Nontheoretical Gravitation

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Abstract
All of gravity's elusive mysteries, including unification, effortlessly resolve by adopting the practical commonsense premise that subatomic particles condense out of the all-pervasive field of radiant electromagnetic energy that embodies the universe. This produces a commensurate decrease in the universal field's density immediately around emerging particles that diffuses inward exponentially because of a sphere's innate geometry that's bound to the inverse square law. This is what establishes a particle's, and the bodies they compose, gravity field. Runaway coalescing naturally ensues as they mechanically pursue equilibrium in the ever-decreasing density of their ever-merging fields.

Discussion
Something is never created from nothing. Particles don't just pop into existence out of nowhere. They condense into being out of the radiant electromagnetic energy that is the universe that expresses as an infinitely vast, all-pervasive universal field.

The universal field is everywhere. It extends indefinitely. If it could be separated from matter, it could be said to correspond to all (three-dimensional) space. It's continuous. Its continuity is unbreakable. And it can't be interrupted. But just like with any field, its intensity, which is density, can and does vary. None of this is the least bit controversial.
Few would also disagree that there's no such thing as matter per se. Subatomic particles aren't composed of any actual material. Nor do they have a surface. They're just small condensed spherical fields of radiant energy that have an increasing density that reaches some maximum concentration at their center. So there's no separation between what's defined as a particle, or the objects they comprise, and the field they originate from and now reside.


Because they're one and the same, every time a particle "spontaneously" congeals into existence this puts the entire universal field at further loss. The field's density decreases commensurate with the emerging particle's condensing. But that minuscule thinning isn't spread evenly throughout the entire universe. What's not taken up and drawn into the particle dissipates inward immediately around it, spherically, three-dimensionally.

Because of a sphere's innate three-dimensional geometry, the field's inward diffusion has to dissipate exponentially per the inverse square law. Whether the diffusion dissipates inward or outward doesn't matter. It's still bound to the exponential gradient inherent to spherical geometry.

It's the inward diffusion of the universal field's ambient electromagnetic energy that's not been drawn into the particle but remains outside it that defines its, and the bodies they compose, gravity field. It's the innate compounding of those gravity fields that causes their density to always be at their least directly between bodies, at their common center of mass, regardless of the distance.

Naturally compelled to seek equilibrium in the decreasing density of their compounding fields, all bodies from particles to galaxies are constantly pushed mechanically by the highest density toward the lowest, which causes their
relentless coalescing toward one another in the ever-decreasing density of their ever-combining fields. Runaway coalescing naturally ensues. This continues until enough material accumulates that the resultant pressure triggers fusion reactions that ultimately transmute every particle back into the electromagnetic radiation from which it arose.

At the scale of galaxies, gravity's inherent runaway nature produces an ever-increasing infall of ever-condensing material that ceaselessly coalesces inward toward a galaxy's common center of mass, not a black hole. They're a mathematical abstraction that's permanently relegated to the theoretical realm by their two-dimensional, funnel-shaped, nonexistent space that impossibly has objects "spaghettifying," not condensing spherically, as they endlessly fall toward infinity.

As material nears a galaxy's core, its exponential condensing collapses it back into the radiant/plasma energy it originated from and radiates back out. Or in well-developed spirals, it's spewed out in huge jets. Eventually it slows, cools, and reconstitutes back into ordinary matter that begins gravitating back to its or another nearby galaxy in a never-ending process of perpetual recycling.

Apparently, the universe has one singular overriding inexorable imperative: the ceaseless creation, ever-increasing condensing, and the eventual collapse of all matter back into its original state of pure radiant energy. See **Diagrams**, **Figures 1** (Inverse Square Law, Gravity), **2** (Fields), **3** (Gravitation), **4, 5, 6, 7** (The Shape of Gravitating Bodies 1, 2, 3, 4) beginning on the next page, and **Ancillary Diagrams, Figures 8** (Atoms), **9** (Neutrons & Isotopes), **10** (Ions) after the Bibliography.
A GRAVITATIONAL FIELD IS THE INVERSE OF AN ELECTROMAGNETIC FIELD

INVERSE SQUARE LAW, GRAVITY
GRAVITY’S DECREASING FORCE, \( g \propto \frac{1}{r^2} \)

Because the universal electromagnetic radiation that particles spawn from is continuous, inseparable, but varies in density like all fields, the leftover radiation surrounding them has to thin inward, diffusing spherically toward their centers, which defines their, or collectively the objects they compose, gravity field, depicted in section as the diffusing background.

The field's intensity, which is density, dissipates exponentially like any other field because of the inherent three-dimensional geometry of a sphere but in the opposite direction, inward, where \( D \) (the density at any given radius) = \( S \) (the originating density established by the object’s mass) \( \times 4\pi r^2 \) (the area of a sphere). At twice the distance from the center, it's four times as dense, producing a decreasing force that's \( 1/4g \). Three times the distance, it's nine times as dense, producing \( 1/9g \) force, and so on.

It's the compounding of gravity fields that causes gravitation. Their ever-increasing gradient pushes objects toward one another as they mechanically seek equilibrium, constantly pursuing the lowest density that always lies directly between them, or toward a common center of mass for multiple objects, which makes for their apparent attraction with a force that conforms to the inverse square law.

Despite its unbelievable simplicity, this is how gravity unifies with electromagnetism.

(7.3 Inverse Sq Gravity 11a)  

**Figure 1**
FIELDS

Gravitational and electromagnetic fields are one and the same. But gravity's diffuses inward while electromagnetic fields diffuse outward. When radiant energy spontaneously condenses into a subatomic particle, it draws together spherically in an omnidirectional manner, leaving the particle's remaining ambient radiation to dissipate inward toward its center. This inward diffusion, which defines its gravity field, still has to thin exponentially per the inverse square law (Density or Intensity $\propto 1/r^2$), like all fields, because of the inherent three-dimensional geometry of a sphere.

Imagine that it was possible to reach out in front of you with your hands and gather together some radiation and compressed it into a tight sphere of matter like you were forming a snowball. The leftover hollowed out region couldn't form a void as it would with the snow. The universal field that you gathered the radiation from would still remain because of its uninterruptible continuity. But it'd be thinning, diffusing inward exponentially, the opposite of an electromagnetic field. That's all a gravity field is.

Objects at all scales tend to coalesce because the density of the universal field between them is always less than anywhere else regardless of distance. Constantly pushed by the higher density toward the lower, this causes them to move toward one another with increasing velocity in what appears to be attraction when they're actually just mechanically seeking equilibrium.

It's tempting to represent buoyancy as analogous to gravitation. When underwater, the density beneath you is greater than above. That difference in gradient tends to push you upward or outward toward the surface with increasing velocity. The water's increasing density with depth is a product of the decreasing density of the Earth's gravity field. The decreasing density of a gravity field is a function of a sphere's inherent geometry that creates a pressure gradient that pushes downward or inward.

The opposite is true for electromagnetic fields. Their density diffuses outward. They increasingly repel outward closer to their center. So we could say they're positively charged. For gravity fields, their density diffuses inward. They increasingly push inward closer to their center. So we could say they're negatively charged. Despite their opposite effects, both fields manifest from the one universal field of radiant electromagnetic radiation. Its spherical exponential condensing into an electromagnetic field/particle leaves behind a gravity field, an ambient spherical region that diffuses inward exponentially.

The diffusing gray background represents a section view through the fields. The heavy dashed circles represent the same object omitted for clarity. The electromagnetic field is shown expanded because it's usually many magnitudes smaller than gravity's.

(27 Fields 7a)
GRAVITATION

Since space is the nothingness between objects and also wouldn't exist if it could express two-dimensionally as a curving plane, it cannot facilitate gravitation. But the radiant electromagnetic energy of the universal field that coincides with all space can.

Because its density varies but its continuity is impossible to disrupt, its density around particles, which condense out of it, has to decrease, creating a spherical region around them and the objects they compose that diffuses inward exponentially toward their centers because of the innate three-dimensional geometry of a sphere, which is bound to the inverse square law, represented in section by the diffusing background.

Because objects react to variations in field density and because the density of their combined fields is always less in between them, they're mechanically pushed toward one another as they naturally seek equilibrium, continually coalescing until they merge. Multiple objects coalesce asymmetrically depending on their mass, distance, and velocity. They begin spiraling in around a common center of mass that may oscillate for a limited number of objects but is nearly fixed for a large number like stars in a galaxy.

Since the decreasing density of an object's gravity field doesn't stop at its surface but continues on through to its center, an object's atoms and even their particles are compelled to condense. So they have to contract becoming more dense as they coalesce due to the ever-decreasing density of their combining fields, as portrayed in diagrams 1 - 4. When enough matter has been accumulated and the pressure becomes great enough, fusion reactions are triggered that begin converting them back into the uncondensed radiant state they originated from.

It's the practical application of simple three-dimensional geometry to our actual electromagnetic reality that naturally and completely unifies gravity and electromagnetism.
THE SHAPE OF GRAVITATING BODIES - 1
Gravitating bodies don't stretch or "spaghettify" in gravity fields. They condense, contracting in an omnidirectional manner, spherically, three-dimensionally, into ellipsoidal shapes that are slightly asymmetrical, similar to an egg, depicted by the dashed ovals, due to the exponential decrease in density of their compounded gravity fields throughout the other body, portrayed in section view by the diffusing background.

For simplicity, if we were to set the smaller body's diameter equal to the larger's radius and locate it three radiuses out then the larger's force of gravity, defined as 1g at its surface, would radially affect the smaller sweeping across its entire body, exponentially decreasing from 1/9g at its closest point to 1/16g at its farthest, causing the closest end to condense more. The smaller's gravity field would affect the larger in the same way but much less. This creates a slight asymmetry in their condensing that has the more condensed ends always point toward one another, or more precisely toward a common center of mass for any number of objects.

If the smaller body's orbit was decaying but with a slow orbital or rotation rate or none at all, the asymmetry of its deformation would remain the same while continuing to condense until they merged. For faster orbits and/or rotation where a stronger outward centrifugal force began to exceed gravity's inward condensing, the smaller body would begin to fragment and disperse. But that dispersion would begin first from its outermost point where the centrifugal force would be the greatest and gravity's compounded force would be at its weakest. We often see this with the fanned dust tails of comets that always diffuse to the outside of their elliptical orbits opposite the Sun.

An obvious example of a body's asymmetrical ellipsoidal deformation is the Moon's, and to a lesser degree the Sun's, affect on our oceans. Water's pliability causes them to distort more readily than the rocky crust below, which also makes their deformation easier to perceive. Their tides are simultaneously high both facing and opposite the Moon where they're slightly lower. But we still insist that high tides are the result of being "pulled" by the Moon's gravity, despite that we have no idea how gravity pulls on something and that there's nothing on the opposite side pulling those oceans into their high tide. They're mostly explained as the result of no pull, or sometimes more reasonably but still incorrectly, the result of the centrifugal force of the Earth-Moon system.
THE SHAPE OF GRAVITATING BODIES - 2
The gravity fields of gravitating bodies compound and diffuse exponentially through other bodies, causing them to condense into asymmetrical ellipsoids. This can be demonstrated numerically by plotting hypothetical values for their combined gravity around their surface.

First, we need to establish the relative gravity of the bodies by comparing their volumes. Assuming they’re both the same composition, if we set the larger’s radius at 1 (the unit of measure doesn’t matter), then its volume \( V = 4/3 \pi r^3 \) will be 4.19 \( (V = 4/3 \pi 1^3) \). For the smaller, shown in section view, whose radius is half of the larger’s, its volume is .524 \( (V = 4/3 \pi .5^3) \). So the smaller body’s volume will be about one eighth, .125 \( (.524/4.19) \), of the larger’s. That’s the ratio we’ll use for their relative gravity, the larger 1g, the smaller .125g.

So at 3 radii out where the bodies are closest, the larger’s gravity \( (1/r^3) \) will be .111g \( (1/3^3 \text{ or } 1/9g) \). Because gravity fields compound, we’ll add that to the smaller’s gravity at its surface, which will always be the same .125g. So the total gravity at their closest point is .236g \( (.111g + .125g) \).

At 3.25 radii out, the larger’s gravity decreases to .095g \( (1/3.25^3 \text{ or } 1/10.56g) \). At each radius distance, it will be the same value everywhere, spherically, perpendicular to its radiant and everywhere through the smaller body inwardly where that sphere slices through it two-dimensionally. The smaller’s total gravity is still .125g at its surface where we’re charting gravity’s effect. So we’ll add that .125g to the larger’s .095g to get a total of .220g that will apply everywhere around the smaller’s exterior at the 3.25 radius distance.

At 3.5 radii, the larger’s gravity diffuses to .082g \( (1/12.25g) \). Added to the smaller’s .125g, we get .207g at about its midpoint all the way around its exterior. At 3.75 radii, it’s weakened to .071g \( (1/14.06g) \). We’ll add that to the smaller’s .125g to get a total of .196g at about its three-quarter point all the way around.

At 4 radii, the smaller’s farthest end, the larger’s gravity has diminished to .063g \( (1/16g) \). So the total is .188g \( (.063g + .125g) \). Note the difference from its closest end, .236g. The overall gravity is much higher. This is why bodies with faster rotation and/or orbital velocities where the centrifugal’s outward dispersal is higher than gravity’s inward condensing always begin to fragment from their outermost point first.

This simple numerical approximation of gravity’s compounding conceptually shows how its exponential diffusing throughout gravitating bodies distorts them into asymmetrical ellipsoids that begin to lose material from their outside first when subject to high enough centrifugal forces.

(11.2 Shape 9a)
THE SHAPE OF GRAVITATING BODIES - 3

By numerically charting gravity's hypothetical increase on infalling gravitating bodies, we can demonstrate how they're not pulled out of shape toward the one another by an attractive force, but will always distort into an asymmetrical ellipsoidal shape while further condensing as they migrate inward due to the compounding of the exponentially decreasing density of their gravity fields, still represented by the diffusing background.

Gravity doesn't attract. It doesn't pull on massive bodies. They're constantly pushed toward one another as a matter of course by the higher density of their compounding gravity fields that has them naturally pursuing equilibrium, continuously seeking the lowest density that's always located in between them at their common center of mass.

If we approximate gravity's compounding at the closer distance of 2 radiuses the same way we did at the 3 radius distance and compare the results, we can quickly see the effect of gravity's compounded diffusion: more asymmetrical ellipsoidal condensing with increasing distortion. No stretching. No spaghettiifying.

Because of the innate compounding of gravity's exponential diffusion, continual runaway condensing has to apply to all gravitating bodies no matter their size, mass, distance, or extreme their conditions until they merge or the ever-decreasing density of their compounding gravity fields creates enough pressure to trigger fusion reactions that convert them back into the radiant energy they originated from in a perpetual never-ending cycle of reprocessing.

(11.3 Shape 9a)
THE SHAPE OF GRAVITATING BODIES - 4

1. A comet that was theoretically uniform and pliable would assume the shape of an asymmetrical ellipsoid oriented with its smaller more pointed end always facing the Sun due to the compounding of its and the Sun's gravity field, portrayed in section view as the diffusing background. Its ongoing condensing in the exponentially decreasing density of the Sun's gravity field at first gently squeezes out its gas, mostly hydrogen, to form its coma, that may or may not have been evaporated/sublimated from internal material by the intensifying pressure and heat from its increasing compression. The Sun's radiant energy then begins to ionize the gas and blow it straight back to form the comet's plasma tail.

2. As its condensing continues, the gas is sometimes seen jetting out at high velocities, confirming its internal origin that's more likely caused by pressure originating from its increasing condensing than external heat from increasing sunlight.

3. The comet's increasing condensing also increases its rate of rotation, indicated by the increasing length of the radiused arrows. When its outward acting rotational and orbital centrifugal forces begin to exceed gravity's inward acting condensing, its material begins to dislodge, fall away, and disperse into an arcing fan shape to form its dust tail. This always occurs from the comet's backside opposite the Sun where the combined centrifugal forces are the strongest and gravity's condensing is the weakest.

4. The comet's coma along with its plasma and dust tails continue to increase until it reaches its closest point to the Sun, perihelion, where its condensing and centrifugal forces and the Sun's radiant energy are all at their maximum.

5. As it begins to leave the Sun's vicinity, the now increasing density of the Sun's gravity field begins to reverse the comet's condensing that in turn slows its rate of rotation. Together with its slowing orbital velocity, its rotational and orbital centrifugal forces weaken, curbing its loss of material, which reduces the size of its dust tail.

6. As it continues to move farther away, solar wind and radiation also diminish, reducing the size of its plasma tail as well.

7. The comet's condensing continues to ease all the way to its aphelion, its farthest point from the Sun, where the pressure from its compression that produces the outgassing that forms its coma is at its weakest.

(11.4 Shape 9a)
Conclusion
The problem of gravity solves itself. It unifies in the most natural way by simply recognizing that subatomic particles innately spawn from and condense out of the radiant electromagnetic energy that comprises the universe's intrinsic field. This creates a commensurate deficit in its density immediately around every particle, spherically, three-dimensionally, that has to diffuse inward exponentially because of the inherent geometry of a sphere. This is how gravity fields are established for individual particles and the bodies they compose. From this practical self-evident understanding all else falls neatly into place.

Coda
The reason gravitation has been so difficult begins with our assumptions about space. It is not something. By definition, it's the nothingness between objects. So there's nothing there to curve (or to expand, or stretch, or cause light's redshift from stretching). We then try to meld that nonexistent space with a nonexistent time into an inconceivable four-dimensional "spacetime." Time also does not exist. It's only the periodic motion of an object we select, like the Earth's rotation and orbit or the cesium atoms of an atomic clock, that we use as a reference. It's not an inherent property of the universe.

Then we try to make that purely theoretical four-dimensional abstraction curve two-dimensionally as a nonexistent plane. A plane by definition doesn't exist either. Its two-dimensionality can only define a location that's planar. Curvature is a property limited to one or two dimensions. In three dimensions, any change in a substance can only occur as a variation in its density. Conceptually, it cannot curve.

We then have that two-dimensional nonexistent curving plane of four-dimensional nonexistent inconceivable spacetime somehow dent underneath three-dimensional massive bodies as if they were affected by the pull of the gravity of a much more massive body positioned underneath them. The denting
then somehow induces their attraction by somehow causing them to roll downhill toward one another, despite not actually rolling or being uphill. Which if it were actually possible, would be a mechanical reaction that acts instantaneously.

All of this conflicted nonsense is at odds with more unfeasible dogma that has gravity propagated by a force similar to electromagnetism that somehow pulls bodies together, acting at the speed of light via waves. But at the same time, that attraction is also somehow mitigated by unobservable massless graviton particles that somehow exist physically without mass. Which if they actually were particles, wouldn't be able to act at the speed of light either. They'd relativistically become infinite.

None of what we consider orthodox has any chance of actually working in our real nontheoretical universe of three actual dimensions.

**Bibliography**


**Declarations**

The author certifies that he did not receive any funding, grants, or any type of support from any individual or organization in the connection with the study or preparation of this work. The author further certifies that he does not have any financial or competing interests in connection with this work or ties of any kind to any individual or organization that might.

**Ancillary Diagrams** (Beginning on next page)
ATOMS
Protons should not be considered tiny physical particles within an electromagnetic field but as the field itself. There’s no surface where the field stops and matter begins. The field becomes progressively more dense until it peaks at its center, represented in section view by the darker diffused circle in 1 & 3. But because that proton field has condensed out of the universal field of electromagnetic radiation, the ambient radiation not drawn into the proton has to decrease in density around it diffusing exponentially like any field because of the geometry of a sphere.

But its diffusion disperses inward not outward, which defines its gravity field, depicted in section by the diffusing background in 1 & 3. Because the decreasing density of a proton’s gravity field is larger than the increasing density of its electromagnetic field, the gravity field’s compounding with the fields of other particles tends to push them together as they naturally pursue equilibrium, mechanically seeking the lowest density that always lies directly between them. So protons should actually be considered negatively charged.

Convention has protons positive charged and electrons negative. Apparently, this has been mostly an arbitrary designation. But it doesn’t correspond to physical reality. It’s one of the reasons why gravitation and electromagnetism are not recognized as the same effect.

Electrons should also be considered as having condensed out of the universal field. Its charge is considered equal to that of a proton. But its mass is 1/18337th as much. So it yields a much smaller gravity field, indicated by the small white dashed circle. For graphic clarity, it’s shown proportionally much larger than it would actually be. Being that the decreasing density of its gravity field is smaller than the increasing density of its electromagnetic field, it has a repulsive effect that when compounded with the fields of other electrons tends to push them away. So in reality it’s positively charged. With the electromagnetic field of the electron still smaller than the gravity field of the proton, the compounding of their fields still pushes them toward one another.

An atom’s electrons should not be envisioned as small objects that rapidly orbit the nucleus as always portrayed. They’re more accurately conceived as having been pressed down and smeared out all over and around the entire nucleus, spherically, three-dimensionally, by the decreasing density of the universal field enveloping it, the atom’s gravity field. It’s compressed to a level where the repulsive effects of all the fields balance out and find equilibrium, as is implied in the section view through a hydrogen atom that has only one electron and one proton.

You still have to ask, though, what is it that initiates the particle’s condensing out of the universal field.

(18.1 Atom 7a)
NEUTRONS & ISOTOPES
A neutron can be considered a merging of a proton and an electron. The compounding of their two electromagnetic fields and their two gravity fields are theoretically balanced to yield no charge, that is if it could stand alone. Its neutral charge suggests that the electromagnetic fields of protons and electrons are half as strong as their combined gravitational fields.

For numerical convenience, if we assume the strength of a proton's gravity field is (-1), negative because of the field's decreasing density, and we know that an electron's is 1/1837th of that (-.00054) then their electromagnetic fields would have to be half of (-1) + (-.00054) or (+.50027), positive because of its increasing density. So a proton's relative charge would be its gravity field (-1) plus its electromagnetic field (+.50027) or (-.49973). And an electron's relative charge would be its gravity field (-.00054) plus its electromagnetic field (+.50027) or (+.49973).

Neutrons usually only exist, though, through the initial pairing of two protons, located at P. The compounding of the decreasing density of their fields, (-.49973) + (-.49973) or (-.99946), first draws them together mechanically as they naturally seek equilibrium. Then the even higher decrease in density of their combined fields draws in and tightly holds an electron, which is positively charged (+.49973), located at E, to create, or define, a neutron, located at N. It's likely that the electron may move back and forth between protons or at times envelop both at once. But the three together still have a negative charge, or a field of decreasing density of (-.49973), that can draw in another electron (+.49973), located at E, to achieve a balanced state, in this case deuterium an isotope of hydrogen.

The actual distance to the electron would be over 60,000 times the radius of the nucleus. At the scale depicted that would put it more than 100 yds away. The important principle that's trying to be conveyed here is that it's the sequence in which the particles assemble, which is facilitated by the relative densities or actual charge of their fields, that is responsible for the creation of a neutron. Otherwise, you'd just end up with a hydrogen atom.

Figure 9
IONS
The actual charge of an ion is also opposite of convention. If we begin with a ground state helium atom, shown theoretically in a section view through its center, the electromagnetic and gravity fields of its two protons, located at P, and two electrons, at E, balance to neutralize its charge. Its neutrons, at N, already a combination of an electron and proton, remain neutral.

If one of the electrons is removed, as depicted in section view in 2, the density of its combined fields would be decreased where its relative charge, as calculated in the previous diagram, would be (-.49973), where its gravity fields dominate, which would tend to draw in other particles, making its charge negative.

If an electron were added, as represented in section view in 3, the density of its combined fields would be increased. Its relative charge would be (+.49973), where its electromagnetic fields dominate, which would tend to push away other particles, making its charge positive.

A decreasing density in the universal field, a gravity field, is a negative charge that tends to push inward. The increasing field density of a particle’s electromagnetic field is a positive charge that tends to push outward. It’s the inherent repulsive nature of a particle’s, or any object’s, electromagnetic field that mechanically causes them to seek equilibrium in the universal field that innately decreases in density around every particle, or object. Their reactive search for the lowest density in their combined fields that always lies directly them, or toward a common center of mass for multiple objects, causes them to move toward one another in an apparent attraction. It’s the same repulsive effect of their interacting fields that pushes or holds them apart when they attain equilibrium.

Protons and neutrons and electrons are not bound together or repelled by imaginary strong and weak nuclear forces that are magically transmitted by unseen massless particles. Gravitation resulting from electromagnetism is simply governing all their interactions.

(18.3 Atom 7a)

Figure 10