

" IN SEARCH OF THE GOD PARTICLE"**January 11, 2009****Rev. Holly Baylies**

' The Twi-loans were a highly intelligent race who immigrated to earth from Twilo. They looked like us, shared our language but had one unusual defect. They could not see in black and white. Twi-loans could not see zebras, or skunks, funeral directors, priests, pandas, NFL referees, or soccer balls.'

The Twiloans are the creation of Leon Lederman, a world-renowned Physicist and Nobel Prize winner who introduced these aliens in his scholarly, thoughtful but wonderfully funny book "The God Particle."

Dr. Lederman writes:

' To give the Twi-loans a taste of our culture, they are invited to a World Cup Soccer match. We don't know that they can't see the ball,' (for one cannot describe or explain or even be aware of anything that has never been a part of our sensory experience until it is pointed out. Even then it is not always evident or understood.) So the Twiloans settle into the VIP box with their earthly hosts and are very soon totally befuddled by what is happening.

Contrary to our understanding of the game, what they see is a bunch of players in shorts racing around the field crashing into each other, arms and legs flailing in the air, whistles blow, players stop and start and occasionally the goalie flings himself at the ground and a great cheer goes up. The Twi-loans cannot understand what is happening and deduce that they are definitely missing something and begin to try and piece together the omitted factor.

In their attempt to understand what is going on, they make note of the actions of the players and compose maps, charts and formulas and deduce from their calculations, a complicated set of rules, all of which still do not explain the strange movements of the teams and what it is, specifically, that is causing the motion of the players in the first place.

One young Twi-loan who has carefully watched the actions of the players finally speaks up after noticing a repeated bulge in the back of the goalie's net every time the crowd cheers. Pondering his observation he interjects "What if, there was an invisible ball?" The others continue to argue and to concur that the empirical evidence is weak, but it is a good probability.

Once the concept of a ball is added to the gyrations and patterns of the players on the field the game begins to make sense.'

Eventually, the Twi-loans, once accustomed to the repetition of the plays and the moves, which led to a bulge in the net, concluded that there was indeed, a ball in place and finally accepted the existence of that ball as the missing piece that influenced the action of the whole game. When they were able to visualize it clearly right in front of them, even if it was invisible and only in the mind's eye, it made the game far easier to follow.

Therefore, once the ball is added to the activity on the field, the assumed existence and placement of ball then gives Meaning to the Rules!

This simple analogy, the search for the existence of the so called missing link, is the one piece of evidence physicists are hunting for that would give meaning to the rules that created the mass that became our universe. It is known as the Higgs Boson Theory. In 1964, Peter Higgs, a scientist in Edinburgh, Scotland, proposed a theory that the existence of a single particle is responsible for imparting mass to all things — a speck so precious it has come to be known as the "God particle." The scientific term for it is the Higgs boson, and to find it physicists are counting on the most powerful particle accelerator ever constructed: the Large Hadron Collider (LHC) at the CERN laboratory in Geneva, Switzerland, a 17-mile underground circuit that took 25 years to plan and \$6 billion to build.

The function of this massive collider is to try and re create the conditions just after the Big Bang, by generating two beams of subatomic particles traveling in opposite directions inside the circular accelerator, gaining energy with every lap, and colliding the beams head-on at very high energy level, in the hope it will reveal the answer the question, “what is it that gives the Universe its mass?

After a number of false starts the Collider will rev up again this summer on its quest to find the answers. 6,000 scientists will be watching and waiting; the rest of us will go about our business, as we always do, hoping we don't simply implode our planet into a black hole and disappear as even the colliders creators have no idea what will happen when the particles collide. Even if they find the answer they are looking for, the origin of the universe, the sole cause of our creation, most of us will not even begin to understand their results.

Now, I certainly cannot offer you an analysis of how the science of quantum physics works or exactly how the scientists perceive the true nature of that one missing particle that we have labeled “GOD” for so long. For I must admit that in my ignorance I have always stumbled over scientific language and even chuckled at the word “Quark”, as it conjures within me an image of a very vocal duck with a Queen's English accent! However the story of the Twi-Loans opened a fresh new door, as regardless of how we re-write the rules of the game or how we choose to visualize the ball in the goal, it is ultimately that evasive, invisible force that set this all in motion. I am envious of the Physicist who knows that somewhere out there caught in the barrel of a Super Collider or parked to the left of the constellation Cassiopeia, is the missing link, for they can plot, chart and see the results of its absence, the mysterious bulge in the net if you will, but they still may not be able to explain or to find it's cause. The Higgs boson theory may lead to answers or just generate more questions.

Or it may set off a catastrophic sequence of events that we are unprepared to deal with. To the everyday person the rules of the game and the visibility of the God particle is not something that we can wait centuries to uncover or to understand only in scientific formulas or equations, as we are living this life everyday, without really knowing what pressed the button that set off our evolution. In the meant time we conjure up our own rules to make it work for us, at the same time taking our place on the field, playing the game with what we have been given, with what we can see and respond too.

In the most simplistic of terms the God Particle that we have come to know exclusively through its absence, is in fact hardly a matter of education or theology.

Theories are accepted and proven wrong every day, theologians have yet to unscramble truth from fiction and myth and even some of the most educated and respected of clerics choose to overlook what historians, biblical archeologists and evolutionists have presented to them as fact. Therefore The God Particle, the bulge in the net, is only as useful and as functional as we choose to perceive it, in the here and now. And no matter what science or religion says or does in its behalf, our own early teachings and life experience, determine what we can see and feel and hear, and it is all we have to go on.

Many years ago a former parishioner of mine, an avid amateur astronomer, invited me to observe the rings of the planet Saturn on one clear autumn night. He was an affirmed atheist and was tortured by his inability to come to some conclusion, some scientific way of embracing a God, a Creator, from what he was observing through his telescope; something or someone that would guide him to a greater understanding of the beauty he saw in the night sky.

He realized that he could spend his entire lifetime studying the movement of one solitary star and never understand the purpose of its existence, never mind the complexities of the whole universe.

Thus he concluded that there is no God that could ever be understood. Our conversations led us all around the idea that the adventure of our faith does not always show itself in the answers we are expecting to find. I explained to him how much it meant to me to see the planet Saturn through his telescope. There, the splendor of the rings stood out in remarkable clarity and even though I had seen pictures of Saturn, the real thing was far more exquisite than I could ever imagine. It was an experience I will never forget. At that moment I ceased to care who made it and why, I just yearned to see its beauty for real, a miniscule fragment, a piece of evidence of the God Particle was enough to invite wonder back into my life. I had discovered something that neither theology nor physics could teach me. Were I to simply dissect its rings into formulas and examine only its components, I would lose the beauty of the whole planet. Whether we find what we are looking for through the lens of a high powered telescope or on a slide of an electron microscope, or in the belly of a super collider, our search for truth does indeed lie in experiencing the results of creation no matter how it came to be.

For the scientist it would be finding the missing a-tom in the fifth of six quarks, uncovering the secrets of black holes, that has remained undiscovered. For the devoutly religious it is the promise of resurrection, or nirvana that seals the truth and purpose of one's existence. For the at home caregiver it is time alone in a hot bath with a glass of champagne. For the student, it is learning everything there is to know by putting a tape recorder under the pillow at night! For the poor and the destitute it is the location of a warm bed and the next meal.

One wonders if The God Particle is real and decipherable, just sitting in a gigantic lab waiting to be cracked open like a miniscule egg, or is it merely a matter of perception, of balancing what we see and hope to see with how we choose to react to it; to see the beauty...all of its components.

Our faith may not be changed by the results of the Higgs boson search as we present as many words for God as there are people who are searching.

But what is it that brings meaning to the rules? Not a cross or a star or a candle, or an old man on a throne of clouds, a complex set of numbers on a blackboard, or the rumblings of a giant machine; nothing at all tangible or visual, rather an unflinching belief, that amid the great unknowns the fact remains that somehow, beauty and mystery does emerge from the unseen, that we can perceive.

For now we study and we treasure those mysteries in our lives and express our conclusions in ways that capture the beauty, that makes sense of the rules in the here and now as best we can, and we acknowledge the existence of the elusive God Particle that dwells so beautifully inside of each of us.

I would like to close with these words by Sarah Moores Campbell:

**We receive fragments of holiness,
glimpses of eternity, brief moments
of insight. Let us gather them up
for the precious gifts that they are
and, renewed by their grace, move
boldly into the unknown.**

So be it

Amen

References:

**Leon Lederman with Dick Teresi The God Particle: Dell Publishing NY pp
10-12 and 23-24**

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