

IQNEXUS Journal

Vol. XVI, No. 4; December 2024

<https://iqnexus.org/journal/>



Front cover Feature.

***How Much of What We Believe
About Ancient History
is Really True***

Inside featuring;

***Dr. Fabiano de Abreu Agrela Rodrigues
Vernon M Neppe MD, PhD,
Claus D. Volko; Simeon Popov; Bryne Tan
and other creative members.***



Inside

7 Fine Arts

music, poems, visual, gallery

Philosophy & Science

papers, essays, dialogues, reviews

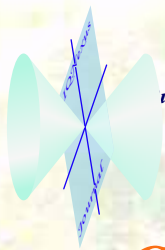
Online Journal publishing the works of the members of IIS, ePiq & Isis Societies, members of WIN

IQ Nexus Journal editorial staff

ublisher/Graphics Editor & Web Administrator.....Stanislav Riha

English Editor.....Jacqueline Slade

IQ Nexus founder.....Owen Cosby



Contact us at infinimag@gmail.com

Website; <https://iqnexus.org/journal/>

Non-members' contributions are welcome and every new contribution has to be accompanied by an introduction from the contributor.

IQ Nexus Journal

was created to publish creative endeavours for members of the IIS and ePiqs, web based societies as well as guests of other societies and invited non members..



This issue features creative works of:

Listed alphabetically;

Alena Plíštilová

Anja Jaenicke

Bryne Tan

Claus D. Volko

David Udbjorg

Edgar Allan Poe

Fabiano de Abreu Agrela

Jason Munn

Jaromír M Červenka

Marie

Marilyn Grimble

Mark van Vuuren

Simeon Popov

Stanislav Riha

Vernon M Neppe

Xavier Jouve

COVER PAGE

How Much of What We Believe About Ancient History is Really True



A legend is a tale regarded as historical even though it has not been proven, and the term “myth” can refer to common yet false ideas. Many myths and legends describe our history, but they are often treated skeptically. This is because many of them, while explaining a phenomenon, involve divine or supernatural beings. However, despite the fact that many disbelieve such stories, they do not disappear; they are passed down to future generations. Some parents tell their children that the stories are true. Others explain that they are likely untrue but important. And for human beings, they are significant.

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<https://www.ancientoriginsunleashed.com/>

*Special thanks to **Jacqueline Slade** for her great help with English editorial work and **Owen Cosby** For reviving and restoring Infinity International Society and establishing IQ Nexus joined forum of IIS and ePiq and later ISI-S Societies for which this Journal was created.*

“Even though scientist are involved in this Journal, I and all involved in the IQ Nexus Journal have tried to keep the content (even though it is a Hi IQ Society periodical) on an ordinary human level as much as possible. In fact, is it not the case, that - to be a human being is the most intelligent way of life?”

Stanislav Riha

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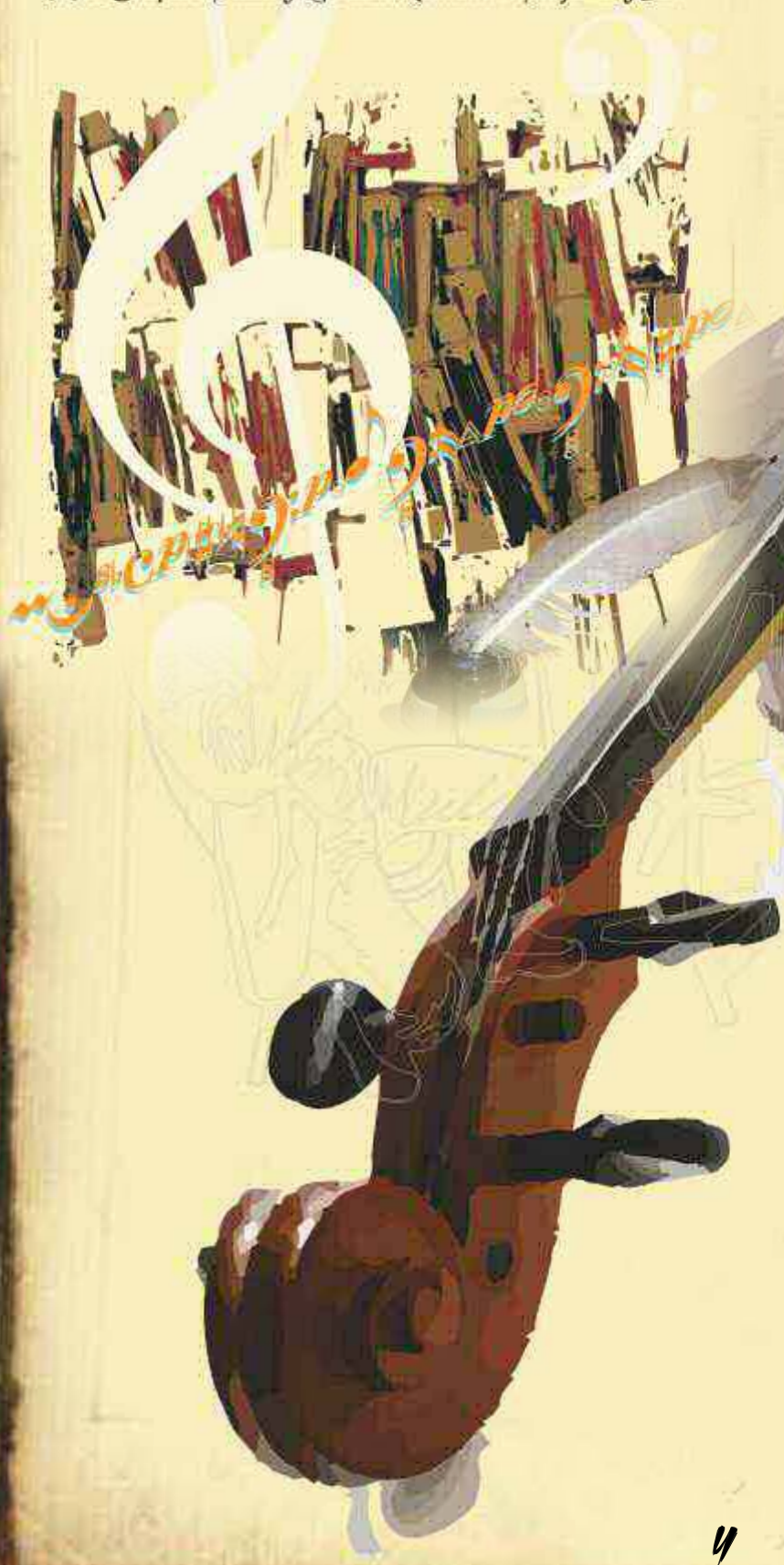
IQNEXUS

TR41



7 Arts

Music Sculpture Painting Literature Architecture Performing Film



music & film

Jason Munn



Video and Musical Composition by Jason Munn

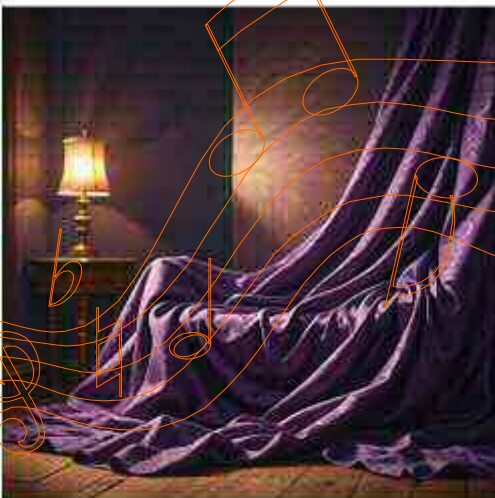


Dreams, Light and Nature

<https://vimeo.com/channels/jasemunn/525484455>



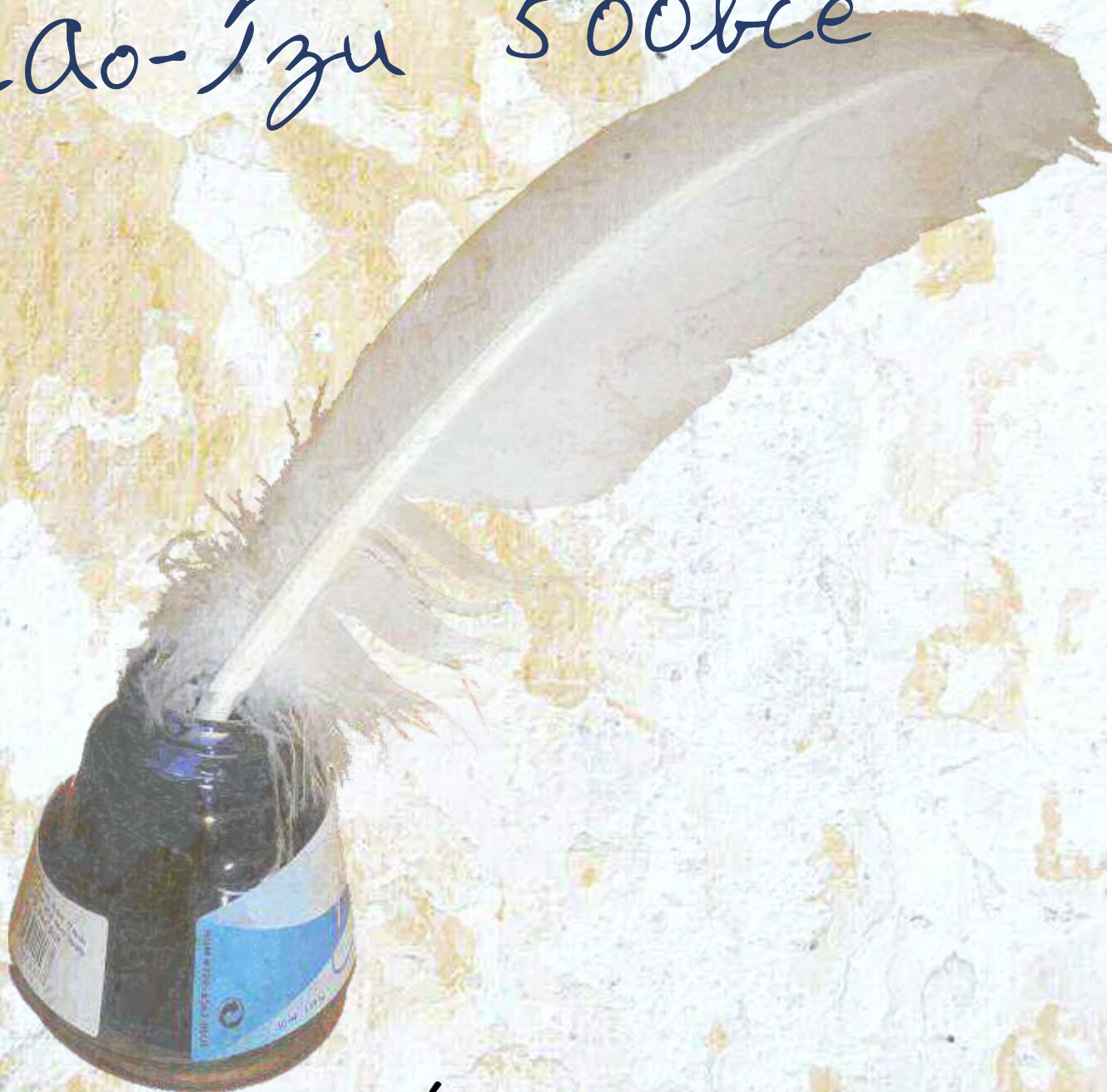
The Purple Cloth



<https://soundcloud.com/jase-munn/the-purple-cloth>

From
a creative pen

Lao-Tzu 500bce



Wisdom of ancient Master

Tao Te Ching

Lao-Tzu 500 BCE

If you want to be a great leader,
you must learn to follow the Tao.

Stop trying to control.

Let go of fixed plans and concepts,
and the world will govern itself.

The more prohibitions you have,
The less virtuous people will be.

The more weapons you have,
The less secure people will be.

The more subsidies you have,
The less self-reliant people will be.

Therefore, the Master says:

I let go of the law,
and people become honest.

I let go of economics,
and people become prosperous.

I let go of religion,
and people become serene.

I let go of all desire for the common good,
And the good becomes common as grass.

SSGA



Stonewall Gallery of Art

The Artists
alphabetically

Alena Plisfilova
Anja Jaenicke
David Udbjorg
Eric Trowbridge

J M Cervenka
Jase Munn
Marie
Marilyn Grimble

Mark van Vuuren
Standa Riha
Xavier Jouve



Ala Plisilova
photography



Ala Plisilova
photography



Leonardo

Anja Jaenicke
painting

//

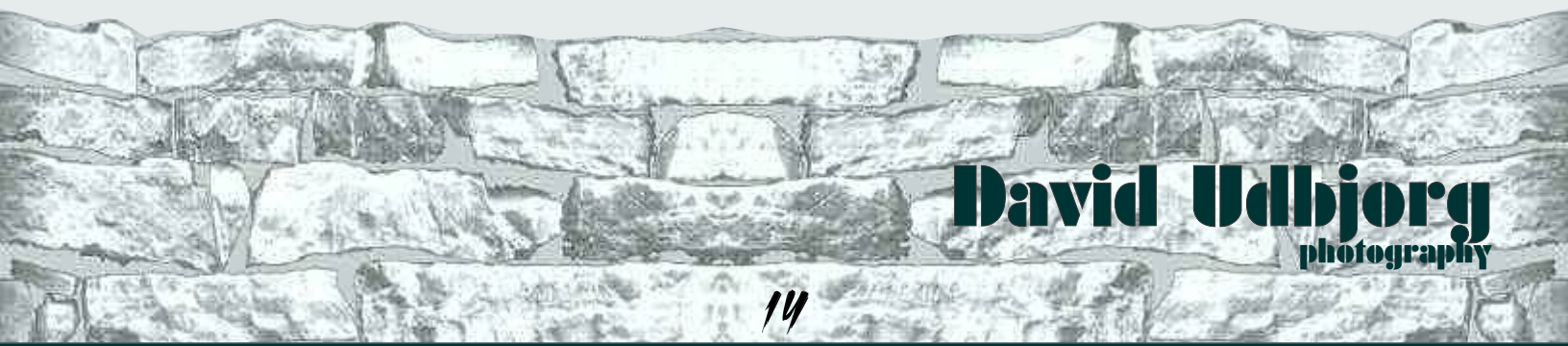


Leonardo

Anja Jaenicke
painting



David Udbjerg
photography



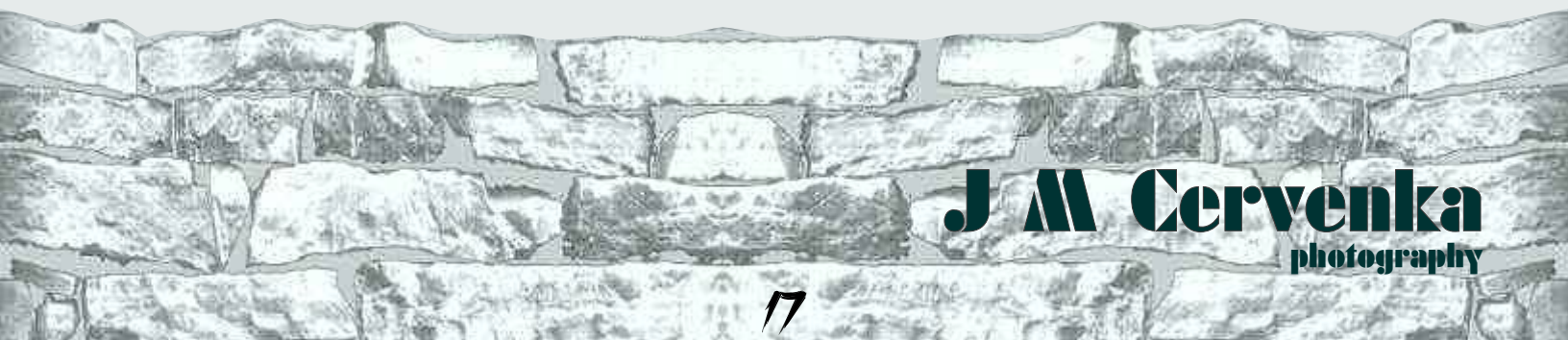
David Udbjerg
photography



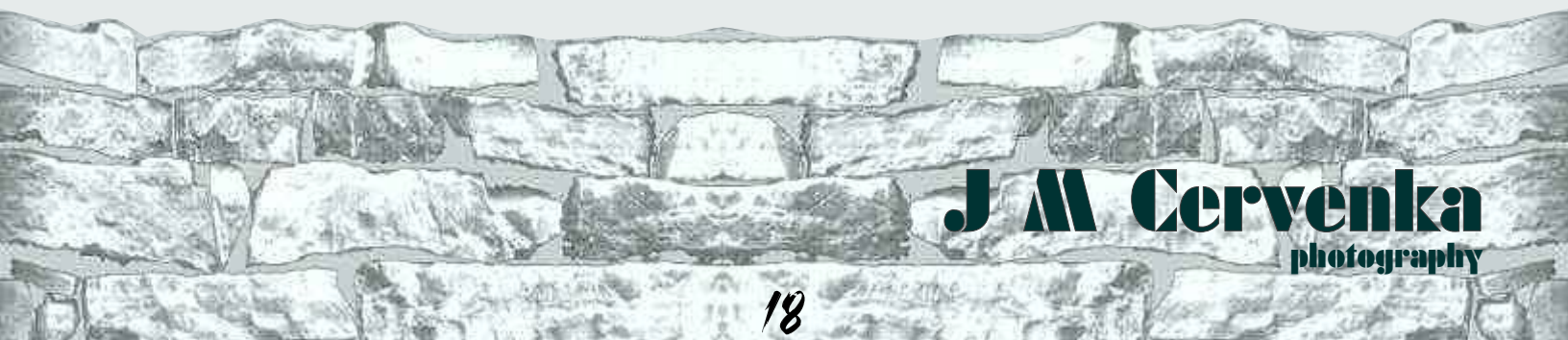
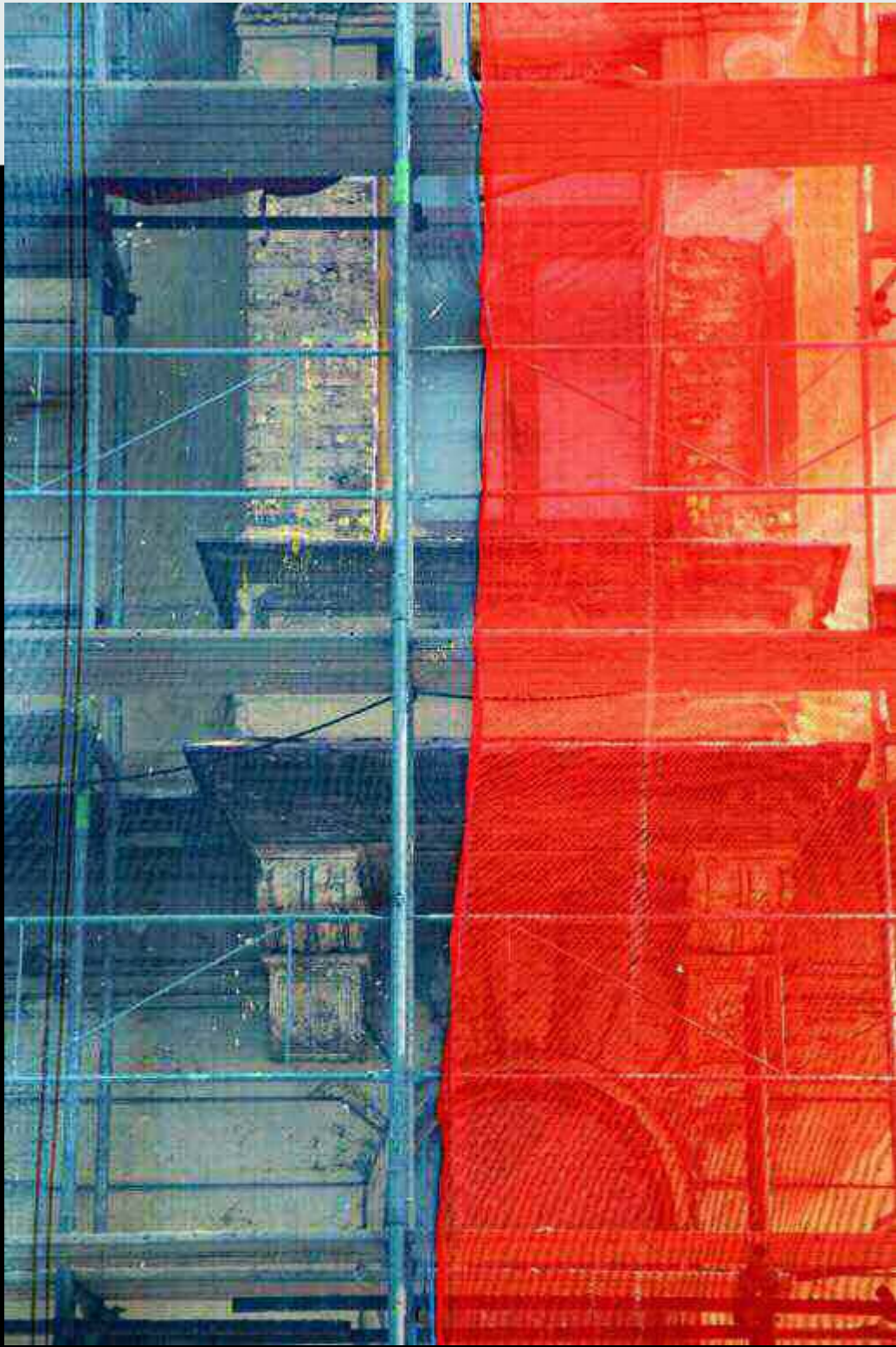
Eric Trowbridge
digital art



Art from the past



J M Cervenka
photography



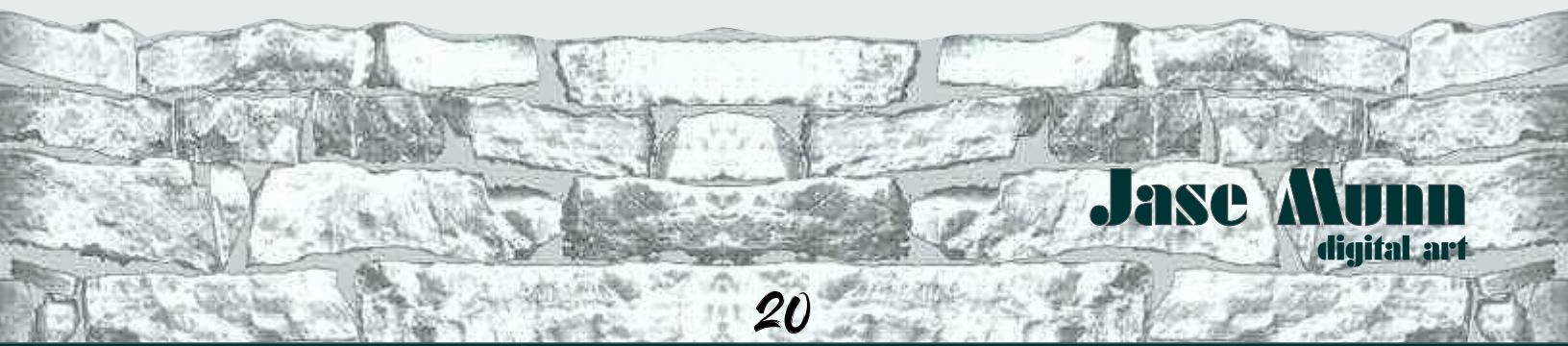
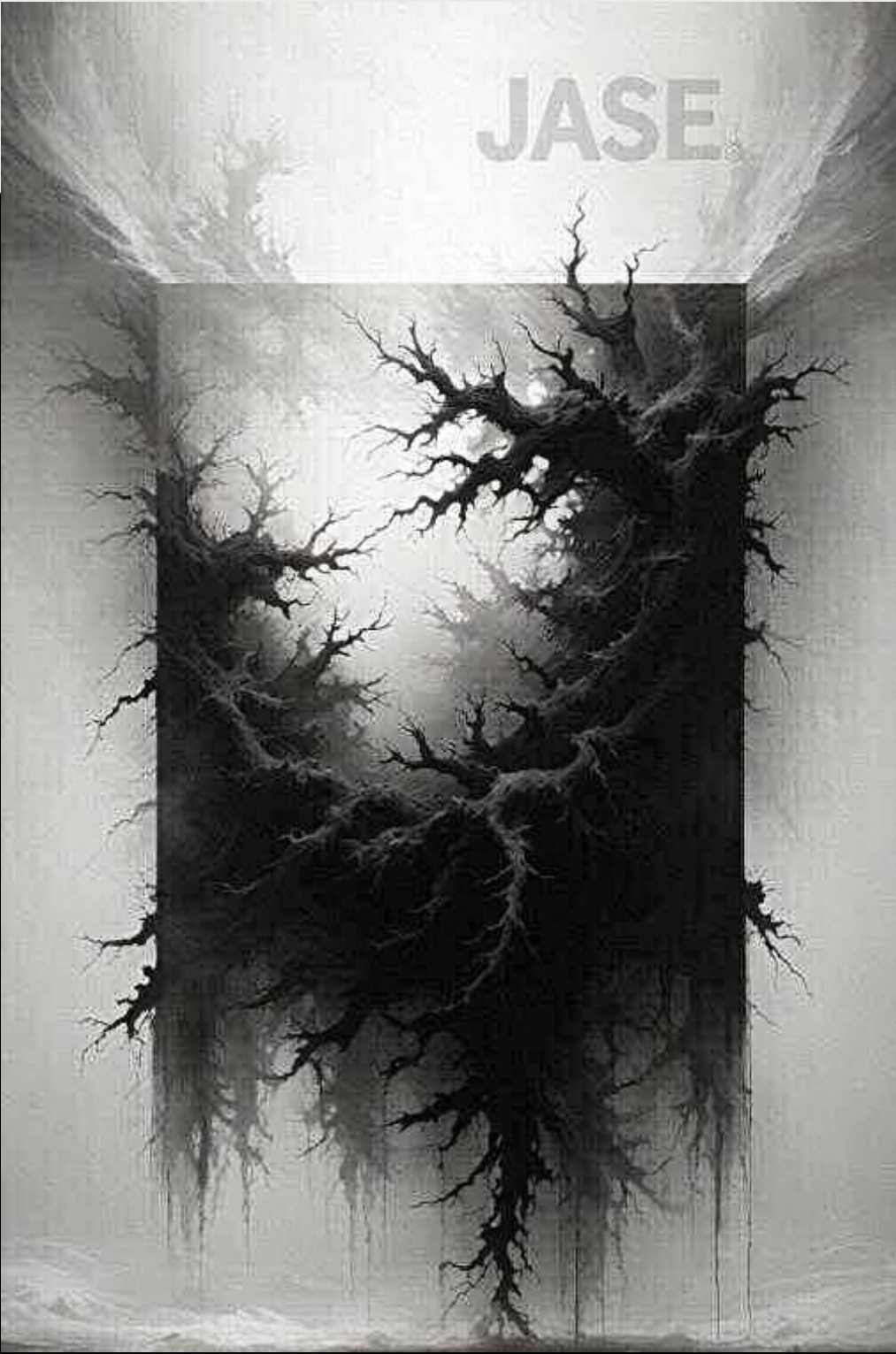
J M Cervenka
photography

JASE.

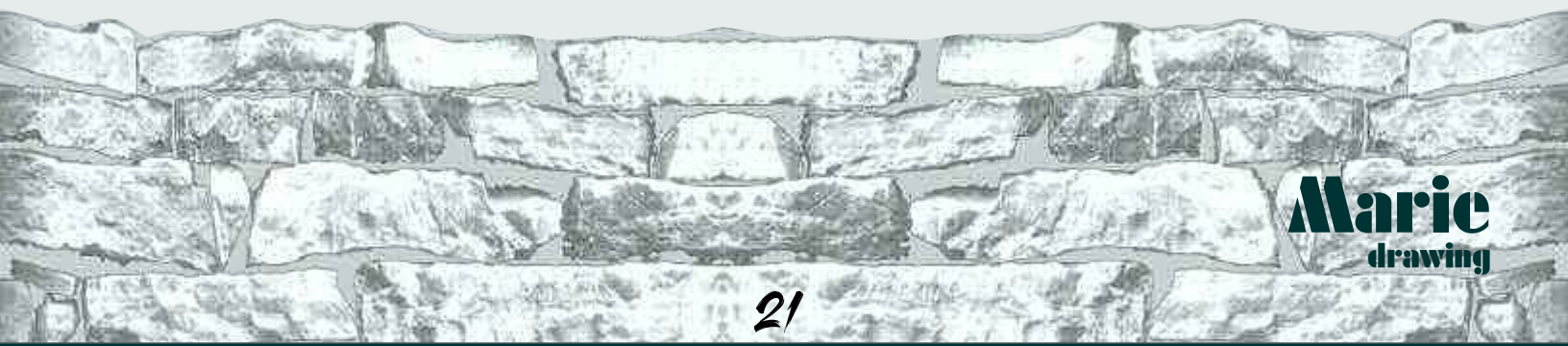
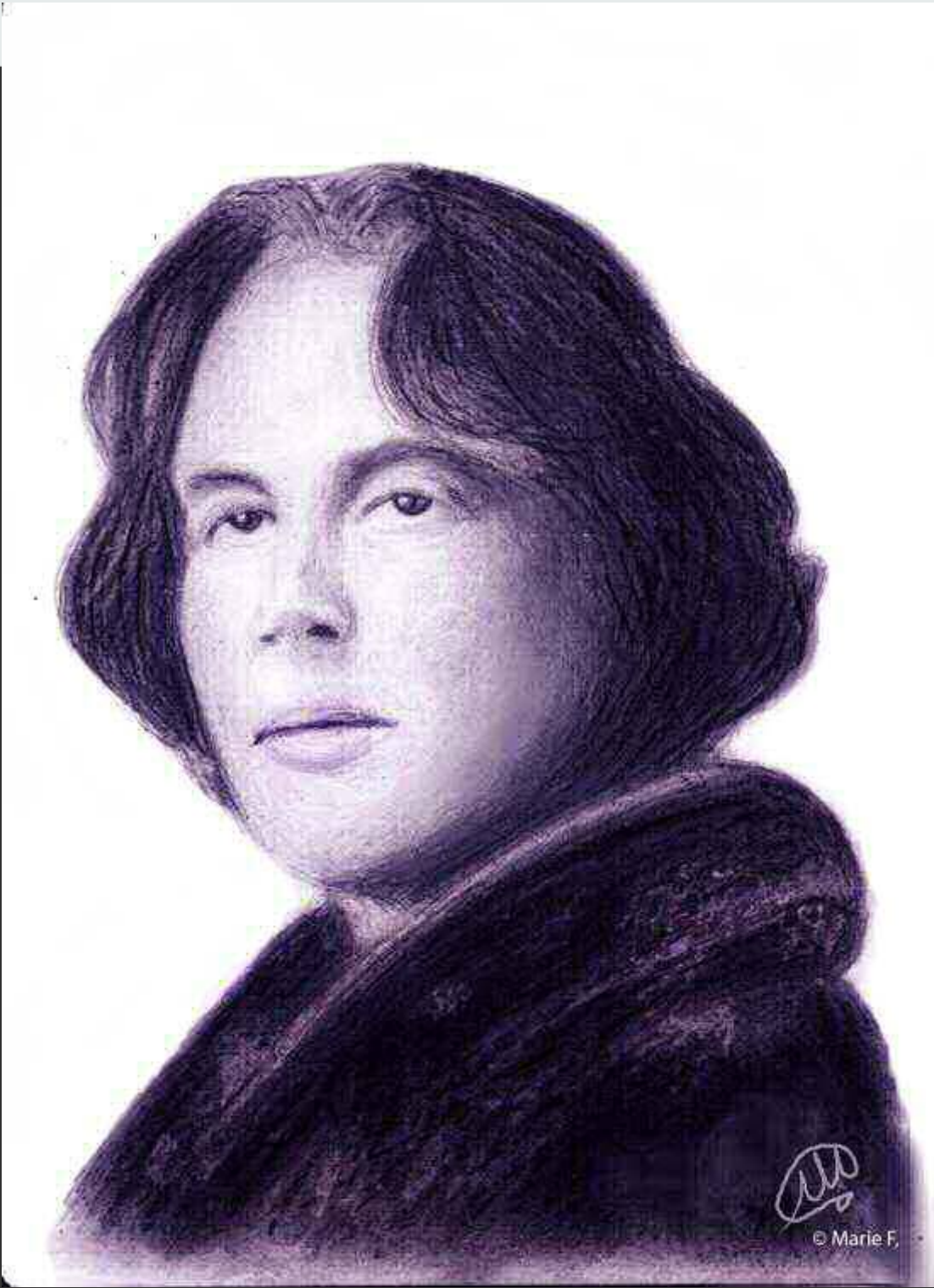


Jase Mum
digital art

JASE

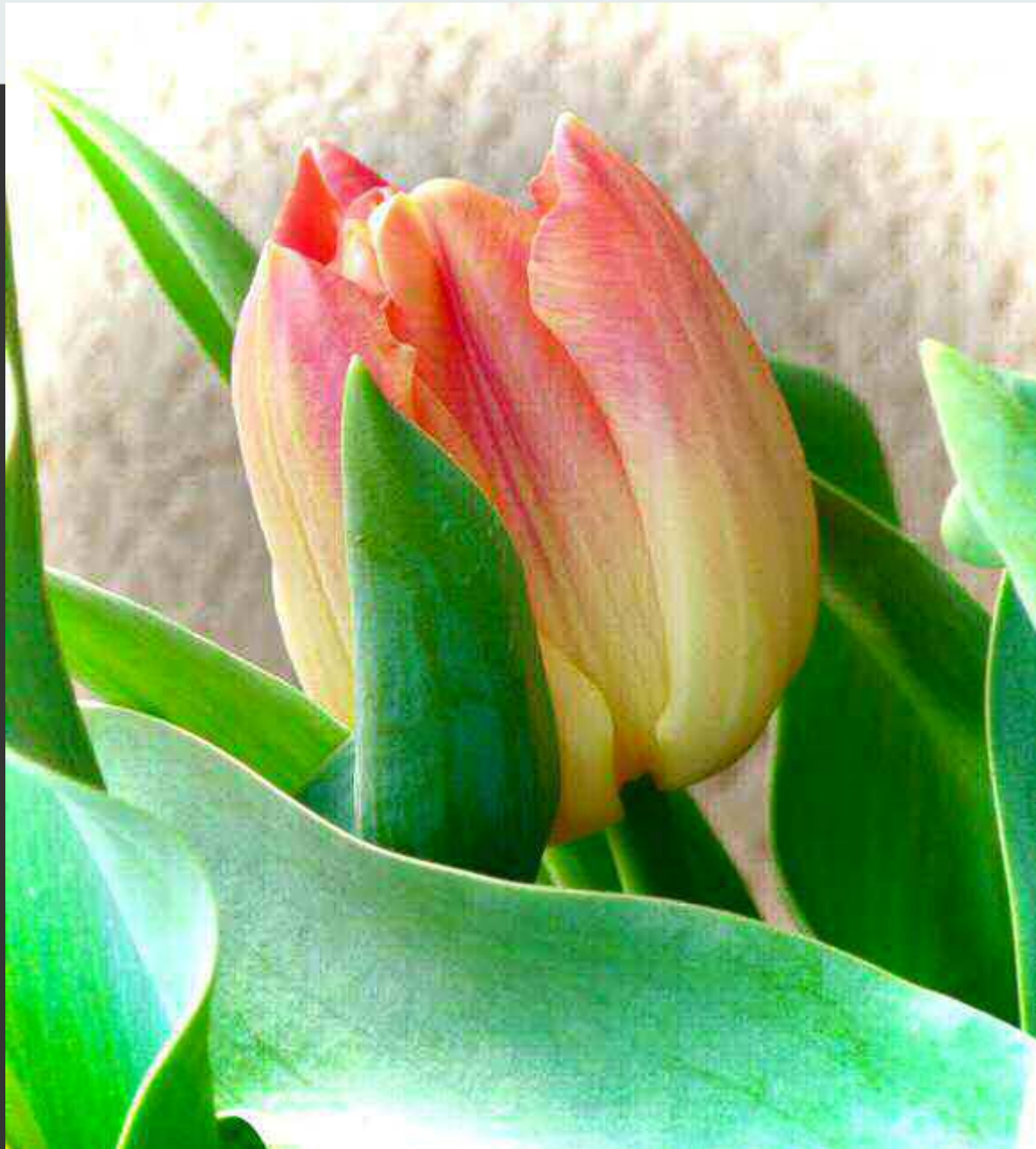


Jase Mum
digital art





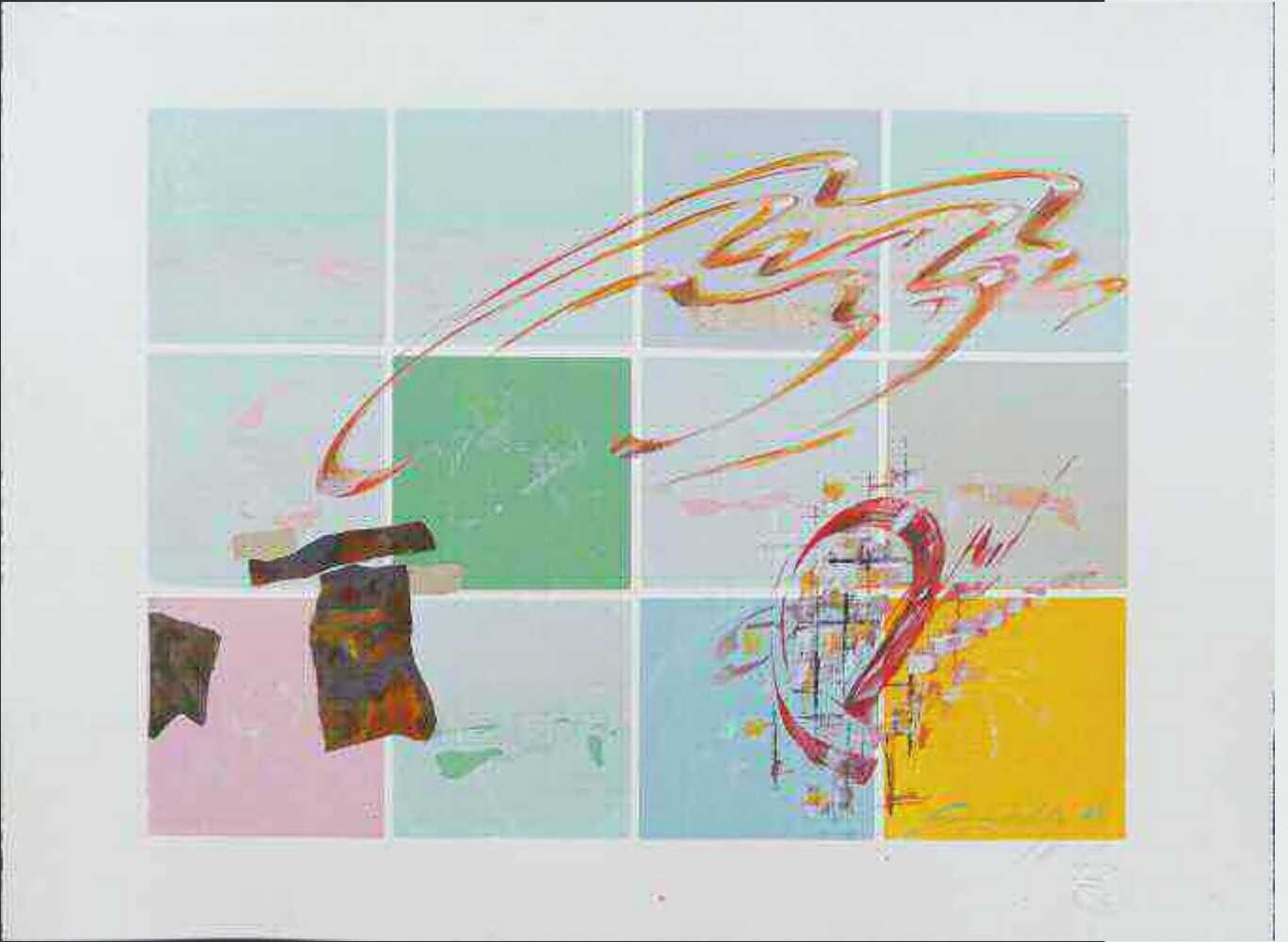
Marilyn Crimble
painting



Marilyn Grimble
photography

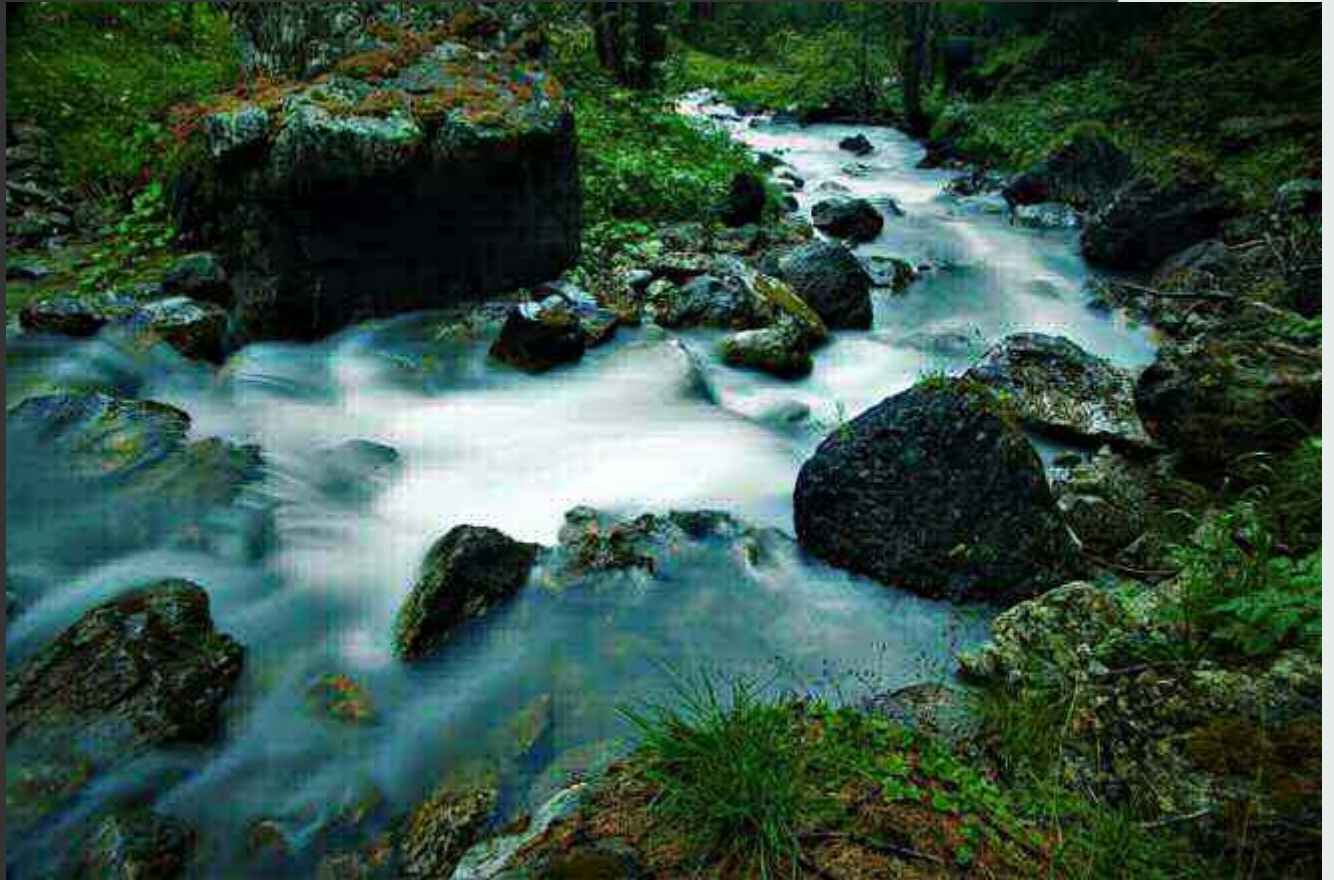


Standa Riha
mixed media





Xavier Jouve
photography



Xavier Jouve
photography

TABELLA V. OSTENDENS POSITIS CEN-
TRORVM ECCENTRICIS SOLARIBVS QVIBVS
Secundum Galileum
Ad tempora Ptolemaei, circa Annum
Christi 140
Ad tempora Copernici, circa Annum
Christi 1543

Essays, Philosophy, Science & Reviews

THE BLACK CAT

Less known stories by Edgar Allan Poe

How Much of What We Believe About Ancient History is Really True?

Ancient History Unleashed

Difference Between Giftedness (2SD) and Profound Giftedness (3SD)

Dr. Fabiano de Abreu Agrela Rodrigues

Modeling Monkeypox Outbreak with the SEIR Model Including Vital Dynamics

Bryne Tan

What is the maximum score you can get on an IQ test?

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Gimmel updated: Physics, spirituality and unified reality

Vernon M Neppe MD, PhD

The Israeli Security Doctrine Adapting Without Altering Core Pillars

Simeon Popov

Has the Age of Artificial Intelligence in Science begun?

Claus D. Volko

THE BLACK CAT.

Edgar Allan Poe

FOR the most wild, yet most homely narrative which I am about to pen, I neither expect nor solicit belief. Mad indeed would I be to expect it, in a case where my very senses reject their own evidence. Yet, mad am I not—and very surely do I not dream. But to-morrow I die, and to-day I would unburthen my soul. My immediate purpose is to place before the world, plainly, succinctly, and without comment, a series of mere household events. In their consequences, these events have terrified—have tortured—have destroyed me. Yet I will not attempt to expound them. To me, they have presented little but Horror—to many they will seem less terrible than *barroques*. Hereafter, perhaps, some intellect may be found which will reduce my phantasm to the common-place—some intellect more calm, more logical, and far less excitable than my own, which will perceive, in the circumstances I detail with awe, nothing more than an ordinary succession of very natural causes and effects.

From my infancy I was noted for the docility and humanity of my disposition. My tenderness of heart was even so conspicuous as to make me the jest of my companions. I was especially fond of animals, and was indulged by my parents with a great variety of pets. With these I spent most of my time, and never was so happy as when feeding and caressing them. This peculiarity of character grew with my growth, and in my manhood, I derived from it one of my principal sources of pleasure. To those who have cherished an affection for a faithful and sagacious dog, I need hardly be at the trouble of explaining the nature or the intensity of the gratification thus derivable. There is something in the unselfish and self-sacrificing love of a brute, which goes directly to the heart of him who has had frequent occasion to test the paltry friendship and gossamer fidelity of mere *Man*.

I married early, and was happy to find in my wife a disposition not uncongenial with my own. Observing my partiality for domestic pets, she lost no opportunity of procuring those of the most agreeable kind. We had birds, gold-fish, a fine dog, rabbits, a small monkey, and *a cat*.

This latter was a remarkably large and beautiful animal, entirely black, and sagacious to an astonishing degree. In speaking of his intelligence, my wife, who at heart was not a little tinctured with superstition, made frequent allusion to the ancient popular notion, which regarded all black cats as witches in disguise. Not that she was ever *serious* upon this point—and I mention the matter at all for no better reason than that it happens, just now, to be remembered.

Pluto—this was the cat's name—was my favorite pet and playmate. I alone fed him, and he attended me wherever I went about the house. It was even with difficulty that I could prevent him from following me through the streets.

Our friendship lasted, in this manner, for several years, during which my general temperament and character—through the instrumentality of the Fiend Intemperance—had (I blush to confess it) experienced a radical alteration for the worse. I grew, day by day, more moody, more irritable, more regardless of the feelings of others. I suffered myself to use intemperate language to my wife. At length, I even offered her personal violence. My pets, of course, were made to feel the change in my disposition. I not only neglected, but ill-used them. For Pluto, however, I still retained sufficient regard to restrain me from maltreating him, as I made no scruple of maltreating the rabbits, the monkey, or even the dog, when by accident, or through affection, they came in my way.

But my disease grew upon me—for what disease is like Alcohol!—and at length even Pluto, who was now becoming old, and consequently somewhat peevish—even Pluto began to experience the effects of my ill temper.

One night, returning home, much intoxicated, from one of my haunts about town, I fancied that the cat avoided my presence. I seized him; when, in his fright at my violence, he inflicted a slight wound upon my hand with his teeth. The fury of a demon instantly possessed me. I knew myself no longer. My original soul seemed, at once, to take its flight from my body and a more than fiendish malevolence, gin-nurtured, thrilled every fibre of my frame. I took from my waistcoat-pocket a pen-knife, opened it, grasped the poor beast by the throat, and deliberately cut one of its eyes from the socket! I blush, I burn, I shudder, while I pen the damnable atrocity.

When reason returned with the morning—when I had slept off the fumes of the night's debauch—I experienced a sentiment half of horror, half of remorse, for the crime of which I had been guilty; but it was, at best, a feeble and equivocal feeling, and the soul remained untouched. I again plunged into

excess, and soon drowned in wine all memory of the deed.

In the meantime the cat slowly recovered. The socket of the lost eye presented, it is true, a frightful appearance, but he no longer appeared to suffer any pain. He went about the house as usual, but, as might be expected, fled in extreme terror at my approach. I had so much of my old heart left, as to be at first grieved by this evident dislike on the part of a creature which had once so loved me. But this feeling soon gave place to irritation. And then came, as if to my final and irrevocable overthrow, the spirit of PERVERSENESS. Of this spirit philosophy takes no account. Yet I am not more sure that my soul lives, than I am that perverseness is one of the primitive impulses of the human heart—one of the indivisible primary faculties, or sentiments, which give direction to the character of Man. Who has not, a hundred times, found himself committing a vile or a silly action, for no other reason than because he knows he should not? Have we not a perpetual inclination, in the teeth of our best judgment, to violate that which is *Law*, merely because we understand it to be such? This spirit of perverseness, I say, came to my final overthrow. It was this unfathomable longing of the soul *to vex itself*—to offer violence to its own nature—to do wrong for the wrong's sake only—that urged me to continue and finally to consummate the injury I had inflicted upon the unoffending brute. One morning, in cool blood, I slipped a noose about its neck and hung it to the limb of a tree;—hung it with the tears streaming from my eyes, and with the bitterest remorse at my heart;—hung it *because* I knew that it had loved me, and *because* I felt it had given me no reason of offence;—hung it *because* I knew that in so doing I was committing a sin—a deadly sin that would so jeopardize my immortal soul as to place it—if such a thing wore possible—even beyond the reach of the infinite mercy of the Most Merciful and Most Terrible God.

On the night of the day on which this cruel deed was done, I was aroused from sleep by the cry of fire. The curtains of my bed were in flames. The whole house was blazing. It was with great difficulty that my wife, a servant, and myself, made our escape from the conflagration. The destruction was complete. My entire worldly wealth was swallowed up, and I resigned myself thenceforward to despair.

I am above the weakness of seeking to establish a sequence of cause and effect, between the disaster and the atrocity. But I am detailing a chain of facts—and wish not to leave even a possible link imperfect. On the day succeeding the fire, I visited the ruins. The walls, with one exception, had

fallen in. This exception was found in a compartment wall, not very thick, which stood about the middle of the house, and against which had rested the head of my bed. The plastering had here, in great measure, resisted the action of the fire—a fact which I attributed to its having been recently spread. About this wall a dense crowd were collected, and many persons seemed to be examining a particular portion of it with very minute and eager attention. The words "strange!" "singular!" and other similar expressions, excited my curiosity. I approached and saw, as if graven in *bas relief* upon the white surface, the figure of a gigantic *cat*. The impression was given with an accuracy truly marvellous. There was a rope about the animal's neck.

When I first beheld this apparition—for I could scarcely regard it as less—my wonder and my terror were extreme. But at length reflection came to my aid. The cat, I remembered, had been hung in a garden adjacent to the house. Upon the alarm of fire, this garden had been immediately filled by the crowd—by some one of whom the animal must have been cut from the tree and thrown, through an open window, into my chamber. This had probably been done with the view of arousing me from sleep. The falling of other walls had compressed the victim of my cruelty into the substance of the freshly-spread plaster; the lime of which, with the flames, and the *ammonia* from the carcass, had then accomplished the portraiture as I saw it.

Although I thus readily accounted to my reason, if not altogether to my conscience, for the startling fact just detailed, it did not the less fail to make a deep impression upon my fancy. For months I could not rid myself of the phantasm of the cat; and, during this period, there came back into my spirit a half-sentiment that seemed, but was not, remorse. I went so far as to regret the loss of the animal, and to look about me, among the vile haunts which I now habitually frequented, for another pet of the same species, and of somewhat similar appearance, with which to supply its place.

One night as I sat, half stupified, in a den of more than infamy, my attention was suddenly drawn to some black object, reposing upon the head of one of the immense hogsheads of Gin, or of Rum, which constituted the chief furniture of the apartment. I had been looking steadily at the top of this hogshead for some minutes, and what now caused me surprise was the fact that I had not sooner perceived the object thereupon. I approached it, and touched it with my hand. It was a black cat—a very large one—fully as large as Pluto, and closely resembling him in every respect but one. Pluto had not a white hair upon any portion of his body; but this cat had a

large, although indefinite splotch of white, covering nearly the whole region of the breast. Upon my touching him, he immediately arose, purred loudly, rubbed against my hand, and appeared delighted with my notice. This, then, was the very creature of which I was in search. I at once offered to purchase it of the landlord; but this person made no claim to it—knew nothing of it—had never seen it before.

I continued my caresses, and, when I prepared to go home, the animal evinced a disposition to accompany me. I permitted it to do so; occasionally stooping and patting it as I proceeded. When it reached the house it domesticated itself at once, and became immediately a great favorite with my wife.

For my own part, I soon found a dislike to it arising within me. This was just the reverse of what I had anticipated; but—I know not how or why it was—its evident fondness for myself rather disgusted and annoyed. By slow degrees, these feelings of disgust and annoyance rose into the bitterness of hatred. I avoided the creature; a certain sense of shame, and the remembrance of my former deed of cruelty, preventing me from physically abusing it. I did not, for some weeks, strike, or otherwise violently ill use it; but gradually—very gradually—I came to look upon it with unutterable loathing, and to flee silently from its odious presence, as from the breath of a pestilence.

What added, no doubt, to my hatred of the beast, was the discovery, on the morning after I brought it home, that, like Pluto, it also had been deprived of one of its eyes. This circumstance, however, only endeared it to my wife, who, as I have already said, possessed, in a high degree, that humanity of feeling which had once been my distinguishing trait, and the source of many of my simplest and purest pleasures.

With my aversion to this cat, however, its partiality for myself seemed to increase. It followed my footsteps with a pertinacity which it would be difficult to make the reader comprehend. Whenever I sat, it would crouch beneath my chair, or spring upon my knees, covering me with its loathsome caresses. If I arose to walk it would get between my feet and thus nearly throw me down, or, fastening its long and sharp claws in my dress, clamber, in this manner, to my breast. At such times, although I longed to destroy it with a blow, I was yet withheld from so doing, partly by a memory of my former crime, but chiefly—let me confess it at once—by absolute dread of the beast.

This dread was not exactly a dread of physical evil—and yet I should be

at a loss how otherwise to define it. I am almost ashamed to own—yes, even in this felon's cell, I am almost ashamed to own—that the terror and horror with which the animal inspired me, had been heightened by one of the merest chimaeras it would be possible to conceive. My wife had called my attention, more than once, to the character of the mark of white hair, of which I have spoken, and which constituted the sole visible difference between the strange beast and the one I had destroyed. The reader will remember that this mark, although large, had been originally very indefinite; but, by slow degrees—degrees nearly imperceptible, and which for a long time my Reason struggled to reject as fanciful—it had, at length, assumed a rigorous distinctness of outline. It was now the representation of an object that I shudder to name—and for this, above all, I loathed, and dreaded, and would have rid myself of the monster *had I dared*—it was now, I say, the image of a hideous—of a ghastly thing—of the GALLOWS!—oh, mournful and terrible engine of Horror and of Crime—of Agony and of Death!

And now was I indeed wretched beyond the wretchedness of mere Humanity. And *a brute beast*—whose fellow I had contemptuously destroyed—*a brute beast* to work out for *me*—for me a man, fashioned in the image of the High God—so much of insufferable wo! Alas! neither by day nor by night knew I the blessing of Rest any more! During the former the creature left me no moment alone; and, in the latter, I started, hourly, from dreams of unutterable fear, to find the hot breath of *the thing* upon my face, and its vast weight—an incarnate Night-Mare that I had no power to shake off—incumbent eternally upon my *heart*!

Beneath the pressure of torments such as these, the feeble remnant of the good within me succumbed. Evil thoughts became my sole intimates—the darkest and most evil of thoughts. The moodiness of my usual temper increased to hatred of all things and of all mankind; while, from the sudden, frequent, and ungovernable outbursts of a fury to which I now blindly abandoned myself, my uncomplaining wife, alas! was the most usual and the most patient of sufferers.

One day she accompanied me, upon some household errand, into the cellar of the old building which our poverty compelled us to inhabit. The cat followed me down the steep stairs, and, nearly throwing me headlong, exasperated me to madness. Uplifting an axe, and forgetting, in my wrath, the childish dread which had hitherto stayed my hand, I aimed a blow at the animal which, of course, would have proved instantly fatal had it descended

as I wished. But this blow was arrested by the hand of my wife. Goaded, by the interference, into a rage more than demoniacal, I withdrew my arm from her grasp and buried the axe in her brain. She fell dead upon the spot, without a groan.

This hideous murder accomplished, I set myself forthwith, and with entire deliberation, to the task of concealing the body. I knew that I could not remove it from the house, either by day or by night, without the risk of being observed by the neighbors. Many projects entered my mind. At one period I thought of cutting the corpse into minute fragments, and destroying them by fire. At another, I resolved to dig a grave for it in the floor of the cellar. Again, I deliberated about casting it in the well in the yard—about packing it in a box, as if merchandize, with the usual arrangements, and so getting a porter to take it from the house. Finally I hit upon what I considered a far better expedient than either of these. I determined to wall it up in the cellar—as the monks of the middle ages are recorded to have walled up their victims.

For a purpose such as this the cellar was well adapted. Its walls were loosely constructed, and had lately been plastered throughout with a rough plaster, which the dampness of the atmosphere had prevented from hardening. Moreover, in one of the walls was a projection, caused by a false chimney, or fireplace, that had been filled up, and made to resemble the red of the cellar. I made no doubt that I could readily displace the bricks at this point, insert the corpse, and wall the whole up as before, so that no eye could detect any thing suspicious. And in this calculation I was not deceived. By means of a crow-bar I easily dislodged the bricks, and, having carefully deposited the body against the inner wall, I propped it in that position, while, with little trouble, I re-laid the whole structure as it originally stood. Having procured mortar, sand, and hair, with every possible precaution, I prepared a plaster which could not be distinguished from the old, and with this I very carefully went over the new brickwork. When I had finished, I felt satisfied that all was right. The wall did not present the slightest appearance of having been disturbed. The rubbish on the floor was picked up with the minutest care. I looked around triumphantly, and said to myself—"Here at least, then, my labor has not been in vain."

My next step was to look for the beast which had been the cause of so much wretchedness; for I had, at length, firmly resolved to put it to death. Had I been able to meet with it, at the moment, there could have been no doubt of its fate; but it appeared that the crafty animal had been alarmed at the violence

of my previous anger, and forebore to present itself in my present mood. It is impossible to describe, or to imagine, the deep, the blissful sense of relief which the absence of the detested creature occasioned in my bosom. It did not make its appearance during the night—and thus for one night at least, since its introduction into the house, I soundly and tranquilly slept; aye, slept even with the burden of murder upon my soul!

The second and the third day passed, and still my tormentor came not. Once again I breathed as a freeman. The monster, in terror, had fled the premises forever! I should behold it no more! My happiness was supreme! The guilt of my dark deed disturbed me but little. Some few inquiries had been made, but these had been readily answered. Even a search had been instituted—but of course nothing was to be discovered. I looked upon my future felicity as secured.

Upon the fourth day of the assassination, a party of the police came, very unexpectedly, into the house, and proceeded again to make rigorous investigation of the premises. Secure, however, in the inscrutability of my place of concealment, I felt no embarrassment whatever. The officers bade me accompany them in their search. They left no nook or corner unexplored. At length, for the third or fourth time, they descended into the cellar. I quivered not in a muscle. My heart beat calmly as that of one who slumbers in innocence. I walked the cellar from end to end. I folded my arms upon my bosom, and roamed easily to and fro. The police were thoroughly satisfied and prepared to depart. The glee at my heart was too strong to be restrained. I burned to say if but one word, by way of triumph, and to render doubly sure their assurance of my guiltlessness.

"Gentlemen," I said at last, as the party ascended the steps, "I delight to have allayed your suspicions. I wish you all health, and a little more courtesy. By the bye, gentlemen, this—this is a very well constructed house." [In the rabid desire to say something easily, I scarcely knew what I uttered at all.]—"I may say an *excellently* well constructed house. These walls—are you going, gentlemen?— these walls are solidly put together;" and here, through the mere phrenzy of bravado, I rapped heavily, with a cane which I held in my hand, upon that very portion of the brick-work behind which stood the corpse of the wife of my bosom.

But may God shield and deliver me from the fangs of the Arch-Fiend! No sooner had the reverberation of my blows sunk into silence, than I was answered by a voice from within the tomb!— by a cry, at first muffled and

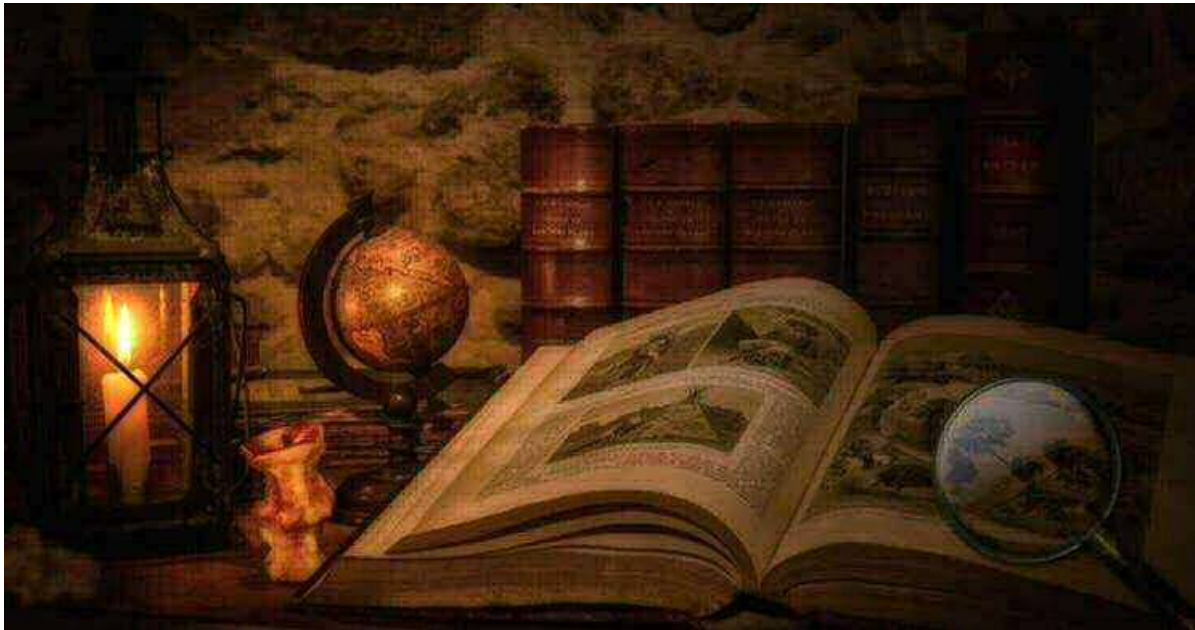
broken, like the sobbing of a child, and then quickly swelling into one long, loud, and continuous scream, utterly anomalous and inhuman—a howl—a wailing shriek, half of horror and half of triumph, such as might have arisen only out of hell, conjointly from the throats of the damned in their agony and of the demons that exult in the damnation.

Of my own thoughts it is folly to speak. Swooning, I staggered to the opposite wall. For one instant the party upon the stairs remained motionless, through extremity of terror and of awe. In the next, a dozen stout arms were toiling at the wall. It fell bodily. The corpse, already greatly decayed and clotted with gore, stood erect before the eyes of the spectators. Upon its head, with red extended mouth and solitary eye of fire, sat the hideous beast whose craft had seduced me into murder, and whose informing voice had consigned me to the hangman. I had walled the monster up within the tomb!



How Much of What We Believe About Ancient History is Really True?

Thinking Critically about Myths and Legends by Ken Jeremiah



A legend is a tale regarded as historical even though it has not been proven, and the term “myth” can refer to common yet false ideas. Many myths and legends describe our history, but they are often treated skeptically. This is because many of them, while explaining a phenomenon, involve divine or supernatural beings. However, despite the fact that many disbelieve such stories, they do not disappear; they are passed down to future generations. Some parents tell their children that the stories are true. Others explain that they are likely untrue but important. And for human beings, they are significant.

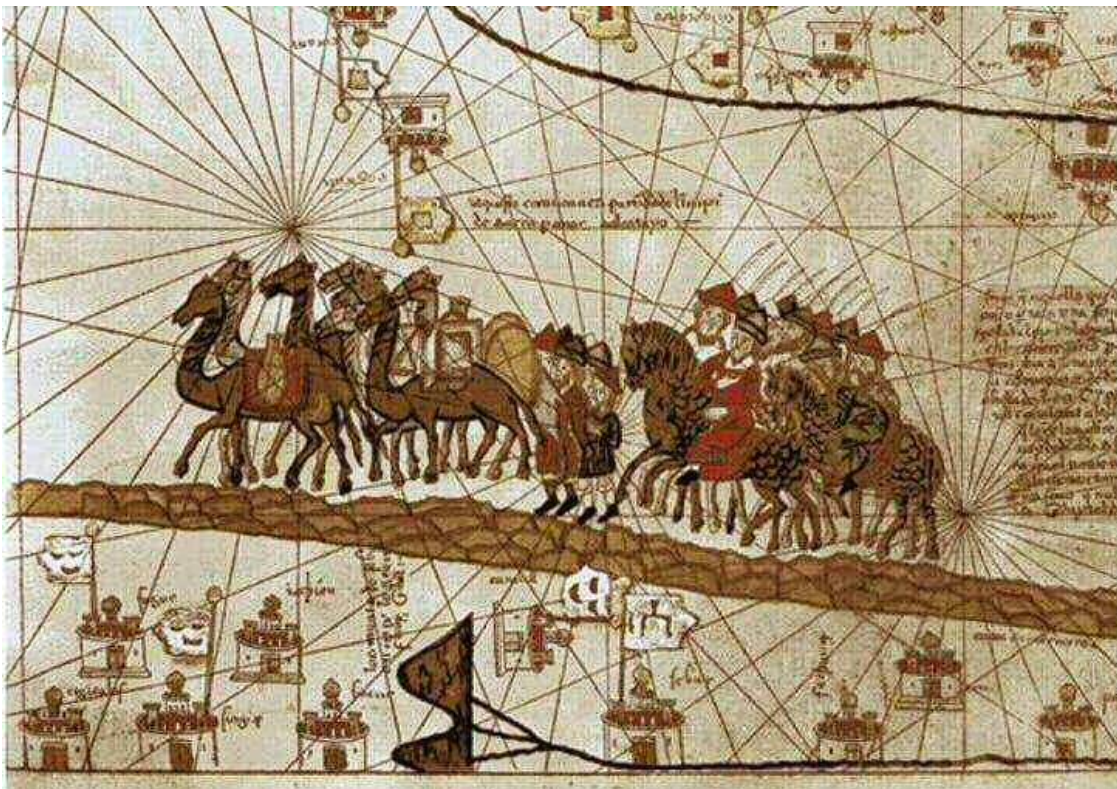
Needing to Know

Psychologically, humans despise ignorance, even though they do not know much about planetary history. Nevertheless, due to this psychological need, historical accounts (which function in the same manner as myths) are filled with what the top minds (at the time) believe are the most logical course of events, and then their suppositions are treated as facts and taught to children.

This leads to children believing that certain hypotheses are facts, and if a teacher who can think critically questions those facts, the students often have a psychological aversion to the topic. They need to “know” what occurred.

If history textbooks contained empty sections in which the author stated, “We are not certain what occurred during this time,” students would likely be insecure because “knowing” what happened provides security. Myths and legends fill in knowledge gaps. People want to know what they do not know, and myths thereby provide comfort.

They are happier on a calm sea than an agitated one. However, people’s reliance on myths has distorted their historical views, and such myths are so much a part of their psychological makeups that questioning them is threatening; they will lash out and do anything they can to stop their beliefs from shattering.



Mention that an individual named Marco Polo who went to China in the 1200s likely did not exist and people will get angry. They will lie and use deceit to try to prove he existed, even though outside of one book written by the fiction author Rustichello da Pisa, there is no evidence of his existence. What is it about people that makes his existence important? It is the desire to “know” history, and because of this need, willful blindness appears.

Similarly, evidence exists that suggests human beings are millions of years old, but since this is not the history most people learned in school, they are generally opposed to it. Because of such opposition, views of history are distorted, likely untrue, and ethnocentric. How could Christopher Columbus have discovered the Americas if there were already millions of people there? Most students don't even know what he was called (Colón), despite the fact that some countries' money is named after him (colónes).

Similarly, students will learn some basic information about Chinggis or Genghis Khan but never learn his name (Temujin). These are just some basic examples of a much more widespread problem: history is misleading and, quite literally, *chosen* for inclusion in history books. Facts that do not support the widespread view of historical events on this planet are discarded and even ridiculed. Some archaeologists have even publicly stated that if the evidence does not fit the established theory, it must be discarded.

The Truth of History

As a result, the majority of citizens are stuck in a rut, and they find it difficult to consider alternative historical possibilities. The only way to fix this problem is for people to assume that many historical events are distorted, even unknown, and then try to see things anew. The great Dao De Jing informs us that when great people perceive the truth (or Way), they will study it and never stop. Mediocre people will pursue it for a bit and then forget it, while inferior people, upon hearing about the truth, will laugh aloud, and if they did not laugh, it would not be the truth.

Astounding Ancient Engineering in Egypt

The following historical accounts should be seriously reconsidered to establish a more accurate view of planetary history: Numerous megalithic sites defy mainstream explanations. Human beings created such structures, and today, even with our modern technological advances we cannot duplicate their achievements. Such structures include the Great Pyramid in Egypt, insofar as its creation and precision.



Between 2.3 and 2.6 million white limestone blocks weighing between two and 15 tons each were moved across great distances and cut with laser-like precision. They were then stacked to create a highly polished, shiny pyramid. Moving such weights more than 100 feet into the air would prove difficult and dangerous today, yet the pyramid's builders were able to do so with astonishing precision and (if the Egyptologists' consensus of a 20-year building process is correct) speed. If workers labored 10 hours every day, yearly, without a single day's break, and provided that there were no errors or accidents that set them back, they would have to move 31 perfectly-cut blocks into the mathematically precise positions every hour. This is not possible today, so we have no idea what technology was used in its creation. We also do not understand how the blocks were moved and lifted, because every theory involving ramps and cranes is discredited if weights and numbers alone are considered.

When Christopher Dunn explored the Temple of Amun Mut Khonsu he noticed that all the statues of Ramses were identical: the faces' left sides were exactly the same as the right ones. After using computer graphics and drafting tools, he wrote,

"It becomes clear that the statues must have been cut with the assistance of mechanical devices that caused the cutting tool to move along predetermined boundaries to produce an accurate representation in granite of the specific design".

Their very creation makes them out-of-place artifacts: they do not neatly fit into the mainstream historical record. Therefore, a new *history* should be considered: one that takes into account all anomalous finds.



Other structures in Egypt, including the Sphinx, which has tantalized archaeologists and historians for years, were likely built c. 10,500 BCE even though no historical texts used in schools would ever suggest that fact. According to what has occurred in modern Egyptology, if evidence supports established theories, it will be accepted, but if it undermines them, it will be rejected.

Mysterious Ancient Builders of Peru

Another amazing site is Sacsayhuaman in Cusco, Peru, which the Incans claim they did not build but mainstream archaeologists and anthropologists insist that they did. When the fortress walls were built, giant boulders weighing more than 200 tons were quarried from a site 1,500 miles (2400 km) away, maneuvered over mountains, and then carved on site to fit perfectly with other megalithic stones in a puzzle-like interlocking pattern.



Some of the blocks weigh more than 360 tons. Today, such-sized stones could be moved by heavy-lift cranes, but not up and down mountains without roads. Another inexplicable oddity about the stones is that the ones at the fortress have perfectly consistent textures with no imperfections or micro-skeletons, despite the fact that others at the quarry from which they came *do* have such imperfections, as do most sedimentary rocks. Finally, the stones show evidence that they were once subjected to temperatures as high as 1100 degrees centigrade (Hancock, 2015). This perhaps leads some credence to the Incan and European accounts that the stones were actually liquefied and then poured into molds: an ancient form of concrete.

Unbelievable Ancient Feats in Lebanon

The ancients' similar skills are seen in the construction techniques of other megalithic sites, including the Temple of Jupiter in Lebanon. Three particular stones weigh approximately 1,200 tons. Moving them today would require 21 heavy-lift cranes working in unison. Of course, there is no way to maneuver 21 of them around the same object with the necessary counterweights and yet have them all work together and move in the same direction. Yet, the ancients seemingly had no problem accomplishing such feats.



Early European Colonies Dispute Columbus Story

Consider megalithic structural designs and historical accounts and it becomes clear that something is missing in our perception of history. Returning to Christopher Columbus and how he could not have *discovered* the New World because they were already millions of people there, someone might argue that his appellation is apt because he was the first European to arrive, but to make such an assertion, such people have to disregard evidence that contradicts their view: evidence that Europeans were in North America in the 1300s and that Templar colonies were also there. One such colony was most likely in Newport, Rhode Island.

More evidence that history is ethnocentric is found just by looking at history books. How many American History texts are based on Native Americans? (They generally center upon the Europeans who came to the Americas instead.) And how many people know that Native Americans traveled by boats to Europe at approximately the same time Europeans first traveled to America?

Similarly, cocaine and hashish were found in ancient Egyptian mummies, and recent tests demonstrate that the substances were ingested. Since mainstream historical accounts hold that Egyptians did not go to America and the Americans did not travel to Egypt, it is a dangling, inconvenient fact that they

have not yet been able to comprehend. Doesn't intercultural communication on a worldwide scale in the ancient world make more sense?

Going Forward by Questioning Historical Myths

The only thing people should do to think critically is to keep an open mind and stop (mentally) discarding historical finds. This is difficult, as non-conforming ideas are typically discouraged. In classrooms, students are rarely presented with contradictory information or alternative historical accounts. They do not generally read, for example, accounts of Columbus in which he is depicted as a slave trader, or accounts of the Hiroshima holocaust written by Japanese survivors. This is because such inquiry threatens the established social order. Hufford wrote, "A teacher should be encouraged to doubt, to recognize and build upon discontent, and to actively question, rather than passively accept, officially-sanctioned, transmitted knowledge".

Such questioning might be considered radical, but it can lead to forward progress. Let's charge ahead!

By [Ken Jeremiah](#)

Top image: Open Book Photo – Public Domain

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IQNEXUS

An unusual meeting of people with very high intelligence quotients

Text by Dr. Fabiano de Abreu Agrela Rodrigues, President of ePiq Society

Difference Between Giftedness (2SD) and Profound Giftedness (3SD)

The scientific literature on giftedness is extensive, yet there remains a lack of deep studies on individuals with exceptionally high IQs, classified as 3 standard deviations above the mean (3SD), also known as profound giftedness. This paucity of data stems both from the rarity of this population and the methodological challenges of studying such a unique group. However, existing studies unveil a notably complex and heterogeneous experience of gifted individuals.

Behavioral and Educational Aspects:

Studies suggest that, contrary to expectations, an extremely high IQ (3SD) does not necessarily equate to greater academic success. Individuals with 3SD face more pronounced educational challenges than their peers with IQs classified as 2 standard deviations above the mean (2SD). This difference is attributed to the intense behavioral and emotional traits of profoundly gifted individuals, such as mood swings and difficulties adapting to conventional school environments. Interestingly, research shows that mothers of 3SD children tend to promote more autonomy and exert less pressure for academic performance, potentially leading to lower school engagement, while 2SD children often experience greater parental pressure for academic achievements, which can boost their performance but also cause anxiety and stress.

Creativity and Expression:

The expression of creativity significantly varies between these two groups. Individuals with 2SD typically exhibit applied creativity, utilizing acquired knowledge to develop innovative

solutions in specific areas. In contrast, 3SD individuals have a more divergent approach, exploring original and unconventional ideas often in fields they have not formally learned.

Emotional and Social Intelligence:

Emotional and social intelligence, not assessed by conventional IQ tests, is notably more refined in 3SD individuals. They possess an enhanced ability to understand and manage emotions and a deeper perception of social nuances, which can significantly improve their social interactions and adaptation to various contexts.

Clinical Aspects:

Although giftedness is not classified as a pathology, the emotional intensity and hypersensitivity common among gifted individuals can increase susceptibility to mental disorders such as depression and anxiety. However, the elevated emotional intelligence observed in 3SD individuals may serve as a protective factor, aiding in emotional regulation and the development of adaptive coping strategies.

Conclusion:

Understanding the nuances and heterogeneity of the gifted experience is essential for developing effective educational and clinical interventions that promote the development and well-being of these individuals. Future research should delve deeper into the neurobiological foundations of giftedness, examine the interaction between genetic and environmental factors in the development of intelligence and creativity, and assess the impact of different educational and therapeutic approaches on the well-being and success of these exceptional talents.

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Modeling Monkeypox Outbreak with the SEIR Model Including Vital Dynamics

Bryne Tan

Abstract

The monkeypox outbreak has spurred renewed interest in infectious disease modeling as a tool for predicting and managing future epidemics. In this study, we apply a refined Susceptible-Exposed-Infectious-Recovered (SEIR) model to the monkeypox epidemic in the United States, incorporating vital dynamics—births and deaths—to reflect long-term population changes. By extending the traditional SEIR framework, this model captures more realistic infection dynamics and offers deeper insights into the transmission, peak times, and eventual decline of the outbreak. The analysis aims to inform public health interventions by providing actionable insights into the optimal timing and allocation of resources. Our findings demonstrate the potential for strategic planning, highlighting the effectiveness of early interventions and long-term epidemic control strategies.

Introduction

The SEIR model is a widely used compartmental model in epidemiology that divides the population into four compartments: Susceptible (S), Exposed (E), Infectious (I), and Recovered (R). To model infectious diseases like monkeypox more realistically, especially over an extended period, it is important to include vital dynamics, such as birth and death rates, in the SEIR model.

SEIR Model with Vital Dynamics

In the SEIR model with vital dynamics, the population is not fixed but changes over time due to births and deaths. This is particularly relevant for long-term modeling of diseases like monkeypox.

The differential equations governing the SEIR model with vital dynamics are given by:

$$\frac{dS(t)}{dt} = \text{birth rate} - \beta \frac{S(t)I(t)}{N} - \text{death rate} \cdot S(t)$$

$$\frac{dE(t)}{dt} = \beta \frac{S(t)I(t)}{N} - \sigma E(t) - \text{death rate} \cdot E(t)$$

$$\frac{dI(t)}{dt} = \sigma E(t) - \gamma I(t) - \text{death rate} \cdot I(t)$$

$$\frac{dR(t)}{dt} = \gamma I(t) - \text{death rate} \cdot R(t)$$

where:

- $S(t)$, $E(t)$, $I(t)$, $R(t)$ are the populations of susceptible, exposed, infectious, and recovered individuals at time t , respectively.
- β is the transmission rate of the disease.
- σ is the rate at which exposed individuals become infectious.
- γ is the recovery rate of the disease.
- $N = S(t) + E(t) + I(t) + R(t)$ is the total population at time t .
- **Birth rate** adds new individuals to the susceptible population.
- **Death rate** removes individuals from all compartments.

Modeling Monkeypox with SEIR and Vital Dynamics

Monkeypox can be modeled using the SEIR framework with vital dynamics, particularly if the disease is expected to be present in the population over a long period. This approach allows the model to account for changes in the population due to births and deaths, which are important for understanding the long-term behavior of the disease.

Steps for Modeling

1. Determine Parameters:

- **Transmission Rate (β):** Reflects how easily monkeypox spreads within the population.
- **Incubation Rate (σ):** The rate at which exposed individuals become infectious.
- **Recovery Rate (γ):** The rate at which infected individuals recover and become immune or are removed from the susceptible pool.
- **Birth and Death Rates:** Include natural population birth and death rates, along with disease-related mortality if applicable.

2. Implement the SEIR Model with Vital Dynamics:

- Use the differential equations provided above.
- Implement the model numerically, using Euler's method or more sophisticated numerical solvers like Runge-Kutta methods in Python.

3. Analyze Results:

- Simulate the model over time to observe how monkeypox spreads, stabilizes, or declines in the population.
- Analyze the impact of different scenarios, such as vaccination, isolation, or changes in transmission rate, on the outbreak's dynamics.

4. Interpret the Results:

- Understand the long-term impact of monkeypox on the population, considering vital dynamics.
- Explore public health strategies to mitigate the outbreak's effects, including vaccination strategies, quarantine measures, and public health awareness.

Methodology

Data Collection

The primary data on monkeypox cases was obtained from the Global Health website, specifically through their public repository. The data file was downloaded in CSV format, containing daily case reports, recoveries, and other

epidemiological parameters across various regions. This dataset served as the foundation for the model inputs.

Data Cleaning and Preprocessing

A Python script was utilized to refine the raw dataset, prioritizing variables crucial for the SEIR model. The refinement process was guided by the need to focus analysis on specific regions with significant data availability and clarity. The following steps were implemented:

- **Handling Missing Data:** Missing values in critical fields such as daily cases and deaths were managed using interpolation methods to maintain data integrity and continuity for time-series analysis. This approach ensures that temporal trends in the data are preserved, which is essential for accurate disease modeling.
- **Removing Duplicates:** Duplicate records were identified and removed based on unique identifiers including date and country. This step was crucial to ensure the reliability of the dataset, avoiding skewed data interpretation.
- **Date Formatting:** All dates were standardized to the ISO format (YYYY-MM-DD) to facilitate chronological analysis and modeling.
- **Feature Selection and Exclusion:** We streamlined the dataset by retaining only the most relevant features for epidemic modeling, such as Date, Location, New Cases, and Total Cases. Broad regional aggregates like continents were excluded to hone in on more granular, country-specific data, enhancing the model's specificity and applicability to targeted public health responses.
- **Data Verification:** Post-refinement, data was verified for consistency and accuracy by visualizing trends in daily new cases across selected high-impact countries. This step not only validated the refinement process but also provided preliminary insights into the disease's transmission dynamics.

The refined dataset was then exported for use in the SEIR model.

SEIR Model Setup

The SEIR model consists of four compartments:

- **S (Susceptible)**: The population susceptible to infection.
- **E (Exposed)**: The population exposed but not yet infectious.
- **I (Infectious)**: The population actively spreading the disease.
- **R (Recovered)**: The population that has recovered and is no longer infectious.

The transitions between these compartments are governed by parameters that represent the rate of infection, latency period, and recovery rate:

- β (Infection Rate): The rate at which susceptible individuals become infected after contact with infectious individuals.
- σ (Latency Rate): The rate at which exposed individuals progress to the infectious stage.
- γ (Recovery Rate): The rate at which infectious individuals recover and move to the recovered category.

The cleaned data was fed into the model, with population-specific parameters estimated for different regions based on historical epidemiological data.

Parameter Estimation and Fitting

The SEIR model parameters (β , σ , γ) were estimated using the following techniques:

- **Nonlinear Least Squares Fitting**: This was applied to minimize the difference between the model output and the observed data.
- **Sensitivity Analysis**: Performed to understand how changes in parameters affect the model's accuracy.

Implementation

The cleaned data and estimated parameters were used in the Python package `SciPy` for numerical integration of the differential equations governing the SEIR model. The model was simulated over the time period corresponding to the dataset.

Step I: Optimisation with a Gaussian filter

We applied the following approach:

- **Data Smoothing:** A Gaussian filter was applied to the raw data to smooth out irregularities caused by reporting delays and anomalies. This pre-processing step helps in reducing noise in the observed data and produces a more accurate representation of the epidemic curve.
- **Parameter Optimization:** The transmission rate (β), recovery rate (γ), and exposure rate (σ) were adjusted iteratively to minimize the least squares difference between the modeled infections and the smoothed actual data. This process refines the model to capture the infection dynamics accurately.

Results

The optimized SEIR model was able to closely match the smoothed monkey-pox data from the United States. In particular:

- The early exponential growth of the epidemic was accurately captured, reflecting the rapid increase in infections.
- The model effectively represented the plateau phase, where infections slowed due to public health interventions and behavioral changes.
- The eventual decline in the number of cases was modeled with reasonable precision, offering valuable insights into the disease's progression and control.

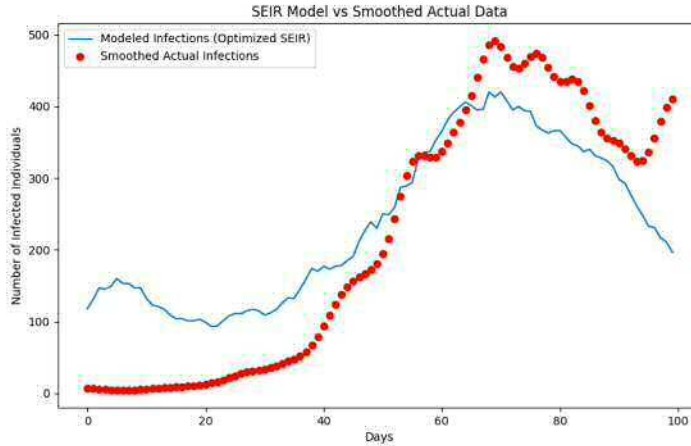


Figure 1: Comparison of Modeled Infections (Optimized SEIR) versus Smoothed Actual Data. The figure illustrates the close fit between the refined model predictions and the actual reported cases, highlighting the phases of the epidemic: growth, plateau, and decline.

Discussion

The results demonstrate the effectiveness of the hybrid approach in optimizing the SEIR model for real-world applications. By incorporating data smoothing and parameter refinement, we achieved a more accurate fit for the monkeypox data. The refined model also allowed for:

- A clearer understanding of the phases of the epidemic, particularly the impact of public health interventions.
- Improved predictions for future cases, offering guidance for healthcare resource allocation and epidemic management.

Further improvements could include integrating additional data sources (e.g., vaccination rates, geographic distribution of cases) and exploring alternative smoothing techniques to handle potential data discrepancies more effectively.

Conclusion

The optimized SEIR model provides a robust framework for understanding the monkeypox epidemic in the US. By aligning the model more closely

with the actual data, it offers valuable insights that can inform public health strategies and interventions. Continued refinement and validation against emerging data will be crucial in maintaining the model's relevance and predictive power.

Step 2: Optimization of the Beta Parameter

The second step in refining the SEIR model involved a sensitivity analysis focused on the beta parameter, which dictates the transmission rate of the infection among the population. This parameter's optimization is crucial as it directly influences the model's accuracy in predicting the infectious spread.

Methodology

The sensitivity analysis was conducted by systematically varying the beta parameter within a predetermined range and observing the resultant changes in the model's output. The objective was to minimize the discrepancy between the modeled infections and the smoothed actual data. The range for beta was set from 0.10 to 0.40, with increments of 0.01.

Results

The analysis revealed a nonlinear relationship between the beta parameter and the model error. Initially, the model error decreased significantly as beta increased from 0.10 to 0.25, indicating an improved fit to the actual data. However, beyond a beta of 0.25, the error began to increase sharply, suggesting overfitting at higher rates of transmission.

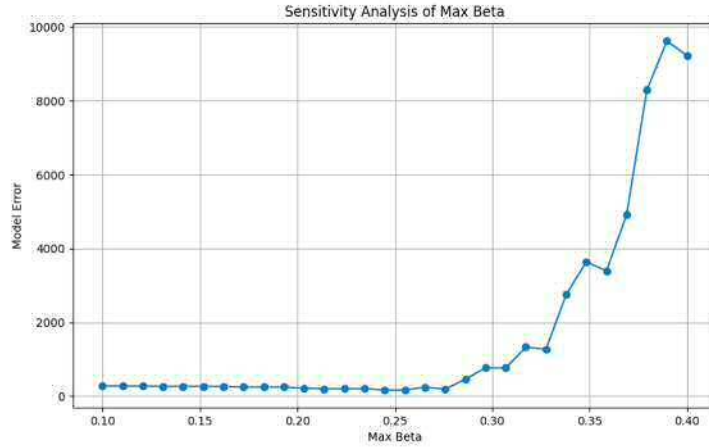


Figure 2: Sensitivity Analysis of the Beta Parameter

The optimal beta value was identified at approximately 0.25, where the model error was minimized, aligning closely with the trend observed in the smoothed actual infection data. This value was then used to adjust the SEIR model parameters for subsequent simulations.

Discussion

This sensitivity analysis underscores the importance of precise parameter estimation in epidemiological models. By optimizing beta, the SEIR model not only aligns more closely with actual data but also enhances its utility in predicting future outbreaks under similar conditions. The optimal beta reflects a balance between model sensitivity to new infections and realistic long-term predictions.

Further analysis could explore the interaction between beta and other model parameters, such as the incubation rate and recovery rate, to holistically improve the model’s predictive capability.

Validation Against Empirical Data

Post-optimization, the SEIR model was validated against smoothed actual infection data. This step was crucial to confirm the model’s efficacy in capturing the dynamics of the Monkeypox outbreak. The figure below illustrates the comparison between the modeled infections and the actual data, highlighting the model’s ability to replicate the observed epidemic curve accurately.

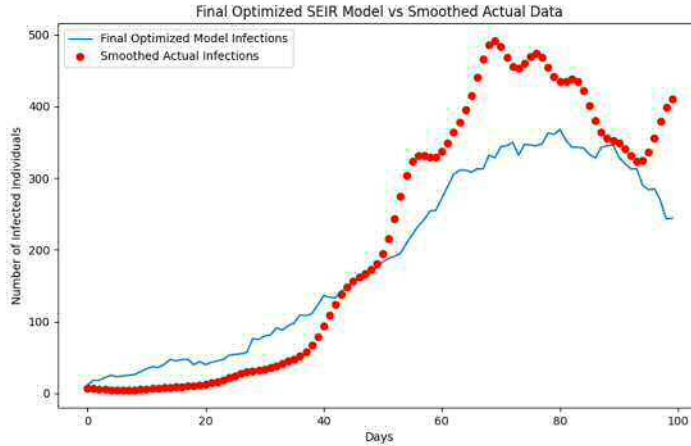


Figure 3: Comparison between the improved optimized SEIR model and smoothed actual infection data, demonstrating how the transmission rate affects the data fitting

These results indicate that the SEIR model, with an optimized β parameter, now more closely align with the actual data, affirming its utility in forecasting and analyzing the spread of infectious diseases like Monkeypox.

Step 3: Refined Approach to SEIR Modeling

The refined approach to modeling the SEIR (Susceptible, Exposed, Infected, and Recovered) model involved integrating data smoothing techniques and dynamic parameter optimization to better fit the observed epidemic data. The model was designed to capture the realistic dynamics of an epidemic by considering variations in the transmission rate over time, reflecting real-world phenomena such as interventions and changes in public behavior.

Data Smoothing

Data smoothing was implemented using a Gaussian filter, which helps in reducing noise and fluctuations in the daily reported cases. This preprocessing step was crucial for stabilizing the input data, allowing the model to focus on the underlying trends rather than being misled by daily reporting anomalies.

```
smoothed_data = gaussian_filter1d(original_data, sigma=2)
```


Dynamic SEIR Model

The SEIR model equations were modified to include a time-dependent transmission rate ($\beta(t)$), which changes in response to interventions and other factors affecting the spread of the disease. This dynamic $\beta(t)$ was modeled as an exponential decay function starting from an initial value, adjusting over time to simulate the effects of lockdowns or social distancing measures.

```
def dynamic_beta(t, lockdown_start, lockdown_strength):
    initial_beta = 0.3
    if t < lockdown_start:
        return initial_beta
    else:
        return initial_beta * exp(-lockdown_strength * (t - lockdown_start))
```

Parameter Optimization

Parameter optimization was conducted using the *minimize* function from SciPy's optimization module. The objective function was designed to minimize the root mean square error (RMSE) between the model's predicted infections and the smoothed actual data. This method ensures that the model parameters are tuned to best fit the actual epidemic curve.

```
result = minimize(objective_function, initial_params, bounds=bounds)
```

Results

The optimized SEIR model provided a much closer fit to the actual data, capturing the peak and overall trend of the epidemic effectively. The figure below illustrates the comparison between the optimized model infections and the smoothed actual data, highlighting the model's accuracy in simulating the epidemic dynamics.

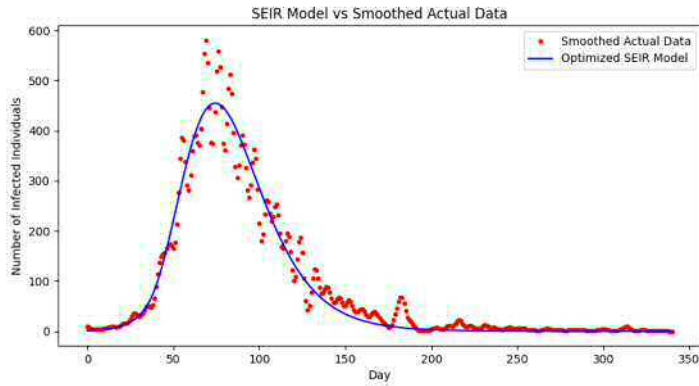


Figure 4: Comparison of the Optimized SEIR Model and Smoothed Actual Data

Conclusion

Modelling the monkeypox outbreak using the refined SEIR model demonstrates significant improvements in fitting the epidemic curve, making it a robust tool for predicting and understanding the spread of infectious diseases. Future work may involve further refining the dynamic aspects of $\beta(t)$, possibly incorporating more granular data such as vaccination rates or public mobility indices to enhance the model's predictive power.

IQNEXUS

An unusual meeting of people with very high intelligence quotients

Text by Dr. Fabiano de Abreu Agrela Rodrigues, President of ePiq Society

What is the maximum score you can get on an IQ test?

IQ tests are widely used to measure intelligence, the best known of which are the Wechsler Adult Intelligence Scale (WAIS), the Wechsler Intelligence Scale for Children (WISC), the Stanford-Binet Intelligence Test and the Progressive Matrices of Intelligence. Raven.

The maximum score on a commonly accepted IQ test is 160, with extrapolations up to 164 points. When calculated with a standard deviation (SD) of 24, this score can theoretically reach up to 200 points. However, this does not mean a different level of intelligence, just a different statistical interpretation of the same results. In Brazil, there are no IQ tests that recognize scores above 160 points.

Tests that indicate very high scores may not be scientifically proven and therefore lack validity. High IQ societies such as Mensa, Intertel, Triple Nine Society and ISPE only recognize validated and proven tests on their websites. It is recommended to check with these societies to validate claims of extraordinary scores. Scores above 200 points are probably unreliable and the tests may not be valid.

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Gimmel updated: Physics, spirituality and unified reality: A brief perspective including the mathematical and empirical proofs.

Vernon M Neppe MD, PhD, DFAPA, FRSSAf, DPP-ECAO, DPM, MMed, FFPsych¹

This perspective is a brief introductory discussion on the topic of Gimmel © Vernon Neppe

Gimmel Abstract

Gimmel is the term developed and described by Vernon Neppe and Edward Close in 2015. We conceptualized Gimmel as the third component of reality -- not mass, and not energy. Initially it was a speculation; but it is now possibly one of the most important concepts in all of science.

Gimmel is likely the primordial component of reality. It is primordial like pre-mass/energy and so was regarded as the third component (or could be regarded as a second component). It is not a substance; it is effectively, an envelope that embeds everything. It allows for mass-energy bestowal, but it also impacts on spirituality and on goodness and harmony. It is versatile. It exists forever and is the link between the finite and the infinite reality. It impacts everything or is linked with everything. It is also in everything -- atoms, subatomic particles: in anything that exists. It is actually not 'in' these components -- it is the envelope. *Gimmel simply cannot not exist. Gimmel is fundamentally the existential organizer of stable structure in the physical universe and the conveyer of the logic of spirituality and life: effectively it's the fabric of everything that exists.*

Gimmel is far more than just consciousness: it's in *union with everything* that is stable and rotates symmetrically on its axis. Without it, particles would rotate out, and therefore vortical spinning is very important. Gimmel allows stability and symmetry. Subsequently, we've realized that even this 'third' description may be incorrect, because mass and energy are equivalent

¹ *Gimmel an update: Physics, spirituality and unified reality.*
Vernon M Neppe MD, PhD.

making it the 'second' not 'third' component of reality. In addition, it is not really the third or second substance -- it is the *envelope* that *exists in everything in reality*: It's in every stable atom or particle or subatomic particle and it *endows spirituality*. Gimmel impacts life and also all non-organic substances and all the elements. However, Gimmel is not really 'in' any of these -- it *endows* these components with, for example, mass and energy, and provides stability. Atoms, effectively reflect *vortical rotations: everything is spinning*.

Gimmel reflects the primordial component of reality: ostensibly in spirituality described as *tohu-v-vohu* (Genesis Chapter 1 verse 2)-- the *tohu* is the primordial mass/energy, the *vohu* is the Gimmel. There are some lines of evidence supporting this Gimmel is ubiquitous, and fundamental in terms of its primordial components, and it *links with the finite and infinite reality*. There is proven evidence to show that Gimmel reflects *exactly* equal the *normalized* mass/energy equivalents in the Large Hadron Collider (in relation to the fundamental electrons of 1, protons 1836, and neutrons 1838 (after stability normalizations). Amazingly, it shows the exact same figures as the naturalized, normalized, integral atomic particles of electrons, protons, neutrons in the Large Hadron Collider.

Given that we cannot easily measure dark matter and dark energy, yet currently Gimmel ratios correlate extremely closely with these dark components. (Even though scientists don't yet have a great deal of data on these dark substances: Even what are they?)

Gimmel correlates totally with the elements of life and is a function of 10^{8^3} in all the elements of life and in the noble elements (neon and helium). Additionally, Water is endowed with more Gimmel than anything else.

We postulate that Gimmel is linked up with catalysts and enzymes, and possibly has strong relevance with homeopathy. It may be an important component for these catalytic reactions and for enzymes in chemistry. It maybe relevant in homeopathic practice given that water is the single major substance that is endowed by gimmel.

- Gimmel allows refutations of fundamental Nobel Prize-winning findings :

- In Murray Gell-Mann's gluons.
- In the Higgs Boson (the so-called 'God particle') which like gluons, is ephemeral and virtual and possibly likely nonexistent. But it hypothetically *bestows* energy and mass (like gimmel) and that assists clarity with gimmel.
- It refutes atomic materialism, but when gimmel envelops atoms, it bestows mathematical normalization.
- It demonstrates why Albert Einstein spent 20 years on his unified theory -- which did not work out, because he did not postulate this extra component of reality (Gimmel).
- *Max Planck recognized that consciousness is fundamental; but gimmel is far, far more than consciousness.*

Gimmel is ubiquitous and mathematically demonstrable.

It is linked with the elements of life. In fact, all the elements of life are multiples of 108^3 . It is the part that, like the Higgs boson -- which however is ephemeral It refutes gluons and refutes the idea of atomic materialism, which without Gimmel cannot work but with Gimmel can work. It is therefore versatile, ephemeral, primordial, and has always existed and will always exist. It is the link of the infinite with the finite.

Gimmel is the previously unrecognized fundamental unique primordial component of reality that exists in conjunction with everything physical and spiritual. The concept has progressed enormously.

Gimmel is linked with the Nepe-Clouse *Triadic Dimensional Vortical Paradigm (TDVP)*. *TDVP involves a 9-dimensional finite volumetric model embedded in the infinite continuity*. Many scientists have tried to discover it, but do not realize it's needed as that third component of reality. Its links with the life elements is very important. The Besant/Leadbeater work shows its exact application in terms of quantal remote clairvoyant viewing. We hypothesize it is linked with a higher infinite power -- God or the Infinity of Infinities or Divinity.

Neppe has proposed five Laws of Reality. These attempt to unify reality.

This work has now been reviewed by numerous different scientists in several different countries, particularly India, where the work has been well recognized.²

In the preparation of this article, I realized that tables would assist. All of these have been published and already peer-reviewed, and so they are referenced in different parts of each section for easy reading (separated out for those who don't want to study them in detail; they can just be made aware that such data exists without interfering).

Background

In 2015, Close and Neppe, described ‘Gimmel’ as the ‘third’ necessary, ubiquitous component of reality that is ‘both massless and energyless’.

Gimmel impinges on every single particle and anything that exists permanently. (85)

Vernon Neppe, in conjunction with his collaborator, Edward Close PhD, *Edward Close PhD, PE, physicist, mathematician and engineer* (respectfully, a true polymathic creative genius) discovered the concept of *Gimmel* after developing

1. Triadic Dimensional Vortical Paradigm (*TDVP*)

Table6-P8: TDVP [92]

2. recognizing the need for 9 dimensions. **
3. developing the complex, fundamental Close-Neppe Calculus of Distinctions (CoDD) applying integrals **
4. unifying the finite within the infinite. **
5. recognizing unifying reality. **

Gimmel (GM) reflects the previously unrecognized, fundamental, unique, primordial component of reality: Gimmel necessarily *exists in conjunction with everything*. Everything in reality is always a unit.

Gimmel contains neither mass nor energy and yet bestows qualities such as volume for particles with mass and energy .

Uniquely, Gimmel impacts all of nature including our physical and apparent spiritual reality. Neppe-Close knew ‘Gimmel’—third Hebrew

letter [λ] with several variants in many different alphabets) was possibly reflecting *divine essence*. *Gimmel reflects the primordial essence underlying and uniting all reality.* 95

Gimmel is fundamentally the existential organizer of stable structure in the physical universe and the conveyer of the logic of spirituality and life: effectively it's the fabric of everything that exists.

-Gimmel is certainly the organizing principle, the logical stabilizing pattern, the union that needs to be in connection with space/time/consciousness and also with mass/energy/consciousness.

The concept of Gimmel has progressed enormously over the past decade. The bottom lines are:

- Gimmel 'the third component' technically would be a *second component with mass-energy equivalence*.
- Originally, we regarded Gimmel as some kind of “*consciousness equivalent*.”
- Neppe argues today that Gimmel appears more correctly to *be enveloping everything in existence*.
- *Gimmel is always necessary* and pervades everything, but in conjunction with something physical or spiritual or even both.
- *Neppe and Close regard Gimmel as provable mathematically and empirically—key published proofs **.*

Technically:

- Gimmel, geometrically and mathematically is measurable in 'quantum equivalence units' (1 electron =minimal unit).
- Gimmel integrates relativity, quantum physics, and higher consciousness in the universe, linking the finite and the Infinite.
- *Close-Neppe recognized mathematics as innate logical multi-dimensional structure of reality.* [46] (Also Tegmark [47]).
Unfortunately, 'school' mathematics teaches math as simple symbolic operations representing only equivalence, enumeration, and numerical calculation using binary logic. Contrast this with gimmel and 9-dimensions as fundamental to the integration of relativity, quantum physics, and to 'higher consciousness' in the universe. Gimmel is the link between.
- Gimmel also allows mathematical logical integration of the innate

multi-dimensional structure unifying reality. Unfortunately, conventional mathematics mainly emphasizes simple symbolic binary logic representing equivalence, enumeration, and numerical *calculation* not the tertiary logic allowing analyses persistent structures (mass-energy, space-time, spiritual- consciousness).

- The Infinite embeds the finite: Gimmel is the link.
- Gimmel reflects the primordial essence underlying and 'still' uniting all of reality.
- All of our finite, observable reality, consisting of space, time, matter, and energy, is quantized, and this reality is embedded within the necessary Infinite Continuity (IC). IC is an unlimited substrate that necessarily sustains and envelops all existence.

"When the Truth is known, Science becomes Poetry, Spirituality becomes Music, and each Life becomes a chapter in the never-ending story of the evolution of consciousness from a single quantum to the Infinite Continuity of Cosmic Divinity." [91, 93,94]

Gimmel *bridges* finite and infinite. Gimmel '*bridges*' finite and infinite.

Gimmel Key features

The author, Prof. Vernon Neppe proposes an extensive *fundamental model of reality exemplified by Gimmel*.

Gimmel physically is *in union with everything that contains mass and energy that is stable and usually symmetrical on its axis*. This stable-symmetry is required, otherwise particles would *rotate* out.

Gimmel also is *in union* with spiritual ideas: This reflects cognitive, affective and volitional qualities including at the highest levels of transcendence.

Gimmel requires a 9-dimensional finite extent, necessarily *embedded within the Infinite Continuity*. The infinite reflects a multi-dimensional dynamic overarching cosmic harmony .

The infinite is *without a beginning* and end.

The infinite likely solves the *Leibnizian* problem of '*something*' out of

something. The first is 'primordial mass' (before the possible so-called 'Big-bang' or equivalent 'event horizon'. That second something is *Gimmel*. *It precedes even the finite quantized reality: Gimmel links the finite* ** [The theological doctrine of 'creatio ex-nihilo' (creation *from nothing*) might be incorrect] **. The infinite is also not 'creation ex-materia: Neppe-Close proposed primordial mass-energy and gimmel Theologically, that might imply "infinite divinity'. Gimmel might also reflect the *God-Essence*.

- Our filters are only our sentient physical [3 Spatial 1 linear time dimensions = 3'S-1t' (part of proven Close-Neppe 9-finite dimensions) embedded in Infinite Continuity) (9D+).
- Applying dimensionality far exceeds concepts such as linear time: We interpret, perceive and act relatively in our own unique space_time and consciousness dimensional fabrics —relative to e.g. observer-motion. I propose this likely should include our relative dimensional-finite experience including gimmel as *Essence*.
- *Gimmel envelops everything*. Gimmel might also envelop ". Or if preferred that . Gimmel-envelop might include that supreme guiding harmony or the universal Reality at all its domains of manifestation.

Gimmel fits within the fabric of the **life elements**: This corresponds with the Periodic Table of the Elements **

Proofs Scientific Demonstrations

Scientific Proof The Large Hadron Collider (LHC) data (when normalized) is *exactly* equal to the *quantal reality*, when 'normalized' (with the fundamental equivalent of electrons normalized) (converted to integrals): This comparison is with the Neppe-Close model of TDVP (Triadic Dimensional Vortical Paradigm) when applying *specifically* "" (Triadic Rotational Units). Both have *exactly* the same integral equivalence scores for the Large Hadron Collider data (LHC) [29] on normalized particles—protons (1836), neutrons (1838) and electrons (1)—as the quantal laws Equivalence) *calculations, yielding results exactly equal to the normalized LHC*. This proves this component of our Triadic Dimensional Vortical Paradigm data is correct empirically. [21-23]

Atomic Materialism (without Gimmel) is refuted. This is huge.

The atomic structure is mathematically impossible. [83] TABLE3-P6
**

With only protons plus neutrons plus electrons equaling atoms creates an inequality.

The volumetric nature of reality restricts mathematical solutions [87]

But adding gimmel-unit calculations allow the mathematics to exactly works out! This means our purely materialism reality is incorrect: We need something else—gimmel solves this.

*Albert Einstein: “ does not play dice” **: Playing with gimmel allows our world.*

Major Refutations of current Nobel Prize knowledge

The current 3S-1t physical model (multiple physicists); It's Contradicted by the 'weird' data in quantum physics and the math anomalies. **

Moreover, Gimmel requiring the 9-dimensional finite volumetric model (9D) embedded in the Infinite Continuity allows for unification of reality ** something sought after unsuccessfully by Laureate Albert Einstein who spent supposedly twenty years on this ** and many other scientists: ** They apparently did not recognize the necessity for Gimmel.

'**Gluons**' of Nobel Laureate Murray Gell Mann are mathematically refuted in 9-dimensions (because of absence of electrons in the model TABLE1-P6. [92] App) and possibly even in 3S-1t based on the 'Close Conveyance Equation' [92]

Gluons and Bosons: Hypothetically, *gluons* -TABLE1-P6. [92] and the *Higgs-Boson* ** (if either existed) are regarded as ephemeral or even virtual. Higgs was originally called 'The Particle.' It's not eternal but very transitory; And applying Gimmel's properties, it's not a 'particle'! ** Gimmel also endows permanent symmetry and stability of the particles it envelops.

Stability: Gimmel physically requires stability (unlike Higgs-Bosons and

gluons). Gimmel also fits within the fabric of the life elements. “Stability” in time is relative. However, in a multidimensional perspective, its core is beyond tiny time limits, thus persisting in both time directions ad infinitum.

Space-time: Gimmel simultaneously pervades and transcends space and time. It is a non-quantum entity, and unlike matter and energy, or space and time, it is not broken into discrete bits. It is exempt from the restrictions placed upon matter and energy by the Heisenberg Uncertainty Principle **, and is not subject to fluctuation or variation in time. **JS

Catalysts: Hypothetically, Gimmel might be an important component to profoundly accelerate chemical reactions through catalysts chemically and enzymes physiologically **

Homeopathy: Remarkably, Gimmel envelops Water more than any other compound. Related?

Solving contradictions: Gimmel also changes the whole perspective of quantum mechanical theory, because there were always some 50 conundrums or contradictions, which were explained as just ‘weird’. ** We had to accept it because we were dealing with a 4-dimensional materialistic reality, as opposed to our demonstrated proof that there are 9-dimensions with a continuity in the infinite. **

Cosmologically, the exact Planck cosmological dark figures are disputed **, but applying Gimmel, these dark cosmological components appear to be linked to an equivalent 1,250 proportionate ratio of dark matter to nucleons and dark energy to electrons respectively. [24, 25]

Critical principles

*Dimensional Biopsychophysics (DP): ** new all-embracing specialty pioneered by Neppe and Close) recognizing 9D+, infinity, TDVP, and gimmel.*

The Close-Neppe Calculus of Dimensional Distinctions [CoDD] is quite different from Newtonian Leibnizian infinitesimal calculus. It's extremely fundamental. The calculus of distinctions is a mathematical system which is the most fundamental logical system that exists. It can be applied to everything quantal, and allow realistic integral calculations.

The problem with prior analyses of reality has been that the applications have been based on Newtonian-Leibnizian infinitesimal calculus **, whereas in reality, there has to be a 'bottom' [67] as with the [16, 68, 69] CoDD which facilitates *quantal limits, unifications and integral calculations*: Much of reality is fundamental, and we can apply science to spirituality.

Dr. Edward Close has maintained that all of reality is mathematically unified. This agrees with the ideas of Max Tegmark[46] and Vernon Neppe. [70] This allows for the rules of reality through CoDD (following Spencer-Brown's 'Laws-of -Form' [71]) Close's calculus recognizes reality's unitary volumetric components, pertaining to the *electron being the fundamental unit of reality*. CoDD allows calculating integral quantal atomic (electron, proton, neutron) particles *exact* unified with the LHC data [72].

CoDD also provides a mathematical language of logic that is very fundamental and unifies reality—quantal, life, dark substances, multidimensionality, infinity. The logic is relative: at the infinite level (e.g. Divinity) can recognize potentially all. Somebody at the 3S-1t level might be functioning in one linear direction, even though there are actually volumetric dimensions. *This means good and evil or events happening at one level do not necessarily reflect choices at other volumetric levels*.

Gimmel reflects the relationship link of the discrete finite embedded in the Infinite Continuity. Without the infinite, the finite is incomplete (Gödel's theorem modified) [75] [76].

Neppe-Close Triadic Dimensional Vortical Paradigm (TDVP). TDVP model involves 9 quantized finite dimensions and 3S-1t is just one incomplete physical component. To solve this we could have just calculated the 9 dimensional volumetric data hypothesizing a better match, but we would not have known if that were the best available result. The Neppe-Close "Triadic Dimensional Distinction Vortical Paradigm" (TDVP) is a metaparadigm involving numerous different Paradigm shifts. It is complex because the nature of reality is complex and it reflects reality. To this time, it has not been refuted, but has, indeed, grown over many years with more and more applications and potential applications. TDVP impacts multiple disciplines.

Integrated within all of this is the idea of good and evil and of a divine

providence, but also limits of being able to perceive our own realities and to control ourselves within those finite limits. We exist in a 9-dimensional extended reality that is finite, but that finite component is extended onto the Infinite Continuity. They are all unified and one.

1. *The most fundamental model is the Triadic Dimensional Vortical Paradigm(TDVP).*
2. *TDVP supports the 9-dimensional model of finite reality, which is inseparable from the infinite reality.*
3. *Gimmel is the missing component of this reality of TDVP: Not contained but enveloping.*

The information below summarizes about two dozen of the key groundbreaking paradigmatic findings of the TDVP model, but in the context of the practical significance for researchers and reality. These are examples only. The practical applications of TDVP are so far reaching that it will take centuries to extend all of these

Reality Remarkable unifications (physical-world, life-elements, dark-substances.)
vortical spinning: rotational : Gimmel appears in union with all fundamental rotating 'particles' ('Gimmel energy vortices').[68,69,76]
implying movement rotationally. [73, 74]
volumetric The perception of the 'volumetric' is fundamentally important and allows 'apprehension' that our realities are never linear as we experience it in our physical 3S-1t reality but have alternative ways of being understood when applying the 9-dimensional finite reality—of likely 3 time dimensions and 3 of consciousness (which might include Gimmel) as well 3 of extended space—embedded in an Infinite Continuity. [47]

Applications

Life elements (TABLE): in Periodic Table: multiples of 10 to power 3
e.g. H, C, O, S, Si, Ne, He
Quantal Remote Viewing Besant-Leadbeater exact [47]
Besant in her book described (what we call) 'quantal 'remote viewing clairvoyance' —QRVC (1895 -1919). Her rigorous study on the then 92 atoms in the Periodic Table of the Elements [47]. *Neppe and Pokharna rediscovered this applying 9D, Gimmel and TDVP. Astonishing is the correlation coefficient 0.9996 with the scatter-gram plot showing almost linear correlation. ** projected <10 (superscript 9) Table14.1- P107 [47].*

Figure4A-P39 [47]

Amazingly this proves four profound results

1. *QRVC, and consequently psi*
2. *gimmel,*
3. *9D.*
4. *TDVP*
- 5.

Close described later independently as ‘quarks’ in and their triadic constituents. [76,90]

Spirituality: ** Speculatively, higher infinite powers ** might reflect possibly, Divinity **, Universe and/or God; and the *Infinity of Infinities* ** or Close’s primary consciousness **.

Close-Neppe CoDD **: fundamental calculus e.g. integrals, bottom limits

In the finite physical reality everything in our reality is volumetric, not linear or cross-sectioned.

Implications in our world

Understanding universal reality ** (*Unifies our laws!*)

Universal laws **

Meaning: more than just science but morality

Fundamental implications: changes world-view profoundly

Researcher validations

Recognitions of Gimmel by colleagues

Gimmel has developed from the Neppe-Close research in *Dimensional Biopsychophysics* ** and Triadic Dimensional Vortical Paradigm (TDVP). **

Gimmel greatly impacts the fundamental proofs of unified reality **, physics ** and spirituality. **

This work on Gimmel has been refereed by several experts pre-submission, plus the editors of this series after submission.

It contains multiple source references to the original Neppe-Close research all peer-reviewed mainly consolidated at www.pni.org/groundbreaking/
To ensure greater objectivity on these findings this chapter like all Neppe’s

articles has been refereed prepublication.

Several leading Dimensional Biopsychophysicists worldwide ** have regarded the 2015 Neppe and Close Gimmel finding as possibly one of *the most important theoretical wide-ranging discoveries of this century*. [1-7] These have been peer refereed / evaluated / perused and independently confirmed in writing by prominent experts in their specialties—all effectively *agreeing with the USA discoverers Dr Vernon Neppe and Dr Edward Close* **

India *Dr Surendra Pokharna, PhD, physicist*

United States

Alan Huguenot, DSc

Leonard Horowitz, PhD, DMD

Stanley Krippner, PhD

Dr Joyce Hawkes PhD deceased

David Stewart PhD, DNM deceased

Israel

Adrian Klein, PhD, PhD, DMD

The following USA scientists have also commented:

Gary Schwartz, PhD

Larry Dossey, MD

Ed Gerck, PhD, PhD

Joseph Slabaugh (physics),

Suzan Wilson (Jungian)

Tens of scientists from *India* where this work has been recognized **
Physics Nobel Laureate, Brian Josephson PhD ** (*UK*) [83]

Gimmel also changes the whole perspective of quantum mechanical theory, because there were always some 50 conundrums or contradictions, which were explained by Physics Laureate Richard Feynman as “weird”, obliging us to simply accept it. ** We had to accept it because we were mistakenly regarding the 4-dimensional materialistic reality as correct and as the only reality **, as opposed to 9 dimensions with a continuity in the infinite. **

*Gimmel is in union with all substances, and we have demonstrated specific mathematical calculations based on the data. ***

Technical data

Gimmel requires a 9-dimensional extent, but also is involved in the Infinite Continuity.

Gimmel likely solves the problem “*of something out of something*” and the “second something” is Gimmel (the first is primordial mass-energy) preceding even the finite quantized reality.

Primordality: *Speculatively*, biblically the Hebrew is ‘Tohu v’vohu’ (Genesis Ch 1, V2). ** Could this phrase be apparently mistranslated as 'chaos' or 'nothingness'? (It appears nowhere else): 'Gimmel' exists in the Infinite Continuity initially and then *never did not exist*. *Gimmel would then reflect that 'primordial something'*: Gimmel reflects the primordial essence underlying and uniting all reality. “Tohu v’vohu” clearly suggests that “*this conjecture implies a radical metaparadigmatic shift in science, philosophy and belief systems. This would turn primordality of mass-energy: A timeless infinite global frame of reference in the finite is unsustainable*”. **AK **JS However, this interpretation must be controversial: textual criticism, linguistics, and theology suggest centuries of translators have been making a mistake in handling these words. Moreover, it implicitly presupposes the 'inspiration' of the Torah, and the divine origin of the Hebrew language.

Discovery of Gimmel:

Gimmel is *necessarily in union* with every single stable particle in the universe, and in anything that exists permanently. *It is neither ephemeral nor a particle and is not a content*.

Therefore, it is ubiquitous in all of nature, including our physical reality.

Gimmel is the extra component of reality besides mass and energy. It appears to be *more than pure consciousness*, bestows mass-energy, and influences all of reality including spirituality.

Gimmel *bestows qualities*. In our physical world it can *imbue* mass

with added aspects. **

-Gimmel is certainly the *organizing principle*, the logical *stabilizing pattern*, the *union* that needs to be in connection with space/time/consciousness and also with mass/energy/consciousness. Gimmel involves the measurable and the equations; it is more than just the vehicle. So this Gimmel is the *organizing connection* and that may be the key phrase. It *envelops* the contents.

Everything has 'higher consciousness' (more correctly 'Gimmel' which is much more) and all the patterns form logical manifestations possibly at the quantal level.

Reality and Gimmel and the existing universe is consistent and even complete in a mathematical sense so that the logic is all there. In our own minds, the logic is not necessarily consistent, not necessarily complete, so that's why we all have a different view of reality because we're really looking at our internal model and not really reality itself. But the final word to me is that any logical structure that reflects the primary consciousness and everything in the final analysis that is stable or can exist in the physical universe and in the spiritual and mental world of human beings.

Gimmel is also empirically demonstrated at the quantal, macroworld and cosmological levels.

Gimmel has speculatively existed long before the event horizon (e.g., pre-big bang with theological creation implications).

Gimmel has spiritual implications, apparently unifying science with spirituality. [8-12] and all reality. [12-15]

The most likely candidate is Divinity embedding all things.

Gimmel impacts nature profoundly, but is in quality infinite so above the laws of nature.

There may be even biblical links such as Genesis chapter 1 verse 2: Tohu (= primordial mass-energy and vohu = likely Gimmel.) This has been mistranslated either as 'chaos' or 'nothingness' when it is the two concepts of 'something' (tohu and vohu).

Gomel Chassadim in prayer

—the Hebrew root letters g-m-l are the same as Gimmel (Hebrew vowels are not too relevant). Gimel alternatively spelling Gimmel.

☐ Gimmel is also empirically demonstrated at the quantal,

macroworld and cosmological levels.

- ☐ Gimmel has speculatively existed long before the event horizon (e.g., pre-big bang with theological creation implications).
- ☐ Gimmel has spiritual implications, apparently unifying science with spirituality. [8-12] and all reality. [12-15]

The most likely candidate is Divinity embedding all things.

Gimmel impacts nature profoundly, but is in quality infinite so above the laws of nature.

There may be even biblical links such as Genesis chapter 1 verse 2: Tohu (= primordial mass-energy and vohu = likely Gimmel.) This has been

Gimmel is measurable in extent.

Gimmel envelops the container: content'. It also has 'intent' (impact). 'Intent' is more than cultural/spiritual qualities, because thought may be linked with action. Related mystical concepts like 'Chi' or 'Prana' only have intent. Prana or chi might have impact or intent or influence component in spirituality.

Gimmel has content, extent and impact. These terms "energetic" or "subtle energy" are best called a *force*, not an energy. This traditionally is finite.

But Gimmel is also in the Infinite Continuity which is *inseparable* from the finite but being infinite is not measurable.

Without Gimmel, that unification would be impossible mathematically.[16-20]

Neppe's Fundamental Laws of Reality

The author Vernon Neppe proposes a *fundamental model of reality with several laws.*

Law #1: There are fundamental components to reality: mass and energy (which are interchangeable) **, and Gimmel.

Law #2: Gimmel is the ostensible *bestower* of information—it appears linked to consciousness, and of relevance to that mass/energy.

Law #3: Gimmel works mathematically. This is unlike the particles called *gluons which are mathematically refuted* [6]. Gimmel likely plays a role similar to that of the theoretical but possibly non-existent Higgs-Boson

particle but gimmel is non-ephemeral and envelops the stability of everything permanent even the spiritual. [6]

Law #4: The laws of Nature are fundamental and unified. There is one single law, which extends from the finite through to the infinite and is unified at the quantal, macroreality and cosmological levels. Gimmel allows this unification.

Law #5: The infinite is fundamental and extends forever. There is an *infinity of infinities* ** which extends mathematically, logically, into all of reality, forever. *This might mean that a creator with Gimmel is linked with being the laws of nature and above those laws because of different levels of infinity and therefore higher nature laws.*

The science:

The analytical data are based on (theoretical)

- mathematical proofs,
- exact empirical LHC data quantally,
- elementally in the periodic

The *macrophysical* demonstrates how the 'life-elements' ('CHOSeN' + Ca, Mg, and likely Si, plus noble elements Ne, He) contain more Gimmel than all other periodic table elements and their atomic numbers (non-isotopic) are exponential multiples of 108.

Table4-7 [92] 108-cubed -TRUE

Everything is enveloped by Gimmel and all the patterns reflect a logically consistent structure of Gimmel at the quantal, life and the existing universe levels.

5. Gimmel changes the whole picture: *Our 4D finite physical experiential reality is simply part of a 9D finite (with 5+ finite dimensions hidden) ** contained in the infinite existence. ***

The Neppe-Clouse Triadic Dimensional Distinction Vortical Paradigm (TDVP) **{appears legitimate theoretically, and in the context of the empirical and mathematical proofs in spirituality and science.

We must fit all pieces of a profound multidimensional reality jigsaw puzzle together, not just 3S-1t: When we do, the laws of nature appear unified and spirituality and science begin to merge. [11, 15, 26-28]. 3S-1t refers to beyond our usual physical experience of 3-spatial dimensions (length-

breadth-height) in a single linear moment in time (the present).

Without Gimmel, *no stable* particle can exist for more than microseconds.

** Moreover the figures are very close for Dark Matter in nucleons and Dark Energy in Electrons [24, 25], plus for life elements in the periodic table [24, 25]. This might imply that the Laws of Nature are unified at Quantal, Macroworld and Cosmological levels.

These findings allow a unification of the Infinite Continuity which embeds the finite reality as one unit. Moreover, Neppe postulates these findings could, at times, allow science and spirituality to be unified. **

Gimmel spirituality could imply there is free-will [30-32], and even that free-will can be combined with good and evil as some kind of spiritual progression [33, 34]. These fundamental postulates allow further unification of reality not only for the Earth but all of Cosmic reality and the never-ending Infinite Continuity. **

Speculations:

“Nature” implies not only sustaining our planet, and every universal law [35-38]. It could imply universal personal truths as well as extending to a spiritual universal reality and the infinite ** Effectively, this means the combination, at times, of science and spirituality, ‘*scientific-spirituality*’. It could be argued that the Infinite Continuity is possibly controlled by a Supreme Being . The Supreme Being would be part of those laws of Nature. [39] [26, 27] [8] yet also above those laws.

The conventional ways of assessing our reality using Newtonian-Leibnizian mathematical-physics ** has led to our not easily appreciating the nature of our true reality and of mathematics.

The most effective calculation system appears to be the fundamental Close Calculus of Dimensional Distinctions (CoDD) that recognizes the quantal nature of realities as integrals. ** EC) CoDD is quite different from the Newtonian Leibnizian-infinitesimal calculus that is universally taught, yet it approximates to zero and does not rely on quantification.

The calculus of distinctions is a logical system which is the most fundamental logical system that exists, and you can apply it to everything quantal, and suddenly things become integral.

The problem with prior analyses of reality has been that the applications have been based on Newtonian Leibnizian infinitesimal calculus, whereas in

reality, there has to be a “bottom”—as with a Neppe/Close Calculus of Dimensional Distinctions. ** This allows quantal limits and unifications and integral calculations. At that point, much of reality is fundamental, and we can even apply science to spirituality.

Dr. Edward Close has maintained that all of reality is mathematically unified. This agrees with the ideas of Max Tegmark [46] and Vernon Neppe [76]. This allows for all the rules of reality to be applied using infinite level calculations -- but not infinitesimal calculus.

Close's calculus recognizes the unitary components pertaining to the electron being the fundamental unit of reality. This is exceedingly important because it has allowed -- Neppe and Close to calculate out *integral* elements that are unified with the Large Hadron Collider data and also a mathematical language of logic that is very, very fundamental and the math fits only with gimmel.

We can now apply the mathematically proven 9-dimensional quantized finite volumetric reality ** to everything—eliminating quantum weirdness, with cosmological and life-element dilemmas being better explained. This is no longer a speculation as it is empirically demonstrated: calculations are exactly equal to the normalized LHC **. This changes the whole: 4D experience becomes part of 9D finite with infinite existence.

7. Amplification of dimensional realities and Gimmel

Physicists are generally trained in the Standard Model of Physics (SMP). [48-50] This implies that they perceive and account for only 3 dimensions of space in a moment in time (3S-1t) (a 4-dimensional [4D] model). However, applying the SMP, more than fifty significant conundrums have arisen that are unexplained or incomplete. [31]

TABLE1-P4 <https://www.pni.org/groundbreaking/TDVPunification.pdf>

We also demonstrated for the first time definitively that the Cabibbo mixing angle is 9-dimensional and supports TDVP. [51-54]

Additionally, explaining these within the SMP 4D fabric led to hypothesizing a “fifth force”, most recently the hypothetical ‘X17 particle’. Neppe and Close propose that this hypothetical X17 may better be explained by a 9-dimensional model (9D) with Gimmel. This model, the Neppe-Close

Triadic Dimensional Vortical Paradigm (TDVP) has amplified physics from 4 dimensions to 9D, specifically first postulating and then further demonstrating mathematically the proof “starting with derivations of the S angle” [55-59] that 9 dimensions must exist. ** Moreover, this data is empirically demonstrated because the neutron, proton and electron mass-energy-Gimmel equivalence in the Triadic Rotational Units of Equivalence () as part of the TDVP model, exactly corresponds with the normalized data for the mass-energy equivalence volumetric data for these particles in the CERN Large Hadron Collider. (LHC). This data shows definitively that we exist in a 9-dimensional finite, quantized, volumetric, spinning reality. The 9-D finite is furthermore, embedded in an Infinite Continuity (9D+). Mathematically, applying this 9D+ model definitively requires an extra third (or second, as mass/energy are equivalent) component that is massless and energyless (Gimmel). Without Gimmel, no particle in the universe would be stable. TDVP unifies nature because the same laws apply across the quantum, macro-world and cosmological reality. Our 4D experience is simply the physical component of 9D+ existence.

At all levels, there is the consistent application of a 9-dimensional quantized finite reality embedded within an Infinite Continuity. The application of Gimmel specifically requires applying the 9-dimensional model and is based on necessary mathematical calculations not only at the quantal level (where the fifty plus unsolved, unexplained or contradictory conundrums can be explained somewhat, and there is no longer quantum weirdness), but at the macroscale level with more Gimmel in the life elements (which, additionally, are consistently all cubic multiples of 108 cubed), as well as cosmologically, where the correlations with proportionate Dark Matter and Dark Energy are overwhelming.

TABLE2-P5 Broader cosmological “Dark” Data

<https://www.pni.org/groundbreaking/TDVPunification.pdf>

Moreover, these 9-dimensional plus factors together with Triadic Rotational Units of Equivalence () [47, 60, 61] and Gimmel, allow numerous solutions that couldn't otherwise be solved. For example, importantly, applying the simple mathematics of, we can demonstrate why gluons, while adequate in 4D, are impossible to apply in 9D. Gluons result in an inequality as the gluons are not linked with electrons.

- The 3S-1t physical reality *we experience* is just a small part of the 9-dimensional reality which might explain why there are 50+ apparent 4-D physical-world anomalies. Gimmel and the related Triadic Dimensional Vortical Paradigm data explains many of these 3S-1t contradictions by applying Gimmel with the 9D quantized finite vortical volumetric model embedded into the Infinite Continuity (9D+) 9D+ with Gimmel allows a unification of our fundamental laws into one law of nature.] Moreover, Gimmel may have always existed, implying ‘something from something’. Gimmel is not a virtual particle like gluons and the Higgs Boson [77], though speculatively like them, Gimmel in conjunction with mass-energy implies a necessary synergy in the finite.
- *It is Ubiquitous and necessary in that single reality that unifies the finite embedding the infinite.* Gimmel is strongly linked with Consciousness. But it is subtly different. Whereas consciousness in this context describes a dimensional level hierarchically greater than Space and Time, Gimmel includes this fundamental concept of consciousness and requires bestowing volume upon mass-energy. Gimmel is a sine qua non that we have refined and applied over many years. The discovery of Gimmel allows for stability, demonstrates how fundamental mathematics is to the very existence of the universe, and allows recognition of a need for a consciousness reflecting perhaps the deepest levels of Consciousness ” possibly a ~spirituality, ensuring the Laws of Nature run smoothly. Gimmel provides a way to unify all of reality and apply the same Laws of Nature quantally, in the macro-physical world, and cosmologically. It also provides a unification of science with spirituality, and of the finite with the infinite. Gimmel provides the unsolved riddles of physics, of biology, and of spirituality.

I called it Gimmel -because I *knew* I had to call it Gimmel. because I knew this was perfectly logical. We went through different phases before arriving at the appropriate concept Gimmel—first in terms of higher consciousness. Initially, we defined it as just some kind of consciousness. Then I realized that I’ve got to redefine it as a higher consciousness. Then I began to use the

term ~spiritual which really was very frightening to some of my scientific colleagues. Higher consciousness is bad enough, even as a parapsychological component, but spiritual may be even more problematic. I kept having this impression that it's not just a spiritual consciousness; it has to be a higher being--it has to be . The '*Force*' was suggested by Jeff Mishlove. We said it's not a and it's not a force. Or Gimmel and the Higher Powers but I want to make it still couched spiritually scientifically. Gimmel is reflecting Nature, and is just the Laws of Nature. It fitted in with the mathematical model of everything. But might be *above* those Laws of Nature as well as *within* the Laws because of the Infinite Continuity. We can go infinitely beyond those stages and to another stage of laws of Nature and others, ad infinitum.

Originally we thought it was consciousness, but it is far more than that, potentially of a higher mystical level. It is not just a supposition, but a component that has been demonstrated definitively--both in mathematics and in physics--correlating with dark matter and dark energy; with the life elements; and particularly, exactly with normalized results in the billion-dollar Large Hadron Collider (neutrons, electrons, protons). The gimmel discovery may be one of the most major advances in science of this century, because it introduces a ubiquitous, newly discovered component of reality that is stable and applicable in every form of endeavor--scientific, physical, philosophical, theological.

This discovery contradicts current Nobel findings: Gell Mann *gluons* are mathematically incorrect in 9D+ **, and gluons and Higgs-Bosons are ephemeral, therefore impermanent and not maintained in its effects. Contrasting Gimmel is *stable and exists in everything*, from the smallest to the largest. It allows for the development of a new theory of reality where everything is unified from the tiniest to the ultra-large; where life is explained; and where there is even Biblical support, ostensibly. Gimmel research is reproducible and replicable easily, applying physics and mathematics, and understanding quantal bases of reality: a 9-dimensional model—finite, volumetric and embedded within the Infinite Continuity. This means that it involves everything in reality. Gimmel is the most primordial component of existence: energy, and yet influencing mass-energy, and also influencing the whole conceptual framework—including psi, philosophy, and theology. Gimmel has implications even for divinity.

Gimmel is not *contained* in anything—yet Gimmel extends everything. *It is like a shadow in a world—the envelope that bestows qualities but otherwise would not exist. There is nothing that is not impacted by Gimmel—not the smallest subatomic structure: atom, molecule, life, solid component, and even dark matter and dark energy. Applying Gimmel leads to the elusive (previously) concept of a unified model of reality.*

Gimmel is a decade old, but the ideas behind it will exist possibly for centuries. It is proven, demonstrable, Ubiquitous, highly relevant; and yet at this point there are no obvious research applications for this, except that it's everything. There cannot be anything in existence that does not have links and does not interface with Gimmel and nothing in existence, tiny or great, that does not require Gimmel.

Gimmel has implications for physics, for the life sciences, for astronomy, for psi phenomena, for the infinite, for understanding reality. So we are dealing with a fundamental understanding of reality: a new essence.

Now dear reader, please help me. How do I even mention the term ‘ ’ as fundamental in terms of my description of Gimmel, because I think we could hypothesize that, Divinity, or a Higher Being bestows these qualities through this discovery of the primordial substance or component which we call ‘vohu’ but which we now know is Gimmel? Gimmel is far more than a higher consciousness. How do I describe this in a scientific paper without pure skepticism? has become taboo in scientific and political circles. Is a ‘scientific-spirituality’ now cogent and useful? It’s something that should not be talked about, surely--please help me here. I would love to have your ideas and your input. Is this so radical that it’s not scientifically relevant yet? Or must we wait another 50 years? 82, 83, 84

There was a hierarchy in our description. It started as space/time/consciousness. Even that ‘consciousness’ was somewhat in dispute in physics and the sciences. Then we realized this was a level of consciousness higher than just the brain—‘*higher consciousness*’. Ed Close described ‘*primary consciousness*’ ** which later on he admitted was a equivalent. Gradually I realized that Gimmel was far more than just a consciousness--it was an existence in everything, or attached to everything, that would bestow meaning, that would bestow physical attributes, that

would bestow qualities, that envelops everything in existence: Gimmel was enveloped every atom, every subatomic particle, every molecule, all objects, dark matter and energy and even life and the Elements. **

Gimmel is a cocoon surrounding everything. It is the envelope that allows the engine to function. Gimmel can be used for calculations as it reveals *a measure of extent*. But it also reflects an *intent so it can influence and impact* and that cocoon reflects the necessary part of the something container. These three distinctions: *impact, extent and content are all relevant. Gimmel imbues into everything. It permeates:*

Gimmel is at the highest ranges of physical objects. But, importantly, it also imbues moral quality, sometimes spiritual or meaningful.

Also, there is a primordial component--the earliest quality of experience that existed in the Bible. That double statement, **tohu v vohu**, is not easily translatable, because it wasn't listed anywhere else. *Some used terms like chaos and nothingness and also didn't explain why there are 2 words not 1.* Nepe hypothesized that tohu was primordial mass/energy, and vohu was actually Gimmel **. Could there be some kind of explanation for this? Could there be some kind of speculation which is beyond speculation and has some theological significance? I discovered that in the *basic Judaic liturgy* there is e.g. the phrase '*Gommel chassadim tovim*'--*who bestows loving kindness*. (In Hebrew the consonants GML is the root so that "Gimmel" is equivalent to "gommel" as the vowels are less relevant). ** This spiritual element is fundamental and fascinating. *Gimmel reflects the primordial something*. So Gimmel is not only the extension of physical properties but has a spiritual significance as well.

1. Gimmel also has implications in parapsychology. Gimmel will explain what I call 'afferent delta' or so-called extra-sensory perception, and 'efferent delta' or what has been called psychokinesis and everything between ** --but not only within the fabric of the brain, but also outside (some simplistically perceive that as the "mind".) It also explains not only the idea of a *Bergsonian filter* communicating with the outside, but it might be bi-or multidirectional, communicating reciprocally maybe with a higher power, such as a divinity, or Gods. **

Planck (1950) "Science progresses one funeral at a time". p.33,97
Effectively, Gimmel exists in everything physically and spiritually and

always was, is and will be.

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The Israeli Security Doctrine Adapting Without Altering Core Pillars

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Abstract:

This article explores the evolution and resilience of Israel's national security doctrine, known as the Israeli Security Triad, introduced by David Ben-Gurion. The doctrine, which is grounded in three pillars—deterrence, early warning, and decisive military victory—has shaped Israel's military and strategic responses to both conventional and asymmetric warfare. While deterrence has successfully prevented state-to-state conflicts for decades, its limitations in countering non-state actors like Hezbollah and Hamas have highlighted the complexities of modern asymmetric warfare. As these groups engage in irregular warfare, Israel has adapted by integrating cutting-edge technologies, such as AI-powered early warning systems, and by introducing a fourth pillar: defense against asymmetric threats. The failures of deterrence and early warning during the October 2023 attacks raise critical questions about whether Israel's traditional security doctrine remains sufficient in the face of evolving threats. This article analyzes how Israel's doctrine has responded to these challenges and whether its reliance on the core principles of deterrence and military resolution can continue to ensure long-term security in the 21st century.

1. Introduction

It was yesterday when I received a phone call from an esteemed scholar and friend of mine with whom we spoke on his new book on the Middle East and the ongoing intense warfare dynamics in the region. He knows what my PhD research thesis is, namely the Development of the Israeli national security doctrine and thus wanted to hear my opinion on newly emerging situation with Israel, Gaza, Iran and Lebanon. While he believed Israel's doctrine has changed significantly in the last year, I will argue the opposite in the following sections.

The Israeli security doctrine, something that we could also call the Israeli security triad (Meridor & Eldadi, 2019), was introduced by the first Prime minister of the country David Ben Gurion. It consists of three main pillars that are intertwined and complement each other. The cutting edge military technologies introduced by Israel during the last decades have not changed the doctrine, but on the contrary were created and introduced in the military complex namely to strengthen the three pillars of the security triad.

The purpose of this article is to shortly describe the Israeli national security doctrine, to pinpoint events that played a role in reshaping it and to showcase why Israel's military behaviour during the recent prove that the doctrine has not faced any significant changes.

2. Introducing the Security triad

The first pillar is the **deterrence**, where Israel adopted the strategy of cumulative deterrence—a hybrid between deterrence by punishment and deterrence by denial. It is based on the assumption that adversaries will abandon their goals after repeated failures in the face of Israel's military power. This concept has been a key element in Israel's strategy, influencing its military and diplomatic posture over the decades (Rodman, 2023).

Historically, Israel's application of the principle of deterrence has been illustrated in various significant military conflicts and operations. From the Suez Crisis of 1956 to the conflicts in Lebanon in 1982, Israel's actions have often aimed to restore or prevent the deterioration of its deterrent capability. These actions have included full-scale wars, targeted strikes—such as the attack on Iraq's nuclear reactor in 1981—and limited military operations, like retaliatory raids and deep penetrations into enemy territory during the War of Attrition between 1968 and 1970. Each action was intended not only to neutralize immediate threats but also to reinforce the long-term perception of Israel's military strength and resolve (Yaniv, 1987).

To provide a broader perspective, the sole aim of this pillar is to prevent any attack on Israel. Israeli deterrence has proven immensely effective within the paradigm of conventional warfare, as we can observe that no state actor has initiated a full-scale war with Israel in recent decades. However, while highly effective in deterring conventional state actors, this approach has been less successful in addressing the complexities of asymmetric warfare. In fact, one could argue that Israel's conventional deterrence might have contributed to the rise of non-state actors and proxies, such as Hezbollah and Hamas, who appear to be "immune" to the traditional deterrence model. These groups engage in irregular warfare tactics that fall outside the scope of conventional military deterrence, thus challenging the effectiveness of this pillar in the modern security landscape. Thus when the deterrence fails it triggers the second pillar of the triad – the early warning.

The early warning systems, which are an essential component of national security, rely on the effective combination of intelligence gathering and analysis and are the primary function of Israel's intelligence services. This critical function not only anticipates and forecasts potential attacks but also significantly enhances the country's defensive posture by enabling timely and effective mobilization and deployment of military assets. The primary advantage of early warning is that it provides the nation with the capability to either absorb an impending attack more effectively or to carry out a preemptive strike, depending on the strategic choice made in response to the threat.

Israel's experience with early warning systems, demonstrates how evolving warfare and advanced technologies continuously reshape the effectiveness of these systems. In the past, during conventional interstate conflicts, Israel used its intelligence capabilities for early warning to anticipate large military operations (Rodman, 2023). The best example that comes to mind is how during the Six-Day War, Israel utilized its intelligence data to launch a preemptive strike, effectively neutralizing the threat before it materialized.

Furthermore publications like General Yossi Sarial's book "The Human Machine team: How to create synergy between Human & Artificial Intelligence that will revolutionize our world" point out the extensive work that has been going in Israel over the last years in enhancing the early warning pillar using cutting edge technologies powered by artificial intelligence. The author, who used his initials to sign his book and revealed his true name by mistake was the chief of Israel's most vanguard intelligence Unit 8200. General Sarial summarizes that the future of early warning systems lies in the successful synergy between human intelligence

and AI, paving the way for more secure and sustainable national security strategies (Y.S., 2021). During the 2014 Gaza War (Operation Protective Edge), Israel used high-tech AI-powered systems for early warning and threat detection. AI algorithms analyzed data from various sources, including drones and ground sensors, to identify and predict rocket launch sites. This capability enabled the Israeli Defense Forces to intercept and neutralize threats more effectively, demonstrating the practical benefits of AI-enhanced early warning systems (Y.S., 2021).

After the deterrence has failed and a hostile action towards the country is in course and when the second pillar – the early warning fails to intercept, predict and inform on this hostile action towards the country, the last part of the security triad is triggered - **the military decision**.

In the realm of national security, the Israeli doctrine has long emphasized the pursuit of **decisive military victory** as a fundamental goal once hostilities commence. This strategy is based on the belief that only a clear, unconditional victory can convince the enemy of the futility of military confrontation, thereby preventing future conflicts. Historically, Israeli security leadership has adhered to this philosophy, arguing that anything less than a decisive victory could lead to subsequent challenges to the concept of deterrence, potentially resulting in more conflicts (Rodman, 2023).

According to General Gadi Eisenkot, the former Israeli Defence Forces Chief of staff, the traditional concept of military resolution has shifted towards the concept of decisive military victory in strategic discourse. This means not only destroying the enemy's operational capability but also achieving complete psychological and physical dominance, forcing capitulation. This approach emphasizes the need to leave the enemy unable to continue the conflict, ensuring a comprehensive and long-lasting victory. Achieving this goal requires a swift and decisive response to threats, aimed at restoring deterrence and stabilizing national life through the demonstration of strength (Eisenkot & Siboni, 2019).

Professor Chuck Freilich on the other hand states that the traditional Israeli defense strategy does not prioritize achieving a decisive military victory, considering it unattainable. Instead, Israel aims to conclude conflicts on enemy territory by destroying enemy forces under favorable conditions. This goal was realized in the wars of 1948, 1956, and 1967, and to some extent in Lebanon in 1982, as well as during the Second Intifada. However, Israel has encountered difficulties in achieving decisive results in the War of Attrition, the Yom Kippur

War, the 2006 Israel-Lebanon War, and various operations against Hezbollah and Hamas (Freilich, 2018).

However, the emergence of asymmetric warfare in the 21st century has nuanced Israel's approach to achieving decisive victory. While the traditional line of thought, which supports decisive victory as essential for lasting peace and security, remains present, its practical applicability and effectiveness in the face of modern warfare dynamics are being reconsidered and debated. The question that arises is whether empirical evidence and experience support the idea that decisive victories lead to long-term deterrence.

In the last decade a fourth pillar of the Doctrine has been introduced by high ranking officers of the Israeli military establishment, **the Pillar of defence**, that has emerged due to the character of the asymmetric attrition warfare with non-state actors. Today, Israel is increasingly focusing on strengthening its defensive capabilities to protect against those unconventional threats. The construction of extensive security fences and the implementation of civil defense measures, such as the distribution of gas masks and reinforced shelters, reflect a shift towards a more balanced military doctrine that includes defense as an essential pillar. This strategic shift is further evidenced by significant investments in missile defense systems like Arrow and Iron Dome, which have become central to Israel's current military strategy, despite initial resistance from military leadership (Eisenkot & Siboni, 2019).

The pillar is a reaction of the impossibility of the early warning systems to predict asymmetric hostilities, many of which are not planned and are conducted by lone wolf attackers. Those could be people who woke up given morning and decided to conduct a killing spree.

3. Emergence of technology

Now that we have a basic understanding of the Doctrine, let's briefly dive into why cutting-edge military technologies were and continue to be developed in Israel and how they have become intertwined with the military. Many Israelis describe their country as a nation-in-arms. Since its establishment in 1948, Israel has faced constant hostilities, ranging from major wars to asymmetric warfare as mentioned above.

The pivotal moment that accelerated Israel's military technological advancements was the French arms embargo, introduced by Charles de Gaulle in 1967. This embargo followed the Six-Day War, during which de Gaulle condemned Israel's preemptive strike against its Arab

neighbors, marking a significant shift from France's previously pro-Israel stance. This decision had profound effects on Israel's international relations. On the one hand, it forced Israel to seek alternative military suppliers, such as the United States, which became its primary arms supplier in the years that followed. On the other hand, it emphasized Israel's need to reduce its dependence on foreign arms and led to the creation of a robust domestic military industry.

Due to the embargo and the constant fear of annihilation Israel began to develop its own military technologies, producing drones, naval vessels, tanks (such as the Merkava tank), and advanced combat weapons. These developments allowed Israel not only to meet its own defense needs but also to become one of the world's leading producers of military technology. Today, Israel is recognized globally for its innovations in defense, exporting drones, cybersecurity solutions, and missile defense systems to countries around the world. As the country continues to implement its military strategy in the face of new threats, the introduction of a fourth pillar demonstrates the need for ongoing innovation, especially as Israel navigates the complexities of asymmetric warfare.

4. Conclusion

The failures of deterrence and early warning systems during the October 2023 attacks highlight a critical juncture for Israel's security doctrine. While Prime Minister Netanyahu's current military strategy focuses on the third pillar—decisive military victory—it also raises important questions about the future of the doctrine. As Israel continues to face asymmetric warfare from non-state actors like Hezbollah and Hamas, the doctrine's traditional focus on deterrence and military resolution may require further adaptation.

Israel's security establishment has already begun exploring additional strategies, as seen with the introduction of the fourth pillar – defense, designed to address unpredictable, asymmetric threats that traditional early warning systems cannot always intercept. This evolution suggests that while the core principles of Israel's security doctrine remain intact, the complexities of 21st-century warfare necessitate ongoing innovation. Ultimately, the success and the international public outcome of the military operations in Gaza and Lebanon will serve as a test of whether the traditional doctrine can still secure long-term deterrence or if Israel must more fundamentally rethink its approach to national security in the years to come.

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Has the Age of Artificial Intelligence in Science begun?

When the Nobel Prizes were announced this year (2024), many people were initially shocked at seeing that the decision had been made to give the Nobel Prize in Physics to two researchers in Artificial Intelligence (AI), one of whom did not even have a physics degree. But the Nobel Prize in Chemistry that was announced a day later showed why that decision had been made: after all, AI methods had been employed by the winners of that prize to conduct their research about the structure of proteins. So it was in some way justified to give two of the researchers who had laid the foundations for modern AI recognition.



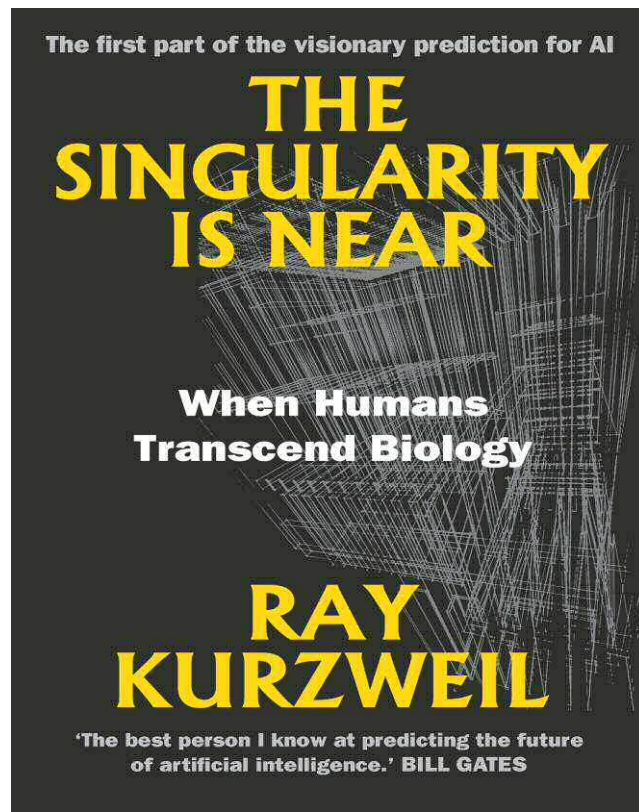
The big question is: Will we see more Nobel Laureates who worked with AI? Will it even perhaps soon be ordinary that Nobel Prize winning scientists have made their discoveries using AI? Is it even possible that every Nobel Prize will be given to people employing AI and maybe the Nobel Prize will be given to the AI systems themselves instead of human beings?

Is it the dawn of a new era, the era of AI in science?

Back in 2005 Ray Kurzweil published a seminal book, called "The Singularity Is Near". Now, almost 20 years later, the sequel to this book has been released: "The Singularity Is Nearer". The sequel summarizes the tremendous progress AI has made in the past decades. However, the singularity itself has not been reached yet, and it is a hot question in public debate whether we will reach it and, if so, when. The singularity would be reached once AI surpassed human-level intelligence because in that case, AI would be able to refine itself and become more and more powerful, and make many discoveries within a short time which would have taken man many years.

Even if the singularity has not been reached yet, AI tools have become very powerful utilities for scientific research. AlphaFold 3 has dramatically improved protein structure discovery, with an

accuracy of about 70%. Its predecessor has beaten all of its competitors in the CASP 2020 challenge. The company DeepMind that created AlphaFold, a subsidiary of Google, has made a great achievement and only deserves to be honored with a Nobel Prize.



There are many applications of protein structure discovery and the reverse process, the prediction of the amino acid sequence from a given structure. In the latter case, for instance novel therapeutics could be designed that work at specific targets in the human cells and have the desired effects. As a matter of fact, the technology that has been awarded the Nobel Prize this year will lead to yet more discoveries that will be worthy Nobel Prize winners.

Now the question is: Will human intelligence still be needed for scientific progress?

I am not sure. Maybe the singularity will come indeed and then human brainpower will be obsolete, maybe except for conducting the experiments the AI systems devise to test their hypotheses. But there is also a chance that the singularity will in fact never, or at least not too soon, materialize and in that case, we will still need highly intelligent academics to work in research.

Claus D. Volko