The New Cosmology: Understanding the Gaia Hypothesis

-- by Michael Dowd

The concept of Mother Earth, or as the Greeks called her long ago, Gaia, has been widely held throughout history. As a result of the accumulation of evidence about the natural environment and the growth of the science of ecology, there has recently been speculation that the biosphere may be more than just the complete range of all living things within their natural habitat of soil, sea, and air.

-- James Lovelock

Ultimately, the largest context of meaning, no matter what the issue, is the cosmology of a people—their story of how things came to be, how they came to be as they are, and where humans fit into the scheme of things. This helps people make sense of the mysteries of life and death and provides the psychic energy to deal effectively with individual and social crises. A people's cosmology is the foundation for their science, religion, ethics, economy, and politics. It is the basic set of unquestioned assumptions upon which all else is built.

The Gaia hypothesis, which proposes that the Earth's living matter, air, oceans, and land, form a complex system that can be seen as a single organism, is a theory that grew out of the Western scientific tradition. This tradition itself comes out of a biblical cosmology. Indeed, the reason that science developed as it did in the West was because the western, biblical cosmology allowed it to do so.

The Genesis creation story said that we humans were placed as stewards on an already existing earth. It told us that we were spiritual in nature, and that we were called into a relationship, a covenant, with the divine. However, since the meeting place for this relationship was in the transcendent realm, our physical world was merely a temporary background, or transient stage. Thus, because the world was physical, not spirit, and because we understood ourselves as having been divinely mandated to have dominion over the rest of nature, our cosmology gave us the freedom to explore the natural world and figure things out, as well as to develop various technologies.

If we look at Native American cosmology as a comparison, we see how it would be impossible for the scientific tradition to develop in that context. The belief system would not have allowed it. In virtually all the creation myths of the native peoples on this continent, the Great Spirit was not transcendent but lived in the natural world, lived in the Earth. Since the Earth was experienced as Mother, and all matter was spiritual as well as physical, there was simply no sense of detachment that would have made scientific exploration or technological development possible.

Through our western, biblical cosmology, we have made enormous progress in figuring things out over last couple of centuries in biology, geology, chemistry, physics, and

astronomy. Ironically, we now see that the very cosmology that allowed these discoveries is no longer adequate. It needs to be revised because it no longer fits with what we have discovered. For example, we have come to see that we were not placed on a fixed, ready-made Earth, but that we are the latest evolutionary development of an unbroken process, which began some fifteen billion years ago in a great explosion of light and energy. Creation is still happening! And with the splitting of the atom, we have come to see that all matter has an inner, numinous, non-material dimension.

At the beginning of his book on the new cosmology, *The Dream of the Earth* (Sierra Club Books, 1988), Thomas Berry says, "one of the most remarkable achievements of the twentieth century is our ability to tell the story of the universe from empirical observation and with amazing insight into the sequence of transformations that has brought into being the Earth, the living world, and the human community. There seems, however, to be little realization of just what this story means in terms of the larger interpretation of the human venture."

Taking this story of the universe -- the new cosmology -- as a means of understanding Gaia, we see that the universe is not an inanimate object with life in it. Rather, it is the subject that is alive. And the human is the being in whom the universe, after some 15 billion years, and Gaia, after nearly 5 billion years, begins to consciously reflect on itself, its meaning, where it came from, and what it is made of. As Teilhard de Chardin noted over half a century ago, "the human person is the sum total of fifteen billion years of unbroken evolution now thinking about itself." We are not separate beings on Gaia: We are a mode of being of Gaia. How you and I think is how Gaia thinks.

If the evolution of the universe in this solar system is to continue with self-conscious awareness, then we must know and live with the realization that we are Gaia, and that Gaia's story is our common sacred story. Ultimately, we are called to consciously participate in the further evolution of the universe through love. The meaning of the Gaia theory lies through that door.

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