

Unitarian Society of Hartford

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The Quantum, the Cosmos, and Doing the Right Thing

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Good morning! It's an honor for me to be here and to address you on results at the frontiers of modern physics and how they relate to a view of ourselves in relationship to each other and the cosmos. These results come from one of the fundamental pillars of modern physics: quantum theory.

Referring to quantum theory, the British scientist and Fellow of the Royal Society, J. B. S. Haldane stated: "It is my supposition that the Universe is not only stranger than we imagine, it is stranger than we can imagine."

And the world that quantum theory opens up is very strange indeed. If you'll look at the cover of your order of service you will see the fundamental symbol of quantum theory, which is the Greek letter psi. That symbol represents a fundamental uncertainty in nature. But when that symbol is combined in a special way with itself as indicated by the * then it also tells us that, in nature, there is a probability of all things being possible. So while there is an uncertainty and limitation to what we can know, there are also infinite possibilities.

One of the strangest consequences recently discovered as a result of experiments in quantum theory is the phenomena of quantum entanglement. The implication of the experiments is that if a molecule is formed as a single entity and then that molecule is split into parts, which are separated then no matter how far apart the pieces are when we change one piece, the effect is instantaneously felt by the other piece. This implies that there is a fundamental connectedness that exists such that no matter how far apart the separated pieces are, they are still always connected.

This has profound implications when we consider the origin of the cosmos. It is now a firmly established result of astrophysics that our universe began as a single entity some 13 billion years ago as a result of the Big Bang. People still often think of the Big Bang as an explosion that happened in space. But that's not so. According to Einstein's theory of relativity, with the advent of the Big Bang space and time as well as matter and energy were all created at once. This means that, taking into account quantum entanglement, all that we see, the stars, planets and ourselves are interconnected and entangled with each other in

a fundamental way. And this entanglement implies that whatever we do then the universe and all that's in it responds.

How then should we view this in regard to ourselves? There are two ways: the local and the cosmic. Consider first the local:

Don't go near the water! If we hear that sort of announcement here in let's say Clinton, Connecticut then that would probably indicate to us that there is a strong undertow along the shoreline or an approaching storm. However such an announcement has a far different meaning in Spike Lee's breakthrough movie "Do the Right Thing." In that movie, which takes place on a very hot summer day in the Bedford Stuyvesant section of Brooklyn, when the radio announcer makes a statement: Don't Go near the Water! It is followed by the announcement that authorities have closed beaches after they found hundreds of syringes and other medical waste washed up on the beaches in Brooklyn and Staten Island. The movie itself is not about the drug problem but the race problem. However the announcement highlights how the subtleties of race relations have played out in the drug problem. At one time the problem with drugs was mainly within the African-American community.

There were many who said at that time "That's their problem."

Some were even harsher in their assessment by saying, "Let them kill each other." I remember as a child my mother taking me to see George Gershwin's "Porgy and Bess." In the movie there is a character called Sportin Life who gives principal characters in the movie a little bit of Happy Dust. In this classic African-American opera, written by a brilliant Jewish composer, all of the drama centers on the consequences of happy dust for all the lives of the people in the little community of Catfish Row. I remember how uncomfortable my mother was when I asked her what Happy Dust was. After my father died my mother moved us from New York City back to Altoona, Pennsylvania where she had grown up.

Being a very independent woman she decided to move us to the predominantly white section of town. It was a lovely community. My mother still lives there in the community that is still predominately white. I visited her recently and met a nice young white couple. The young woman of that couple would frequently come down to visit my mother and make sure that she was okay. Last week my mother called me in tears saying that she had been wakened up in the middle of the night with the sound of a helicopter and police cars up the block. The next day she found out that the young couple had been arrested for selling cocaine out of their home. This is a local example of how if we had done the right thing in the beginning by taking care of those in the African-American community who we really are connected to then we might have lessened the catastrophic drug trade that is one of the major plagues of our society today.

There is another reason why we should do the right thing that has more cosmic implications. Recall that at the beginning of my sermon I mentioned that everything began as a single entity in the Big Bang. Our relation to the universe may be more fundamental than just being parts of the universe. Our human consciousness is the result of the universe in our head. Neuroscience has shown us that the brain consist of more than 100 billion individuals neurons with one quadrillion, that is, thousand trillion connections between them. However consciousness does not reside in any individual neuron. Consciousness is the result of the collective behavior of all the individual neurons. It just that way the consciousness of the universe may be the result of all the parts of the universe.

That is to say not just us but all the stars and planets. This cosmic consciousness, which we may call God or the great mystery, depends on us just as we depend on it. And in fact there is a representation of how you and I relate to the universe. This diagram of the Big Bang evolving into a giant eye represents the evolution the universe as it became more conscious and we, all of us, are the universe being aware of itself. So how we behave in the universe affects the consciousness of the universe itself and how we behave in the universe may diminish or enhance our own cosmic consciousness. **And it is for that reason also we should 'do the right thing'**. Spike Lee's movie "Do the Right Thing" ends as it began with a radio announcement. The DJ closes by saying something that we should all seriously consider:

"Are we going to live together? Together are we going to live?"

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