

“How Great Thou Art”

Throughout the history of the Western and near Eastern world there has been a close link between physics (from the Greek word meaning “nature”; generally speaking, our understanding of the forces of nature), metaphysics (a system of principles held to be true of all of reality, both visible and invisible), and theology (reflection on the faith of a group of people, or reflection on revelation). Cosmology reflects these links, for it is variously described as: an area of metaphysics that deals with the universe as an orderly system; a branch of astronomy that deals with the origin, structure and space-time of the universe; a story of origins involving the natural world. The debate over Intelligent Design and the growing interest in creation spirituality indicate that questions about the interrelationships between and among God, human beings and the created world, as well as about the relationship between science and religion, are not moot.

In a letter to the Director of the Vatican Observatory, Pope John Paul II addressed the importance of science for theology.

Theology will have to call on the findings of science to one degree or another as it pursues its primary concern for the human person, the reaches of freedom, the possibilities of christian community, the nature of belief and the intelligibility of nature and history. The vitality and significance of theology for humanity will in a profound way be reflected in its ability to incorporate these findings.

These findings are not simply to be exported from science to theology; they must be examined carefully for their utility in coming to a deeper understanding of our faith. Yet the Pope continued with a series of questions, giving examples of scientific discoveries that might hold rich insights for theology.

[M]ight contemporary cosmology have something to offer to our reflections on creation? Does an evolutionary perspective bring any light to bear upon theological anthropology, the meaning of the human person as *imago Dei*, the problem of Christology—and even upon the development of doctrine itself? What, if any, are the eschatological implications of contemporary cosmology, especially in light of the vast future of the universe? (Letter to the Director of the Vatican Observatory, June 1, 1988, in *Origins* 18 [1088-89]: 375-378.)

Scripture clearly understands creation as the handiwork of God, as the revelation of God as Creator, as provident, as powerful and wise. Jesus frequently used images drawn from nature to illuminate the mystery of the Reign of God. By attending to creation, the Judaeo-Christian tradition assumes, believers can have some insight into the person and character of God. Study of nature affords us, then both understanding and wisdom. So St. Albert the Great, philosopher, theologian, and naturalist, wrote in his treatise on animals, “The whole world is theology for us, because the heavens proclaim the glory of God.” In fact, creation is sometimes referred to as the first book of revelation. Thus, according to St. Thomas, “Any error about creation leads to an error about God.”

In the West, the modern era witnessed a growing strain between faith and reason, culminating in the relegation of religion to the private sphere as well as the growth of atheism. The discoveries of Copernicus and Galileo challenged religious understandings

of creation and the place of humanity within it. Laws of nature were extrapolated from the movement of such large bodies as stars and planets; gradually a mechanistic and deterministic understanding of the universe supplanted an organic one. Living organisms, including human beings, and social entities were understood mechanistically. God was pictured by some as the great clockmaker in the sky, the remote source of order and stability. A vertical dualism began to prevail, with a growing split between inner and outer, private and public, spirit and matter, soul and body. Matter or nature was viewed as inert and atomistic; for many people its intrinsic or sacramental value vanished. All that counted was its usefulness. The whole was simply the sum of its parts; to understand the parts was to know the whole. The modern era brought important scientific discoveries, technological innovations, and a growing insistence on democracy and human rights. It also saw the rise of both totalitarianism and individualism as well as the development of the most efficient means of killing and the increasing despoliation of the earth.

Obviously this is a very broad description of an epoch. In the first decade of the twenty-first century, however, due in no small measure to discoveries in physics, our knowledge of the world has undergone major shifts, which have ramifications for our self-understanding and for our images of God. Following the suggestions of Pope John Paul II, let us briefly explore what we might learn from some of these discoveries.

Less than one hundred years ago Edwin Hubble discovered the Andromeda galaxy. We now know that there are 125 billion galaxies—each with billions of stars—spread across 30 billion light years. The Hubble telescope now transmits extraordinary pictures of these galaxies. Just 40 years ago scientists came to general agreement that the universe originated in a single event and for 13.7 billion years has been expanding and growing in complexity, differentiation and consciousness (see www.pbs.org/deepspace/timeline). The immensity of the cosmos in both space and time can only lead us to an ever more profound reverence for the Creator, the Source and Ground of everything that exists. Images found on such websites as <http://hubblesite.org/gallery/> and <http://antwarp.gsfc.nasa.gov/apod/> may move us to pray with the psalmist with a new depth of amazement and wonder: “The heavens declare the glory of God; the skies proclaim God’s handiwork” (Ps. 19:1).

Through the work of Einstein and others we come to a new appreciation of the profound interconnectedness of everything that has existed and will ever come into being. The “stuff” of which everything is made can be traced back to that originating event. Time and space are related, as are energy and matter. The smallest material entities are really energy-events. So Fritjof Capra observed, “In quantum theory you never end up with ‘things’; you always deal with interconnections.” Henry Stapp put it another way, “An elementary particle is not an independently existing unanalyzable entity. It is, in essence, a set of relationships that reach outward to other things.” Relationship is elementary; the universe is not an aggregate of individually existing elements but a dynamic whole fashioned of vast and complex networks of relationships.

Such insights from science may help us come to a new appreciation of the Trinitarian God, a dynamic, creative, eternal unity of relationships. These insights may also assist us in overcoming individualism: there is nothing that is not in relationship. Society is not simply a collection of individuals; rather, it is a system, a dynamic whole in which the whole affects the parts and the parts, the whole. As a Sufi saying observes: “You think because you understand one you can understand two, because one and one are

two. But you must also understand *and*.” We can perhaps understand more fully our tradition’s teaching on the common good. In a highly individualistic or in a totalitarian society, individual and common goods are often understood as opposed. If, however, existence is profoundly and ineluctably relational, then the common good truly is that set of conditions and relationships in which each and every entity can flourish.

Scientists point out that the universe exhibits law and freedom, order and chaos, stability and novelty. This God created an evolutionary universe in which slight ‘irregularities’ eventuated in galaxies, a cosmos which, had it unfolded one trillionth of a trillionth percent faster or slower, would have flown apart or imploded. The universe can no longer be interpreted through any mechanical image; rather, it is the handiwork of the God of our Scripture, who is always faithful and yet often unpredictable, a God of promise and the source of newness. The Spirit of God moves in and through every thing that exists, animating it, activating its potential, bringing newness for the sake of life, uniting all things in its breath.

Maximus the Confessor once wrote, “God is everywhere and at all times working out the mystery of [God’s] embodiment.” Reflecting on the multi-billion year process necessary to prepare the conditions for the emergence of life, as well as the exact and delicate balance required for each of those conditions to obtain, and to meditate on the evolution of life forms and processes necessary for human life, evokes ever deeper resonance in the words of the psalmist: “When I look at your heavens,/ the work of your fingers/ the moon and the stars that you have established;/ what are human beings that you are mindful of them,/ mortals that you care for them?” (Ps. 8:3-4). We human beings are that unique part of the creation conscious of itself and capable of consciously praising God. We are that part of creation charged with stewardship of God’s multi-billion year work of art.

There are many other scientific discoveries rich in possibility for theological reflection; they cannot be examined in this brief article. We believe, however, that in the incarnation, God entered history; in the resurrection, creation through Jesus’ humanity entered the divine dimension. In the cosmic calendar, understood from the Big Bang until now, the birth of Jesus took place at 11:59:56 p.m. on December 31st. It is hardly surprising that his teaching and example seem to have such shallow roots in our psyches and behavior! We struggle to believe and live the truth that in losing our lives we shall find them, in dying to self we shall rise, that authority is service, that God’s deepest desire for us is fullness of life in communion, that the work of forgiveness and reconciliation is the practice of the Reign of God. The work of redemption is intimately linked with the work of creation. Paul tells us that all creation groans, hoping for liberation (Rom. 8:19-23), and that God wanted “to reconcile everything in [Christ’s] person, both on earth and in the heavens” (Col. 1:20). The new cosmology gives us a perspective on the length and breadth, the depths and heights of God’s aim; in doing so, it may give us a more profound realization of the dignity and work to which we have been called.

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