

Managing for Adaptive Creativity: Thinking with the Planet

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Os Schmitz has argued that ecological management needs an ethical orientation of the sort supported by *Journey of the Universe*. I return the cross-disciplinary favor by proposing that practice of ecological management may be the best cultural site for generating the ethics we need. Let me make that proposal by starting from this open question: in what ways do might cultures use a narrative of the emerging universe?

1. Wonder

Perhaps only a social ethicist would ask a question about the practical use of a work aimed to evoke wonder. In an era when the stars are usually clouded from view in an orange haze of urban lights, meditating on my body's genesis from star furnaces reminded me why I yearn for a dark night sky. *Journey of the Universe* connected my yearning to the genesis of the universe itself, and to the remarkably recent enlargement of the universe in human minds.

Moral traditions have failed to develop with that enlargement because – I was reminded – in less than a century our knowledge of the universe exploded past anything previously imaginable. Modern moral cultures learned to live without the earth at the center. But hundreds of billions of stars and billions of spinning galaxies!—how can we learn to live with that? Ours is a universe pulsing with innumerable centers, worlds without end, all related to one another in a deep unfolding time. It almost exceeds our capacity even for wonder. We need teachers who can make us wonder again, so I am grateful to Mary Evelyn Tucker and Brian Swimme. To work so long on such a complex subject and come away with such a lovely, uncluttered prose account of the almost-unaccountable – that is an accomplishment of high culture.

The moral cultures of the anthropocene stand in need of wonder. Despite my own irenic work with Christian traditions, teaching at Yale Divinity School daily reminds me how disconnected even the most advanced theological education is from the birth of stars and the pulsing movement of life. Without language to make sense of the emerging cosmos, Christian communities let their accounts of the experience of God drift away from their experience of creation. One symptom of this theological disconnection from wonder, I think, is indifference to ecological decline.

2. Cosmology and Practical Ethics

How do moral cultures learn to wonder again? Global society faces sustainability problems that force reflection on the human purpose in an unfolding cosmos. But it is not obvious how the emergent universe guides right behavior for any concrete problem. Consider anthropogenic biodiversity loss. After the stars shame us out of

our indifference, can the unfolding universe inform the practice of conserving biodiversity?

Practical ethics should be abstemious, I think, about drawing morals from the evolving cosmos for the concrete problems facing human cultures. Wonder at the evolution of life in the universe seems indeterminate for guiding what societies should do about their problems. Indeed, wonder at our relativity to a billion other creative centers of the universe might well make ethicists like me less absorbed in trying to improve the civilization of contingent earthlings on this not-so-important planet. Which might be a salutary moral in itself.

Yet the narrators of this *Journey* do want to shape human action by the patterns of the story they have to tell. This journey patterns the human journey; humans should become universe people by being the hands and heart of the universe, bringing forth the universe's energies and thereby learning to tell the story that tells us. I hesitate; to what extent can knowing whence comes the elements of our bodies and the creativity of our minds lead us into doing what is right by the planet with our hands and hearts? Whether science-based or mythic, accounts of how things came to be orient their hearers to the world, but – precisely because they are open-ended, journeying narratives – their meaning remains dependent on what those hearers will then do.

Now I agree that received cultural traditions should tell their stories of how things came to be in a real learning relationship to our best, science-based accounts of the unfolding universe. Certainly many religious traditions have consonant symbols for the telling – like the Eastern Orthodox idea of the human as microcosm, destined to liturgically embrace the created cosmos. Here too human creativity becomes the hands and heart of the universe, in this case incorporating Christ, who draws the universe into its divinizing journey into the life of God. The microcosmic tradition, however, also demonstrates the indeterminacy of cosmology for practical action. Eastern Orthodox priests in central Europe used to bless coal furnaces and industrial factories as exemplary of this liturgical elevation of the world by human creativity. Is a coal-burning furnace an apt work from humans born of star furnaces? The cosmological narrative seems to admit that pattern of action, as much as it does geoengineering as a reponse to the problem those furnaces create.

Eastern Orthodox cosmology, in other words, needs some way to specify good creativity. What sort of human action realizes the creativity of earth's unfolding, and what sort of earth-unfolding represents a realization of God's creativity? How that question is answered in the context of contemporary sustainability problems will determine the meaning of the cosmic Christ (and associated christic cosmology) for Eastern Orthodox action.

In other words, where a community is actively taking responsibility for creative earth processes it is also deciding the practical meaning of its view of God and the universe. If we learn something of the nature of God by understanding the creative

processes of nature, then the practices whereby we learn how earth systems work under different conditions of human action have moral and theological value.

Adaptive ecological management, as a practice of understanding how ecological systems work under different conditions of social interaction, is then an important context where cultures learn and decide what earth's creativity means. It is a way of thinking with the planet. Ecological management may work as cultural context where is generated the ethic of sustainability needed to make practical sense of humanity's place in the journey of the cosmos. Management can only work that depth of social learning, however, if it uses cosmology as an imaginative tool of reflection, capable of calling into question the metaphor of "management."

3. Learning Creativity Through Practical Management

Consider how human agents might learn to pattern their action after earth's creativity by learning from the practice of managing for biodiversity. Which species must humans protect, which can they allow to go extinct, and what sort of world should anthropocene power realize? While a generally ecological cosmology might imagine various scenarios of sustainable community, the practice of doing ecological management begins to shape the moral mind by the way ecological systems work.

That may be the most important legacy of Aldo Leopold, who showed what happens in a landscape when a society's cultural stories about the world have no reflexive relationship to what is going with the ecological community. Take, for example, the specific thing Leopold learned: the importance to the community of managing for top predators. More than one theologian has paused over the dissonance between managing ecological communities for the dominance of violent beasts and a cosmology that supposes human creativity bends toward transforming the world toward peace and away from suffering. Some theologians have explicitly called for humans to manage for a decrease in animal predation, even to genetically modify lions so that they can lie down to eat hay with the lambs. Other theologians of course find that repugnant. (Some of the most suggestive and honest work with that dissonance is in the final third of Larry Rasmussen's *Earth Community, Earth Ethics*.)

I don't think that this practical question of management – one with rather decisive outcomes for life on earth – could or should be settled by a universe story. Who knows what the universe wants leopards to be? Theologians have no prior way of knowing whether God wants antelope to be skittish and fast or bucolic and slow. They might, however, appreciate the role of leopards in a complex ecological system that produces many social and ecological goods. For example, recent research from Schmitz et al. has shown that the predatory activity of sperm whales is good for the health of their prey species, as well as many other forms of ocean life, which is implicitly good for human systems that depend on ocean life. Reading their research has led one scientist-theologian to declare ["thank God for carnivores."](#)

I think that giving thanks for carnivores coheres with a science-based universe story, and I have argued elsewhere that it makes sense within the cosmology of

Thomas Aquinas – the meaning of which is still carried in the practices of some sacramental churches. But I don't think that either the journey of the universe or Thomist cosmology requires protecting predators. Arguing the opposite would also cohere in both cases.

Ecological management thus offers a way of thinking with the planet, considering the interpretive frameworks we have for its reality within its systems. Expanded into broad forms of adaptive social learning, inclusive of the sorts of questions raised by the philosophical and religious humanities, it can drive cultural ferment around practical problems. We must be shaped by the journey of the universe, which happens in context, as moral communities work with their cultural inheritance to learn from the cosmos by working with the earth.

I close by summarizing three points:

(1) How humans manage to protect biodiversity in the era of a human-influenced earth will make the meaning of the universe stories that we tell. The creative emergence of the universe is indeterminate for human creativity, awaiting the (contingent, fallible) interpretation given it by the wondering freedom of humans.

(2) Insofar as we learn how the creativity of earth works, and the social and ecological goods produced by it, from working with environmental systems, conservation management is a practice not just for the application of ethics, but for the formation of ethics. Even in conditions of moral uncertainty, then, when cultures have disagreements over the value of nature, ecological systems bear a pedagogical value. They must be protected so we can learn if and how they are of value. (And if we can learn of God from them, their pedagogical value runs even deeper.)

(3) The practice of conservation biology must recognize the implicit cosmological questions and ethical significance of its work. A holistic practice of ecological management, I would argue, should include such exercises as discussing *Journey of the Universe*. What sort of humans will we become by our managing? What sort of planet in what sort of universe do these policies imply? Maybe management is an impoverishing metaphor for our action? Without wondering of that scope, management can fail to be as self-reflexive as it should, and so fail to spur the adaptive social learning that it must.