹ 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."

From the vantage point of LaRouche economics, when creativity is based on axiomatic change for millions of people around the globe, it becomes evident that the science of economics becomes a free form of exchange among peoples. The grain that Russia has proposed to send to African countries, for example, in order to put an end to NATO's depopulation policy, is the best example of this form of gratuity which generates gratitude everywhere around the globe. It was such a gratuity-gratitude combination which created the Peace of Westphalia in 1648. However, the result of such an axiom busting action is bound to cause a lot of turmoil and dissonances, as the case of Panurge shows immediately below, because it requires an axiomatic transformation of the soul most emphatically in the form of cognitive generosity. And then the torturous moment came to Panurge:

¹¹ Psychogony is the study of the origin and development of the soul and mind. Plutarch had an insightful view of the subject: [PLUTARCH, Moralia. On the Generation of the Soul in the Timaeus | Loeb Classical Library \(loebclassics.com\)](#) But, the so-called Neo-Platonists of the Renaissance made a mess of the subject. What Lyndon LaRouche brought to this ancient science of Sphaerics is invaluable because he showed the difference between a biological fossil and a human artifact of cognition. As he stated about the crucial Vernadsky discovery of the Noosphere: "The evidence which qualifies us to say that one ape-like creature is human, and another essentially represents some species of ape, is that characteristic of the human mind which is the well-spring of mankind's ability to effect willful increases of our species' potential relative population-density. The distinction is not, as we know, "tool-making," for which even chimpanzees created in the likeness claimed by F. Engels have shown aptitude. It is creative behavior of the type expressed by the discovery and proof of some universal physical principle. *It is such creative behavior which distinguishes mankind systemically, as the conception of the Biosphere reflected in the quotations introduced above distinguishes living from abiotic processes.*" Lyndon LaRouche, [On the Noetic Principle: Vernadsky and Dirichlet's Principle](#), EIR, Vol. 32, No. 22, June 3, 2005, p. 40.

“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 [approximately] seventy-eight stairs [78], Panurge cried out to our most luminous Lantern:

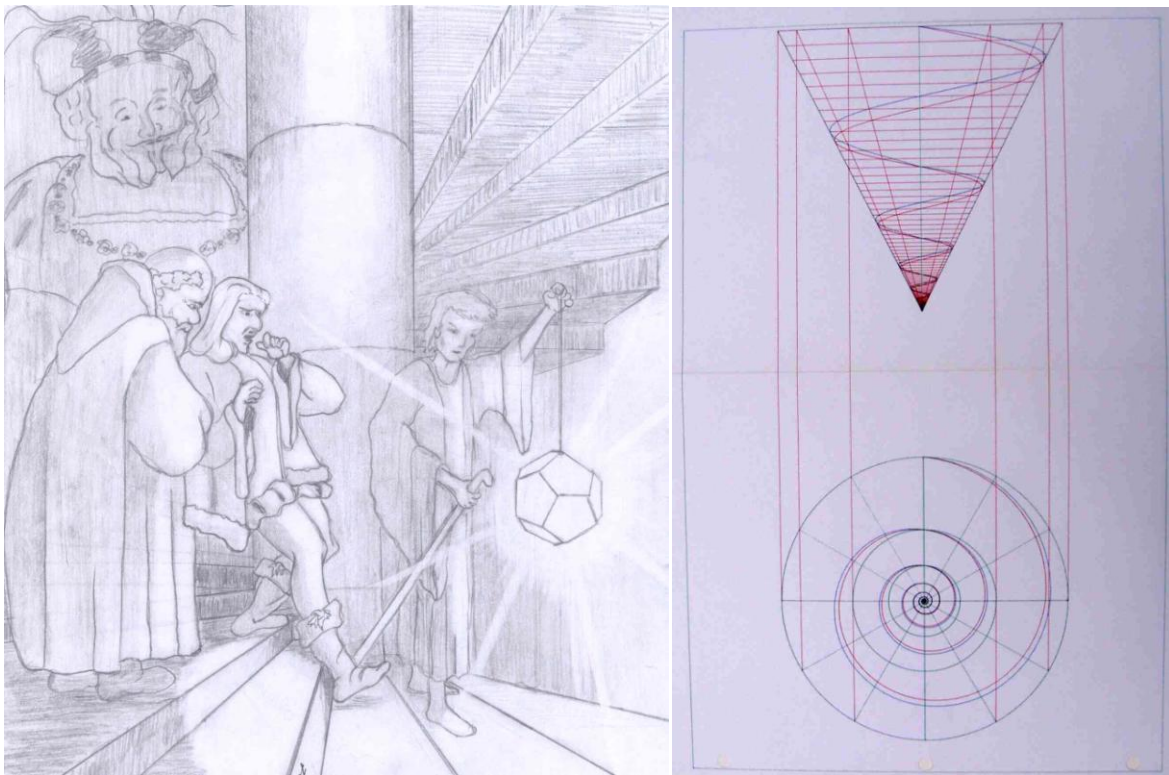


Figure 3. Panurge passing over the arithmetic/geometric register shift step 78 of the Pythagorean Tetrad (François Rabelais, Book Five, Chapter 36.)

“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 singing 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. Have you got you cutlass? I haven't any weapons at all, offensive or defensive. Let's turn back."¹²

The construction of Rabelais' mathematical discontinuity, however, is not as straightforward as it appears to be, because the solution to the puzzle is to be found by inversion; that is, by going backward from the result of the total process, that is, from the last step reached, which is 108. Therefore, the half of the total is 54, because it is made up of (unity) 1+ (two plain numbers) 2+3+ (two squares) 4+9+ (two cubes) 8+27 = 54 x 2 =108 which is an octave. Therefore, 78 is the arithmetic/geometric mean of the octave of 54 and 108 and the seven numbers are the seven notes of the octave.

The key, here, is to discover that this is not a numerological exercise as Rabelais makes it appear to be. This is music to my ears because it is a cognitive response. On the contrary, Rabelais is providing the reader with the necessary steps to discover and solve something that will be discovered in mathematical-physics much later and become identified as the singularity of the Gaussian arithmetic-geometric mean function of the complex domain. Rabelais gave just enough indications so that the reader is able to reconstruct, in his own mind, the solution in a manner analogous to how God constructed the soul of the universe as Plato showed in the psychogony of his *Timaeus*; that is, with the two mean proportions of an axiomatic change which is the most fundamental cognitive response to the distinction between man and beast.

Do the following constructions to see how this works: Find the Arithmetic-Geometric mean (A-G mean) 78 within the octave of 54 and 108. How do you do that?

¹² François Rabelais, *GARGANTUA AND PANTAGRUEL*, Penguin Classics, translated by J. M. Cohen, 1955, Book Five, Chapter 35, p. 686.

- 1) First, take the arithmetic mean of those two values, which is: $54 + 108$ divided by $2 = 81$. Then take the geometric mean of the same two values, which is the 2 square root of $54 \times 108 = 76.3675...$
- 2) Second, take the arithmetic mean of the last two values, which is: $81 + 76.3675$ divided by $2 = 78.6837...$ Then, thirdly, take the geometric mean, which is the square root of $81 \times 76.3675 = 78.6496...$
- 3) Third and lastly, take the arithmetic mean again of the last two results: which are: $78.6837 + 78.6496$ divided by $2 = 78.666...$ Then, take the geometric mean, which is the square root of $78.6837 \times 78.6496 = 78.666...$, which is the A/G mean of that octave.

The question is: How did Rabelais know about this Arithmetic/Geometric mean some 300 years before Gauss discovered the existence of the complex domain? The answer can only be found in temporal eternity provided it comes from a contrite heart.

Now, after having been confronted with this astonishing psycho-epistemological-axiom-busting-moment, the reader should investigate the processes of the three numbers that Rabelais generated and see how they could be related to such a galactic event. Again, the three numbers are 108, 54, and 78. The apparent (physical) process of those three different steps is the arithmetical/geometrical generation of the Tetrad; however, the true mental process (epistemological) is the underlying singularity function of the axiomatic change, a change very similar to what a human voice has to go through in the vocal register shift of the well-tempered musical system as developed by J. S. Bach.

Project the shadows of these numbers on the wall of Plato's cave and see what you come up with. How did Rabelais arrive at these three numbers? And, what is their significance? Have another look at the Gauss arithmetic-geometric mean function and see how it works in the complex domain of economics in the way that LaRouche developed it. What is the significance of those three numbers with respect to the Gauss A-G mean and to LaRouche economics? How do they relate to what Panurge has gone through? What is the significance of the geometric

relationship to the psycho-epistemological behavior of Panurge that Rabelais called “the true psychogony of Plato”? This experiment is also very similar to the one that Benjamin Banneker made when he related his mathematical puzzle of proportionality to the issue of slavery with the master of Monticello. It has to deal with the form of temporal eternity of what the human mind can take to heart when he is faced with the truth. You can find this earlier Banneker pedagogical of mine on the LYM website.¹³

If you take the total number of steps in the spiral Tetradic staircase, the conical function as a whole has 108 steps forming a musical octave starting from step 54. Then, there is also a complex halfway rotating step between them. It is an arithmetic and geometric step 78, which represents the singularity of a threat that Panurge perceived as deadly when he was about to put his foot on it. What is that threat? What does it have to do with number 78? Is this merely an imagined fear or is it a real fear of death that you can calculate, ahead of time?

This is the tragedy of not being able to go beyond an apparent axiomatic limitation of character, such as the flaw in Shakespeare's Hamlet, or the condoning by the general American citizenry faced with a corrupt U. S. Congress. This is the excruciating moment of a high density of singularities that a citizen experiences at a crucial historical moment of decision that may cost the life of the entire human species. This is the Lydian moment of Christ's Gethsemane as expressed by Brahms's *Four Serious Songs*! This is also, quite literally, what the arithmetic-geometric mean function represents at the complex halfway mark of a double conical spiral progression makes within an octave around the cone of a Bel Canto register shift. (See Figure 3.)

This conical function is represented in Lyndon LaRouche's *So You Wish to Learn all About Economics* book as the arithmetic-geometric mean function of the whole spiral action progression, (p. 51).

For our purpose here, however, we have arrived at an apparent limit of 78.666... after three iterations, which generate the delta volume of the Leibniz calculus, the singularity of the quantum of action of the A-G mean, which had been

¹³ [BENJAMIN BANNEKER: PROPORTIONALITY AND THE BENEFIT OF THE OTHER](#)

associated with the fearful devil's interval of F# during the Middle Ages. This infinitesimal interval was used to scare the hell out of people during the Dark Ages and made them politically impotent for fear of being burnt at the stake for telling the truth. The irony, however, is that you can also express this singularity with the double Lydians of Beethoven's Piano Sonata, Opus 27 No. 2, first movement, measures 35-36. They are the musical equivalent of the Pythagorean Tetradic Steps of the creative process. (Figure 4.)

As Plutarch told his old friend, Euphanes, about the role that old men play in public affairs: "except in the case of those whose love of mankind and of honour dies first, and whose zeal for what is noble fails before their desire for material necessities, as if the active and divine qualities of the soul were less enduring than the passive and physical." Moralia, Book 10, p. 79.



Figure 4. Beethoven Piano Sonata Opus 27, No. 2, measures 35-36 double Lydians

Now, what is interesting, here with Rabelais and Beethoven, is that they both used this singularity as an axiomatic change, as a crisis of opportunity. The interval describes and explains how a creative moment is always fearful, because, at the point where you have to make a decisive step which changes your entire life, you become totally perplexed, and you want to run back to a comfort zone, for fear that

you will lose everything and not be able to break through to meet the next higher degree of responsibility that history is putting on your shoulders.

This crucial experiment, therefore, has universal implications and carries with it a heavy load of consequences. For example, this crucial experiment is one of the best pedagogical representations for the creative process itself, but it also locates the astrophysical significance of Kepler's discovery of an exploded planet in the register shift region of the solar system, between Mars and Jupiter. Such a dialogue can only take place in temporal eternity of both the physical and epistemological domains.

It should not surprise anyone, therefore, to discover that this is also the hook where the Riemannian-LaRouche free axiomatic change economic method hangs its hat. Now, if you have done some serious Bel Canto voice exercises, you will also recognize what I am talking about, because you will have gone through such an experiment and you will have constructed, for yourself, this joyful creative moment of the passing tone register shift by discovering how to place your own voice in changing from the chest register to the head register; that is when you take it to heart. This is a lot to take in one scoop, but nevertheless.

Now, let's come back down to Earth for a moment and examine how the same axiomatic change is generated after you willfully organize politically, as a world historical figure. It is that crucial experiment which decides whether you are leading willfully or you are being dragged unwillingly behind a public opinion banner. Thus, it is written in Latin characters at the entrance of the Lanternland Temple of the Bottle: "*Fate leads the willing, but the unwilling drags.*" Listen to Panurge claiming his sublime victory on this matter as he asserts that he is willing to go on to the next axiomatic level in this battle:

"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. Let's move, let's get moving, and 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, and piss on. My name is William the Fearless."¹⁴

This reminds one of the famous speech made by Roosevelt during the 1930's depression, in which he said: "all you have to fear is fear itself."

After the exhilarating experience of the Tetradic Steps and the successful axiomatic change that Panurge made, the reader is then introduced to the Word of the Bottle Divine:

“BOOK FIVE, CHAPTER 45: The Priestess Bacbuc leads Panurge into the presence of the Holy Bottle.

“There the noble priestess Bacbuc made Panurge kneel down and kiss the edge of the fountain, and then ordered him to get up and perform three Bacchic dances around it. After this, she commanded him to sit down between two stools, with his arse on the ground. Then, she opened the book of ceremonies and, whispering in his left ear, made him sing an old Athenian vintage-song, which goes as follows:”

“Bottle! whose Mysterious Deep
Do's ten thousand Secrets keep,
With attentive Ear I wait;
Ease my mind, and speak my Fate.
Soul of joy! Like Bacchus, we
More than India gain by thee,
Truths unborn thy Juice reveals,
Which Futurity conceals.
Antidotes to Frauds and Lies,
Wine, that mounts us to the Skies.
May thy Father Noah's Brood
Like him drown, but in thy Flood.
Speak, so may the Liquid Mine
Of Rubies, or of Diamonds, shine.
Bottle! Whose Mysterious Deep
Do's ten thousand Secrets keep,

¹⁴ François Rabelais, Op. Cit., p. 687.

With attentive Ear I wait;
Ease my mind, and speak my Fate.”¹⁵



Figure 5. The poem is a translation from *The Works of Mr. Francis Rabelais*, Vol. I, Privately Printed for the Navarre Society Limited (London: 1653).

“When this song was sung, Bacbuc threw something into the fountain, and suddenly the water began to boil fiercely, as the great cauldron at Bourgueil

¹⁵ Quoted from Pierre Beaudry, [What Does It Mean To Be Rabelaisian?](#), The Schiller Institute, reprinted from *Fidelio*, Vol. IX, No. 4, Winter 2000.

does when there is a high feast there. Panurge was listening in silence with one ear, and Bacbuc was still kneeling beside him, when there issued from the sacred Bottle a noise such as bees make that are bred in the flesh of a young bull slain and dressed according to the skilful method of Aristaeus, or such as is made by a bolt when a cross-bow is fired, or by a sharp shower of rain suddenly falling in summer. Then this one word was heard: *Trink*.

“By God almighty,” cried Panurge, “it’s broken or cracked, I’ll swear. That is the sound that glass bottles make in our country when they burst beside the fire.”

“Then Bacbuc arose and, putting her hands gently beneath Panurge’s arms, said to him: “Give thanks to heaven, my friend. You have good reason to. For you have most speedily received the verdict of the divine Bottle; and it is the most joyous, the most divine, and the most certain answer that I have heard from it yet, in all the time that I have ministered to this most sacred Oracle. Get up and let us examine the chapter in whose gloss this great verdict is interpreted.”

“Let us go,” said Panurge, “in Heaven’s name. I’m no wiser than I was last year. Enlighten us; where is the book? Turn it over; where is the chapter? Let us see this merry gloss.”

“BOOK FIVE, CHAPTER 46: *Bacbuc’s interpretation of the Verdict of the Bottle*

“Bacbuc threw something in the basin, and the water immediately ceased to boil. Then she led Panurge back to the middle of the larger temple, where the fountain of life played. There she pulled out a huge silver book shaped like a hogshead or the quart book of *Sentences*. This she dipped into the fountain, and said to him:

“The philosophers, preachers, and doctors of your world feed you with fine words through the ears. Here we literally take in our teaching orally, through the mouth. Therefore I do not say to you: Read this chapter, understand this gloss. What I say is: Taste this chapter, swallow this gloss.

Once upon a time, an ancient prophet of the Jewish nation swallowed a book, and became a learned man to the teeth. Now you must immediately drink this, and you'll be learned to the liver. Here, open your jaws.”

“Panurge opened his mouth wide, and Bacbuc took the silver book – which we thought really was a book, because of its shape, which was that of a breviary. But it was a true breviary and natural flask, full of Falernian wine, which she made Panurge swallow.

“That was a notable chapter,” said Panurge, “and a most authentic gloss. Is that all that the verdict of the thrice-great bottle intended to convey? I like it very well indeed.”

“That is all,” answered Bacbuc, “for *Trink* is a panomphaean word. It speaks oracles, that is to say, in all languages, and is famed and understood by all nations. To us it signifies: Drink. You say in your world that *sack* is a noun common to all tongues, and that it is rightly and justly understood by all nations. For, as Aesop's fable has it, all human beings are born with a sack round their necks, being by nature needy and begging from one another. There is no king under the firmament so powerful that he can do without other men's help. There is no poor man so proud that he can do without the rich, not even Hippias the philosopher, who could do everything. And if one cannot do without a sack, even less can one do without drinking. So we maintain that not laughter but drinking is the proper lot of man. I do not mean simply and baldly drinking, for beasts also drink. I mean drinking good cool wine. Note, my friends, that by wine one grows divine; there is no surer argument, no art of divination less fallacious. Your Academics affirm this when in giving the etymology of wine they say that the Greek *οἶνος* is like *vis*: force or strength. For it has the power to fill the soul with all truth, all knowledge, and all philosophy. If you have noticed what is written in Ionic characters above the gate of the temple, you may have understood that the truth lies hidden in wine. The Holy Bottle directs you to it. You must be your own interpreter in this matter.”

“It would be impossible to speak better than this venerable pontiff does,” said Pantagruel. “I told you that much when you first spoke to me on the subject. *Trink* then. What does your heart tell you, when cheered by Bacchic enthusiasm?”

‘Let us drink,’ said Panurge.’¹⁶

In summation, for those who conceive economic matters from the temporal eternal goodness of their hearts, let their motions be up and down, and all around expressed by half, and half of the half again; for those who harmonize with musical resolution in their hearts and for the love of mankind, let their moods be knotted into double Lydians; and for those who like to drink divine with friends, let their motions be dancing up and down, and all around in temporal eternity with a Rabelaisian bottle of Chinon La Devinière.¹⁷



Figure 5. La Devinière is the original family farm of the Rabelais family in Seuilly, France.

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¹⁶ François Rabelais, *Gargantua and Pantagruel*, Penguin Classics, p. 705.

¹⁷ La Devinière Manor is the birth place of François Rabelais in the Chinon countryside of Seuilly, France. [Musée Rabelais Manoir de la Devinière - Association "Châteaux de la Loire" \(leschateauxdelaloire.org\)](http://www.leschateauxdelaloire.org) and [MUSEE RABELAIS - LA DEVINIERE: in SEUILLY, The Loire Valley, a journey through France \(loirevalley-france.co.uk\)](http://www.loirevalley-france.co.uk). I also recommend you taste the Bernard Baudry Chinon 2020 Cabernet Franc.