

THEOLOGY AND THE NATURAL SCIENCES

Topic: Eschatology: Scientific and Theological Perspectives in Dialogue
Convener/Moderator: William R. Stoeger, Vatican Observatory Research Group
Presenters: Joseph W. Haller, Departments of Astronomy and Physics,
University of Arizona
Jame Schaefer, Department of Theology, Marquette University

Haller's presentation on catastrophic processes summarized the various cosmological and astronomical scenarios for the demise of life here and elsewhere in our universe. For the universe itself, there will ultimately either be heat death, if the universe expands forever, or the "big crunch," if its expansion eventually halts and collapse ensues. Looking at more local phenomena, the inevitable transition of the Sun into a red giant, which would precede its eventual death, a nearby supernova, or a merger of neutron stars would be the most likely candidates for ending or severely affecting life on Earth. Recent investigations of gamma-ray bursts suggest that neutron star mergers occurring within 3,000 light years of the Earth would be lethal. Finally, research from the last few decades on large asteroid and comet impacts, and the recent observations of comet Shoemaker-Levy 9 with Jupiter in 1994, have awakened popular awareness that we are vulnerable to global catastrophes of astronomical provenance. Such events have in fact occurred on earth before, and have been responsible for the mass extinctions of the dinosaurs and many other species. Though such catastrophes may not happen again for millions of years, they undoubtedly will happen eventually.

In her complementary presentation "Eschatological Reflections on Cosmological and Evolutionary Processes" Jame Schaefer first pointed out that theological reflection accepts the results and perspectives of science and attempts to appreciate them within the context of our experience of faith. An eschatological focus emphasizes the life and happiness offered by Christ in the present and our anticipation of and movement into the future with confidence in our resurrection and eternal life after death. Contemporary cosmology presents a serious challenge to theological eschatology by forcing it to be more inclusive in its concerns than just the fate of human beings—the Earth and the cosmos itself must be drawn into salvation in Christ. The present world and universe are in some definite way the raw material of the new heavens and the new Earth. Schaefer supported her position by summarizing the eschatological views of several contemporary theologians: Moltmann—the temporality of creation is a promise of the new

creation; Bratton—there is a need for an ethic determined by natural brotherhood with nature; Ratzinger—God is faithful to his creation, and individual salvation is complete with the redemption of the Cosmos and the Elect.

Thus, the occurrence of catastrophe is not ultimately hopeless or worrisome as such. In fact, it is consistent with the Christian tradition. Theologically we expect an end in some such way, with a subsequent transformation of the cosmos and of our own lives. We have an expectation of hope for this, which is based in the promise of resurrection in Christ. Nature is in need of redemption from its suffering, too. Evolution and misuse of creation by humans all speak of a finitude in the world which must be transcended. Schaefer suggested the image of an all-inclusive, cosmic Eucharist banquet as helping to embody an adequate eschatology informed by cosmology and the other sciences.

After the presentation some concern was expressed about the different realms of discourse involved in dealing with these subjects and how they might be adequately bridged. Substantial discussion centered around the following points: (1) Is there a way to speak of the world as "good" or "bad"? Do not these categories have their strict application only in the moral order? Thomas Aquinas' notion of "perfection" was suggested as a way to apply the ideas of "good" and "evil" to inanimate creation in a generalized way. Related to this was some consideration of the application of these categories to what God does and allows.

(2) Are the foundations for hope in the resurrection of Christ as presented adequate in light of the scale and reach of the catastrophic processes which are at work in the universe? What is the basis for our hope in light of the apparent certainty of eventual annihilation? What are the bases for ultimate optimism Christian theology has to offer, in the face of a spectre of terrestrial and cosmic dissolution? Much more work needs to be done in this area.

(3) What are the boundaries of the expected eschatological fulfillment? Moltmann and Polkinghorne, for example, suggest that all contents of the cosmos will be in some way redeemed. Haller questioned this: "Could it not be that only some contents of the cosmos have an eternal destiny while the remainder have only an ephemeral contribution to its final outcome?"

WILLIAM R. STOEGER

Vatican Observatory Research Group

The University of Arizona

Tucson, Arizona