The Large Hadron Collider and its Importance in the Global Situation

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The world of Physics is very much misunderstood. Many people today do not fully understand the effect that this vast, expansive body of knowledge has on the natural realm in which they exist. Not only is this the case, but so is it that too few of us can fully appreciate even a fraction of what the subject – and indeed all of its offshoot subjects, as well – has to offer for us. It could be conjectured that this is due to the fact that Physics is inherently more complicated, and often times more abstract, than her sister sciences in Biology, Chemistry, and the like. Those areas of study tend to have a larger array of demonstrations and experiments that are designed to excite and draw in a more massive student body. A Physics instructor can always demonstrate wave patterns, centrifugal force, gravity, acceleration, etc., but in order for one to fully understand the forces at work, it takes much more traditional classwork time than the concepts put forth in a Chemistry class with an effective lab period.

It is for this reason that this very same world of Physics is in need of more tangible ways in which to present the concepts she has to offer in order to grow and foster a collective understanding of the world around us that is also more tangible and can be passed down through the generations to the world that will exist long after we are gone. This is where the Large Hadron Collider comes in. The Large Hadron Collider is a particle accelerator built underground near Geneva and the French-Swiss border. In fact, not only is the LHC a particle accelerator, but it is purported to be the world's largest and highest energy particle accelerator. The main purpose of the LHC is to allow physicists throughout the world to test their theories and to test the predictions put forth by scientists before their time.

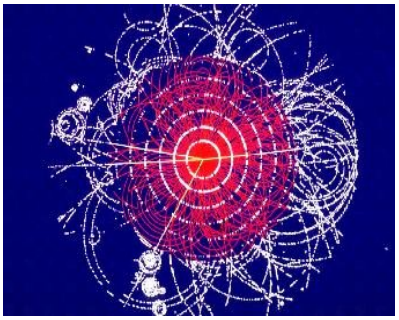
These are very important reasons to continue research with the Large Hadron Collider as

the findings can show us the truth behind the world in which we live. Not only is this true, but we can also receive more tangible evidence as to the predictions used to form experiments with the LHC. The importance here is two-fold. For one, it greatly improves our global knowledge of the subject, causing a better – almost *natural* – understanding of the world around us in a similar way to how everybody today understands the concept of gravity. The second reason is important to the survival and subsequent growth of the field, itself. It takes a very special kind of person to align themselves to one of the sciences in such a way that they devote their lives to the study of their chosen subject, but the numbers of those scientists doesn't grow at the same rate as is necessary for proper study of the world. Yes, many scientists today struggle to gain the financing needed to complete their experiments and provide us with new or updated answers to questions about our natural world, but that is a cultural issue that also needs to be remedied. In truth, if we devoted as much money to the sciences as we should, there would only be a small fraction of the required scientists working on each subject. The entire field would be well understaffed.

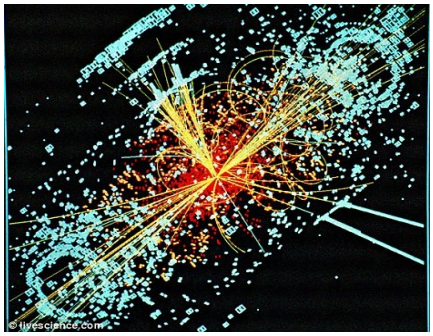
Whether or not the concept of the LHC is exciting now, it is still in its adolescent phase. Beginning in 2009, the scientists at the LHC have run the system at increasing levels of power, with projected increases occurring until 2014. Now, a particle accelerator, very lightly “defined” can be said to shoot various particles at each other with outstanding forces in order to study the effects. The results are interesting, to say the least. Below is a picture of what happens in this type of experiment:

http://www.dailygalaxy.com/my_weblog/muon-particle.jpg

In addressing the issue of our cultural disregard to the sciences, it can be argued that the Large Hadron Collider and her findings in the realm of Physics, alone, can increase our public awareness of the scientific community and the great, fascinating work they do every day. No matter how much society's intelligence levels dwindle, scientific findings still appeal greatly to the public's senses of adventure and inspiration. Not only that, but new findings leave lasting impressions on our minds. After reading about a new cure for a particular disease or neurological chips that can control robotic arms, or even about the possibilities of discovering the Higgs boson particle, a reader becomes extremely excited, even though they are only presented with the most summarized version of the facts so as to remain a short, interesting blurb on a website or in a newspaper. Below is what the Higgs boson has been purported to look like through very impressive calculation:



http://www.dailyworldpost.com/wp-content/uploads/2012/03/simulated_Higgs_boson_decay.jpg



http://i.dailymail.co.uk/i/pix/2011/04/23/article-1379844-0BBEE64600000578-253_468x400.jpg

The two images look completely different, but the thing they have in common is the amount of intense speculation and calculation that goes into figuring out what it could possibly look like. We want to know if it's actually possible to create this thing and what it actually looks like, too. Scientists aren't from a completely different species, though. So just because this is something that excites scientists, doesn't mean that it can't excite the entire world. It's only because scientists understand more of what makes these things a part of our natural world that separates them from the rest of the group. If we can all understand these concepts in the way that we all have a more-than-basic understanding of medieval science and what came before that, we can begin to allocate our time and resources into the things that can make this world a much better place. It's that interest that keeps the field alive, and what can cause further growth. If we as an entire species are merely interested in the sciences, we can go very far. If we become emotionally invested in these fields of study – whether by way of personal relationships or just by considering the concepts we could be defining *today* – we can improve our world one hundred-fold. The sciences will quite probably receive more funding to improve and maintain their research and create a society that's as close to a utopia as we can possibly achieve.

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