

Rush to the Higgs?

Physics' Standard Model of particles and forces desperately needs the theoretical boost of an objectively "real," physical Higgs boson. The CERN July 2012 "5 sigma" certainty "discovery" of a heavy, unstable, electrically neutral "Higgs-like boson" at about 125–126 GeV is no doubt a new boson that is consistent with the long sought Higgs boson. As of March 2013 both CERN's CMS and ATLAS teams have now claimed definitively that it is physics' grand desideratum: *the* Higgs boson that completes the Standard Model. It's a new boson yes, but is it a Higgs boson? Indeed, is it *the* Higgs boson? After all, post-Standard Model supersymmetry superstring theory (SUSY) predicts five Higgs bosons!

Is the recent discovery of this "Higgs-like" particle indeed the advent of the putative holy grail that is the scalar omnipresent diaphanous "God particle" (Leon Lederman) which finally "proves" the existence of the mystical Higgs Field? It is hoped that this long sought physical mechanism for electroweak symmetry breaking (EWSB) bestows mass upon the little particles/fields that we are. These particles are the ostensibly purely physical/material entities that become life, then sentient consciousness, then human consciousness that understands all of this arising phenomena, our relative conventional spacetime experience, and its trans-conceptual primordial ground in which, or in whom this all arises.

As is usually the case with such oracular pronouncements, much more work must be done to determine whether the characteristics of the new particle are consistent with the Higgs parameters as predicted by Steven Weinberg's definitive 1967 paper ("A Model of Leptons" (PhysRevLett, 19:20). Weinberg, with Glashow and Salam accomplished the final unification of the electromagnetic force with the weak nuclear force to become the electroweak force (for which they received the Nobel Prize).

Does the Higgs particle have the requisite zero spin, zero charge and even (as opposed to odd) parity? Is it truly elementary, or is it composite? Most importantly, does it decay into the requisite particles in the correct proportions? The first three of these have now been proven. But any statistically significant deviation from

these predicted decay parameters excludes this new particle from Standard Model orthodoxy.

Therefore, if this mysterious new boson cannot be confirmed as *the* Higgs boson, then the prodigious Standard Model paradigm with its inflationary Big Bang creation myth—which is mathematically linked to the Higgs field—is in big trouble. Thus opens a way into a new emerging paradigm that is a post-quantum, post-Standard Model new physics that includes the multiverse; super-symmetrical superstring/M theory (SUSY); and loop quantum gravity.

There are further concerns with this half century Higgs grail quest:

1) Does the epistemic fudge in the incomplete mathematics of the Higgs Field render it pragmatically useful, like the prodigious "pixie dust" (Feynman) of QED "renormalization" (with its mixed gift bag that includes the laser, the semiconductor, and the bomb)? Or is this bit of untidy theoretical conjuring, under duress of Big Science, but another product of the massive intellectual hubris of human discursive science-mind? Remember that the trillion dollar Higgs sector—key to the future of the aging, but still beautiful *ad hoc* Standard Model—is under huge funding pressure to produce results.

Physics' Standard Model odyssey into the brave new world of *ontologically relative* (reality is semiotic and observer-dependent upon our intersubjective "web of belief"), unobservable, "post-empirical" phenomena—the conceptually ineffable quantum world of quarks, leptons, and the multiverse, not to mention (gasp!) "consciousness"—is, in spite of the inherently subjective quantum theory, an ambitious objectivist/materialist program to grasp the noetic (mind/spirit) perfect subjectivity of that nondual primordial ground of everything, the very "mind of God" (theistic or non-theistic).

2) Be that as it may, let us assume the Panglossian view that there was no essential error in the processing of trillions of points of recorded data in order to "discover" the fabulously fleeting production by an unstable decaying particle of just two high energy photons.

3) The physics by which the inherently non-objective, "mystical" all-pervading scalar Higgs Field provides the perfectly precise quantity of mass to each massive particle, while leaving the mass-less particles unchanged, is not at all understood, if

it can ever be grasped by the conceptually limited two-valued, binary logic that is the outer limit of human *conceptual* mind. Again, the core theory of the Higgs Mechanism remains—no surprise—mathematically incomplete, to say the least (Zebuhr, Hotson, Phipps, Gulko, *Infinite Energy*, Vol. 18/105, 2012).

Should the physical and mathematical parameters of the putative new Higgs boson actually meet all of the physicalist/materialist expectations of the CERN physicists, we still do not know if it is creator of all the mass in the timeless physical cosmos, not to mention the all-embracing whole of the Pythagorean *kosmos* that embraces an infinity of physical universes.

This great *kosmic*, panpsychic (everything has some degree of consciousness) *ultimate* whole subsumes *relative* spacetime reality (our perennial Two Truths). That of heaven and earth undreamt of in our pathologically reductionist monistic materialist philosophies is indeed *kosmic*. Can this vast unbounded whole (*mahabindu*) really be reduced to a purely physical reality (Materialism)? Or to a merely mental reality (Idealism)? Is there perhaps a syncretic centrist middle way (*Madhyamaka*) view? From the epistemology you choose, arises the ontology you deserve.

So, just how it is that this wondrous Higgs particle, "where footless fancies dwell" (William James), bestows mass to that of reality which arises and appears, is of course the trillion dollar question of this great epistemic adventure. Higgs miracle, or adventitious Big Science Higgs farce? (Or both, or neither?)

Let us then not rush to the scintillating Higgs desideratum, just yet. Rather, let us patiently follow the continuing drama of this anachronistic monistic materialist undertaking with a modicum of informed ontologically relative "healthy skepticism" (skepticism of one's own deep cultural background materialist beliefs and biases). Then let us see, in due course, what our new post-Standard Model physics paradigm reveals to the noetically prepared mind.

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