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Divine Presence—Causal, Cybernetic, Caring, Cruciform: From Information to Incarnation

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The prologue of John's Gospel begins with the divine Logos in creation and concludes with this Logos becoming flesh. This is *prologue to Gospel*: a Christ event with cosmic significance. John says the Word “made his dwelling among us ... the one and only Son, who came from the Father, full of grace and truth” (John 1:14). The divine Logos becomes fully incarnate only when sacrificial redemptive love is taken at the pitch in the life, death, and resurrection of the Christ. By the end of the prologue John is preaching *incarnation*, but he opens with divine *immanence*. One might thus hope to begin with pervasive divine *inspiration* and end with the apical word *incarnation*. But when does such an immanent *logos* pass over to God incarnate?

We worry here whether the word can convincingly be used at the start or en route. “Incarnate” means *in flesh* (at least at face value), and neither God nor any other being could be incarnate at a level of existence that does not have flesh, such as stars or trees. Despite what the panpsychists might say, it is hard to put spirit into rocks. That God *became flesh* in the person of Jesus is already a startling claim, but at least persons–complex, fleshed beings who can think, love, do good and evil–might be the sort of vehicle in which God could become personally present. It is not so with crystals or dirt.

In the biological world, the higher, blooded animals have flesh; but can God become present in a chimpanzee or a wolf? Some “presence” seems to follow if the Spirit animates all life. But animals show little evidence of having religious experiences; any divine presence would be unsensed. Saint Francis preached to the birds, but we think that is quaint. Alongside the intense sense of divine presence in Christ, the claim that God is *incarnate* in birds might be nonsense. If, however, *incarnate* is enlarged to include *embodied*, then one could at least meaningfully ask whether God might be embodied in animals.

Another word with a Greek and biblical legacy is *sōma*, “body.” This has a rather generic use; it refers to heavenly as well as human bodies. Biologically, plants have *sōma* but not flesh. God might be embodied in plants. We seldom think of plants as being *animated*, but never doubt they are *organic*. But God is spirit, and trees have no spirit. Perhaps the Spirit “inspires” all life, but *incarnation*, enfleshed saving presence, is something more. Plants “respire” and are upheld by divine power, but this is not yet incarnation.

Still, some make a more insistent claim about pervasive incarnation: in a strict sense incarnation is reserved for Jesus alone, but “this compressed view of incarnation must be extended into a ‘full-scope view’ if the divine self-revelation is to be revelatory for

all human beings.”¹ “There is no redemption for human beings ... without the redemption of nature.”² “In his incarnation God assumes not only human nature but also the nature of all the living.”³ “The scope of reconciliation is as wide as the scope of creation.”⁴

We seem to get the idea that in God, nothing in natural history—or at least nothing good—can be partial, failed, and left as the end of the story. Since in natural history all creatures die, most of them early and prematurely, we need a kind of super-redemption, really a super-universalism. In God, there will be a super-universe with all the fauna and flora, all the stars and galaxies, reestablished and redeemed.

This may seem extreme, but still there is something to be said for the divine self-revelation permeating the cosmos across the adventures of matter-energy, life, and mind. The Spirit does continually “renew the face of the earth” (Ps. 104:30 NKJV).

Matter-Energy: A Rational, Causal, and Contingent Universe

In the opening verses of the prologue of John, there is no talk yet of “flesh,” only of *logos* in creation. If the divine *logos*, or “word,” refers to a rationality in the universe, then the universe is surprisingly rational. Einstein concluded famously that “the eternal mystery of the world is its comprehensibility.”⁵ Theologians find that mysterious rationality a signal of the transcendent.

Astrophysics and nuclear physics describe a universe that is “fine-tuned” for life. Startling interrelationships are required for creative processes to work. Recent theory interrelates the two levels;

1. Niels Henrik Gregersen, “The Extended Body of Christ,” page 238 of this volume.
2. Jürgen Moltmann, *The Coming of Cod: Christian Eschatology* (Minneapolis: Fortress Press, 1996), 260.
3. Jürgen Moltmann, “Is God Incarnate in All That Is?” page 128 of this volume.
4. Richard Bauckham, *The Bible and Ecology: Rediscovering the Community of Creation*: (Waco, TX: Baylor University Press, 2010), 152.
5. Albert Einstein, (*Out of My Later Years*, revised reprint edition (Westport, CT: Greenwood, 1970), 61.

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astronomical phenomena such as the formation of galaxies, stars, and planets depend critically on microphysical phenomena. In turn, the midrange scales, where the known complexity mostly lies (in ecosystems or human brains), depend on the interacting microscopic and astronomical ranges. Change slightly the strengths of any of the four forces that hold the world together (strong nuclear force, weak nuclear force, electromagnetism, gravitation), change critical particle masses and charges, and the stars would burn too quickly or too slowly. Atoms and molecules—including water, carbon, and oxygen—or amino acids (the building blocks of life) would not form or remain stable.

Roger Penrose is impressed by “the extraordinary degree of precision or ‘fine-tuning’ for a Big Bang of the nature that we appear to observe,” concluding that ours is “an extraordinarily special Big Bang.”¹⁶ Martin Rees writes similarly, “We should surely probe deeper, and ask why a unique recipe for the physical world should permit consequences as interesting as those we see around us.”⁷ The startup looks like a setup. Robert Russell is right: “We should think of the divine reach as extending even deeper than biology, namely into the underlying physics of our universe with its cosmic fine-tuning for life.”⁸

Logos in Cosmos

Logos suggests logic, and there is logic built into multiple dimensions of the universe. Equations such as $E=mc^2$ are true all over the universe. This gives physics its metric character, with accompanying

6. Roger Penrose, *The Road to Reality: A Complete Guide to the Laws of the Universe* (New York: Knopf, 2005), 762, 726.

7. Martin Rees, *Our Cosmic Habitat* (Princeton, NJ: Princeton University Press, 2001), 163.

8. Robert John Russell, “Jesus: the Way of all Flesh and the Proleptic Feather of Time,”* page 332 of this volume; cf. Holmes Rolston III, *Three Big Bangs: Matter-Energy, Life, Mind* (New York: Columbia University Press, 2011), ch. 1.

predictability and testability. Eugene P. Wigner contends that “the enormous usefulness of mathematics in the natural sciences is something bordering on the mysterious and that there is no rational explanation for it. ... The miracle of the appropriateness of the language of mathematics for the formulation of the laws of physics is a wonderful gift which we neither understand nor deserve.”⁹

John A. Wheeler exclaims, “This is a world of pure mathematics and when we penetrate to the bottom of it, that's all it will be.”¹⁰ We live in a “matheomorphic” universe. Such mathematics could corroborate the belief that the world we inhabit is the creation of mind. God, the first Cause, the Primal Cause continuing, is a mathematician.

However, the problem arises here of how to get the mathematics embodied—not yet in any flesh, but instantiated in matter-energy. Mathematics per se does not cause anything. There are worlds imaginable in mathematics that are never realized. Though Stephen Hawking delights in the search for a theory of everything, he goes on to ask:

Even if there is only one possible unified theory, it is just a set of rules and equations. What is it that breathes fire into the equations and makes a universe for them to describe? The usual approach of science of constructing a mathematical model cannot answer the question of why there should be a universe for the model to describe.¹¹

In terms of our present inquiry, this is to say that pure mathematics is not even embodied, much less incarnate—not until it becomes applied mathematics, mixed into matter and energy.

9. Eugene P. Wigner, "The Unreasonable Effectiveness of Mathematics in the Natural Sciences," *Communications on Pure and Applied Mathematics* 13 (1960): 2, 14.

10. John A. Wheeler, interviewed in *Helitzer* (1973), 27.

11. Stephen Hawking, *A Brief History of Time*, Updated and Expanded Tenth Anniversary Edition (New York: Bantam, 1998), 190.

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Logos needs *word* beyond mathematics. Mathematics is stylized and crude as a description of rich natural processes. Its precision is bought with its incompleteness. No theory of everything is a necessary and sufficient cause for planet Earth, with its seven continents and seven seas. Within physical cosmology, the factual claims may be mathematical, based on values in equations, but the cosmological interpretation of these facts is not. The interpretation is historical, metaphysical, theological. A merely mathematical God could not be incarnate in Earth, much less in elephants or Israel. Such a God is not up to either creating or indwelling in either. A God who is mathematically present would not be sophisticated enough to become incarnate in flesh-and-blood history.

Cosmic Incarnation?

What we have considered so far could be endorsed by monotheists in general. These arguments may show *logos* as present and embodied in matter, but this is not yet incarnation, enfleshment. Is there some connection with the word become flesh in Jesus? Russell says yes: “If the divine reach extends into physics, then the physics of the flesh of Jesus—and the fine-tuning of the universe that makes the evolution of life possible—matters.”¹¹ Amen and well enough, but we do not know whether to think of this “divine reach” as immanence or incarnation. Did the Word become flesh, the Christ event with which John concluded his prologue, affect the primordial *logos*-presence in matter-energy with which he began? We now know what John did not: the carbon and oxygen atoms in Jesus' body were once forged in the stars, as were all the elements on Earth heavier than hydrogen and helium—no stars, no Jesus. Russell's statement that “the physics

12. Robert John Russell, “Jesus: The Way of All Flesh and the Proleptic Feather of Time,” page 332 of this volume.

of this fine-tuned universe . . . offers a precondition”¹³ seems quite true, but is the post-Jesus physics different? Sean McDonagh puts this forcefully: “In Christ, God welded himself in an irreversible way to the totality of the emergent creation.... Christ is co-extensive with, and a central dimension of every reality. He carries within himself the signature of the supernovas and the geology and life history of the Earth.”¹⁴

But every human, every nonhuman creature, every rock, equally carries this signature. Jesus' body, too, was composed of cosmic dust, fossil stardust. God became incarnate in Jesus, so this must have influenced the molecules of his metabolism, involving carbon and oxygen atoms. But that fact ipso facto does not somehow “weld” the bodily Jesus, walking on Earth, to the totality of creation, past, present, future, across the 13 billion years of cosmic history. Past natural history is there in him, but did any new “welding happen in him? We have no concept of any changes that took place in his atoms, making them different in him from what they were before.

During Jesus' years of metabolism, there was input of air and food and discharge of wastes. There was turnover in his lungs and cells, as in all humans and animals. Presumably, some of these atoms in the millennia since have been breathed into, taken up, recycled, in other humans and animals. Nothing about such atoms would be recognizably different because they once passed through Jesus' body. There was physics in Jesus' flesh, but we have no evidence that his physics differed from the physics in the flesh of John or Pilate, who also stand in the history of this evolution of life.

John puts Jesus in a cosmic framework, but does John also claim that Jesus transformed that cosmic framework into which he came?

13. Robert John Russell, “Jesus: the Way of all flesh and the Proleptic Feather of Time,” page 334 of this volume.

14. Sean McDonagh, *To Care for the Earth* (Santa Fe, NM: Bear and Co., 1986), 118.

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Since God became material in Jesus, did Jesus thereby incarnate all matter, retroactively past, contemporarily present, prospectively future? God's presence is concentrated in Jesus, who was a bit of animated dust, but nothing follows about God becoming incarnate in the magmas at the core of the molten Earth. One cannot extrapolate from the particular bit (Jesus' earthy body) to the global whole (Earth, all creation). This is unwarranted slippage. Real effects all the way back in time would require reverse causation, which is not permitted in contemporary physics. That would require Jesus-effects even outside his light cone.

Moltmann claims that all the creatures and natural processes “will be resurrected and transfigured in eternity. ... Nothing transient is lost.”¹⁵ Dust devils are transient; transfigured in Jesus, do they become immortal? Even rocks are transient on geological scales, stars on cosmic scales. Is all transience transfigured to permanence in the great redemption?

Redeemed Cosmos?

Jesus' incarnation makes possible “a redemption of all of nature—even to its ‘bottom level,’ the physical universe.”¹⁶ Neither John, nor Paul, nor Jesus knew anything of atoms or quarks, galaxies or asteroids, so they could not have made claims specific to these. I doubt that Russell has a concept of what a redeemed quark would look like. In fact, nobody has much concept of what an unredeemed quark looks like; quarks are mostly suppositions required by back inference from the mathematics of energy exchanges. Physics is necessary for incarnation, but from that we cannot conclude that incarnation transforms, redeems, or even reaches into the ionic exchanges or

15. Richard Bauckham, *The Theology of Jürgen Moltmann* (Edinburgh: T&T Clark, 1995), 210-11.

16. Robert John Russell, “Jesus: the Way of all Flesh and the Proleptic Feather of Time,” page 342 of this volume.

shifting electron energy levels in Jesus' body. They are what they are in all human bodies, before and after Jesus divinely incarnated his flesh, and most of them are in nonhuman animal bodies as well.

The prologue starts with Logos immanent in the world, but finishes with incarnation in flesh (John 1:14). If one is going to argue for deep incarnation, one needs to stretch out (or argue away) this flesh (*sarx*). Gregersen wonders, with emphasis, whether “the divine Logos ... has assumed not merely humanity, but the *whole malleable matrix of materiality*. ... In modern translation, *sarx* would cover the whole realm of the material world from quarks to atoms and molecules, in their combinations and transformations throughout chemical and biological evolution.”¹⁷ He concludes, “It is as natural for God to dwell in the world of dirt and waste as it is for God to be present in the uniquely human characteristics of highly developed consciousness, morality, religious imagination, and 'God-consciousness'”¹⁸ The problem with this claim is that it trades on open meanings of “dwell in” and “natural.” Is God *immanent* in all matter, atoms to asteroids? Yes. Is God *naturally incarnate* in all matter? No; neither before or after Jesus' years on Earth. There is more than one level of indwelling. God can be immanent in dirt without being incarnate there.

Similarly, Elizabeth Johnson wants to make the meaning of “flesh” more comprehensive: “*Sarx* in John signifies what is material, perishable, fragile—in a word, finite, the opposite of divinity clothed in majesty.” The *sarx* of John 1:14 thus reaches beyond Jesus, and beyond all other human beings, to encompass the whole biological

17. Niels Henrik Gregersen, “Deep Incarnation: Why Evolutionary Continuity Matters in Christology,” *Toronto Journal of Theology* 26 (2010): 176-77; cf. Niels Henrik Gregersen, “God, Matter, and Information: Towards a Stoicizing Logos Christianity,” in *Information and the Nature of Reality: From Physics to Metaphysics*, ed. Paul Davies and Niels Henrik Gregersen (Cambridge: Cambridge University Press, 2010), 344.

18. Gregersen, “Deep Incarnation,” 185.

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world of living creatures and the cosmic dust of which they are composed. “Christ's benefits are intended not just for the human world but for the whole natural world.”¹⁹ If so, grass, germs, and even the dust in space have *sarx*. Outside of supernature, there is nothing in this universe that does not have *sarx*, since all things are finite.

But now the word *sarx* has been so stretched out that it begins to lose any specificity to what we once might have thought of as “flesh,” and what seems to be the main point of the rest of John's Gospel: Jesus enfleshed, revealing God's solidarity with human suffering. Nothing that comes later suggests that John is seriously interested in Jesus' solidarity with grass or asteroids. He is interested in claiming that this Jesus is the Logos sent from the Father, and thus has cosmic backing.

The meaning of *sarx* in Liddell and Scott's classical *Greek-English Lexicon*, as well as in Thayer's *Greek-English Lexicon of the New Testament*, is always flesh, muscle, edible meat, the pulpy substance of fruit, corruptible flesh. It is never matter, rocks, trees, or mountains, much less stars or planets. We should also take Ludwig Wittgenstein's advice here to look not to the *meaning* but to the *use*.²⁰ The whole point of the prologue is to introduce this Word become flesh in the carpenter of Nazareth.

Gregersen seeks a “strong continuity between the historical figure of Jesus and the cosmos at large.”²¹ That cannot mean that the life of Jesus affected distant galaxies, altering their nucleosynthesis. It might mean that the life of Jesus reveals at depth what the cosmological and evolutionary history, on certain of its trajectories, is tending toward: complex beings capable of suffering love. Perhaps all we need to claim is that Jesus revealed something about events preceding him

19. Elizabeth A. Johnson, “An Earthy Christology,” *America* 200:12 (2009): 27-30.

20. Ludwig Wittgenstein, *Philosophical Investigations* (Oxford: Blackwell, 1953), sec. 43.

21. Gregersen, “Deep Incarnation,” 173.

in natural history and gave humans some hope about events yet to come.

Life, Cybernetics, Caring: Pro-Life Earth

Surveying natural history for signs of divine presence, we should not forget emergence. Carbon and oxygen are found on both Earth and Jupiter, but nursing mothers are found only on Earth. Some things that were not previously possible become possible with the opening up of new space. Perhaps this is owing to, or gives location for, divine inspiration of a kind that gets closer to incarnation. Now we get more *logos*—proactive, not just passive—coming into the world.

Logos in Life

Molecular biology, discovering DNA, has decoded the “secret of life,” classically ascribed to the Spirit of God. Evolutionary history has located the secret of life in Darwinian natural selection operating across enormous time spans, with the fittest selected to survive. These vital creative processes continue across deep time, producing the ascent of life from the simple to the complex. There is an increase of information, with genetic creativity resulting in billions of species. There is self-actualization, reproduction, the ongoing sharing and elaborating of biological value and promise.²² Theologians claim that underneath it all is divine Spirit breathed into matter, a still further and deeper secret of this animation.

Einstein and Wheeler could read the mathematics out of deep space and deep time, but they were dealing with passive information, rationality built into the matter-energy processes. In the biological world, proactive information appears, showing how to compose, maintain, communicate, and elaborate living structures and processes.

22. Holmes Rolston III, *Three Big Bangs*, ch. 2.

This is information about the directed use of matter and energy. This biological sense of information is agentive. What makes the critical difference is the information carried in the genes with its resulting capacity for doing something: the *formation* includes *information*. Afterward, as before, there are no causal gaps from the viewpoint of a physicist or chemist, but there is something more: novel information that makes possible the achievement of increasing biological order.

Genes do not only contain descriptive information *about* but prescriptive information for the vital processes of life. There is natural selection *for* what a gene does, contributing to adaptive fit. Genes have a *telos*, an end, stored in their coding. Genes are *teleosemantic*. That differentiates physics from biology, and biologists need to be alert to this. George C. Williams is explicit: “Evolutionary biologists have failed to realize that they work with two more or less incommensurable domains: that of information and that of matter. ... The gene is a package of information.”²³ There is more where once there was less. For scientists, this superintending and supervening process is cybernetic. For theologians, what is added to matter-energy is *logos*.

A crucial line is crossed when abiotic formations get transformed into loci of information. The *factors* come to include *actors* that exploit their environment. Evolutionary natural history has generated “caring.” There is caring wherever there is agency, motivation, and locomotion.

In some developmental lines, these genes produce sentience. Irritability is universally present in life, but sentience, coexistent with neural structures, brings the capacity to move about deliberately in—and also to get hurt by—the world. A neural animal can love something in its world. It has the power to move through and

23. Quoted in John Brockman, *The Third Culture: Beyond the Scientific Revolution* (New York: Simon and Schuster, 1995), 43.

experientially to evaluate the environment. This capacity is greatly advanced over anything known in immobile, insentient plants. A still more sophisticated level of complexity is reached with the capacity for learning, for acquired behavior. A coyote has a memory and conditioned learning; it can remember which directions to run for cover. This requires developing neural or other capacities to operate in the subtleties of context, which in turn generates new levels of caring.

This developing sentience has the appearance of felt caring, when the organism is united with or torn from its loves. The earthen story is not merely of goings-on, but of going concerns. Animals hunt and howl, find shelter, seek out their habitats and mates, feed their young, flee from threats, and grow hungry, thirsty, hot, tired, excited, and sleepy. They suffer injury and lick their wounds. Living things have needs.

Biologists have become increasingly impressed with how, at least on some trajectories, these selves become social and interdependent. Caring gets complicated, since selves are implicated. They eat each other, but also depend on each other (even on what they eat). They must reproduce themselves. Self-defense requires adapted fit; living things are webbed together in ecosystems. Caring is only self-contained up to a point; after that it is caring “about” these relationships, the contacts and processes with which one is networked. The system requires mutually operating together. This logic of life suggests a *logos* of proactive caring coming into the world.

The Logos must in some sense have been “present” in the genes of Jesus. Jesus had genes that he shared with chimpanzees and chickens, as do all humans (even if he was haploid, not diploid!). In him there were cytochrome-c molecules, an electron carrier in the respiratory chain, the basic form of which goes back 1.5 billion years.²⁴ So Jesus

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had, again, the signature of evolutionary history. But this is not the point of John's prologue, and it is a mistake to try to stretch the activity of divine incarnation into the material basis of Jesus' biological metabolism, shared with other humans, shared in large part with animals great and small. This metabolism is necessary but not sufficient for a locus of incarnation. Rather, this incarnation is embodied in Jesus' person, which is enfleshed, but lies in his living out a life of suffering love.

Incarnate Sarx?

Perhaps we can now claim that *logos* has become flesh, entered *sarx*. This would extend *sarx* to all life on Earth rather than extending it to all cosmic matter. "The solidarity of the flesh in the doctrine of the incarnation is not limited to the human community. Flesh is understood as involving the whole 3.8 billion-year evolutionary history of life on our planet, with all its predation, death and extinctions, as well as its diversity, co-operation, interdependence and abundance."²⁵

Two issues now face us; one past, one future. In his prologue, John sees the Logos as having been coming into the world with and since creation. But John's Gospel vision is redemptive, present and future. In the life, death, and resurrection of Jesus, does anything redemptive happen to this ongoing natural history? Does Jesus change the future of *sarx*?

Although he claims cosmic redemption, Moltmann is less universal with claims about flesh: "Perhaps *basar* can best be translated 'life.'"²⁶

24. Lubert Stryer, *Biochemistry* (San Francisco: W. H. Freeman, 1975), 351-52.

25. Denis Edwards, "The Redemption of Animals in an Incarnational Theology," in *Creaturely Theology: On God, Human, and Other Animals*, ed. Celia Deane-Drummond and David Clough (London: SCM, 2009), 92.

26. Moltmann, "Is God Incarnate in All That Is?" page 127 of this volume.

He cites Isaiah: “All flesh is grass” (Isa 40:6 RSV). But surely this is metaphor, not identification; all flesh is *like* grass. Isaiah does not claim that grass has flesh. The claim is only that both humans and grass wither and perish. Although it seems too much of a stretch to think of protozoans and plants as having flesh, they do have vulnerability. They struggle to survive. So perhaps *sarx*, though it means “flesh,” can be stretched into a metaphor for vulnerable “life.”

Redeeming All Creatures?

Does this mean that all flesh (meaning all living creatures) is redeemed? Moltmann can be quite specific about the extent of his claims, which extend beyond but include the history of life on Earth: “The raised body of Christ therefore acts as an embodied promise for the whole creation ... a transfiguring efficacy emanates from it. ... So in this body and through it the powers of the new creation act upon and penetrate the world.” This includes “animals, plants, stones, and all cosmic life-systems.”²⁷

There is certainly a history of ongoing creation; there are evolutions to richer and more complex forms of life. ... But in this history of creation, there is also dying, violent death, mass extermination and the extinction of whole species through natural catastrophes and epidemics. ... Not even the best of all possible stages of evolution justifies acquiescence in evolution's victims, as the unavoidable fertilizers of that future. ... There is therefore no meaningful hope for the future of creation unless ‘the tears are wiped from every eye.’ But they can only be wiped when the dead are raised, and when the victims of evolution experience justice through the resurrection of nature. Evolution in its ambiguity has no such redemptive efficacy and therefore no salvific significance either. If Christ is to be thought of in conjunction with evolution, he must become evolution's redeemer.²⁸

27. Jürgen Moltmann, *The Way of Jesus Christ: Christology in Messianic Dimensions* (San Francisco: HarperSanFrancisco, 1990), 258.

28. Moltmann, *The Way of Jesus Christ*, 296-97.

Richard Bauckham has some misgivings:

Moltmann claims that just as Christ died in solidarity with all human beings, to redeem them from death, so he dies the death of all the living, in solidarity with all living things that die. All death in nature Moltmann regards as not natural, but as a tragic destiny, whose reversal at the end is anticipated in Christ's resurrection. At this point one may want to ask questions. Does death really have the same significance for every kind of creature? For elephants, who mourn their dead, it is a tragic destiny, as it is for us. But for this year's marigolds, which die in the annual cycle of death and new life that will produce next year's marigolds, is death tragic? Need we mourn the individual marigold as we certainly would the species, should it become extinct?²⁹

An oak produces millions of acorns, with only one surviving to replace itself. Is each acorn to become a mighty oak in heaven? A bullfrog can lay 25,000 eggs in a clutch, and lay more than one clutch a season. Does Jesus resurrect all these frogs?

Bauckham is nevertheless attracted to this grand redemption: "If the new creation is the transformation of the whole of this material creation so that all creatures may share in the life of the divine eternity, then Jesus' resurrection must lead the way to new creation for the whole community of creation, not just humans."³⁰ Edwards agrees:

Redemption through incarnation is a theory of redemption cast in the most universal terms. ... God is with every sparrow, every beetle, every Great White shark, every creature hunting another for food and every creature that is the prey of another.... Animals will reach their redemptive fulfillment in being taken up into the eternal life of the Trinity. ... This kind of incarnational theology provides the basis for seeing kangaroos and chimpanzees, kookaburras and dolphins as participating in redemption in Christ.³¹

29. Bauckham, *The Theology of Jürgen Moltmann*, 210-11.

30. Richard Bauckham, *The Bible and Ecology: Rediscovering the Community of Creation* (Waco, TX: Baylor University Press, 2010), 171.

31. Edwards, "The Redemption of Animals," 91, 95, 82.

Christopher Southgate closes a probing analysis with a hope that “extends the concern of Christian soteriology beyond the human world to cover the healing of the evolutionary process and the redemption of the many casualties of evolution.”³² Russell claims that “‘every sparrow that falls’ is greeted immediately by her Risen Lord.”³³ We get a vision of plenitude of life for every creature who has ever lived and died. All live happily ever after. There are no losers—all win. On Earth the music is in a minor key, but in heaven all the music is in a major key.

“The beginning is gathered up into the end and the consummation brings back everything that had been before.”³⁴ Does this mean that all the young who were cut short from disease or starvation are resurrected to live in full health and be well-fed in heaven? What might this mean for a lion and its prey? “The young lions roar for their prey, seeking their food from God” (Ps. 104:21). Do we need to envision that all prey in heaven are resurrected and live out their fullness of life? Even vegetarian lions and resurrected prey would have to eat (and cut short) the lives of shrubs and grass. Even if these vegetarians eat fruit, they kill the seeds within.

In the new creation of all things, the great transformation of the cosmos is from transitoriness to immortality: “In his incarnation God assumes not only human nature but the nature of all the living too: ‘The Word became flesh.’ The whole vulnerable, mortal nature is assumed by God in his becoming human, in order that it may be healed, reconciled, glorified.”³⁵ These are high-sounding words, but both Bauckham and I doubt that Moltmann can imagine what

32. Christopher Southgate, “God and Evolutionary Evil: Theodicy in the Light of Darwinism,” *Zygon* 37(2002):821.

33. Robert John Russell, “Jesus: the Way of all Flesh and the Proleptic Feather of Time,” page 346 of this volume.

34. Moltmann, *The Coming of God*, 265.

35. Moltmann, “Is God Incarnate in All That Is?” page 128 of this volume.

glorified elephants, bullfrogs, oaks, marigolds, and termites would be like. This is believing what we do not understand—indeed, believing what approaches the incredible. We may enjoy the theological exuberance of such sweeping claims, but on the ground they evaporate. Moltmann adds, “The difficulties about not just *hoping* this but *thinking* it too are considerable.”³⁶ Indeed! Perhaps we should consider this mostly a form of pious theological hand-waving.

Elizabeth Johnson suggests a deep resurrection meaning that “the whole natural world, all of matter in its endless permutations, will not be left behind or rejected but will be likewise transfigured by the resurrecting action of the Creator Spirit: Cosmic redemption is neither imaginable nor empirically verifiable. But it stems from the logic of faith in God who creates and indwells in the world, embraces it in deep incarnation, and loves and values the whole evolving shebang.”³⁷ Now it seems that we believe it although we cannot imagine it, much less verify it. So we really have no idea of what a transfigured elephant or tsunami might be like. Could there be a danger here of believing the absurd? This is a blanket claim that does not know what it covers, but it feels good to make such claims of solidarity with all creation.

Philosophers sometimes notice that a bold claim, after pressure from critics, is modified little by little until the once-bold claim, as they say, “dies the death of a thousand qualifications.” Here, redemption is boldly expanded to cosmic scope, but when stretched out to redeeming everything from microbes to black holes, it dies the death of uninhibited enlargement.

Even if we found some intelligent sense in which the divine Logos, becoming flesh, might redeem creatures, it would not automatically follow that the form of this enfleshment would be incarnation. We

36. Moltmann, *The Coming of God*, 260.

37. Elizabeth A. Johnson, “Jesus and the Cosmos,” page 150 of this volume.

might become convinced that God redeemed elephants, but still find ourselves wondering if God incarnate in Jesus was spread out to God incarnate in elephants. Gregersen sees himself as following the deep ecology of Arne Naess, an ecology that is less anthropocentric.³⁸ Similarly, John Haughey finds himself baptizing deep ecology: “Deep ecology triggers deep incarnation.”³⁹

But Naess contrasted his deep ecology with a shallow ecology. Where is incarnation shallow? Hardly in Christ. If divine incarnation is “deep” anywhere, it would seem to be in the life, death, and resurrection of Jesus. By contrast, any divine incarnation in elephants or trees would be shallow. Forget the deep/shallow contrast, then; the opposite of “deep” here is “high,” not shallow. There is high Christology, full incarnation in Jesus, and there is deep incarnation in these nonhuman creatures. Maybe the cue came from Naess, but the metaphorical contrasts have been radically altered.

Neither John nor Jesus could have made claims about quarks or black holes, about which they knew nothing. Perhaps they made claims of incarnation in the Mediterranean nature they did know. “*God becomes Jesus, and in him God becomes human and (by implication) foxes and sparrows, grass and soil.*”⁴⁰ But we really have no concept of what God in Jesus did to enter into and to reconcile those animals and plants that Jesus and John did know in their wilderness deserts: “fiery serpents and scorpions” (Deut 8:15; Num 21:6), “jackals,” “hyenas,” “owls,” “kites,” “ravens,” “porcupines,” “ostriches,” “wild goats (satyrs),” “wild beasts” (Isaiah 34), or even those cedars of Lebanon that the Lord planted centuries before and has since watered abundantly (Ps. 104:16). All such creatures across the years CE are the same as they were across the years BCE. Taken in any literal sense,

38. See Gregersen, “Deep Incarnation,” 178.

39. John C. Haughey, “Baptizing Deep Ecology,” *Woodstock Report* 94 (2009): 6-7.

40. Gregersen, “Deep Incarnation,” 182, his emphasis.

the idea of a reconciled or redeemed ostrich, saved by the blood of the cross, is both biological and theological nonsense. Even searching for some symbolic sense, we are pressed to develop serious content claims.

Gregersen concedes that he is not speaking plainly: “the point of deep incarnation is not that God is, plainly speaking, ‘incarnate in all that is,’ but rather that the incarnate Logos, sent from God the Father, is present *for* and *with* all creatures, including in their sufferings.”⁴¹ I agree that the Logos may well be present in all the animated creatures—the wind of life breathed into them for their lives, sustaining them in their suffering. But is such a Logos-presence incarnation in any Johannine sense?

Plainly speaking, God is not incarnate in all these creatures, from paramecium to elephant, but theologically speaking God *is* so incarnate—which is fleshed out as meaning that God is present for and with these creatures. This, however, is what immanence has meant across centuries of theological discussion. The Hebrew Tetragrammaton YHWH means, “I am there.” “Presence!” Theologians have seldom denied that God holds the universe in existence constantly over an abyss of nothingness.

Think deeply, we may be told; think timelessly. Or at least think differently about time. Russell wants “to reject the linear concept of time” for a “thicker” concept of time,⁴² for “multiply connected time,” where events back and forth across natural history are interwoven something like nodes on the Internet. Russell is here reminiscent of what John McTaggart discounted as the temporal A-series, where a knife-edged present moves inexorably across time to convert the future into the past, in favor of what he called a B-series, having only

41. Gregersen, “The Extended Body of Christ,” page 240 of this volume.

42. Robert John Russell, “Jesus: the Way of all Flesh and the Proleptic Feather of Time,” page 347 of this volume.

an earlier-than/later-than in a serial whole, a sort of past-present-future interwoven as a whole.⁴³

There is an ontological dependence of all created things on God. Creatures are limited by space and time, but God is not. So God can be there in rocks and grass in incarnate form if God so pleases. That omnipresent incarnation is not, Gregersen cautions, “omni-manifest.”⁴⁴ Now, Gregersen finds a way to back off from his seemingly strong claim. This God is *incarnately present* in the flowing lava of volcanic eruptions, the shearing rocks of earthquakes, the tidal waves of tsunamis, but not *manifest* there. So we can have loci of incarnation that manifest in a way that reveals nothing about that which we later do find manifested, revealed, in Jesus. This is a “full-scope,” but not “omni-manifest,” revelation in which we are learning nothing about God in God's hidden incarnate presence in rocks or redeemed elephants. “We hope for what is beyond our capacity to imagine.”⁴⁵ Perhaps we can imagine some transubstantiated elephant with redeemed substance that still has the accidents of an elephant. Claim if you like that the incarnation redeems all animal flesh, but it is hard, so to speak, to “flesh out” this claim with any specifics of how the work of Jesus benefited the wild world.

The claim seems vaguely reasonable so long as it is kept reasonably vague. Divine presence in, with, and under natural history can plausibly be seen as Logos becoming enfleshed, incarnate. But when we try to envision Jesus as transforming that natural history in his resurrected body, there is promise, hope, ingenuity, and freewheeling slippage between ideas.

43. John M. E. McTaggart, *The Nature of Existence* (Cambridge: Cambridge University Press, 1927), vol. 2, ch. 33.

44. Gregersen, “The Extended Body of Christ,” page 235 of this volume.

45. Edwards, “The Redemption of Animals,” 96.

Ideational, Spirited Mind: Logos and Love

Of all enfleshed creatures, one is especially remarkable. Humans find themselves placed cognitively and critically where no other species is. Neurologists find that we humans are the most sophisticated of known natural products. The human brain is of such complexity that descriptive numbers are astronomical and difficult to fathom. A typical estimate is that it contains 10^{12} neurons, each with several thousand synapses (possibly tens of thousands). Each neuron can “talk” to many others. This network, formed and re-formed, makes virtually endless mental permutations possible. The human brain is capable of forming thoughts numbering something in the range of $10^{70,000,000,000}$, a number that dwarfs the number of atoms in the visible universe (10^{80}).⁴⁶

Our mental genius enables us to rise to a transcending overview. Humans are “spirited selves,” enjoying our incarnation in flesh and blood, empowered for survival by our brain/minds, defending our personal selves, and yet we transcend ourselves and our local concerns. *Homo sapiens* is the only part of the world free to orient itself with a view of the whole. There have been, in evolutionary history, other hominids, other *Homo* species, about whose mental capacities we are uncertain. But we have no doubt about the uniqueness of *Homo sapiens* on Earth today. We are not free *from* either the worlds of nature or culture, but free *in* those environments. That makes us, if you like, free spirits; it also makes us self-transcending spirits. That is the peculiar genius of the human “person” or “spirit.”

Elaborating the genetic cybernetic possibilities, human genes in generating human brains crossed a threshold into a cognitive realm

46. Owen Flanagan, *Consciousness Reconsidered* (Cambridge, MA: MIT Press, 1992), 37; Mike Holderness, “Think of a Number,” *New Scientist* 170 (2001): 45.

with spectacular new powers and freedoms. The combinatorial cybernetic explosion is recompounded. Terrence Deacon catches this uniqueness:

Hundreds of millions of years of evolution have produced hundreds of thousands of species with brains, and tens of thousands with complex behavioral, perceptual, and learning abilities. Only one of these has ever wondered about its place in the world, because only one evolved the ability to do so.⁴⁷

We wonder where we are (cosmology, universe, Earth, creation), who we are (person, self, spirit, soul), what we ought to do (ethics, justice, love, values). An ancient sage recorded, millennia ago, that humans are made in *the image of God* (Gen. 1:27). Interestingly, a Harvard paleontologist, after a quarter century of probing the origins of life and the evolutionary epic, recently concluded his thoughts about the human place in natural history: “Perhaps we were made in God’s image after all. ... On this planet, at this moment in time, human beings reign,” capable of great evil, but hopefully with “grace and humility.”⁴⁸ God might be in, with, and under archaic bacteria, continuing through their evolution into chimpanzees, but none of this prehuman life seems able to image God. That requires further emergent moral and philosophical capacities to reflect on, to reflect the divine.

Incarnate persons must choose between good and evil. Persons set up a reflective gap between the real and ideal that orients action. Humans may desire, for instance, to preserve and enlarge family and tribe. We may admire and try to be Good Samaritans. In the human desires to be moral, however brokenly, ideal mixes with real. Our struggle through this coupling with broken embodiment, enfleshed,

47. Terrence W. Deacon, *The Symbolic Species: The Co-Evolution of Language and the Brain* (New York: Norton, 1997), 21.

48. Andrew H. Knoll, *Life on a Young Planet* (Princeton, NJ: Princeton University Press, 2003), 246.

deepens the struggle for survival in the biological processes. How far is struggle required for vital creativity? Astronomical and chemical processes may be exquisitely mathematical, but the adventures of incarnate minds navigating hyper-immense possibility space cannot be, especially when exploring ongoing possibilities in justice, caring, and loving. A parent—even a heavenly father—does not fine-tune the rearing of a son or daughter. Suffering love is never clockwork precision. If there is resonance, this is in sympathy and solidarity, spirit attuned to spirit, beset by hopes and fears in an ambiguous and challenging world.

Chemical reagents remain effective in human biochemistry, but spiritual agency, superimposed on this, is a radically new level of being. We find in each person an agent who must be oriented by a cognitively considered belief system in a way that, in the biological world, animals are not. Persons are challenged with the question of how to authorize such a belief system. In persons, the self-actualizing and self-organizing doubles back on itself with the qualitative emergence of what the Germans call *Geist*, what existentialists call *Existenz*. Matter can, the physicists say, be “excited” under radiation. The neural animal can, the biologists say, become “excited,” emotional. Here, what is really “exciting” is that human intelligence is now “spirited,” an ego with felt, psychological inwardness that cares about itself and its role in the world.

Persons have egos. They feel ashamed or proud; they have *angst*, self-respect, fear, and hope. They may get excited about a job well-done, pass the buck for failures, have identity crises, or deceive themselves to avoid self-censure. Humans are capable of pride, avarice, flattery, adulation, courage, charity, forgiveness, prayer. They may resolve to dissent before an immoral social practice and pay the price of civil disobedience in the hope of reforming their society. They weep and say grace at meals. They may be overcome with

anomie, or make a confession of faith. They may insult or praise each other. They tell jokes. Persons act in love, faith, or freedom, driven by guilt or seeking forgiveness—to use categories that theologians have thought fundamental.

Persons have unique careers that interweave to form storied narratives in cultural heritages. They have heroes or saviors who may die for the sins of the world, launch the kingdom of God, or launch other passionate ideologies about the meanings of life and history. Persons may become disciples of these sages and saviors, and when they do they realize that to be a person includes a dimension of “spirit.” Where there is reflective, sacrificial suffering love, there is spirit. There is spirit where there is a sensing of the numinous, the sacred, the holy. There is spirit where there is awe, a sense of the sublime. There is spirit where, along with an explosion of knowledge, nature escalates as a wonderland. There is spirit when persons confront the limit questions, when persons get goose pimples looking into the night sky or at the Vishnu schist at the bottom of the Grand Canyon—or pondering whether God can be incarnate in matter, in life, in persons, in the person of Jesus.

Might this imagining become incarnation? Humans, for better and worse, are all incarnate, enfleshed. But the divine Logos is incarnate only when such sacrificial suffering love is deeply embodied. Indeed, God is fully incarnate only when such redemptive love is taken at the pitch in the particular life, death, and resurrection of Jesus Christ. In this deepest—and highest—incarnation, we find revealed the inspired omnipresence of divine grace, the destiny of life on Earth. From that Logos become flesh, gospel Logos in Jesus, who dwelt among us, there can be—indeed, there has repeatedly been—incarnation in the saints of the Christian community. So we do reach, at the apex, incarnation in this world, culminating the Logos that has been immanent since creation.

Cruciform Nature and Divine Incarnation

Reaching the Christ, the apex of divine incarnation, we can look again at all the living and dying through the millennia of evolutionary natural history and find the cross of Christ anticipated. The cross of Christ can be said to fulfill that evolutionary cruciform world—although, as I have argued, the cross of Christ does nothing to transform the evolutionary processes that for eons antedated Jesus' life in Palestine, and that have continued in wildlife and wildlands since.

In physics and astronomy, we meet a causal puzzle, one of creation *ex nihilo*. Biology adds creation *ex nisu*, creation *per laborem*. To cause, care is added. To movement, concern is added. To energy, effort is added. Something is at stake, requiring defense. There is success and failure. There is death but, with labor and regeneration, life ongoing. There is a kind of death that bears much fruit, like a seed fallen into the earth. “Unless a grain of wheat falls into the earth and dies, it remains just a single grain; but if it dies, it bears much fruit.” (John 12:24). John can use a botanical analogy for the passion of Jesus.

The flora and lower faunal forms participate in this struggle, but the capacity for suffering evolves only in later, higher forms. Now there must also be endurance—in the more sentient creatures, passionate endurance. We meet an existential puzzle, one of creation *per passionem*. Life on Earth is not a paradise of hedonistic ease, but a theater where life is earned by toil and sweat. In the psalmist's metaphors, life is lived in green pastures and in the valley of the shadow of death, nourished by eating at a table prepared in the midst of enemies (Psalm 23). We do not have available to us any coherent alternative models by which, in a hurtless and painless world, there might have come to pass anything like these dramas that have happened in botanical and zoological nature, events that in their

central thrusts we greatly treasure. There are sorts of creation that cannot occur without death, without one life seeded into another, and these include the highest created goods. Death can be meaningfully integrated into the biological processes as a necessary counterpart to the advancing of life.

Suffering is already present in animal flesh and blood as soon as it becomes neural. Suffering goes back-to-back with caring sentience; it drives life toward pleasurable fulfillment. Not only does the good presuppose concomitant evil, but the evil is enlisted in the service of the good. Individually, the organism seeks to be rid of pain, and yet pain's threat is self-organizing. It forces alarm, action, rest, withdrawal. It immobilizes for healing. The organism is quickened to its needs. The body can better defend itself by evolving a neural alarm system. The experiences of need, want, calamity, and fulfillment have driven the natural and cultural evolution of abilities to know and, in course, abilities to think. Where pain fits into evolutionary theory, it must have, on statistical average, high survival value. It is selected for, and there is a selecting against counterproductive pain. In this sense, pain is a pro-life force.

Struggle and suffering, and life renewed in the midst of its death and perishing, are central themes in Christianity. Although these themes are distinctively human, especially when they involve suffering that results from sin, some of them seem pervasively present in biological life, and increasingly so in flesh-and-blood life. Natural history is "cruciform" even before humans arrive; in all creating of life there seems to be a struggle through to something higher. Things perish with a passing over in which the sacrificed individual also flows in the river of life. Each of the struggling creatures is delivered over to preserve a line. In flesh-and-blood creatures, each is a blood sacrifice, perishing that others may live. In them we have a kind of "slaughter of the innocents," a nonmoral, naturalistic harbinger of the

slaughter of the innocents at the birth of Christ, all perhaps vignettes hinting at the innocent Lamb slain from the foundation of the world. In their lives, beautiful, tragic, and perpetually incomplete, they speak for God; they prophesy as they participate in the divine pathos. All have “borne our griefs and carried our sorrows” (Isa. 53:4 RSV). They share the labor of the divinity.

Science and common experience discover what these creatures empirically are, which remains unchanged before and after Christ. But Christ reveals the large-scale picture into which these creatures can and should be placed. It is not that deep incarnation transforms what these creatures are, redeeming them from their frailty and failures, but that incarnation in Christ shows deeply the framework in which they are placed—this cruciform creation yielding, on one of its supremely revealing trajectories, this Christ who exemplifies suffering love. The struggle for adaptive fit—life and death and life renewed across the millennia—prefigures the life and death of Christ. These prior events are necessary if there is to be a human species, if there is to be a Jesus of Nazareth who is put to death. Further, this Christ event reveals the most extensive and comprehensive meaning and significance for this storied natural history across the life events on Earth.

We can see the stars as part of the setup for forming a planet Earth. We can see carbon, oxygen, and iron as making life on that Earth possible. We can see flesh-and-blood, suffering creatures as necessary but not sufficient for the emergence of creatures that can care in love. We can see a brained mind as necessary for creatures that can reflect self-consciously about their role in this history. We can see Israel's history as preparation for the coming of its Messiah. We can trace an evolving storied achievement across this cruciform creation. Jesus reveals transformations that have been underway for millennia, at least in this corner of the universe with its life, its humans coming

out of Africa. Darwinian natural history is already telling that story, but the whole story is not told without stories of Abraham, the law, the prophets, the Christ.

In causal explanation, A causes B and B causes C; the explanatory emphasis is on causal precedents. This explanation characterizes natural science. But narrative explanation differs. Z reveals the significance of Y, which reveals the significance of X. X leads toward Y, which leads further to Z. X and Y get taken up into Z. Perhaps we can see cosmological history and evolutionary history as preconditions for incarnation in Christ; perhaps we can say that the Spirit is at work opening up the possibility space for these developing preconditions. But this does not warrant the further, different causal explanation that God is *incarnate* in ancient stars or ancient dinosaurs merely because Jesus would never have arrived in Nazareth without them in the prior history of the universe.

I agree with the way Johnson puts it:

An ecological Christology interprets the cross, revered as the tree of life, as a sign that divine compassion encompasses the natural world, bearing the cost of new life throughout the endless millennia of dying entailed by evolution. To be in solidarity with divine care amid creation's groaning, the community of disciples must enter the lists on the side of those who act for ecological well-being, enduring the suffering this entails. ... Human connection to nature is so deep that we cannot properly define our identity without including the great sweep of cosmic and biological evolution. We evolved relationally; we exist symbiotically; our existence depends on interaction with the rest of the natural world.⁴⁹

Edwards finds that “the Christ-event reveals a God who not only feels *with* suffering creatures, but who is already at work transforming suffering of every creature into life.” With that I concur, even though

49. Elizabeth Johnson, “An Earthy Christology.”

I do not follow him to his further conclusion: “The Christ-event is saving not only for human beings, but also in some way for other creatures, including dogs and horses and eagles.”⁵⁰

In the Greek, “nature” has, as root idea, “giving birth.” If we must use metaphors, after Darwin the Earth is as much like a womb in these gestating powers as it was, after Newton, a clockwork machine or, after Einstein, energy and matter bubbling up out of a space-time matrix. This “giving birth” requires “labor,” and the birthing metaphor, making possible this continuing regenerating, seems inseparable from elements of struggle. Biological nature is always giving birth, always in travail. Something is always dying and something is always living on. Earth slays her children, a seeming evil, but bears an annual crop in their stead. The “birthing” is nature's orderly self-assembling of new creatures amid this perpetual perishing. Life is ever “conserved” as biologists might say; it is perpetually “redeemed,” as theologians might say. We recognize in creative nature dimensions both of redemptive and of vicarious suffering, in which ongoing success is achieved by sacrifice.

There are passages in the Bible that seem to promise a pervasive general redemption of a fallen nature:

For the creation waits with eager longing for the revealing of the children of God; for the creation was subjected to futility, not of its own will but by the will of the one who subjected it, in hope that the creation itself will be set free from its bondage to decay and will obtain the freedom of the glory of the children of God. We know that the whole creation has been groaning in labor pains until now. (Rom. 8:19-22)

For in him all the fullness of God was pleased to dwell, and through him God was pleased to reconcile to himself all things, whether on earth or in heaven, by making peace through the blood of his cross. (Col. 1:19-20)

50. Edwards, “The Redemption of Animals,” 94, 92.

Can we make any sense, in light of contemporary biology, of this grand redemption? A biologist is quite sure that whatever nature is, its fundamental character has nothing to do with human sinfulness. Human sin did not throw nature out of joint; nature does not need to be redeemed on that account. Well, perhaps nature is not out of joint due to human sin, but natural history has forever been in bondage to futility and decay, from which it needs redemption.

Although the natural world is a place of ambiguity—challenges, threats, life support, life renewed, environmental resistance, and environmental conductance—we need to resist the idea that there is something horribly broken about nature. David Hull charges, “The evolutionary process is rife with happenstance, contingency, incredible waste, death, pain and horror.”⁵¹

Marilyn McCord Adams sees Christ as a “horror-defeater ... within the framework of the universe as a whole,” as though nature is a land of horrors from which each of its inhabitants needs to be rescued to a “horror-free zone.”⁵² In reaction, we get that great hope for the transfiguration, the idyllic redemption, of each and every living creature across evolutionary history, resurrected in the glory of God through the blood of Christ. I earlier argued that it is difficult to make either biological or theological sense of such claims. One possibility for dealing with them is to realize that these are claims of exuberance, made by writers who are carried away with their vision of Christ. In the midst of their ongoing struggle for life, the Bible writers can abandon this ambivalence and portray a new heavens and a new earth that fulfills the prophetic vision of the day when “the wolf shall live with the lamb, the leopard shall lie down with the kid” (Isa. 11:6). Most interpreters now see the creation and fall story in Genesis

51. David L. Hull, “God of the Galapagos,” *Nature* 352 (1991): 486.

52. Marilyn McCord Adams, *Christ and Horrors: The Coherence of Christology* (Cambridge: Cambridge University Press, 2006), 66-67, 227.

Incarnation

as parable or poetry, as is the lion eating straw like the ox (Isa. 11:7) or the crystal city in the new creation. The Bible closes with Eden restored, a garden city.

These are peace pictures, hoping for the end of violence in culture. We may hope for the end of violence in culture, but this has nothing to do with natural selection in nature, where lions must eat meat and predation must continue. The wolf lying down with the lamb does not make any biological sense, since ecological harmony includes the violence of eating and being eaten, a conflict and resolution essential to biological creativity at the higher trophic levels. The wolf lying down with the lamb makes sense only as it poetically expresses human hopes for redemption within culture. Such passages do not have any biological application. Shalom in nature and shalom in culture are different categories.

To take another example: according to Isaiah, when Israel returns from exile “the mountains and the hills before you shall burst into song, and all the trees of the field shall clap their hands” (Isa. 55:12). There is nothing to be learned here about God in mountains or trees, or even about mountains and trees in themselves. Focus is on the Hebrew people celebrating their rescue by God. *For you shall go out in joy, and be led back in peace.* That is how this prophecy begins. In human history, God might be present. But regarding the mountains and trees, we are only dealing with metaphor, not science. Sing such praises to God in liturgy, but do not mistake it for metaphysics.

Perhaps natural history is already glorious enough. We live in a universe that is thirteen billion years old, exploding from a vacuum, fine-tuned from the start, immense in size, coming to a unique and most complex expression point in Earth, generating a natural history with rich biodiversity. At the apex of this universe we humans stand, finding out who and where we are, searching across forty orders of magnitude, from quasars to galaxies, across scales from DNA

to global biosystems, discovering that we ourselves have staggering possibilities, able to think vastly more thoughts than there are atoms in the universe, with escalating powers for good and evil, caring for each other and this Earth. And on this Earth, with the signature of the stars, the signature of evolutionary history, there appears a Christ, who lived, died, and rose from the dead, becoming a perpetual icon for the Logos of sacrificial love. The story is just fantastic—and true. We already have a deep nature in which the divine Logos has been at work generating abundant life. The light shines in the darkness, and the darkness has not overcome it.