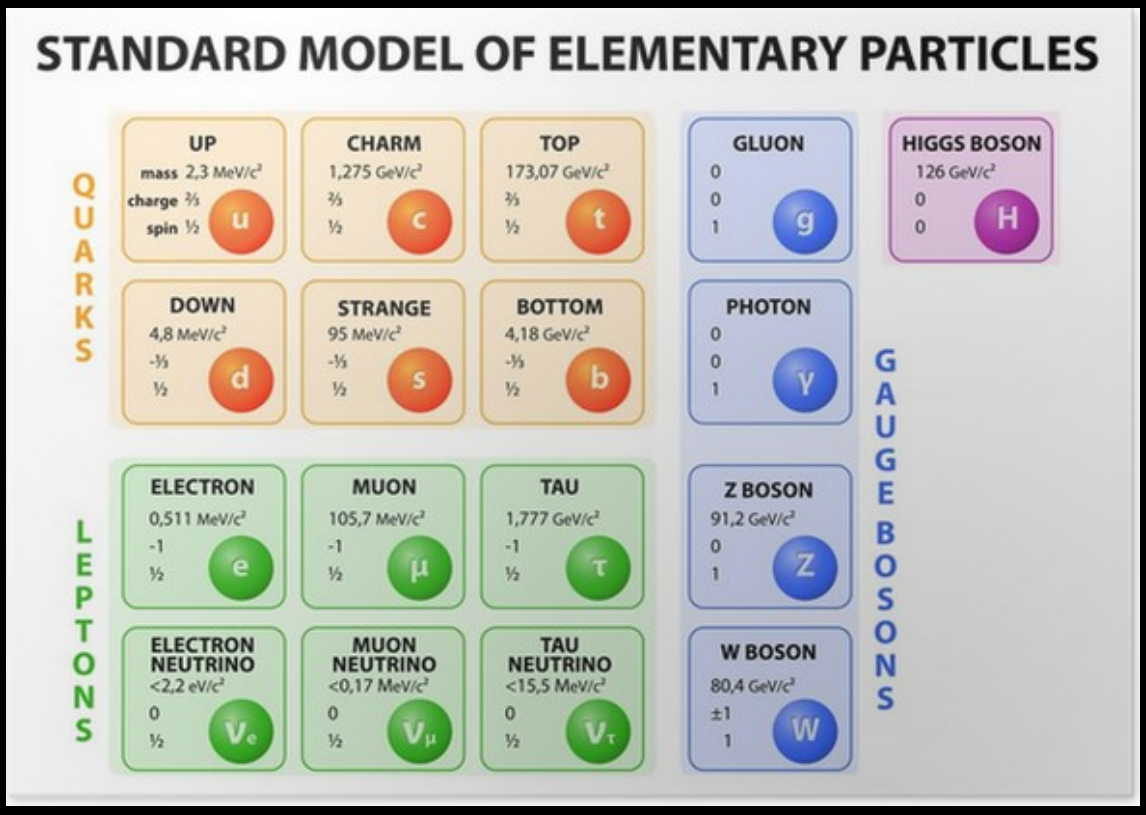
The Irrational Standard Model vs ...

sgm, 2018/NOV/11



The diagram above concisely illustrates the accepted Standard Model of elementary particle physics. Quarks were invented to explain the particle zoo, the plethora of products created in atom-smashing experiments. Individual quarks will never be observed, according to theory, because they can only exist in at least pairs, normally trios. Gauge bosons were invented to explain, in order from top to bottom, the strong nuclear force, electromagnetism, and the weak nuclear force. Individual leptons have been observed. The Higgs has been detected by one facility but the inferred purpose, to imbue mass, is entirely contrived.

Notably missing is any treatment of gravitation or General Relativity. So the Standard Model is at best incomplete with respect to the four forces of nature. There are two core assumptions associated with the Model:
1. forces are mediated by bosons (as illustrated above)
2. elementary particles are inherently random

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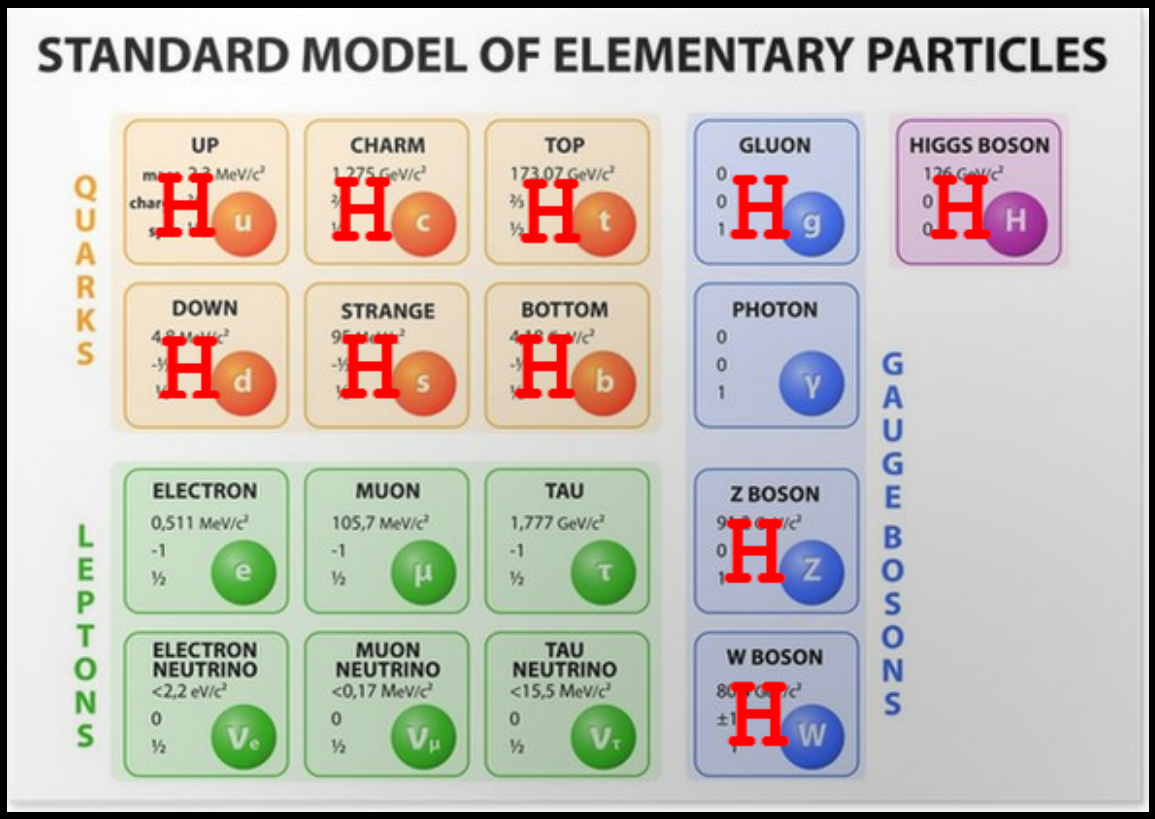
The motive for 1 is simplicity, Occam's Razor, admirable. The motivation for 2 is Heisenberg uncertainty and again relates to Occam's Razor, again admirable: all elementary particles obey Heisenberg uncertainty; it's natural to assume one of the two following causes or both:
1. Heisenberg uncertainty is caused by measurement
2. Heisenberg uncertainty is caused by inherent properties
Fierce debate for many years has excluded 1 and yet again favoring Occam's Razor, 2.

Because of 2, scientists have looked for evidence of previously known "stable" particles, specifically the proton, to indicate they're not. After many years and experiments, not a single case has been observed. Protons are evidently Stable. Perhaps 2 does not apply to them or perhaps we misunderstand 2. As evidence for the latter, consider the following.

Nuclei are stable or they're not. Examining the Chart of Nuclides demonstrates this fact. Proposing a "weak force" causing decay is admirable and further to theoretically construct an "electro-weak" force combining them is admirable as well. Science has made tremendous progress in concisely explaining the particle zoo and three of the four forces of nature. Kudos.

However, in the process of doing that, we've ignored other models which I classify as Partial Grand Unification, that don't depend on bosons for force mediation, and have a plethora of beneficial implications. Einstein pointed the way with his General and Special Relativity. In general, a force can be mediated by one of two things:
1. boson exchange
2. curvature / changing the media between them
Einstein's genius used 2 to explain gravitation. If only he had known about the strong nuclear force, he might have developed the following framework.



It's a fact that, as explained above, the particles with red Hs on them are hypothetical or, as in the case of the Higgs, have hypothetical purpose. No scientist can contest this fact. Students have seen this diagram (without the Hs) so many times, they've accepted it as fact. However, as anyone knows, student acceptance does not turn a theory into a law of nature.

Let's start with the so-called weak-carriers, W and Z bosons. Why are they unnecessary? Very simple:

1. if all nuclei were stable, life would be impossible
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3. the existence of life absolutely requires a balance of stable and unstable nuclei regardless of the causative agent

So it does not matter if radioactive decay is mediated by bosons or little-green-men; we would not exist if there was not a careful balance between stable and unstable nuclei. The simplest explanation of radioactive decay is without mediation: some nuclei are stable and some are not.

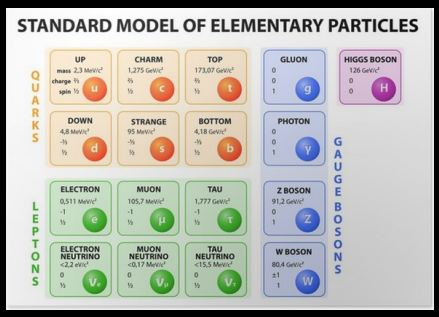
Why are quarks unnecessary? Again, very simple:

1. quarks were invented to explain products of atom-smashing experiments
2. ALL of those products quickly decay into more familiar particles: electrons, protons, neutrons, and neutrinos
3. if we focus on those final decay products instead of wasting time on intermediate completely transient ones, we simply don't need quarks to explain them
4. free neutrons ALWAYS decay into: an electron, proton, and anti-neutrino which implies neutrons are composite but NOT necessarily composed of quarks

Quarks are over-kill; we don't need to explain unstable transient decay products anymore than we need mediation for radioactive decay. That leaves the electron-proton mass ratio and the actual composite nature of neutrons. The argument for the former is identical with that of nuclear stability: without a specific range of values, life could not exist. You would not be reading this sentence if the electron-proton mass ratio was outside a certain range. As for the composite nature of neutrons, I suspect it is something about geometry and internal resonance with respect to neutrons within a stable nucleus; the same qualities which make nuclei stable make neutrons stable within them. We need to study deuterium nuclei thoroughly and compare them to free protons and neutrons.

To my knowledge, no one else has ever tried to explain the strong nuclear force via curvature as we will next. Not only does this imply a unified gravistrong force, but General and Special Relativity are also unified. Finally, it replaces the Higgs as the progenitor of mass. What is this "superforce"? I call it temporal curvature or more specifically – temporal elasticity. Using Occam's Razor, I've reduced gravitation down to one dimension: time. Distributed temporal differential is equivalent to distributed space-time differential. More simply, curving time is necessary and sufficient to explain gravitational potential. This one step unifies General and Special relativity because time-dilation is the common feature between them. Lorentz and GR effects can be explained with

temporal elasticity including Lense-Thirring, something traditionally considered purely geometric. Finally, mass can be derived as a function of what I label ‘internal period’ which relates to Compton wavelength. So ultimately, mass is a function of time. Relativistic mass is simply rest-mass + relativistic-energy = rest-mass + kinetic-energy. This implies that kinetic = relativistic = extra energy in temporal warp. Which implies relativistic mass is essentially enhanced temporal warp.



neutron proton electron neutrino -VS- temporal elasticity photon

Which is simpler? Which includes gravitation?

In this article, antimatter has not been addressed which is the flip-side of time-dilation: time-compression. Anti-nuclei can and do exist because the antimatter “strong force” equates with antigravity / time speeding up. A theory of antimatter black holes has been developed along with explaining CvB anisotropy, the Dipole repeller, and predicted anti-^{8}Be decay rate. Dark energy and the apparent preponderance of matter are addressed:
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Note: I realize I cite the anthropic principle twice but for me it’s far better than a self-creating multiverse which is the ultimate ridiculous proposition of convention. Quarks, weak-bosons, Higgs, self-creating multiverse,.. artifice upon artifice upon artifice becomes an untenable house of cards.