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Gravity Repulsion

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ABSTRACT

This article considers the consequences of viewing gravity as a repulsive force rather than attractive. It turns out that viewing gravity as repulsion leads to the explanation of some mysteries of the physical universe. Because of symmetry viewing gravity as either repulsion or attraction leaves most mathematical formulations relative to forces undisturbed for the most part. Examining how the universe behaves from the standpoint of gravity being repulsive is the substance of this article.

The main conjecture made in this article is that the universe began with a centrifugal type force that is what we experience as a gravitational force throughout the universe. In essence, the initial big bang started with an explosion that resulted in gravity as the mother of the other three natural forces. We conjecture that orientation restrictions on adjacency of quantum particles in conjunction with the Pauli exclusion principle and repulsive gravity interact to determine much of the character of possible stable atom configurations. Check reference (1) to understand fully the restrictions placed on the adjacency of particles by orientation.

The quest to unify the forces of nature has been the objective of several prominent physicists presently and historically. Einstein spent a good portion of his later years in quest of a unified field theory. The traditional approach of reasoning with mathematical equations has had the effect of isolating natural forces from their origins that is conjectured in this article to be gravitational repulsion beginning with the big bang. Most physicists recognize that the answer to finding a unified field theory lies in understanding the earliest moments of the big bang assuming one actually occurred. Stephen Hawking is one of the most famous physicists who devoted an effort to investigating the early moments of the big bang. This article in no way wishes to undo the great works of many physicists who have succeeded in achieving a degree of understanding in the way the strong, weak, and EMF forces individually work. This article attempts to explain where gravity fits in as a force within the physics of the universe as a unifying overall force.

So, what must have happened that started the ball rolling that is our universe, if we assume it began with a big bang. Given that the universe started with a big bang we can be sure that matter formed with diversity or there would not be the universe that we now have. Also, it is a certainty that orientation played a major role in the formation of the early universe. By orientation it is meant the existence of at least one coordinate system that agrees with the unknown dimensionality of the universe.

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One of the most memorable attempts to invalidate the proof of the Four Color Theorem was done by a professor from a major university who was also involved in attempting to fix the computer proof of the Four Color Problem. He ignored the definition of hyper spatiality leading him to believe that the proof of the 2N Color Theorem was contradicted by twisting parallelepipeds into contact with each other so that each parallelepiped interfaces with each other. Such a three dimensional configuration would clearly need N colors to be colored so that no two adjacent ones have the same color. The answer to his objection was easily addressed, because the definition of hyper spatiality precludes twisting of space in the way suggested.

Finding a standard proof solution to the Four Color Problem led to its generalization that is called the 2N Color Theorem in [1]. The standard proof for four colors was found by the author to generalize to N dimensions. The significance of the 2N Color Theorem is that it gives clear meaning to rotation in N dimensions. Possibly even more important the 2N Color Theorem places restrictions on the structural make-up of particles like atoms, protons, neutrons, and so forth.

If we conjecture that the universe began with a big bang then we have to conclude that matter took form in the very early stages of the expansion of the universe. Rotation would be at the heart of the expansion in the sense that rotation gives rise to centrifugal forces acting on the chunks and particles of matter formed everywhere in the explosive expansion. We conjecture that the resultant totality of all repulsive gravitational centrifugal forces is what we experience as gravity in our universe.

All stable and unstable forms of matter are manifestations of the original big bang. Such manifestations of matter in our universe we conjecture are subject to gravity and structural restrictions determined by the 2N Color Theorem. It is the mutual repulsive gravity forces between physical matter that gives both stability and instability in the behavior of matter. For example, when the repulsion force of gravity from a star is sufficiently less than the gravity repulsion of the matter making up the rest of the universe, then the star might collapse and become a black hole or possibly a dwarf star.

Now let us return to the notion of rotation. Rotation can be viewed N dimensionally. When the universe formed from a pure mass of energy the gravity repulsion from the center of the condensed energy mass caused the universe to explode and expand. The condensed energy mass at explosion likely began by rotating at the instant of the big bang resulting in rotations of the individual pieces caused by the explosion and expansion.

Without rotational movements the universe as we know it could not exist. Rotation is fundamental to our physical universe. When any missile is projected what happens normally? It rotates. A perfect knuckle ball thrown by a baseball pitcher would have no rotation whatsoever relative to any convenient coordinate system. Perfect knuckle balls could occur, but are highly unlikely. So, we are wise to conjecture that the original universe exploded into rotational type movements of chunks of matter as well as its own rotation before it began to expand. Still, there is a probability that some matter entities participating in the expansion and explosion were perfect knuckleballs or at least near perfect knuckleballs.

There is a probability that repulsive force of initial gravity may have simply projected some stable matter entities in such a way that no rotation was imparted. It would depend on whether the repulsive force of gravity made a perfect hit on the center of mass of the matter entity or not. Particles like the neutrino would seem to be great candidates for the role of matter entities that are projected as a result of the big bang without having any or at least very minimal rotation relative to any coordinate system of orientation assigned to the N dimensional universe. We know that neutrinos react very weakly with gravity. No doubt the repulsive gravity of any neutrino is close to nil. The repulsive gravity of its external universe acting on any neutrino must be almost large enough in proportion to the repulsion gravity of the neutrino itself to create a mini-black hole rather than the neutrino. One might surmise that were the neutrino to have absolutely no rotation whatsoever then the universe would have a totally different character where no life could exist due to the constant bombarding of trillions of mini-black holes. So, the neutrino offering almost no repulsive gravity of its own can go about its business somewhat independent of gravity floating through lead walls and any other material.

The gravity repulsion of a neutrino is essentially overwhelmed by the vector sum of gravity of most anything in its locale whether it is lead, a human body, or whatever. It is believed that up to 50 trillion neutrinos pass through the average human body each second. The neutrino seems to have virtually no control over its movements dictated by the overwhelming repulsions of gravity imparted to it by most everything near it. One would imagine that lead atoms simply push the neutrino away making it easy for the neutrino to go right through walls of lead. Viewing the neutrino would lead one to believe that the neutrino was unaffected by gravity. In reality, the conjecture that gravity is repulsive would tend to say exactly the opposite of how the neutrino actually reacts to gravity. The neutrino is simply repulsed by the gravity of the matter around it. The neutrino would only appear to be unaffected by gravity of adjacent matter. In truth, it is totally at the mercy of all gravity surrounding it, if the conjecture of this article is true.

What other effects does viewing gravity as repulsion have on what we already know about our universe? I.e. what do we know about our universe that can be explained viewing gravity as repulsion? Several mysteries in physics can be resolved assuming gravity is repulsion. For example, there has never been a satisfactory answer to the questions: Why is the universe expanding? Why has it not reached a steady state where there is no expansion or contraction? Why is every electron a perfect clone of other electrons in its neighborhood? Why are most molecules and atoms stable and essentially identical? Why do most atoms and other particles just fall apart spontaneously on occasion? I.e. why are chunks of physical matter stable for the most part?

Gravity being the mother of all natural forces makes sense, assuming gravity is repulsive. Particles like the electron were born in the early stages of the expansion of the universe from the big bang. In any given neighborhood we can assume that the gravitational repulsive force of individual like particles versus the gravitational repulsive forces of the external universe to any given like particle is in exactly the same stable equilibrium making like particles indistinguishable. Small wonder that comparing proximal particles results in concluding that they are essentially clones. However, were one to compare an electron on planet earth with one at the edge of the expansion of the universe, then the electrons might appear somewhat unalike because of the difference in the strength of external and internal gravity repulsive forces near the boundary of the universe compared with the interior of the universe.

We know that the universe is expanding due to astronomers routinely measuring a red shift at all points outside of our planet

relative to our galaxy. I.e. everything seems to be moving away from us. At the outer edge of the universe repulsive gravity from the internal gravitational repulsions is forcing the boundary of the universe to expand because its repulsive gravitational force is much weaker than the internal resultant gravitational repulsion of the inner universe.

What about the variety of stable particles? How are they determined by gravity repulsion? The answer to this question would seem to be that shortly after the big bang occurred many different stable formations occurred subject to the strong, weak and EMF forces. Some became atoms. The structure of atoms and other particles would then be determined by orientation (2N Color Theorem), internal gravity repulsions and other factors, such as, the Pauli exclusionary principle. No doubt that if this article is correct in its conjecture, then there will be formulated mathematical equations which take into account the repulsions of the components of the atoms relative to the repulsion of the outside universe that goes to the heart of the issues of stability and instability of particles.

The conjecture of this article leads to some very interesting possibilities. Gravity viewed as repulsion rather than attraction explains several mysteries of the universe. The notion of N dimensional rotational movement as the source of gravity found in nature seems reasonable because rotation resulting in centrifugal force is a fundamental action that can be applied to any entity of matter. The universe is a physical reality. It is not an equation.

Still, equations help understand why the universe behaves in certain ways when viewed as a metaphor for physical reality. After all, nothing is more descriptive of physical reality than itself. The conjecture of this article leads to viewing all forces as they relate to one another springing forth from basic repulsive centrifugal gravitational forces starting with the onset of the big bang. The basic force of repulsive gravity explains why atoms are held together as almost replicas of one another tightly by nuclear forces along with gravitational repulsion and orientation restrictions determined by the 2N Color and other factors like the Pauli exclusionary principle.

Internal repulsive gravities within the atom along with the external repulsive gravity of the universe and nuclear forces result in stable atoms, in general. Clearly, the vector sum of the universe's external repulsive gravity must equal the resultant repulsive gravity of the configuration of any given atom for the atom to maintain in a relatively stable state. Generally, it is likely that stability is a result of innate gravitational forces internally and externally operating on matter. We can surmise that the instability and stability of many types of matter is a result of the vector sum of repulsive gravity forces both internal and external. If the vector sum of all gravitational forces acting on an entity of matter is non-zero, then instability would ensue with a tendency to reach a state of equilibrium that is stable. Thus we have radioactive atoms that exude various quantum particles in attempting to attain stable equilibrium. It is possible that the internal and external forces of gravity result in the instability we know as radioactivity.

There is one final mystery that may have an explanation using the repulsion theory of gravity. There exist experiments in bubble chambers that indicate that it is possible to tweak a specific particle in a way that causes another particle to react to the tweaking despite being separated by distance. This would tend to say that it is possible to overcome the speed of light as a fixed constant. In fact, it would tend to say that it is possible to attain an infinite velocity assuming that the particle tweaked conveys a force on the sister particle that reacts to it despite being at a distance. According to the repulsion theory of gravity all particles affect all other particles through the natural force of repulsive gravity that permeates the universe and keeps it essentially in a state of stable equilibrium. This would mean that there is no need to have any direct contact with a particle to affect its behavior. The universe connects by the basic force of repulsive gravity. Separation of matter is an illusion.

Einstein's general theory predicted that light would be affected by gravity. To establish the accuracy of the prediction Sir Arthur Eddington performed an experiment that could only be done during a syzygy. The point of the experiment was to prove that light would be affected by the gravitational field of the sun during the syzygy. A star behind the sun sent rays of light during the syzygy. If light was affected by gravity physicists believed that the star's light would pass through the Sun's periphery and show a deflection. The deflection occurred making the star look like it was coming to Sir Arthur from a totally different location than where it actually was before the syzygy. Physicists were convinced that the deflected angle was very close to what Einstein's general theory of relativity predicted. What the world of physics did not realize was that the experiment proved more than light being affected by the Sun's gravitational field. It proved that gravity is a repulsive force and not an attractive one. Were it true that gravity is an attractive force then likely the attraction of the sun would have attracted the light waves of the hidden star into the Sun. In that case, the star's light waves would not have been seen by Sir Arthur Eddington [2-6].

Conclusion

This is a seminal article that is exploring a possible explanation for why physicists have never been able to build a unified field theory that encompasses all natural forces. Gravity has always been the problem of the four natural forces. No one has ever questioned that gravity is an attractive force. However, the Eddington experiment suggests strongly that gravity is repulsive. And being repulsive we can easily see that gravity is the force that everything in the universe exerts on everything else. In essence, the universe is connected by gravity. Every physical entity interacts with the repulsive forces of all of the physical matter in its exterior. Gravity is very likely a different type of force that possibly cannot be reconciled in the same way as the other natural forces but still interacts with them in a way that creates a stable universe. It is hoped that this article will stimulate an army of physicists to explore whether the conjecture of this article is correct. It may also be possible to disprove this conjecture through experimentation. The author leaves it as an open question for future generations to decide.

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