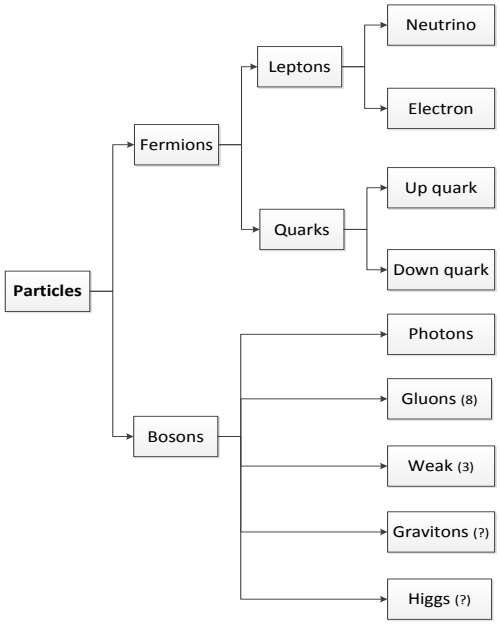

Figure. The Standard Model of Particles

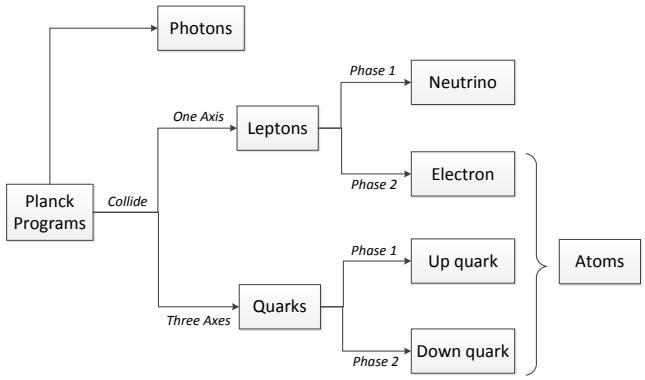

Figure. A Processing Model

The Evolution of Matter[1]

The standard model *divides* the physical world into fermion (matter-like) and boson (light-like) realms. Then it divides fermions into the matter we know and lets virtual bosons explain fields and forces (Figure). Bosons can't create fermions because they have different properties, e.g. massless photons can't make electrons with mass, nor can colorless photons create quarks with color.

In quantum realism, light is space spread out, matter is light bottled up, and charge is the permanent processing remainder. The sixty two elementary particles, five invisible fields, sixteen charges and fourteen virtual bosons of the standard model (Table) are replaced by one *core program* interacting on the channels of one *grid network* that generates the entire physical world, so the universe is *simplicity combined not complexity reduced* (Figure).

The same program that confined to one node is what we call space, when more or less spread out becomes the electro-magnetic spectrum, i.e. light. Matter then evolved from light, as extreme photons locked up the channels of one axis to form an electron or neutrino, depending on phase. These combinations "survived" by keeping other entities out of their grid niche. An electron is then one dimensional matter, so it can collide in space but still act like light in the two-dimensions of an atomic orbit. Light colliding on three axes gives an up or down quark depending on phase, including their one third charges. Three quarks sharing photons in a triangle can fill the channels of a two axis plane, which by spin becomes three-dimensional matter, resistant to all external change. This *physical evolution* continued in the *nuclear evolution* of the higher atoms of the periodic table, in the matter factories we call stars. In evolution, survival is key, so the heavy but transient "particles" found in accelerators, like the Higgs, that seem so important to us aren't important in this evolution because they don't

Table. Fields, charges and bosons of the standard model

Field	Charges	Bosons
Electro-magnetism	+1, 0, -1	Photon (1)
Strong	Red, Green, Blue, White, Cyan, Magenta, Yellow, Clear	Gluon (8)
Weak	+½, 0, -½	W^+, W^- & W^0 (3)
Gravity	1?	Graviton (1?)
Higgs	1?	Higgs particle (1?)
Total = 5	**Total =*16***	**Total =*14***

[1] This is section 4.5.7 from Chapter 4 The Matter Glitch: An Alternative to the Standard Model, of the forthcoming book Quantum Realism by Brian Whitworth. The link gives a free early access to the whole chapter.

survive. Conversely, while quantum randomness seems pointless to us, it is the key to physical evolution, just as genetic variety is the key to biological evolution.

In processing terms, quantum programs *distribute* on a grid network, until a *channel overload* gives a *reboot* that restarts or *collapses* the program, in a physical event that *entangles* or merges the programs. A physical particle can't spread as a wave or collapse to a point, but a program spreading on a network can as it can re-spawn from any instance. When quantum theory says the electron wave function spreads over a galaxy then collapses to point physical event, it really happens. Our physical world is the *interface* between quantum entities, thrown up on demand, just as quantum theory says. Every observation is an overload, reboot and restart that occurs at a point, and the physical world consists entirely of these restarts.