Ontology of Scalar Mechanics

Vitor Matheus Izoldi Nogueira

January 12, 2026

Proposed is the pressing emergence of a new field of study, Scalar Mechanics (SM), dedicated equally to the ordering of recognized scalar phenomena, as sequentially arising from the configuration state of a single unified scalar field; the aether, along with re-identifying those phenomena heretofore unclassified as scalar. The experimental resources and theoretical foundation required for such a theory have at length been laid out with the culmination of modern physical theory, which arguably fundamentally plateaued by 1930.

While physics has produced extraordinary technical extrapolations, which have innately yielded exponential empirical progress in recent years, it can be argued that since the theories of general relativity (1905), special relativity (1915) and quantum mechanics (~1925), no subsequent development has so far as approached such a foundational conceptual upheaval, and that all serious modern physical and cosmological theories operate within the paradigm established during that period. It must be briefly noted that, prior to this, an extensive multiplicity of mathematical axiomatic frameworks for an aether field had already borne empirical fruit, as physics had slowly grown to envelop the pith of newtonian mechanics.

An ontological inquiry into force, mass, energy, inertia, and even spacetime is deemed imperative, for within their nature lies the source of many current contradictions and unresolved problems in physics. Phenomena such as wave-particle duality, vacuum energy density, the measurement problem, CMB anisotropy, the black hole information paradox, singularities and horizons, unmeasurable aether drift, intrinsic subatomic spin, neutrino mass, charge quantization, superposition, entanglement, quantum contextuality, EPR paradox, inflation's catalytic mechanism, baryon asymmetry, the ontology of time, quantized gravity, wave-function ontology, and the Hilbert space assumption are all accounted for via this unified model.

A scalar axiomatic framework appears instrumental in dissolving the astronomical divergence between the domains of quantum mechanics and special relativity. Scalar Mechanics is thus presented as a vital milestone toward the realization of quantum gravity, while naturally in the same plane accommodating a unified field theory and a single unifying field equation.

Gravity may be aptly described as the 'mother of all forces', despite being in-and-of itself an emergent phenomenon. Gravity is a secondary scalar, albeit still the primary *physical* scalar essential for matter to maintain physicality; driving intramolecular spin. Still, gravity arises from the configuration of the primordial *aetheric* scalar, motion. Virtually all ostensibly mysterious phenomena, exceeding those listed above, are stripped down and revealed—some as candidly paradoxical, others as direct evidence that our fundamental physical framework has fallen much deeper, even into the realm of grave contradiction.

Gravity is proposed as an omnipresent electromechanical graviton current gradient extending from sky to Earth—predicted cosmologically as the Cosmic Microwave Background (CMB), measured locally as the Atmospheric Potential Gradient (APG), and observed terrestrially as Brownian motion. This downward current imparts positive electrostatic charge onto physical matter, producing electromechanically induced momentum via repulsion acting upon the positively charged nuclei.

Hydrogen, for instance, owing to its low net positive charge, possesses sufficient spatial separation between its protonic mass center and its electronic discharge cloud—here understood as a dynamic, self-similar electrostatic field—to cross the effective graviton coupling threshold. As a result, most gravitons pass through hydrogen without significant deflection; only deflected gravitons impart downward momentum onto its protonic mass center. Diatomic hydrogen's extended negative, discharge emanations also insulate its source-point, effectively repelling the negatively charged Earth while remaining attracted to the positively charged sky. Hence hydrogen and any gaseous atom with similar compositional attributes readily overcomes the downward graviton current.

Gravitons are posited not merely to permeate matter, but to comprise its physical configuration. In permeation, they encounter greater resistance within denser configurational structures than within more loosely packed ones. An elemental metallic substance, for instance, contains a higher concentration of material points—here represented as protonic mass centers or point-sources—within its lattice than does an equivalent volume of a monoatomic gas. Regions of increased and more complex configuration density therefore interfere with graviton flow to a greater degree, producing a correspondingly larger drag differential, denoted by ∂. Consequently, hydrogen is electrically willed upward—against the APG/graviton flow—while tungsten is dragged downward. The scale of a single graviton must be many orders of magnitude smaller than even subatomic structures.

According to relativity, the fundamental fabric of the universe—spacetime—is itself comprised of geometries and their associated geodesics, from which fields and particles arise, all of which are posited to possess tangible existence. Consequently, in superseding Newtonian mechanistic thought and nineteenth-century field theories, relativity recast time and space not merely as fixed passive backgrounds but as fundamental constituents of physical reality, whose measurements are inseparable from the observer. Mutual time dilation is a direct result of this ontological reframing of experiential reference points and, though implied as physically real by relativistic standards, gives rise to a symmetry that proves problematic when interpreted in the context of concrete physical phenomena.

In the Scalar Mechanical view, time and space cannot be reified; they are conventions assigned to immaterial, scalar aspects of an otherwise tangible universe. A second may be longer or shorter depending upon the atomic transition chosen to define it; had a different atom been selected in place of cesium-133, an alternative temporal standard would have followed. Indeed, ytterbium and strontium—employed in modern optical clocks—are already known to provide greater precision, highlighting the conventional rather than ontological nature of temporal units.

A foot does not exist in itself, just as heat does not exist as a substance. Heat is the frictional activity within molecular systems, which themselves possess no fundamental existence apart from their emergence from a deeper physical process. Matter arises through the infolding of a scalar potential field into structured substance, whose locked circular motion expresses potential energy as mass and magnitude.

It is therefore plausible, within the quantum-gravitational framework—here understood as a graviton-driven scalar electromechanical potential field acting upon mass—that ontological primacy can be ascribed solely to the source: a vacuum–plenum, denoted as S. The vacuum–plenum presents an apparent duality that may seem contradictory, yet it violates no physical laws so long as these attributes do not coexist in opposing fullness. That is, at any given moment, a point in space may exist as a vacuum until occupied by regions of greater source configuration, at which point it manifests its plenum potential to the degree that the matter occupying that space is able to sustain. Disturbances within this source give rise to matter in much the same way that otherwise indiscernible ocean waves, upon nearing the shore, steepen and break into visible whitewash.

No ontological distinction exists between the source of physical phenomena and their manifested substance, for any real strength attributed to matter derives from energy expressed through motion. That this is so is evident in the fact that even a block of tungsten, when supplied with sufficient thermal energy, will ultimately vaporize.

The source S is a universal still point. It is omnipresent and thus exists in stasis even in the absence of measurable field effects. Formerly, it was known as the aether—a name compelling to retain—but following the conceptual scarring inflicted upon theoretical physics by relativity, its tone was softened to medium. The source is both vacuum and plenum, for the field effects arising from its motion momentarily unveil its inner plenitude.

Thence, space is an emergent product of magnitude, expressed within matter whose sustenance is motion; intramolecular spin is thus “fed,” or powered, by the downward gravitational flow. Time, likewise, must be distinguished according to whether one is concerned with duration or eternity—a distinction not always observed in modern physics, and one that often breeds confusion.

If space and time do not constitute the fundamental fabric of the universe, then what does? The still-point already implicit within contemporary physical theory is inescapable: Ψ itself. Its configurational state is omnipresent in potentiality and stasis throughout the physical universe.

The correlations observed in E.P.R. experiments reflect that particles emerge from, and are sustained by, the same underlying field, the single point; synonymous with aether or the source S.

This single point is simultaneously everything and nothing, everywhere and nowhere. It manifests itself in varying degrees of everything and nothing simultaneously, its presence and absence modulated by the configuration density of surrounding matter and fields.

Instead of four fundamental forces and 13-17 fundamental force-carrying particles with tangible local quantum existence, these are all different locked vibrational states and force-expression modalities of a continuum of potentiality.

From the source's infolding motion arises the essence of substance: the graviton, whose magnitude, if discernible, is dwarfed by that of photons or quarks. These entities, in turn, are constituted by graviton flux under differing scalar conditions. Quarks, in particular, manifest upward or downward graviton flow depending on whether they occupy the Up or Down convention —a distinction that, until now, was merely a labeling convention, irrespective of their intrinsic nature.

All known elements are layered compounds built upon the fundamental hydrogen toroidal structure. What is commonly referred to as the "probability cloud" is, in fact, a plenum cloud—ubiquitous and ever-present—until locality is defined through measurement, the process of which itself inherently relies on emergent forces such as magnetism or light.

The configuration state of the source, and the intensity of its changes, gives rise to different fundamental scalar quantities. Its density gradients and "tangledness" produce both time—manifested as a slowing of processes—and space, expressed as the velocity and path solution along ΔS (the change of the source). In accordance with relativistic principles, paths curve toward regions where configuration change is optimized. Entropy is emergent. Fields are emergent. All particles, likewise, emerge from the Motion of the One Substance: the Graviton.

All matter is produced through hydrogen fission and fusion within stars. There is, therefore, a single fundamental source, substance, and spirit of the universe, which may be most simply and truly defined as Motion.