Mathematics, Physics and Nature

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Abstract

Mathematics and physics as sciences are human inventions containing many more or less fortunate discoveries. Contemporary research on common grounds of mathematics and physics is highly evolved and requires years of work to master even its elementary methods, knowledge and skills. Very accurate theories for the very small and the very large have been developed over the decades but we still haven't managed to combine those theories. Is that necessary or even possible? Is there something underneath those theories what we have missed so far? Why mathematical theories in physics are so powerful? Following story is about an idea which potentially gives us a new perspective to Nature, physics and mathematics.

The Story

We haven't discovered the True Nature yet. Even though QM works in its domain it doesn't mean that it's the ultimate truth. Most likely there is a layer, or perhaps many layers, under it. Layer underneath QM might include for example realism and point like particles could be concrete, physical, spinning spherical objects. Naturally we can't observe the spinning phenomenon directly, only its consequences would be obvious, for example gravitational and EM interactions. Wait a minute, that's a pure crack pottery! Actually it might be that it's not… Theory of Everything by Illusion (TOEBI) (Rouvari, Introduction to Theory of Everything by Illusion) is based on hypotheses which state that particles are indeed concrete, physical, spinning spherical objects with defined spinning vector and they do possess this property all the time.

Given hypotheses provide a physical platform which enables different interactions. Force Transfer Ether Particles (FTEPs), physically smaller than photons, create the "sea" of FTEPs (ether, FTE) which has very much classical properties, e.g. FTE density (FTEPs per volume). Spinning particles generate dynamic FTEP systems around themselves. Spinning axis poles experience inwards FTEP flux which spreads around the particle at the rate induced by the particle's spinning frequency. Sounds awfully childish and simple, however, Nature doesn't care about our opinions.

Gravitational Interaction

Simplest scenario is the gravitational interaction which gets weaker and weaker when the distance between the centers of the masses increases, following the inverse square law. Why is that? Due to geometry you say. That's right, but how come? The explanation, according to TOEBI, is that particles are

capable of "holding" FTEPs around themselves, phenomenon which is very much linked to the concept of particle mass. Particles of a gravitating object create local FTE environment with certain properties, e.g. FTE density. Naturally, by putting more and more spinning particles inside a finite volume increases volume's and its surroundings' FTE density. Due to geometric, FTE density obeys previously mentioned inverse square law.

What causes particles' acceleration towards the center of gravitating object? Intuitively it should be harder for particles to penetrate into denser FTE and perhaps particles should be rejected away from the denser FTE. The trick is the minuscule FTE density difference experienced by particle between the side facing the center of gravitating object and the opposite side.

FTE density difference affects the FTEP dynamics surrounding spinning particle. Side facing the higher FTE density automatically redistributes lesser amount of the incoming FTEPs (from the spinning axis poles). Now incoming FTEPs flow and spread more freely to everywhere else compared to the side facing the higher FTE density and this physical, concrete, mechanism pushes the particle towards the larger mass (higher FTE density).

EM Interaction

The same mechanism applies, albeit in much greater magnitude, when two spinning particles interact. Particle's outward FTEP fluxes have the handedness induced by particle's spinning motion. Let's say that we have two spinning particles and their spinning vectors are parallel and fixed. Due to flux handedness when the spinning vectors are parallel FTEPs accumulate into the path between the two particles; hence generate much higher FTE density on the side facing the other particle. As described earlier, higher FTE density attracts particles and due to the great FTE density difference the experienced attraction is very powerful.

Let's say that those spinning vector orientations are still fixed but this time antiparallel. What happens in the space between the particles? Now, due to FTEP flux handedness, there won't be any accumulation of FTEPs in between the particles, quite the contrary, combined FTEP fluxes reduces the FTE density in the path between the particles, hence the higher FTE density is located on the opposite side than in the case of parallel spinning vectors, and therefore the particles experience repulsive force. Closer the particles are to each other more powerful the interaction.

Particles without fixed spinning vectors behave differently, they react to a FTEP flux and its handedness originated from another particle by changing their spinning vector orientations antiparallel. Outcome from such a spinning vector orientation configuration is automatically the repulsive force, like observed between free electrons. Things get even more interesting if we study the behavior of spinning particle in a magnetic field generated by atoms' unpaired electrons or by electric current. In both cases the cause for the magnetic field is the underlying unpaired electrons' spinning vector orientation pattern (Rouvari, Introduction to Theory of Everything by Illusion).

Spinning particle in a magnetic field experiences a huge amount of differently oriented FTEP fluxes and it reacts to them by changing its spinning vector orientation constantly (Larmor frequency). At this point we should realize that the underlying spinning phenomenon affects everything and it has this important property, frequency which is a combination of physical phenomenon and mathematics. Just like TOEBI hypothesis stating that particles are spherical objects, again, a physical phenomenon combined with mathematics.

Atoms and Other Particles

Atoms consist of other particles, e.g. protons, neutrons and electrons. According to TOEBI, protons and neutrons consist of electrons, no need for quarks (Rouvari, Atom Model and Relativity, 2014). Quark masses are due to high energy collision and eventually quarks decay. Same applies with many other heavier particles, they decay into lighter particles and most of the time those particles include electron and/or positron.

According to TOEBI, also positron is plain vanilla electron (Rouvari, Antimatter, 2014). Luckily particle annihilation processes happen in rare circumstances, usually only when particles' spinning vectors collide head-on and have the opposite spinning directions. It might be that only Fermilab has such a technology that its accelerator can produce a narrow proton beam with highly polarized transverse spin. In principle, with two such beams (with anti-parallel spins) we could produce proton annihilations. Currently Fermilab uses only one such beam for studying the effect of spin in various collisions.

Electrons and protons are attracted towards each other and, according to TOEBI, protons are made of three electrons, so how come they experience attractive force when electrons normally experience repulsive force? The reason for attractive force is proton's three bound electrons. Single electron generates certain FTEP flux pattern and handedness around itself and this phenomenon leads (as described earlier) to the repulsive force between two free electrons, however, three electrons constructing proton don't generate such a FTEP flux pattern, hence electron and proton are able to experience attractive force through the same mechanism as described in the gravitational interaction section.

What prevents orbiting electron from crashing into nucleus? Simply put the surrounding FTE density. At some point, FTE density between the proton and the electron reaches the level where the electron can't physically advance towards the nucleus anymore. Same phenomenon happens in case of paired electrons in atom because the nearby nucleus destroys the normal electron FTEP flux pattern behind the electron-electron repulsion.

Time and Relativity

What is time? According to TOEBI, time emerges from the property how fast particle is able to change its position. For living things, chemical reactions (based on particle interactions) and their rates makes the difference, therefore measuring the elementary particle's position changing rates makes sense. Currently we do measure the rate of time for example with (Cesium) atomic clocks. Certain amount of the energy level changes constitutes one second, faster the energy level changing occurs faster out time ticks.

If we look at the energy level changing phenomenon through TOEBI glasses we can see something quite breathtaking… FTE density once again enters the stage. Gravitating source provides the surrounding FTE density for particles and higher FTE density induces also higher subatomic FTE density because particles' outward FTEP flux can't spread around as easily as in lower FTE density. What does this mean for spinning electrons orbiting nucleus? It takes longer time for unpaired electron to move (spin through) into another energy level, simply because it has more FTEPs on its way.

Also by moving our atomic clock in some FTE environment we induce subatomic FTE density increase. More detailed information is available from referenced paper (Rouvari, Atom Model and Relativity, 2014).

Conclusion

There might be a physical mechanism underlying QM and relativity theories, larger spinning particles in the sea of smaller particles (FTE). TOEBI gives an alternative description of Nature and the root level explanation why mathematics and physics are so linked to each other in so many levels.

If, for some reason, TOEBI turns out to be the theory of everything, it comes with the package. Although we would gain much deeper understanding of Nature we would also reach a new technological level which includes antimatter utilization. I'm not sure if we are ready for it but that's another story.

Thank you.

TOEBI blog

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