On Riemann's Higher Hypothesis of the Flank

by Michael G. Steger

Sept. 6—Russian President Putin's intervention into the crisis now facing the nation of Syria, though laden with risk, may be the preemptive action that ends a thermonuclear world war before it occurs. Whether the American people will respond to this quality of leadership and remove the risk of war, is yet to be seen.

During the attack on Pearl Harbor on December 7, 1941, when facing the threat of global fascism and war, the American people at that time recovered their lost and more compelling identity, and rose to the challenge presented by their great President Franklin Roosevelt. Today, the American people are again asleep in cowardice, with only mild stirrings apparent; yet with over four billion of the world's persons moving to expose the fraud of President Obama and the Wall Street financial system, Americans must soon arise and fulfill that great President's legacy, or face total peril from their own inaction. President Putin, you might say, has turned the flank on the American people as much as he has on Obama and his British controllers' threats of nuclear war.

Bernhard Riemann (1826-1866)

Consider the moral and existential test of the European migrant crisis, i.e. nothing less than Obama's ongoing Holocaust, and the accelerating destruction of the future of civilization. Then consider the apparent and unequivocal necessity of a new system, one based on the higher principles and implications of the BRICS. Unfortunately, what remains still veiled for many who now recognize the higher moral necessity of a new and global economic system, is that its fulfillment lies infinitely far beyond the sphere of mathematics.

Where this necessary future lies, one which prevails not from the past in linear progression, but is provoked as if a surprise from beyond the mathematician's predictable future, and so distinct from the cause of the current collapse, will be found by the method of the great genius Bernhard Riemann and his higher hypothesis of the flank.

Let Riemann then educate those of us who choose to act upon this higher reality, as we now converge upon a moment as great as it is uncertain, a Pearl Harbor-like test of mankind's creative and moral fitness to survive.

The Flank

In a short paper written in 1799, a young Carl F. Gauss, Riemann's later mentor, launched what was to be a lifelong attack against the fraud of what was to become Napoleon Bonaparte's fascist regime, a regime no less dependent on the tyranny of mathematics than today's trans-Atlantic rot.

Gauss was thus quickly identified by Napoleon's leading agents, e.g. Joseph-Louis Lagrange and Pierre-Simon Laplace, as the successor to the great European tradition in physical science, one premised upon the powers of creative genius towards the discovery of principle. In particular, as was obvious to Napoleon's henchmen, what Gauss had presented in 1799 was an irrefutable defense of the great genius Gottfried Leibniz, whose death in 1716 had opened the gates to a Brit-

ish-directed cult of mathematics, but who, while living, not only dominated the intellectual culture of Europe during the previous century, but had also led a major political intervention into the growing dominance of the Anglo-Dutch financial empire.

Now, under the tyranny of Napoleon, and the later impositions of the fascist Congress of Vienna, Gauss was forced to operate behind a veil of seemingly mathematical advancements, or face certain destruction for his devotion to the creative potential of the human mind. [1]

Yet, each area of Gauss' development of the language of mathematics was premised entirely upon the most rigorous and extensive physical investigations, each resolved by a quality of physical insight entirely coherent with, and often in direct continuation of the work of Nicholas of Cusa, Johannes Kepler, and Gottfried Leibniz before him. [2]

For Gauss. the mathematics was in every case an after-effect, a remnant of a physical discovery. But by the time of Napoleon's defeat and the Congress of Vienna's enforcement of the *ancien régime* and brutal dictatorship over Europe, the tyranny of mathematics was only strengthened against Gauss' scientific leadership.

So Gauss, left to his own devices, rejected the mathematicians' world view and continued his own remarkable advancements in scientific thought over the next half-century. Much like Albert Einstein, who was later to express his own theological objections while facing similar political affronts, i.e. "God doesn't play dice," Gauss remained constrained under persistent political attacks, relegating his creative revenge to a later date.

Turning the Flank

By 1854 Bernhard Riemann had become one of Gauss' leading students and a leading scientific thinker at the renowned Goettingen University. He was one of the few young scientists who would survive the mathe-

1. Gauss's so-called mathematical work was so prolific and penetrating that he is considered to this day the most dominant figure in the creation of modern mathematical studies.

2. For example, Gauss's investigation of curvature was premised on what was then the most extensive geodetic survey ever attempted, a process similar and very much conceptually related to the discovery by Johannes Kepler of physical gravitation as presented in his *Nova Astronomia*. To this day, Gauss' work in this area lays the basis for understanding partial differential equations, field theory, and relativity; yet his physical investigations, let alone his remarkable insights such as his discovery of the asteroid Ceres, are largely ignored or overlooked.

Mathematical Demons

Pierre-Simon Laplace, a henchman for mathematics and a leading Bonapartist, known best for his attack against physical astronomy, i.e. the very system of discovery of principle developed by Cusa and Kepler, published his diatribe in support of British empiricism and mathematical astronomy entitled *Mécanique Céleste* in that very same year of 1799.

Laplace, who was infamous for denying the existence of God based on his mathematical assumptions, later expressed his world view in 1814 as a companion to his study of probability, where he describes what is now known as Laplace's demon:

> We may regard the present state of the universe as the effect of its past and the cause of its future. An intellect which at a certain moment would know all forces that set nature in motion, and all positions of all items of which nature is composed, if this intellect were also vast enough to submit these data to analysis, it would embrace in a single formula the movements of the greatest bodies of the universe and those of the tiniest atom; for such an intellect nothing would be uncertain and the future just like the past would be present before its eyes.
>
> —Pierre-Simon Laplace,
> *A Philosophical Essay on Probabilities* (1814)

That is to say, there is no future except that which has already been decided by past events. No fundamental advancements, no revolutions in scientific thought, nor transformations of the global economy would or could occur unless they have already been predetermined by the total set of previous interactions, a property later ascribed also to the fraudulent second law of thermodynamics.

In other words, one must accept Laplace's stupidity and our early death, for creativity and God have been reduced to what one might call an incestuous mechanics.

maticians' attacks, though not for long—but unlike others less fortunate, such as Niels Abel and Evariste Galois, who would perish early, due to brutal attacks by Laplace's lackeys Cauchy and Poisson.

With his aging mentor, the leading European genius, sitting in the audience, Riemann presented his Habilitation Dissertation, which launched,—much as his mentor had in 1799 but now with even greater powers of insight as a result of Gauss' half-century of work—what would redefine the entire nature of physical science in accordance with the principles of physical discovery of universal principle, freeing mankind from the tyranny of mathematics.

Riemann's mentor, Carl Friedrich Gauss (1777-1855), painted by Christian Albrecht Jenson.

Riemann, through his brilliant philosophical investigation, had captured, by way of a conceptual development of Gauss's unique contributions, the essence of mathematical thought as applied to physical principle, only to then expose its intrinsic failure to provide any benefit to future scientific discovery. It was a conclusion which triggered many resentments, but a great joy to Gauss, and then Einstein later, and to all who love mankind's unique creative potential as against our current depravity.

For Riemann, in taking up the underlying problem of mathematics over the preceding 2,000 years, beginning with the formal system of Euclid, had set his sights not on a revolution in the scientific world view, which had then become so depraved as to worship Isaac Newton even in Germany, but rather set himself the goal of a revolution in the foundations of scientific thought itself. [3]

His foundations for this most remarkable flanking maneuver—an intervention which has in essence defined the character of the domain by which a revolution in human thought occurs, i.e. the domain from which all successful advancement in human culture depends, including Putin's now critical action in Syria—were Gauss' unique advancements regarding the nature of universal gravitation, combined with the psychological insights of a student of the poet Friedrich Schiller, Johann Herbart, and his work regarding the topological characteristics of the development of the creative mind itself. [4] [5]

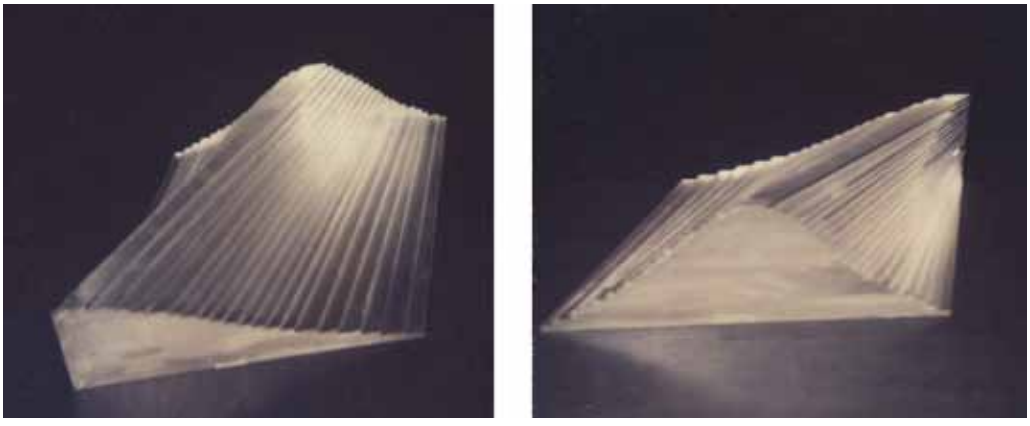
Unknown to most then or now, once Riemann premised his investigation upon Gauss's most advanced investigations into the nature of physical space, his was no longer an investigation of space itself, but rather that which determines the characteristics of space, i.e. the physical principles which determine the metrics and actions within physical space, an idea entirely outside the confines of eunuchs such as Euclid, and one which brought sheer delight to Einstein's reflections on the pathway of light a half century later! [6]

3. From Riemann's *Habilitation Dissertation*: "*Plan of the Investigation.* It is known that geometry assumes, both the notion of space and the first principles of constructions in space, as given in advance. She gives definitions of them which are merely nominal, while the true determinations appear in the form of axioms. The relation of these assumptions remains consequently in darkness; we perceive neither whether and how far their connection is necessary, nor *a priori*, whether it is possible. From Euclid to Legendre (to name the most famous of modern reforming geometers) this darkness was cleared up neither by mathematicians nor by such philosophers as concerned themselves with it." Clifford Version.

4. This should come as no surprise to any student of Kepler's *Harmony of the World,* where Kepler's own rigorous pursuit of the principle of gravitation led him deeper and deeper into reflections on the nature of creative mind as a principle itself.

5. From the *Habilitation Dissertation*: "In proceeding to attempt the solution of the first of these problems, the development of the notion of a multiply extended magnitude, I think I may the more claim indulgent criticism in that I am not practised in such undertakings of a philosophical nature where the difficulty lies more in the concepts themselves than in the construction; and that besides some very short hints on the matter given by Privy Councillor Gauss in his second memoir on Biquadratic Residues, in the *Göttingen Gelehrte Anzeige*, and in his Jubileebook, and some philosophical researches of Herbart, I could make use of no previous labours."

6. From the *Habilitation Dissertation*: "The question of the validity of the hypotheses of geometry in the infinitely small is bound up with the question of the basis of the metric relations of space. In this last question, which we may still regard as belonging to the doctrine of space, is found the application of the remark made above; that in a discrete manifold, the basis of its metric relations is given in the notion of it, while in a continuous manifold, this basis must come from outside. Either therefore the reality which underlies space must form a discrete manifold, or we must seek the basis of its metric relations outside it, in binding forces which act upon it."



Two views of a geometric model of hydrodynamic shock-wave generation, which Riemann studied, and led to one of his revolutionary contributions to scientific thought.

As Riemann posits this in the final assertion and conclusion of his dissertation, with future discovery lingering just beyond, he resolves the greatest of flanks:

"This leads us into the domain of another science, that of physics, into which the object of today's proceedings [in the math department] does not allow us to enter."

It is from this vantage point that Riemann makes his critical turn, the final *fait accompli.* For once the positive identification of physical principles is sufficiently made, an assertion which can only conjure images of a proud and smiling Gauss—an assertion such as the "binding forces which act upon it (i.e. space),"—then, in this context, all of the previous mathematical assumptions and infinite language constructions which had become the subject of extensive academic study, all at once become obsolete, the mere remnants of past discoveries at best.

So even while Gauss' investigations, especially into the questions of curvature, had provided a most rigorous identification of the physical characteristics of Kepler's principle of gravitation, yet the mathematical concepts are unable by their own limitations, to ever provide a reproduction of Kepler's discovery. Gauss would be the first to acknowledge such a point, but it was a point left for his student Riemann to make.

For the re-creation of Kepler's discovery of harmonic orderings of gravitation, or of Einstein's development of general relativity, or perhaps most important, the coming discovery of the principle of our galaxy according to higher relativistic harmonic orderings, are not dependent upon mathematical conceptions,—indeed, usually greatly hindered by them,—but depend rather on the physical insights and musical passion of the likes of Kepler, Gauss, Riemann and Einstein, as well as Bach, Mozart, and Beethoven. For such discoveries will not be found in the domain of mathematics or contemplations of space, but rather in the increasing potential of the human individual to apply the great discoveries of the past as an impassioned foundation and source of optimism to access the necessary and sufficient future, projected uniquely onto the creative mind of man.

Epilogue

Since the subject of our proceedings does permit an investigation into the domain of physics, it is entirely appropriate to provide an important, if perhaps introductory, consideration towards an immediate change in the global systemic nature of the human economy.

Take as an example the five Platonic solids. Why five? Could you have foreseen that only five regular polyhedra exist in physical space? Such considerations uniquely provide an opportunity to reflect on the assumptions which shape our conception of human history.

It is not unusual when confronting the typical pessimist, perhaps even a devotee of Donald Trump, that they profess such despair simply because they have already accepted defeat, i.e. their assumptions of the shape of human history do not permit revolutionary development. Unbeknownst to the average pessimist, they have accepted assumptions about the nature of human history, for which, as Riemann states at the beginning of his dissertation, "The relation of these assumptions remains consequently in darkness; we perceive neither whether and how far their connection is necessary, nor *a priori*, whether it is possible."

To the revolutionary political activist, as contrasted to the common spectator or political pundit, it is increasingly obvious that we are now converging on a discontinuous moment in the course of human history, one which stems not from past events, but from the future's necessity, either significantly downwards with great loss of human life and culture, and even possible extinction,—or upwards to a new, greater existence for mankind as a creative species. Such singular moments are what human history is made of: not from the past, but from our Galaxy's to-be-discovered future.