

**Moving Dimensions Theory & Hero’s Journey Physics
Overcoming the Tragic Anti-Theory Leviathans that No Longer
Teach Foundational Papers nor Ask Foundational Questions**

By Dr. E (The Professor in Black)

“In questions of science, the authority of a thousand is not worth the humble reasoning of a single individual.” –Galileo Galilei

“Books on physics are full of complicated mathematical formulae. But thought and ideas, not formulae, are the beginning of every physical theory.” --Einstein/Infeld, The Evolution of Physics

Moving Dimensions Theory—which regards time as an emergent phenomena—was inspired in part by Einstein’s words pertaining to the higher purpose of physical theories: *“Before I enter upon a critique of mechanics as a foundation of physics, something of a broadly general nature will first have to be said concerning the points of view according to which it is possible to criticize physical theories at all. The first point of view is obvious: The theory must not contradict empirical facts. . . The second point of view is not concerned with the relation to the material of observation but with the premises of the theory itself, with what may briefly but vaguely be characterized as the “naturalness” or “logical simplicity” of the premises (of the basic concepts and of the relations between these which are taken as a basis). This point of view, an exact formulation of which meets with great difficulties, has played an important role in the selection and evaluation of theories since time immemorial.”*

The vastly wealthy anti-theory regimes no longer approach physics as the Founding Fathers of physics approached physics. Safe from logic, reason, and experiment in their multiverses/parallel universes, they have rejected the wisdom and philosophy of Einstein, Bohr, Born, Planck, Newton, Aristotle, Plato, and Galileo; and they regularly send froth sycophantic attack dogs to tear down true physical theories, while trying to bankrupt true physicists, to keep their perpetual-motion money machines running 24/7, even as they vote and legislate against time, space, physical reality, the foundational papers and questions, and rugged cowboy physicists.

And yet, it moves. Below is a simple chart that shows the simple glory of MDT, when contrasted to the institutionalized and well-rewarded failures of the anti-theory regimes. “I do not feel obligated to believe that the same God who has endowed us with sense, reasons, and intellect has intended us to forgo their use.” –Galileo

	Moving Dimensions Theory	String Theory / M-Theory	LQG
Postulate	The fourth dimension is expanding relative to the three spatial dimensions at c, as a wave-front with a Planck wavelength.	Everything is made of tiny, vibrating strings, or something. (Is this even a postulate?)	Little loops are cooler than little strings in never really helping us formulate what has never been seen—quantum gravity.
Equation	$dx^4/dt=ic$??? (No.)	??? (No.)
Provides a physical model	Yes.	No.	No.

underlying the Principle of Relativity.			
Accounts for time and its arrows across all realms.	Yes.	No.	No.
Weaves change into the fundamental fabric of spacetime for the first time in the history of relativity.	Yes.	No.	No.
Provides a <i>physical</i> model for time as an emergent phenomena.	Yes.	No.	No.
Accounts for time's asymmetries across all realms.	Yes.	No.	No.
Provides a <i>physical</i> model for entropy.	Yes.	No.	No.
Provides a <i>physical</i> model for quantum nonlocality.	Yes.	No.	No.
Provides a physical model for quantum entanglement.	Yes.	No.	No.
Provides a <i>physical</i> model underlying the relativistic phenomena ($E=mc^2$/time dilation/etc.).	Yes.	No.	No.
Provides a common *physical* model for curious phenomena in qm & relativity & stat mech.	Yes.	No.	No.
Funding	\$0	\$1,200,000,000+	\$100,000,000+
Provides a <i>physical</i> model underlying Huygens' & Heisenbergs' Principles.	Yes.	No.	No.
Provides physical model underlying time's asymmetries.	Yes.	No.	No.
Provides physical model underlying time's arrows.	Yes.	No.	No.
Unfreezes time.	Yes.	No.	No.
Liberates us from the block universe.	Yes.	No.	No.
Accounts for/sets the maximum/only velocity c.	Yes.	No.	No.
Sets the velocity of light c and Planck's Constant h	Yes.	No.	No.
Ranks super-high on the famous Dr. John Baez crackpot index.	No.	Yes.	Yes.
Predicts all of relativity.	Yes.	No.	No.

Predicts the gravitational slowing of light and time.	Yes.	No.	No.
Predicts the gravitational redshift.	Yes.	No.	No.
Proposes a new universal invariant.	Yes.	No.	No.
Explains away Godel's block universe.	Yes.	No.	No.
Accounts for Einstein's "spooky" action at a distance.	Yes.	No.	No.
Provides a <i>physical</i> mechanism for the distribution of locality into nonlocality.	Yes.	No.	No.
Provides a <i>physical</i> mechanism for the energy of the vacuum.	Yes.	No.	No.
Recognizes that space-time can bend and move. (Honors Einstein's GR)	Yes.	No.	Up to a point. But refuses to see the natural beauty of $dx^4/dt=ic$.
Provides a physical model for quantum foam.	Yes.	No.	No.
Shows time travel into the distant past is impossible.	Yes.	No.	No.
Useful for building vast groupthink / handwaving / anti-theory regimes.	No.	Yes.	Yes—when combined with E8/\$\$\$\$\$.
Provides us with free will to move beyond anti-theory regimes.	Yes.	No.	No.
Exalts physical ideas/models over meaningless math.	Yes.	No.	No.
Weaves change into the fundamental fabric of spacetime.	Yes.	No.	No.
Accounts for the single velocity of c through spacetime for all objects.	Yes.	No.	No.
Backed by well-funded/snarky sycophants /misleading PR campaigns to the innocent press.	No.	Yes.	Yes.
Accounts for and unifies the dualities (space/time, mass/energy, wave/particle)	Yes.	No.	No.

Provides an <i>underlying physical</i> reason for all nonlocal, wavelike behavior.	Yes.	No.	No.
Unfreezes time and progress in theoretical physics.	Yes.	No.	No.
Helps Godel with his problems with time in relativity/a block universe.	Yes.	No.	No.
Cashes in on Multiverses / Tautologies / Anthropic Principle / pseudo-science	No.	Yes.	Yes.
Sheds light/resolves the Einstein/Rosen/Podolsky Paradox.	Yes.	No.	No.
Conforms to Einstein's/Born's/ Planck's/Plato's/Galileo's notions of the nature of physical theory.	Yes.	No.	No.

Plato: "I have hardly ever known a mathematician who was capable of reasoning." The Plato quote is hanging in the Boston Museum of Science, and it seems to agree with Albert Einstein, Galileo, and Max Born:
<http://www.ilfilosofo.com/blog/2008/04/12/plato-mathematician-quote/>

"I personally like to regard a probability wave as a real thing, certainly as more than a tool for mathematical calculations. ... how could we rely on probability predictions if we do not refer to something real and objective? (Max Born on Quantum Theory)"

Max Born wrote, "All great discoveries in experimental physics have been made due to the intuition of men who made free use of models which for them were not products of the imagination but representations of real things."

"Gradually the conviction gained recognition that all knowledge about things is exclusively a working-over of the raw material furnished by the senses. ... Galileo and Hume first upheld this principle with full clarity and decisiveness." -- (Albert Einstein, Ideas and Opinions)

To reject *physical* intuition and replace it with the nonsensical block universe MDT does away with seems to go exactly against the spirit by which physics has ever advanced, according to Galileo, Einstein, and other noble physicists.

It seems a preposterous conclusion that quantum mechanics, which works so very well, must be thrown out and reformulated for something which MDT shows there is no need for--the block universe.

“In the long run my observations have convinced me that some men, reasoning preposterously, first establish some conclusion in their minds which, either because of its being their own or because of their having received it from some person who has their entire confidence, impresses them so deeply that one finds it impossible ever to get it out of their heads. Such arguments in support of their fixed idea ... gain their instant acceptance and applause. On the other hand whatever is brought forward against it, however ingenious and conclusive, they receive with disdain or with hot rage - if indeed it does not make them ill. Beside themselves with passion, some of them would not be backward even about scheming to suppress and silence their adversaries. I have had some experience of this myself. ... No good can come of dealing with such people, especially to the extent that their company may be not only unpleasant but dangerous.”--(Galileo Galilei)

“my dear Kepler, what do you think of the foremost philosophers of this University? In spite of my oft-repeated efforts and invitations, they have refused, with the obstinacy of a glutted adder, to look at the planets or Moon or my telescope.” --Galileo Galilei

We must forever keep physical reality in the front and center, along with logic and reason and *physical* intuition--otherwise progress in physics will grind to a halt, as it has for the past thirty years.

“But before mankind could be ripe for a science which takes in the whole of reality, a second fundamental truth was needed, which only became common property among philosophers with the advent of Kepler and Galileo. Pure logical thinking cannot yield us any knowledge of the empirical world; all knowledge of reality starts from experience and ends in it. Propositions arrived at by purely logical means are completely empty as regards reality. Because Galileo saw this, and particularly because he drummed it into the scientific world, he is the father of modern physics -- indeed, of modern science altogether.” --Albert Einstein, Ideas and Opinions

Math can be very pretty, but Einstein reminds us that physicists ought pursue *physics,* founded in a physical reality--”Mathematics are well and good but nature keeps dragging us around by the nose.”“

“It is anomalous to replace the four-dimensional continuum by a five-dimensional one and then subsequently to tie up artificially one of those five dimensions in order to account for the fact that it does not manifest itself.” – Einstein to Paul Ehrenfest. Just think what Einstein would have said about entire parallel universes/muliverses/landscapes we cannot see!

With an heroic spirit, MDT takes us back to origin of modern physics--to the original papers on relativity and QM, and it humbles itself upon that mountaintop. And when it comes on down, off the shoulders of relativity and QM's giants, MDT presents us with a fundamental view of reality that conforms to all experimental evidence, while not only resolving the paradoxes of the non-locality of the EPR effect and seemingly frozen time in Godel's block universe, but also unifying the resolution of both physical curiosities within a simple

physical postulate--the fourth dimension is expanding relative to the three spatial dimensions, or $dx_4/dt = ic$. In a sense, this is the first theory to predict QM's nonlocality and entanglement, by postulating that the fourth dimension is inherently nonlocal via its expansion--an empirical fact that the timeless, ageless, nonlocal photon agrees with, as the photon surfs the fourth expanding dimension. And not only does MDT predict this, but it also provides a *physical* model for entropy and time and all its arrows and asymmetries throughout all realms. And finally, all of relativity may be derived from MDT's simple postulate, as it is in my paper--the fourth dimension is expanding relative to the three spatial dimensions-- $dx_4/dt = ic$. A postulate and an equation representing a novel *physical* feature of our universe--a fourth expanding dimension--and the natural, subsequent prediction of all of relativity, qm's nonlocality, entropy, time's arrows and asymmetries in all realms, and quantum entanglement.

“I don't believe in mathematics.” Quoted in Carl Seelig. Albert Einstein.

“Do not worry about your difficulties in mathematics, I assure you that mine are greater.” --Einstein

“Geometry is not true, it is advantageous.” --Jules H. Poincare

MDT's Confession/Apology

I was hoping for a bit of a dialogue, but too, the lack of dialogue will be useful to historians of science in understanding and characterizing why our era has seen no progress in theoretical physics, despite unprecedented funding and resources.

Never before have so many been paid so much to advance physics so little. Indeed, future historians will see that overfunding tends to lead to sociological constructs that exalt consensus building rooted not in logic, reason, and physics--not in foundational questions; but in fashion and politics which obscure the foundational spirits, papers, and questions.

So it is that the Anthropic Principle and tiny, little vibrating strings are exalted over *physical* contemplations and questions, *physical* principles, and *physical* models such as MDT: the fourth dimension is expanding relative to three spatial dimensions, or $dx_4/dt=ic$. For the first time in the history of relativity, change is woven into the fundamental fabric of spacetime; and a deeper physical invariant is shown to underlie relativity and quantum entanglement and nonlocality, in addition to time and all its arrows and asymmetries, and entropy, as well as Huygens' and Heisenbergs' principles.

In many ways Galileo had it easy, because at least the Inquisition in his day wasn't posing as physicists interested in science.

And Max Planck had it easy too, as he noted, “A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it.”

But in Planck's time, the opponents were generally a generation of successful scientists who had risen to the pinnacles of their profession via science--not by politics. So today's non-opponents of MDT are anti-theorists bolstered by state-funded crackpot indexes and anthropic principle politics--"we have tenure/funding because we are smarter than you because if we weren't smarter than you, we wouldn't have tenure/funding. Ergo we are smarter than you," is what they announce at their lavish conferences, reformulating the anthropic principle to fit the latest "flavor of the week" of their unchanging anti-theory regimes, which have frozen physics in a block universe.

Max Born wrote, "All great discoveries in experimental physics have been made due to the intuition of men who made free use of models which for them were not products of the imagination but representations of real things."

And yet, today, the quantum gravity regimes have rejected simple physical models along with the belief that the math ought represent *real* things. And now, they are even willing to forget time, space, reason, words, dialogue, physics, and physicists--to keep their perpetual motion funding apparati moving--even as time remains frozen. And thus, despite hundreds of millions in funding, there is no quantum gravity. There is no graviton, nor any consistent theory of quantum gravity. Instead, there are literally an infinite number of string theories, and a fair amount of loop-quantum theories, none of which quantize gravity in any finite, consistent way; let alone in any way that makes predictions that can be tested. There is no proof whatsoever for tiny, vibrating strings, nor atoms of space and time, nor twistors, nor tiny little loops, nor multiverses, nor hyperspace, nor parallel universes, nor bouncing universes--all of which grace the cover of Scientific American as sycophant students are trained to call true physicists seeking *physical* models and *physical* truths crackpots. And the Greats themselves--Nobel Laureates--both living and dead, have spoken out against such pseudo-science and snarky mathematical handwaving, which has become a religion that has replaced physics, thusly bringing progress to a halt.

"Books on physics are full of complicated mathematical formulae. But thought and ideas, not formulae, are the beginning of every physical theory." -- Einstein/Infeld, The Evolution of Physics

Instead of classical, rugged physics on the higher plain of physical reality, we get communal, political efforts which end up opposing progress in physics, as they oppose the individual heroic spirit by which all higher physical truths are ultimately apprehended.

Science is more of an art than a science, and it always seems to advance in manners never before anticipated by the establishment, as Planck stated. One cannot legislate, nor vote on, nor dictate the advancement of science by fiat. Do not take my word for it.

"One cannot pray a lie," as Mark Twain once said.

"New scientific ideas never spring from a communal body, however organized, but rather from the head of an individually inspired researcher who struggles with

his problems in lonely thought and unites all his thought on one single point which is his whole world for the moment.” --Max Planck

And again we see the primacy of the honest individual in the classic, epic hero's journey!

“A hero ventures forth from the world of common day into a region of supernatural wonder: fabulous forces are there encountered and a decisive victory is won: the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man.” --Joseph Campbell

<http://en.wikipedia.org/wiki/Monomyth>

And the Nobel Laureate economist F.A. Hayek agrees!

“The tragedy of collectivist thought is that, while it starts out to make reason supreme, it ends by destroying reason because it misconceives the process on which the growth of reason depends. It may indeed be said that it is the paradox of all collectivist doctrine and its demands for “conscious” control or “conscious” planning that they necessarily lead to the demand that the mind of some individual should rule supreme—while only the individualist approach to social phenomena makes us recognize the superindividual forces which guide the growth of reason. Individualism is thus an attitude of humility before this social process and of tolerance to other opinions and is the exact opposite of that intellectual hubris which is at the root of the demand for comprehensive direction of social purpose.” --F.A. Hayek, *The End of Truth, The Road to Serfdom*

Along comes a scientist who agrees with the philosophy of Einstein and Max Born and Planck. Along comes a physicist who agrees with Wheeler, and Feynman, and Glasgow, and Godel, and Bohr, and Gamow--wishing that he could watch old Westerns with Bohr and Gamow. Along comes a scientist who agrees with Nobel Laureate Robert Laughlin and Nobel Laureate F.A. Hayek, with Newton and Dirac, with Heisenberg and Minkowski, with the great mythologist Joseph Campbell. Along comes a scientist with simple theory that has a simple postulate and equation from which all of relativity may be derived; from which entropy naturally arises, and which accounts for time and all its arrows and asymmetries across all realms, while also providing a *physical* model for entanglement and nonlocality, as well as a *physical* model for Huygens' principle and the Heisenberg Uncertainty principle. Not only does the multi-billion-dollar physics establishment ignore it, but they have so much funding, that they can hire grad students and professors to snark the theory, so as to defend their perpetual-motion NSF money machines and religions of wormholes, time warps, quantum gravity, multiverses, tiny, vibrating strings, and geometric mysticism/PR/hype, which Moving Dimensions Theory has no need for, as it concerns itself with physics and physical reality--with logic, reason, and simple postulates and equations that represent a hitherto unsung universal invariant--the fourth dimension is expanding relative to the three spatial dimensions at c .

What we have here is a modern-day Inquisition, except that it is even more dangerous, as at least Galileo's Inquisition weren't claiming science's throne.

Check out:

http://www.jklarsen.com/myblog/index.php?blog=6&title=confession_of_galileo_galilei&more=1&c=1&tb=1&pb=1

Where it is reported: "In 1633, physicist Galileo Galilei was brought before the Roman Inquisition. Tried on "vehement suspicion of heresy," Galileo was forced to swear that he "abjured, cursed and detested" the errors of his work, which extended the findings of the Polish astronomer Nicolaus Copernicus that the Earth Moves."

Now I have postulated that the fourth dimension expands relative to the three spatial dimensions, and not one person in the entire quantum gravity regime has ever, ever, taken the time to comment on my theory. It's not like MDT is a secret, so their silence puzzles the will.

It would be one thing if quantum gravity/string theory were smashing successes-- then, naturally, Rovelli/Carol et al. would all be busy partying like rock stars and flying to conferences and awards ceremonies in Aspen and Hawaii. But with the utter failure of the anti-theory regimes, for decade after decade, surely they ought have a few moments to assess the great and natural success of the brand new directions proposed by MDT.

"Insanity: doing the same thing over and over again and expecting different results." --Albert Einstein

But I realize, that with tenure and titles to worry about in their aging anti-theory regimes; perhaps before commenting on MDT, they are all waiting for a confession, so as to make the theory "safe" for discussion in polite circles. I even thought of emailing Ed Witten and asking him to come out with a press release in which he states that the M in M-Theory stands for Moving Dimensions.

Well, here is my confession, based on Galileo's, which can be enjoyed here:

http://www.jklarsen.com/myblog/index.php?blog=6&title=confession_of_galileo_galilei&more=1&c=1&tb=1&pb=1

I, Dr. E, son of the late Vincenzo Galilei of Florence, aged 70 years, tried personally by this court, and kneeling before You, the most Eminent Antitheorists and Reverend Lord Cardinals of M-Theory Multiverses, Inquisitors-General throughout the Quantum Gravity Republic against heretical depravity, having before my eyes the Most Holy Gospels of an Elegant Universe, Not Even Wrong, and The Trouble With Physics, and laying on them my own hands; I swear that I have always believed, I believe now, and with Ed Witten's help I will in future believe all which the Holy Quantum Gravity and M-Theory Church doth hold, preach, teach, and hype to the press, including E-8 and next year's E-9 anti-theory.

But since I, after having been admonished by this Holy Office entirely to abandon the false opinion that the fourth dimension expands relative to the three

spatial dimensions, and that quantum mechanics' entanglement, nonlocality, entropy, relativity itself, time and all its arrows and asymmetries across all realms, the gravitational slowing of clocks and time, Huygens' Principle, Heisenberg's Uncertainty Principle, probability, and all the dualities (space-time, wave-particle, mass-energy) derive from this simple principle of MDT and its equation $dx^4/dt=ic$, and that I was neither to hold, defend, nor teach in any manner whatever, either orally or in writing, the said false doctrine; and after having received a notification that the said doctrine is contrary to the Holy Writ of Hyperspace, I did write and cause to be printed a blog and forum in which I treat of the said already condemned MDT doctrine, and bring forward arguments of much efficacy in its favour, without arriving at any solution: I have been judged vehemently suspected of heresy, that is, of having held and believed that the fourth dimension's expansion is the universe's fundamental invariant and the cause of all time and motion, and that the block universe does not exist and time is not the fourth dimension, but that time is a parameter that emerges because the fourth dimension is expanding relative to the three spatial dimensions at c , that change is and ought be woven into the fundamental fabric of space-time with $dx^4/dt=ic$, and that the fourth dimension, like the earth, does move.

Nevertheless, wishing to remove from the minds of your Tenured Eminences and all faithful LQers and String Theorists this vehement suspicion reasonably conceived against me, I abjure with sincere heart and unfeigned faith, I curse and detest the said errors and heresies, and generally all and every error and sect contrary to the Holy Quantum Gravity Regimes, and I am ready to forget time, forget space, and forget physical reality, while embracing multiverses and tiny, vibrating strings. And I swear that for the future I will neither say nor assert in speaking or writing such things as may bring upon me similar suspicion; and if I know any heretic who speaks out against tiny, vibrating branes, anti-theories, or atoms of space and time, or one suspected of heresy, I will denounce him to this Holy Office of Time Travel, or to the Inquisitor of Wormholes and Ordinary of the place in which I may be, which will of course be in the block universe, which MDT falsely liberated us from, while falsely granting us free will and free thought, as it falsely unfroze time. I hereby remit all future free will, as I return to the block universe with the hopes of receiving the funding that is a part of my pre-Ordained future, as a member of the Quantum Gravity Church in this multiverse--this subset of the landscape--that the Gods of the Anthropic Principle granted us, while declaring that we should receive infinite funding for our fortitude in service to the Lords of the Landscape.

I also swear and promise to adopt and observe entirely all the penances which have been or may be by this Holy Office of Loops imposed on me. And if I contravene any of these said promises, protests, or oaths, (which Ed Witten forbid!) I submit myself to all the pains and penalties which by the Sacred Canons of String Theory and other Decrees of D-branes general and particular are against such offenders imposed and promulgated. So help me God and the Holy Warped Passages/The Trouble With Physics/10⁹⁹ indecipherable arxiv.org papers--which I touch with my own hands.

I, Dr. E, aforesaid have abjured, sworn, and promised, and hold myself bound as above; and in token of the truth, with my own hand have subscribed the present schedule of my abjuration, and have recited it word by word. In America, at the

Convent della M-Theory, this 8th day of December, 2008, in this parallel universe.

I, Dr. E, have abjured as above, with my own hand.”

And as I'm walking away to serve out my house arrest and exile from the academy after this confession, I turn to the crowd that had gathered to hear me read it and smile.

And I say, “And yet it--the fourth dimension--moves! Eppur si muove!”

http://en.wikipedia.org/wiki/E_pur_si_muove

Best,

Dr. E (The Real McCoy)

“In questions of science, the authority of a thousand is not worth the humble reasoning of a single individual.” –Galileo Galilei

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