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UU Fellowship of the Eastern Slopes  
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*The Whole of Everything*

Good morning! And it really is a good morning, a point I'll return to later. But right now, first things first.

**First day**

Scripture has it that on the first day (the VERY first day!) God created light.

As a youngster, I was concerned that God then created the sun, moon, and stars—the sources of light—on the 4th day. Later I was relieved to learn that science said the same thing. Light came first, the stars, sun, and moon came later.

So light seems like pretty important stuff—the first thing out of the box. So what is it? Einstein said that every Tom, Dick, and Harry thinks he knows what light is but they're wrong. (And it's still true!)

**Mirror and light**

To get a handle on light, I brought a special prop. A mirror.

Wherever the mirror is located, everyone who can see an image in the mirror sees something different. In school we learn that light moves in straight lines from objects in the room to the surface of the mirror and then into our eyes. From our point of view, this sounds reasonable.

But what about the mirror's point of view? What comprises the totality of all possible views that the mirror puts out? What does the totality of all possible views look like?

**Quantum Mechanics (QM)**

QM provides some of the answers. We and the world are composed of particles. These particles are not exactly things because you can't exactly pin them down and they appear and disappear, but we call them "particles." The important point is that each particle affects all the others and is in turn affected by all the others. This interaction forms the mathematical basis of QM so that as described again by Thich Nhat Hahn: "The one can be seen in the all, and the all can be seen in the one."

This constitutes the interconnected web of which we are part.

QM portrays light as a particle, called a photon, with mind-boggling properties. Generally speaking, it travels at only one speed, the speed of light. Furthermore, when a photon jumps out of the vacuum of emptiness, it leaves behind another photon that goes at light speed backwards through time. (I'm not making this up. I couldn't make this up!)

Every other type of particle has a similar backwards moving twin. The twin of the electron, for example, is called a positron. It's the hole in the vacuum left by an electron that jumps out. If the

electron falls back into the hole—that is to say—meets up again with the positron, the two particles annihilate each other leaving behind one or two photons. (Wow! Just what you'd expect, right?)

It turns out that photons and electrons work together as buddies. Photons ferry electrons about in atoms and molecules in ways that explain all of the laws of chemistry.

### **Relativity Theory (RT)**

OK, that's QM in a nutshell. So, let's briefly move on to RT, the other great theory of our time.

Our perception of the image in the mirror—and every other sensory experience—invariably includes space and time in combination. Nobody has ever noticed a place except at a time, or a time except in a place.

Consider the concept of space. Does it have a boundary? If so, what's on the other side? If it doesn't have a boundary, where does it end? Can it double back on itself in every direction?

Time is also weird in that the past has never fully passed. Through our telescopes, we look back in time to see events that happened billions of years ago. In the telescope, we see them happening right now! In RT time is treated as an additional dimension, the fourth dimension, set at right angles to the three dimensions of space. Again, we have here a weird notion that we can't visualize.

The physics teacher, Lewis Carroll Epstein suggests that all travel through the four dimensions of spacetime occurs at the speed of light. (There's light again.) As Epstein puts it, "There is only one speed. Everything, including you, is always moving at the speed of light. How can you be moving if you are at rest in a chair? You are moving through time."

Again, the mathematics substantiates this interpretation of the theory.

In the words of the poet Marianne Moore, "The power of the visible is the invisible."

### **Smart Phone**

So, QM and RT are pretty weird. You might say that they're *non*-sense, meaning they're not a product of our senses, not even our common sense.

But the theories work. That's the important thing. So far, no proposition in either theory has ever been proved wrong.

And you need both theories to determine your GPS coordinates, to know with accuracy where you happen to be in the world and the time that you happen to be there.

So, the proof of the pudding lies with another prop which I happen to have, as do many of you. The smart phone! And this thing is really really smart! It uses QM to pluck particles out of the air—particles which come into existence all around us and of which we are composed. This task

is orchestrated by satellites that move through space and time in exact accord with Einstein's formulas of RT.

So, although the theories used in the operation of the smart phone lie beyond the reach of our senses, the smart phone has revolutionized our sensory experience. Right? Whether this is good or bad depends on how we use these digital devices.

### **Only Concepts**

Light, space, and time are only concepts. Their reality stems from their interpretive value. If they make successful predictions—as they do—we believe them—as we should. Nevertheless, they're only concepts generated by the physical cells, electrical interactions and chemicals in our brains. When we open the skull, no ideas or images or concepts fall out. Only material stuff.

In the words of the physicist David Bohm:

The movement of electrons in the outside world generates electromagnetic photons—particles of light—that move electrons within us that activate our muscles to move us about so we receive light from other portions of the world. The loop continuously modifies itself. In this way the percipient is not only always learning about his environment but is also changing himself. That is, some reflection of the general structure of his environment is being built into his nervous system.

The poet Ernesto Cardenal put it this way: “Subject and object: who can separate them for us? The apple is on the table and in the mind. And the woman who cuts the apple?”

The physicality of our brains houses and produces additional conceptual products like consciousness, the self, freewill, and our notions about God.

### **Consider the self**

Which is more important to you: your self or your body? Which would you more willingly part with? Many religions hold the self or soul in higher esteem than the body.

But then, as stated by the Indian sage Nisargadatta Maharaj: “Your self-image is the most changeable thing you have. It is utterly vulnerable, at the mercy of a passerby. A bereavement, the loss of a job, an insult, and your image of yourself, which you call your person, changes deeply.”

In the dreaming state, your self creates separate identities for everyone you're dreaming about. You don't know what they'll say until you hear them speak, even though your brain creates them as it creates you and everything else in your dream.

In deep sleep, interactions between your body and its environment continue. In deep sleep your body still exists as a functioning entity—but without consciousness or any conception of a self. Physically, you are still there, but no consciousness or sense of self directs your activity. You're there and you're not there at the same time.

Know thyself.

Your true nature is your body in dreamless sleep just as much as it is your conceptualized or dreamed body that thinks it's in charge when you're awake.

### **Other concepts**

It's worth noting that our thoughts about the self, freewill, and God are trustworthy and powerful concepts that facilitated the survival of individuals and social groups in the past. We are here because earlier peoples passed to us the physical propensities of our brains that allow us to think these thoughts.

Our thinking and responses in the past had to be lightning fast and in the simplest possible terms. Run, hide, or fight. Or, on a good day, and just often enough, run, hide, fight, or make love. To facilitate our rapid response, all our thoughts and actions were emotionally based.

Our belief in the supernatural is another important inheritance. Our forbears with a god on their side to answer their prayers, fulfill their desires, lessen their fears, and smite their enemies fared better than those without the notion of supernatural support.

The support provided by the religious group was wonderfully described by the columnist Robin Abrahams, who was also known as Miss Conduct:

These people don't just pray for you when you're sick; they bring you casseroles, and drive you to chemo, and say things like, "I was going to take my kids to the pool today and it's nicer for me if they've got friends to play with— can I take yours, too? Honestly, hon, you're the one doing me a favor!" Walking away from a community like that isn't easy... and there are good evolutionary reasons why. Having friends to help you through tough times is far more likely to ensure your individual survival than getting the correct answers to highly abstract questions.

At this point, however, we should note the dark side of groups. Every group sets up its antithesis—an out-group. And to enhance its identity, the in-group disparages the out-group. Sometimes viciously so.

John Whitfield, *Nature News* blogger, says: "Humans are more helpful to each other than almost any other species, and their societies are more egalitarian. But beyond the edge of a group, cooperation has a tendency to become well-organized brutality."

Cardinal Newman, 18th C religious leader said: "Oh how we hate one another for the love of God." (Throughout the world, hatred is still at work.)

### **The original garden is here**

It is through our thoughts that the universe discovers its existence.

We know now that the trees of life and knowledge in the original garden were not one-time flowerings. The trees and the rest of the garden are still leafing out. The Monarch butterfly and the milkweed— the creature and the garden— continually produce modified versions of each

other. And it has come to pass that we and the serpent share a vast number of identical genes that have brought us both to the same place.

That which we seek is already here.

As the scripture said: “And Jacob awaked out of his sleep, and he said, Surely the Lord is in this place; and I knew it not.” (Genesis 28:16\_

We create the world even as the world creates us. The perceiver of the thing and the thing perceived join at the hip, locked together in a mutual process of becoming. Without the world, we are nothing; without us, the world lacks meaning.

Some words about love. The physicist, Richard Feynman said: “Love, not truth, is what people want.”

And from Mother Teresa: “In the world of today, it is we who have to be God’s love and compassion.”

To get love, give love. Whoever acts with respect will get respect. Or as Rumi put it in the 13th Century: “Whoever brings sweetness will be served almond cake. “

But how can we love our enemies?

When the narrator in Remarque’s novel, *All Quiet on the Western Front*, kills an enemy soldier who jumps into his trench, the narrator examines the photographs in the man’s wallet, and says:

Comrade, I did not want to kill you. If you jumped in here again, I would not do it...But you were only an idea to me before, an abstraction that lived in my mind ....It was that abstraction I stabbed. But now, for the first time, I see you are a man like me. I thought of your hand-grenades, of your bayonet, of your rifle; now I see your wife and your face and our fellowship. Forgive me, comrade. We always see it too late. Why do they never tell us that you are poor devils like us, that your mothers are just as anxious as ours, and that we have the same fear of death, and the same dying and the same agony....Forgive me, comrade; how could you be my enemy?

“Love is patient, love is kind. ... it is not self-seeking, it is not easily angered, and it keeps no record of wrongs.”

Love keeps no record of wrongs. What a wonderful reminder with which to continue the rest of our lives. Love keeps no record of wrongs. May we bring this love to fruition.