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SCIENCE, NATURALISM, AND RESURRECTION—A RESPONSE

In this evocative essay John F. Haught makes a thought provoking contribution to the expanding dialogue between Christian theology and natural science. In the interest of raising issues and questions for further conversation, I will begin by articulating what I believe is Professor Haught's broad goal for this paper and for much of his work over the past twenty years. A man of purpose, Haught has a mission, which is to hasten the arrival of the day when science and Christian eschatology, can be mutually supportive in the "humble desire to know."[1] It may seem to many scientists and theologians that making eschatology the focus of science-theology dialogue is "mission impossible." But not for Haught, who argues that a firmly held faith that the universe is grounded in an ultimate love and promise, revealed in Jesus, the risen Christ,[2] can actually support a scientific quest for knowledge. He believes that his Christian faith stance also provides a needed basis for liberating science from imprisoning ideologies that are obstacles to authentic truth-seeking.[3]

The commitment to liberate science from imprisoning ideology is evident in Haught's application of a hermeneutics of suspicion to "scientific naturalism," an ideology that he argues has shaped attitudes about science in western culture. In this regard, echoes of Alfred North Whitehead's rigorous critique of scientists' mechanistic interpretations of insensate matter can be heard.[4] Naturalism not only challenges the possibility of resurrection, its insistence that events can be explained by mechanical principles of causation rules out teleology and therefore any hint of purpose in nature. Naturalism, Haught argues is founded in an "ontology of death" that views "life only as a late and apparently unplanned anomaly" in a lengthy cosmic story.[5]

Haught persuasively argues that so pervasive is naturalism's "ontology of death," that even advocates of scientific creationism and Intelligent Design inadvertently subscribe to it in their emphasis on the special interruptive acts of God, an emphasis which upholds God's absolute sovereignty over an inert and passive nature. This very helpful insight leads Haught to raise a perennial question

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[1]John F. Haught, *Science and Religion, from Conflict to Conversation* (New York: Paulist Press, 1995) 22.

[2]Haught has written at length about the love and promise, revealed in Jesus Christ. Love and promise are foreshadowed in God's relationship with the people of Israel and brought to a climax in Jesus, especially in his resurrection. See his *Mystery and Promise, A Theology of Revelation* (Collegeville MN: Michael Glazier/Liturgical Press, 1993) 121-25 and passim.

[3]Haught, *Science and Religion*, 22.

[4]Alfred North Whitehead, *Science and the Modern World* (repr.: New York: Free Press, 1967; orig. 1925) 10-18; 50-55.

[5]In light of the time scale of the cosmic story outlined by Haught, a response not addressed in the proposed ontology of death is the attribution of insignificance and even futility to human purposes within such an immense time span.

regarding divine agency: Does a biblically rooted faith require Christian believers to assert that God acts as a direct causal agent intervening in the physical world?

His "No" to this question and his critique of naturalism provides a spring board for applying a hermeneutics of remembrance. Following the lead of philosopher Hans Jonas, Haught draws attention to a pre-Renaissance panvitalism, worthy of renewed attention and development. To replace the "ontology of death," Haught sketches a metaphysics that rejects a universe conceived not only as the outcome of past lifeless mechanical causes (naturalism) but also as the product of the interventionist agency of a distant sovereign God (Creationists and Intelligent Design theorists). His metaphysical panvitalism envisions "aliveness" to be the essential characteristic of nature. Not to be confused with classical forms of vitalism that attributed life to an external "vital force," he postulates, in company with Teilhard, that the promise of life in the universe was present long before there were life forms.[6] This panvitalism is eschatological because nature, the cosmos, is properly understood as the anticipation and promise of an indeterminate future, including eventually the victory of life over death revealed in Christ.

Haught's proposed eschatological panvitalism is a theology of hope built on divine promise. His emphasis on hope brings me to my first of six questions, which springs from the admonition found in 1 Peter: "Always be ready to give an explanation to anyone who asks you for a reason for your hope" (1 Peter 3:15 NAB). If as Haught claims "science, as such, does not render the resurrection . . . incredible," nor is "science . . . *incompatible* with resurrection," then is it reasonable to expect that Haught give some attention to *the reason for his hope* in a future *alive* with divine promise? I raise this question because, although Haught's eschatological panvitalism assumes the "that" of resurrection faith, he does not give attention to the "what" question. The scientific-minded frequently ask: What was the content of the resurrection of Jesus and of the Easter appearances? Responses to the "what" question abound. Most are variations of individual versus collective communal experiences and objective versus subjective possibilities: the reanimation of Jesus' corpse versus group transformative experiences of the disciples; empirical appearances of light versus mystical visions of insight; the Pauline spiritual body versus ecstatic experiences of the divine Spirit, and so on. It would seem that his reason for not addressing the "what" question is that natural science, according to its current prevailing criteria, cannot accommodate unique singularities.[7] Certainly,

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[6]The possible influence of Teilhard is noted here. See Teilhard de Chardin, S.J. *The Phenomenology of Man* (New York: Harper & Row, 1959) 57 and passim.

[7]The resurrection of Jesus (if defined in bodily terms) defies the criterion of analogy, drawing into question not only its scientific and historical facticity but also its probability. Among the first to recognize this was Ernst Troeltsch, "Über historische und dogmatische Methode in der Theologie" (1898), "Historical and Dogmatic Method in Theology," in *Religion in History*, trans. James Luther Adams and Walter E. Bense (repr.: Minneapolis MN: Fortress Press, 1991). Troeltsch argued that all legitimate, historical phenomena must have a present-day analogy. Underlying this principle is the scientifically influenced

theological positions should not be determined by protocols derived from reductionistic atheist science. Yet, if a proposal for a scientific paradigm with an underlying metaphysics of eschatological panvitalism is to replace the imprisoning and deadening ideology of naturalism, then it seems to me that the *reason* for Christian hope deserves some attention. Without attention to Jesus' resurrection, it is difficult to avoid the judgement that Christian eschatology is nothing more than a strategy for talking people into embracing a vague (and perhaps unrealistic) hope for a future beyond the grave.

Emphasis on the *future* on which the world leans for "its sole support" (cf Teilhard), prompts a second question. Jürgen Moltmann in writing about the future has made a distinction between the *futurum*, the anticipated future that develops out of present potentiality of becoming, and the *adventus*, a coming from the radically new future, which the Christian tradition associates with the general resurrection and new creation in Christ.[8] In order to gain more clarity about what Haught means by "the future," how, if at all, are these very different concepts of "future" present in his proposed eschatological panvitalism? I raise this question because traditional Christian eschatology makes it difficult to avoid speaking of both continuity and discontinuity between this present world and a promised world to come.

The extension of Haught's eschatology to encompass the cosmos bears a discernible resemblance to Wolfhart Pannenberg's eschatological theology. Pannenberg has proposed an ontology for the whole of reality, including human history, in terms of the resurrection of Jesus, which for him proleptically reveals the future as eschaton. An eschatological ontology is foundational for Pannenberg's project. In a similar vein an eschatological metaphysics is foundational for Haught's. And so my third question is: Is Pannenberg's description of God as the "all-determining reality" *from* the future[9] compatible with Haught's God "as essentially Future"? Is Haught's essentially future self-emptying God consistent with a God retroactively working *now* in and through the processes of nature, sustaining and transforming creation?

I now shift our attention to a question of scientific import, which I will introduce with an observation: theologians who engage science almost always construct their theologies in response to questions and challenges raised by

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uniformitarian assumption that all events in history are similar. The criterion of analogy posits that the future will be like the past. This can result in making descriptions of the past occurrences prescriptive for future ones. According to this logic, God is unable to raise Jesus from the dead and bring forth eschatological transformation of the universe in the future.

[8]Jürgen Moltmann, "Theology as Eschatology," in *The Future of Hope: Theology as Eschatology*, ed. Frederick Herzog (New York: Herder and Herder, 1970) 1-50.

[9]Wolfhart Pannenberg, *Theology and the Philosophy of Science*, trans. Francis McDonagh (Philadelphia: Westminster, 1976) 14-15 and passim. For Pannenberg, Jesus' resurrection reveals that God reaches back into history to redeem the world. Prolepsis, is where the future is already present and active in the present "now moment," while remaining future as exemplified by God's act in raising Jesus from the dead.

scientific methodology and theories. Theological positions, such as Haught's that eschatological panvitalism reform the philosophical assumptions of science, are rarely proposed. Haught's strategy provokes a fourth question: Since he proposes a new postmechanistic paradigm for science, which seems to turn the prevailing conception on its head by no longer giving priority to past causal occurrences, how is scientific causality to be conceived if priority is given to the future and to nature's promise? This question gets at the issue of how science—freed from the ontology of death—is to be conceived and done.[10]

Finally, it seems reasonable to bring prospective future developments in the evolving cosmic story into the conversation. In his paper, Haught indicates that he is committed to a resurrection grounded eschatological theology that does not contradict scientific knowledge. This implies that his panvitalistic metaphysics grounded in God's future must also apply to physical reality. It follows that my fifth question is: How then is one to deal with the catastrophic in nature at micro (earth) and macro (cosmic) levels? Since Haught included the Big Bang cosmological story in his presentation, specifically how does eschatological panvitalism respond to cosmologists who provide scientific warrants for a universe that will either "freeze" or "fry" in the distant future?[11] Based on scientific calculations, some argue that if the universe is infinitely open ("flat" or "saddle-shaped"), it will expand forever and continue to cool from its present temperature (about 2.70K[12]), gradually approaching the frozen state of absolute zero. Others claim it will fry because the universe is closed (spherical). After it expands to a maximum size in another hundred billion

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[10]Scientist David Bohm wrote: "Science is, above all else, about the matter of causality. The central question in science is always: How can we understand the phenomenon in question, in terms of what causes it?" in *Causality and Chance in Modern Physics* (repr.: Philadelphia: University of Pennsylvania Press, 1987; orig. 1957) 1. In scientific explanation one encounters variations of Aristotle's material, formal and efficient causes. However, Aristotle's final causality (rational agents act for the sake of ends) tends to involve teleological factors and conscious choice, and is in essence ruled out of consideration in conventional science. Conventional science does not include questions of ultimate causality and instead seeks causal explanations, which connect phenomena with one another, which unify different levels and domains of phenomena, and which generate testable predictions that are open to falsifiability.

[11]For more information on cosmologists' predictions of the universe's future, see James Trefil and Robert M. Hazen, *The Sciences: An Integrated Approach*, 2nd updated ed. (New York: John Wiley & Sons, Inc., 2000) esp. chap. 15: "Cosmology: Will the Universe Ever End?"; and Paul C. W. Davies, *The Last Three Minutes* (New York: Basic Books, 1994). By limiting my focus to the cosmological scenarios, my intent is not to diminish the importance of addressing the earthbound, "micro" realities that are sources of suffering for human and nonhuman creatures, such as the ecological crisis, global poverty, religiously motivated conflict. The time limit set for the response makes any meaningful treatment of these realities impossible.

[12]Kelvin—a temperature scale in which zero occurs at absolute zero and each degree equals one kelvin. Water freezes at 273.16 K and boils at 373.16 K.

years or so, it will then collapse to an ever smaller size with an increasingly higher temperature, somewhat like a mirror image of the expansion of the cosmos from an initial singularity 12-15 billion years ago.[13] In both the "freeze" or "fry" scenarios, all life as we know it will be extinguished. Granted, that elsewhere Haught has dismissed catastrophic predictions of the cosmic future because they are based on mathematical abstractions that ignore the contingent openness of nature's *de facto* historicity.[14] Nevertheless in these scenarios we do encounter a potentially serious challenge to the Christian eschatological panvitalism that Haught proposes: cosmic demise.

Currently, the weight of evidence favors an open forever-expanding universe.[15] Freeman Dyson, a scientist who over twenty-five years ago sounded the clarion call for scientific eschatology with this statement: "I hope . . . to hasten the arrival of the day when eschatology . . . will be a respectable scientific discipline and not merely a branch of theology,"[16] supports the theory of an open universe. Reacting to scientists who project lifelessness and pointlessness for the cosmos, such as Stephen Weinberg, Dyson provides a scientific basis—with 137 calculations—for an optimistic future for intelligent life.[17] Contra supporters of final cosmic catastrophe that Dyson argues wrongly assume that life as mere substance is too static to continue to adapt to future environmental changes, he proposes that life is organization oriented to a telos of life and capable of novel adaptation. In the struggle to achieve its purpose, life in the distant cosmic future will evolve into

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[13]In the closed cosmos scenario the hot Big Bang will collapse into a hot Crunch. A major supporter of closed-cosmologies is Martin J. Rees, cited in Haught's paper. See his "Our Universe and Others," *Quarterly Journal of the Royal Astronomical Society* 22 (1981): 109-24. Resolving the conflicting theories rests with the amount of matter in the universe. According to Mark William Worthing, in *God, Creation, and Contemporary Physics* (Minneapolis: Augsburg/Fortress, 1996) 162, calculating the mass of the universe is not yet possible.

[14]Haught, *Science & Religion*, 174-78; see also his "Evolution, Tragedy, and Hope," in *Science and Theology, the New Consonance*, ed. Ted Peters (Boulder CO: Westview Press, 1998) 238. While Haught's argument may be valid, the notion of prediction is so central to science that scientific predictions of cosmic collapse or decay beg for some attention.

[15]William R. Stoeger, S.J. "Scientific Accounts of Ultimate Catastrophes in Our Life-Bearing Universe," in *The End of the World and the Ends of God*, ed. John Polkinghorne and Michael Welker (Harrisburg PA: Trinity Press International, 2000) 27. Stoeger recommends Peter Coles and George F. R. Ellis, *Is the Universe Open or Closed?* (New York: Cambridge University Press, 1997).

[16]Freeman Dyson, "Time without End: Physics and Biology in an Open Universe," *Reviews of Modern Physics* 51/3 (July 1979): 448. As the winner of the Templeton Prize for Progress in Religion in 2000, Dyson is brought into the conversation.

[17]Dyson, "Time without End: Physics and Biology in an Open Universe," 449-58; Dyson's 137 mathematical calculations combine molecular biology, neurophysiology, and space physics to construct an optimistic view of cosmic future.

posthominid, intelligent forms that transcend bodily limitations as we now know them.[18] By his own admission, Dyson has little formal education in theology.[19] However, his non-Christological scientific eschatology does reject naturalism's ideology of death, which prompts a sixth and final question: Might Dyson's mathematically calculated eschatology provide a resource for the further development of Haught's eschatological panvitalism?

Perhaps this question points not only to the difficulty associated with competing scientific models of the future of the cosmos but also of the project of bringing scientific eschatology and Christian eschatology into fruitful dialogue. Scientific eschatology is a nascent science without a firm consensus among scientists about the future of the cosmos. Therefore, a theologian must exercise prudent caution about identifying Christian eschatology too closely with a particular scientific prediction of the universe's future, including the vitalistic one Dyson has proposed. Yet, if making eschatology a focus of theology-science dialogue challenges scientists to examine the reductionistic assumptions of scientific naturalism and expand the scope of their inquiry, and if at the same time Christian theologians are challenged to respond to the demand for public warrants for Christianity's "end-time" truth-claims, then both communities and the societies in which they participate will likely benefit. This possibility makes Haught's mission of engaging theologians and scientists in "the humble desire to know" something for which we can be grateful.

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[18]Dyson, *Infinite in All Directions*, 107. Frank J. Tipler is another member of the scientific community who has proposed a scientific eschatology with a focus on a future consciousness that will transcend historical embodiment. Tipler has indicated that he does not believe in the resurrection of Jesus. He envisions resurrection as a future event in evolution in which life in the form of information processing will take hold of its own destiny prior to the self-destruction of the physical world. See Tipler, *The Physics of Immortality* (New York: Doubleday, 1994) 225.

[19]Dyson, *Infinite in All Directions*, 119. Dyson's sense of God is that "God learns and grows as the universe unfolds. . . . God is what the mind becomes when it has passed beyond the scale of our comprehension" (119).