Evolution and the God of Mutual Friendship

Denis Edwards

Abstract: Theology today is challenged to engage with three great inter-related movements, the struggle for justice for the poor of the Earth, the feminist movement and the ecological movement. In this article the author deals with the question, "How do we think about God in the light of biological evolution?" in terms of a theology of God as a God of mutual relations. It is argued that the fundamental nature of reality is inter-relational, that the God of evolution is a God of mutual friendship, and that God is self-limited in love, making space within for creation.

ONE OF THE THINGS I have learnt from feminist theologians is the importance of acknowledging the limits and partiality of my own standpoint in doing theology. For me, this means owning that I am male and ordained and relatively secure and privileged.

It also involves my understanding that theology today is challenged to engage with three great inter-related movements, the struggle for justice for the poor of the Earth, the feminist movement and the ecological movement. Because of this understanding of the theological task, feminist theology is important for every aspect of my work as a theologian. As a male, I do not think of myself as doing feminist theology. Rather, I think of myself as doing theology in dialogue with feminist theology, learning from and incorporating its analyses and insights.

In this article I will attempt to deal with the question: How do we think about God in the light of biological evolution? I will attempt to respond to this question in the light of a theology of God as a God of mutual relations. This is an insight which I believe is core to our tradition, although is often obscured, and it is also an insight which has emerged as central in the work of a number of feminist theologians.[1]

1. This theme has emerged strongly in a number of feminist Christologies, particularly in the work of Isabel Carter Heyward, *The redemption of God: a theology of mutual relations* (Lanham: University Press of America, 1982), Mary Grey, *Redeeming the dream: feminism, redemption and Christian tradition* (London: SPCK, 1989) and Rita Nakashima Brock, *Journeys by heart: a christology of erotic power* (New York: Crossroad, 1994). Elisabeth Schüssler Fiorenza is right to insist that any such theology must be

THE EVOLUTIONARY WORLDVIEW

Cosmologists tell us that the Earth, along with the rest of our solar system, was formed about four and a half billion years ago. Quite soon afterwards, there was life on Earth. Scientists have discovered stromatolites (the remains of communities of microbes) and microfossils in rock formations in Africa and North West Australia that are more than three billion year old. They conclude that, by three and a half billion years ago, well developed communities of bacteria already covered the face of the Earth. These were the first ecosystems. The whole pattern of life on Earth has evolved from these communities of simple prokaryotic (without a nucleus) cells.

The evolutionary worldview that is taken for granted at the end of the twentieth century owes a great deal to the genius of Charles Darwin. The publication of *The Origin of Species* in 1859 marked the beginning of a new era in our understanding of the universe and of ourselves and also, I will suggest, of God. Since the time of Copernicus and Newton it had been clear that the physical universe obeys laws of nature that account for the movements of planets as well as all the physical phenomena we experience on Earth. What Darwin offered was a way of understanding life itself as governed by natural laws. The diversity of organisms, the origin of species, even the origin of human beings, could be explained by an orderly process of change governed by natural laws.[2]

Darwin recognised that organs such as the eye are wonderfully organised to serve certain functions. Theologians like William Paley had argued that the exquisite functional design of the eye proved beyond doubt the existence of Creator. But Darwin showed that the finely tuned adaptation of living organisms could be explained as the result of a natural process, natural selection. There was no necessity for an appeal to an external designer to explain the emergence of the eye. With natural selection the origin and adaptive nature of living organisms could be accounted for in terms of natural laws operating within entirely natural processes.

---

capable of challenging structures of domination rather than simply reinscribing them, but I think she undervalues the critical power of a theology of mutual relations in her *Jesus: Miriam's child, Sophia's prophet* (New York: Continuum, 1994) 50-57. My own christology is more Chalcedonian than Carter Heyward's or Brock's, but I find this stream of relational theology creative and challenging. In this work I draw more directly on feminist theologians writing on God, particularly Catherine Mowry LaCugna, *God for us* (SanFrancisco: HarperSanFrancisco, 1991), Elizabeth Johnson, *She Who Is* (New York: Crossroad, 1991) and Sally McFague, *Models of God* (Philadelphia: Fortress Press, 1987).

2. See Francisco J. Ayala, "Darwin's Revolution" in John H. Campbell and J. William Schopf (eds.) *Creative evolution?!* (Boston: Jones and Bartlett, 1994) 1-17.

Darwin understood natural selection as the "preservation of favourable variations and the rejection of injurious variations".[3] He saw that some variations confer advantage in adapting to an environment and to the possibility of survival. This means that advantageous variations are transmitted to future generations more frequently on average than their alternatives. In time, favourable variations will be preserved and those that are not useful for adaptation will be eliminated. Francisco Ayala points out that while Darwin understood natural selection mainly in terms of differential survival, the modern understanding of natural selection is formulated in genetic and statistical terms as differential survival.[4] This process accounts for the appearance of design in nature, but it is a process that in itself is without foresight, planning or consciousness.

The twentieth century has seen the emergence of genetics, and the insight that genetic mutation is the cause of the variations which are at the heart of natural selection. In the mid-twentieth century genetics and biochemistry were fused to form molecular biology, which has provided new evidence for reconstructing evolutionary history. The insights of molecular biology have been integrated within an expanded Darwinism, to form the neo-Darwinian synthesis. Among biologists, there are debates about issues such as whether evolution is gradual or something that occurs in rapid bursts, and about the extent to which evolutionary change occurs because of other factors beyond natural selection. But it appears that most biologists see the known data as consistent with neo-Darwinism, in which genetic variation and natural selection are understood to be major factors in evolutionary change.[5]

It is not the role of theology to enter into debates about the intricacies of evolutionary theory. But I believe it is important for theology to enter into a critical dialogue with the broad picture offered by contemporary biology. The crucial theological question is: How can we think about the Christian God if we take seriously the evolutionary worldview assumed by late twentieth century science?

THE GOD OF EVOLUTION AS A GOD OF MUTUAL FRIENDSHIP

If we think of the universe unfolding during the last fifteen billion years, and of life evolving on Earth over the last three and a half billion years by natural selection, and of the cultural evolution of the last

3. Charles Darwin, *On the origin of species* (London: Unit Library, 1902) 76.
4. Ayala, "Darwin's Revolution", 12.
5. Stephen Jay Gould is a well known advocate of "punctuated equilibrium", arguing that the fossil record points to long periods of little change, punctuated with bursts of speciation in relatively short periods. See his "Darwinism and the expansion of evolutionary theory", *Science* 216 (1982) 380-87, and S. J. Gould and Niles Eldredge, "Punctuated equilibrium comes of age," *Nature* 366 (1993) 223-27.

hundred thousand years, how does this relate to our view of God? Some recent writers on the relationship between evolution and Christianity, such as Gerd Theissen and Philip Hefner, have been interested in the rise of altruistic love and its relation to biological and cultural evolution. They see altruistic love as grounded in the fundamental character of reality. They see it as providing insight into God. Philip Hefner writes that the Christian claim is that "altruistic love holds the status of a cosmological and ontological principle".[6] I will suggest, by contrast, that it is not altruism, but the love of mutual relations which has this status.

It is undeniable that the Gospel calls for love of the "other" and that the cross of Jesus is the central Christian symbol of self-sacrificing love. Altruism is clearly a radical dimension of the Christian understanding of divine and human love. But is "altruism" a sufficient description of this love? There are two reasons why I think it better to look beyond altruism in order to express the ultimate Christian vision of the reality behind our evolutionary history.

The first reason comes from theological anthropology. Feminist scholars have argued that Christian theologies of sin and salvation show the effect of having been constructed by men. In this traditional theology there has been a tendency to identify sin with pride, self-assertion and self-centredness. But does this reflect universal human experience? The admonition to a more self-sacrificial love may well offer a corrective to a dominant form of sinfulness operative in powerful people, but it may exacerbate an oppressed person's sin of "hiding" from freedom and self.[7] Altruism may be essential learning for dominant groups, but some oppressed persons may be thought of as "altruistic" to a fault. Admittedly this latter form of altruism does not represent the Christian concept, which involves self-love as well as love of the other. But the point is that indiscriminate calls to altruism and self-sacrifice can function in some circumstances to maintain oppression. This argument, in my view, does not undermine the significance of the sacrificial love of the cross, nor the importance of altruistic love, but offers an important critique of indiscriminate, undifferentiated and uncritical calls to self-sacrifice and altruism.

The more fundamental reason for reserve about the ultimacy of altruism comes not from anthropology but from the doctrine of God.

---

6. See Philip Hefner, *The human factor: evolution, culture and religion* (Minneapolis: Fortress, 1993) 208-9. For Gerd Theissen's views, see his *Biblical faith: an evolutionary approach* (London: SCM, 1984).

7. See, for example, Valerie Saiving Goldstein, "The human situation: a feminine view", *Journal of religion* 40 (1960) 100-112, Judith Plaskow, *Sex, sin and grace: women's experience and the theologies of Reinhold Niebuhr and Paul Tillich* (New York: University of America, 1980), and Susan Nelson Dunfee "The sin of hiding", *Soundings* (1982) LXV: 316-27.

From the perspective of trinitarian theology, it seems clear that, even while the cross of Jesus points to altruism and self-sacrifice as essential components of divine and human love, love is revealed most radically in the trinitarian relations of mutual, equal and ecstatic friendship. The Christian ideal of love is undeniably altruistic, modelled on the cross of Jesus, but it is more than altruistic. It concerns self-possession as well as self-giving, love of self as well as love of the other. In Christian trinitarian theology, altruism is understood within a vision of mutual and equal relations. So, while Philip Hefner sees altruistic love as holding the status of "a cosmological and ontological principle," I believe that it is Persons-in-Mutual-Relations that has this status.

The good news of Christianity is that God is not simply a God of self-sacrifice, but a God of reciprocal giving and receiving, a God of perichoretic relations of mutual love. *Perichoresis* is a word used by John Damascene (675-749) to describe the being-in-one-another, the mutual dynamic indwelling of the trinitarian persons (John 10:30; 14:9; 17:21). It comes from *perichoreo,* meaning to encompass, and it describes reciprocal relations of intimate communion. The word suggests a communion in which diversity and unity are not opposed. Rather it is a unity in which individuality finds full expression. *Perichoresis* expresses the ecstatic presence of each divine person to the others, the being-in-one-another in supreme individuality and freedom. It points to a relationship in which each person is present to the other in a joyous and dynamic union of shared life.

For me, the theologian who best expresses insight into this communion is Richard of St Victor.[8] Richard sees the self-transcending love of friendship as the high point of human life and argues that such friendship must be found in God. Because he cannot accept that the fullness of love is self-love, Richard cannot be content with a view which sees God simply as loving Godself. Real friendship is love which goes from the self to the other. If there is to be mutual love in God then there must be in God more than one person; there must be at least two and their love for each other must be radically equal and mutual. But Richard's insight into friendship leads him to suggest that real love does not remain with the two but wants to share love with another. For full love we look for one who can share our love for the beloved. Richard sees the friendship in the Trinity as ecstatically breaking out beyond the two to include a third, whom he calls the "*condilectus*" (the one who is loved with another). In the love of the divine persons he sees supreme love flowing equally in all directions. The love shared by the trinitarian

8. For a critical edition of Richard's *De Trinitate,* see Jean Ribaillier, *Richard de Saint Victor, De Trinitate, texte critique avec introduction, notes et tables* (Paris: Vrin, 1958). The important Book III has been translated by Grover A. Zinn in *Richard of St. Victor: the twelve patriarchs, the mystical ark, Book Three of the Trinity* (New York: Paulist Press, 1979).

persons is so mutual and so equal that they are united in unity beyond human comprehension. The human experience of unity in love gives us only a faint glimpse into the unity of this kind of trinitarian love.

Richard's theology suggests that it is friendship which is at the heart of things. I find this a fruitful way to approach an understanding of the God of evolution. In contemporary feminist theology, Sallie McFague offers us the image of God as Friend of the universe, and of human beings as creatures called into friendship with the Friend of the universe.[9] Elizabeth Johnson portrays the divine economy in terms of friendship: the Spirit befriends us, making us friends of God; Jesus-Sophia is the incarnation of divine friendship inviting us to table and calling us to be not servants but friends (John 15:5); and "the creative love of Mother Wisdom reaches throughout the universe and all of its embedded individual lives with a friendship brimming with desire for the well-being of the whole of her creation".[10]

For Elizabeth Johnson, "the love of friendship is the very essence of God".[11] If this is taken seriously, and I believe it must be, it means that it is mutual friendship which is the fundamental principle from which all creatures spring. It is friendship which enables all things in creation to be and to become. I think it matters a great deal that the "cosmological and ontological" principle of the universe is personal, relational and communal.

A GOD WHO CREATES BY RELATING TO AN INTER-RELATED UNIVERSE: THE FUNDAMENTAL CHARACTER OF REALITY IS RELATIONAL

This relational view of God is a point of contact with biological science which understands reality as an emerging, relational process. In a biological worldview things are interconnected and interrelated at all levels from that of the cell to that of an ecosystem and to that of the planetary community. The evolution of life is understood in communal and interactive terms. An example of this is Lynn Margulis' widely accepted theory of the origin of mitochondria. Mitochondria are tiny bodies which swarm in thousands in each of our cells. In the membranes of these mitochondria, energy from food molecules is stored and released for use in a controlled way. Lynn Margulis has argued that the ancestors of mitochondria are the prokaryotic bacteria that inhabited the earth two billion years ago, which are now assembled to form large eukaryotic cells (cells with a nucleus), such as those that make up our bodies. Each of our cells is a community of the descendants of such bacteria. Richard Dawkins comments on this:

9. McFague, *Models of God,* 172.
10. Johnson, *She Who Is,* 217.
11. Johnson, *She Who Is,* 218.

> Each one of us is a community of a hundred million million mutually dependent eukaryotic cells. Each one of those cells is a community of thousands of specially tamed bacteria, entirely enclosed within the cell, where they multiply as bacteria will. It has been calculated that if all the mitochondria in a single human body were laid end to end, they would girdle the Earth, not once but two thousand times. A single animal or plant is a vast community of communities placed in interacting layers, like a rain forest. As for a rain forest itself, it is a community seething with perhaps ten million species of organisms, every individual member of every species being itself a community of communities of domesticated bacteria.[12]

Dawkins tells us that he finds this vision of the cell as an enclosed garden of bacteria, more inspiring, exciting and uplifting than the story of the Garden of Eden. One can share Dawkins' wonder at this picture without necessarily sharing his generally negative attitude to biblical faith. In fact, I find that his communal picture of the evolution of life fits beautifully with the way a communal, relational God might create.

The late twentieth century retrieval of the doctrine of the Trinity is suggesting not only that God is relational but that the fundamental nature of all reality is relational. I will mention only two of the theologians who make suggestions along these lines. One is the Orthodox theologian John Zizioulas. He points to the intellectual breakthrough made by the Cappadocians, Basil the Great (c.330-79), Gregory of Nazianzus (330-89) and Gregory of Nyssa (330-95). Their insight, he says, is that "the being of God is a relational being". God's being is communion. This communion is a "primordial ontological concept," not a notion added to the divine substance, or something which follows substance.[13] Thus, communion rather than substance is understood as the fundamental ontological concept. It is communion that makes things be. Nothing exists without it. Zizioulas, faithful to the ancient tradition of the East, insists that everything that is exists because of a person, the Father. But the First Person exists only in a communion of Persons. Reality springs from Persons-In-Relation. For Zizioulas "God" has no ontological content without communion. Nothing is conceivable as existing only by itself. There is no true being without communion.[14]

---

12. Richard Dawkins, *River our of Eden: a Darwinian view of life* (London: Phoenix, 1995) 52.

13. John Zizioulas, *Being as communion: studies in personhood and the church* (Crestwood, NY: St Vladimir's Seminary Press, 1985) 17.

14. Zizioulas, *Being as communion,* 17. See also John Zizioulas "The doctrine of the Holy Trinity: the significance of the Cappadocian contribution," in Christoph Schwobel (ed.), *Trinitarian theology today* (Edinburgh: T & T Clark, 1995) 44-60.

Catherine LaCugna, too, sees the very being of God as relational and personal: "God's To-Be is To-Be-in-relationship, and God's being-in-relationship-to-us is what God is."[15] Her whole book on the Trinity, *God for us*, becomes an argument for what she calls an ontology of relation. Catherine LaCugna writes that an ontology which is proper to the God of the economy of salvation "understands being as being-in-relation not being-in-itself".[16]

Ontology refers to the study of the fundamental nature of reality, to the study of being itself. Writers like Zizioulas and LaCugna are suggesting that reality is relational because God is Persons-in-relation, and I am arguing that it is important to pursue the implications of this for an understanding of our evolutionary universe. I believe that it makes a great deal of difference if we see the fundamental reality of the universe and of the biological community on Earth as relational, dependent upon a God who is Persons-In-Mutual-Love.

If the essence of God is relational, if the very foundation of all being is relational, if everything that is, springs from Persons-in-Relation, then I would argue that this points towards a fundamental understanding of created reality which might be called an ontology of "being-in-relation". In such an understanding of reality, not only is God Persons-In-Relation, but each creature can be understood as a being-in-relation.[17]

It is important to note, of course, that there is an infinite difference between created being-in-relation and the divine communion. But what continuous creation means is that created being-in-relation always springs from, depends upon, and in a creaturely way participates in, the being of divine Persons-in-Relation.[18]

It seems clear that this theological view of the fundamental character of reality can be seen as having congruence with the insights of evolutionary biology. Biology suggests a world of cooperative, coadaptive, symbiotic and ecological relations. Ecological biology, along with other areas of twentieth century science, points towards a view of nature that is fundamentally relational. It seems that biology and theology both point towards a view of reality in which relationships have a primary place. Trinitarian theology and ecological biology can meet in an ontology which understands the being of things as being-in-relation.

---

15. LaCugna, *God for us,* 250.
16. LaCugna, *God for us,* 310.
17. See also Walter Kasper, *The God of Jesus Christ* (New York: Paulist Press, 1976) 290 and 320. Anthony Kelly's theology of the Trinity as divine Being-in-Love would lend support to this line of thought. See his *The Trinity of love: a theology of the Christian God* (Wilmington, Delaware: Michael Glazier, 1989). See also Colin Gunton's trinitarian principles of freedom-contingency, relation and energy, in *The promise of trinitarian theology* (Edinburgh: T & T Clark, 1991) 142-61.
18. On this concept of creaturely communion as communion by participation, see Zizioulas, *Being as communion,* 94.

A GOD OF FREE SELF-LIMITATION IN LOVE

I have been arguing that there is a happy meeting point between the relational nature of biological life and the relational God. But it is also important to take account of the dimensions of biological and evolutionary existence which are unpleasant, disturbing or frightening – the evolutionary dead ends, the extinctions, the predation, the suffering and the death that are part of the process.

I will suggest that an important response to the negative side of evolution is in terms of a theology of a self-limiting God. But I will mention briefly three preliminary points. First, I believe that we need to stand with Job before the mystery of God and God's creation and to acknowledge that there is a great deal we do not know. We do not know, for example, what the experience of non-human creatures is like. We certainly do not know the outcome of God's work of creation and new creation. We cannot see the full picture. We are not in a position to stand in judgement on God's morality in creating through natural selection because of our limited perspective and our limited information.

Secondly, it is important to understand natural selection in a non-mythological and non-anthropomorphic way as simply the differential reproduction which is built into nature. It is not helpful to describe natural selection as "selfish" as some theologians tend to do. The process itself is not to be judged in anthropomorphic terms any more than the process of stellar nucleosynthesis or the big bang itself. Like them, it is a part of the pattern of divine action in creation, a pattern which respects the intrinsic properties of things. If natural selection is approached in a non-anthropomorphic way, then I would argue that the issue of theodicy is no more intense with regard to natural selection than it is with regard to other dimensions of existence, above all, death itself. The problem of evil is not specific to natural selection. In fact, once death is accepted as essential to biological life, it seems to me that natural selection can be understood as a positive process whereby the negativity of death is subsumed, in some circumstances, into a process which leads to wonderfully creative new possibilities for life.

Thirdly, what Christians do know is the inclusive and compassionate God revealed in Jesus, the God who identifies with the pain of the world. If God is consistent and faithful then theological logic demands that the qualities found in God's action in Jesus are also operative in God's action in and through natural selection. This means that, in spite of the costs of the process, those who accept biblical revelation will hold that God can be trusted in the process of creating through natural selection.

The most important theological response to the loss and suffering associated with natural selection and biological life and death is to call

into question the traditional view that there are no limits to what God can do. If one's view of God is of a being who is absolutely omnipotent, unencumbered by any limits of any kind whatsoever, then it is difficult to reconcile such a God with the suffering that accompanies natural selection and still affirm divine goodness. But in the perspective of God as a God of mutual relations, it can be argued that God is not absolutely unlimited, but is, rather, a God who freely accepts the limits of loving finite and created beings.

If the trinitarian God is understood in relational terms, then I believe that theological coherence suggests that God must be understood in terms of the limitations that are freely accepted in loving relationships. This view of the God-world relation differs from Whiteheadian process theology because of its emphasis on the Trinity, divine transcendence and divine freedom in creation. But it shares two very significant emphases with process theology.[19] The first is commitment to a relational theology. The second is the insistence that this relational theology involves a real, two-sided, but differentiated, relation between God and creatures.[20]

God really relates to creatures and in the relating becomes vulnerable. The divine act of creation is an act of love, by which the trinitarian persons freely make space for creation, and freely accept the limits of the process. God respects the integrity of nature, its processes and its laws. And in creating and relating with human creatures, God freely accepts the vulnerability of interpersonal love, and enters into love with a divine capacity for self-giving love. God accepts the limits of physical processes and of human freedom. The theology of incarnation and the theology of the cross point to a God of unthinkable vulnerability and self-limitation. It is this concept of God, I believe, which needs to brought into relation with natural selection.

If God is to be understood as consistent and faithful, then theological logic demands that the boundlessly compassionate God revealed in

---

19. For the development of these themes in process theology see Alfred North Whitehead, *Process and reality*, corrected edition, ed. D. R. Griffin and D. W. Sherbourne (eds.) (New York: Free Press, 1929, 1978), Charles Hartshorne, *The divine relativity: a social conception of God* (New Haven: Yale University Press, 1948 and 1964), *A natural theology for our time* (La Salle, IL: Open Court, 1948 and 1967), and John B. Cobb and David R. Griffin, *Process theology: an introductory exposition* (Philadelphia: Westminster Press, 1976). See also Ian Barbour, *Religion in an age of science* (London: SCM, 1990), Charles Birch, *On purpose* (Kensington: New South Wales University Press, 1990), and, for a theology of divine kenosis influenced by process thought, John F. Haught, *Mystery and promise* (Collegeville: Liturgical Press, 1993).

20. See Denis Edwards, *Jesus the Wisdom of God: an ecological theology* (Maryknoll: Orbis Press, 1995) 122-30. See also the work of Arthur Peacocke, *Theology for a scientific age* (Minneapolis: Fortress Press. 1993) 87-183, John Polkinghorne, *Science and Christian belief* (London: SPCK, 1994) 71-87, Jürgen Moltmann, *God in creation* (London: SCM, 1985) 185-214, and Ted Peters, *God as Trinity: relationality and temporality in divine life* (Louisville: Westminster/John Knox Press, 1993) 179-82.

Jesus Christ is the same God who acts in creation. The God of natural selection is the liberating, healing and inclusive God of Jesus. This suggests a God who freely accepts the limits of the process of emergence, a God who creates through the losses and gains of evolutionary history. It suggests a God engaged with creation, a God who respects the process, who suffers with creation, a God whose ongoing action is adventurously creative in and through the unfolding of evolutionary history.

A GOD WHO CREATES THROUGH THE INTERPLAY OF CHANCE AND LAWFULNESS

The fossil record shows that life has not evolved in a straight line. As Stephen Jay Gould has said, evolution is more like a copiously branching bush than a straight line.[21] Many forms of life have ended up in extinction. Nevertheless evolution has produced such marvels as orchids, lorikeets, kangaroos and human beings. This has happened through the interplay of chance and law.

Chance is an integral part of the evolutionary process. Genetic mutations are the source of novelty in natural selection. They appear to arise entirely at random. Some of them are beneficial, but most are harmful. Without these mutations, evolution could not occur because there would be no variation that could be passed on to another generation.

But evolution itself is not random. It is able to be creative because there is a process, natural selection, which preserves what is useful for adaptation and eliminates what is not useful. Without natural selection random genetic mutation would yield only disorder and ultimately extinction, since so many mutations are harmful.

It is mutation and natural selection working together that produce something as beautiful as a blue wren, and something as complex as the human brain. It is chance and lawfulness, randomness and order, interlocked in collaboration, which have brought forth the exuberant diversity of life on Earth. It is chance operating within the framework of natural laws which accounts for the inherent creativity of nature.

What does the role of chance have to say to our view of God the creator? Jacques Monod, in his *Chance and necessity*, argued that since evolution is grounded in "pure chance," there is no longer any point in talk of purpose or meaning in the universe.[22] This amounted to a powerful attack on the Christian view of God as Creator, an attack that has been carried on in a different form in recent years by writers on

21. S. J. Gould, *Wonderful life: the Burgess shale and the nature of history* (London: Penguin Books, 1989) 35.
22. Jacques Monod, *Chance and necessity* (London: Collins, 1972).

evolution like the biologist Richard Dawkins and the philosopher Daniel Dennett.[23]

But the Darwinian view of evolution springing from variation and natural selection is not necessarily opposed to the idea of God as Creator. It is certainly opposed to simplistic views of God creating through a series of divine interventions. But it is not in conflict with a view of God creating in and through natural processes, including chance and natural laws. Thomas Aquinas long ago clarified that God's way of acting in the world (which he called primary causality) is not opposed to the whole network of cause and effect in nature (secondary causality). God's work is achieved in and through creaturely cause and effect. It is not in competition with it. Aquinas never knew Darwin's theory of evolution, but if he did, he would have had no difficulty in understanding it as the way that God creates.

Of course, to think of God creating through genetic mutation and natural selection does involve a significant shift in thinking about God and in imaging God. God is now to be pictured as involved creatively in an open-ended process. D. J. Bartholomew has urged that chance "plays a constructive role in creating a richer environment than would otherwise be possible". He understands chance as giving the Creator advantages that it is difficult to envisage being obtained in any other ways. He believes that there is every reason to think that a Creator who wished to achieve certain ends, such as intelligent creatures, might choose to reach those ends by means of random but creative processes.[24]

Arthur Peacocke sees God as the ultimate ground and source of law and chance. He sees the Creator unfolding the potentialities of the universe in and through the natural processes which are inherent in nature itself. But evolution does not follow a pre-determined path. There is an "open-endedness" in history. We need to conceive of God as "involved in explorations of the many kind of unfulfilled potentialities of the universe," potentialities which have been given to the universe by God. According to Peacocke, there are propensities in nature which God has "built in". These "load the dice" in favour of life, increased complexity, and consciousness. Like Bartholomew, he sees the role of chance as "simply what is required if all the potentialities of the universe, especially for life are to be elicited effectively."[25]

Peacocke's view of God is as an explorer in creation. He expresses this insight with a beautiful image taken from musical composition – God is like a composer able to unfold all the hidden potentialities of a

23. See for example, Richard Dawkins, *The blind watchmaker* (Harlow: Longmans, 1986), and Daniel C. Dennett, *Darwin's dangerous idea* (London: Allen Lane, Penguin, 1995).
24. David J. Bartholomew, *God of chance* (London: SCM, 1984), 97-98.
25. Peacocke, *Theology for a scientific age*, 119-20.

theme. God is the "Improvisor of unsurpassed ingenuity." God at work in creation is like Johann Sebastian Bach improvising on a theme at the key board. Or, God is like a jazz virtuoso developing and exploring all the potentialities of a simple melody.[26]

Many other images come to mind: a painter at work on a canvas, a metaphor unfolding in the mind of a poet, a gardener developing a beautiful landscape, a host preparing a meal for friends. Two insights are important in all these images: first the work is exploratory and improvising; second, the artist can only work with what is there, with the possibilities and constraints offered by the materials and the subjects of the work.

A GOD WHO MAKES SPACE "WITHIN" FOR CREATION

Any way of imaging God is bound to be inadequate. When we come to think of God's "place" in relation to the universe, then our imaginations are necessarily misleading.

Even though we know that space-time unfolds from the big bang and is intimately related to the created universe, and even though we know God radically transcends all our notions of space and time, yet still we imaginatively locate God somewhere in relation to the universe. A common imaginative picture is of a uni-personal God and the universe as two realities more or less over against each other, with God reaching into the world at certain moments.

I would argue, with Hans Urs von Balthasar, for another less inadequate image – that of the unfolding universe as "within" the trinitarian relations of mutual love. The "place" of the universe is within God.[27]

In the Trinity the divine love of the one who is the Fountain Fullness, the Matrix and Source, the One who is Father and Mother, flows to the One who is Word and Wisdom. But their love transcends itself ecstatically to embrace the third who is the Holy Spirit. Creation and the evolution of life occur within this divine life. As St Bonaventure teaches us, creation is the free ecstatic overflow of the fecundity of the divine trinitarian love. Everything that comes to be is created in divine Wisdom through the ecstatic and fecund Spirit of God.

The becoming of the world is grounded in the eternal trinitarian process. There is no necessity which demands that God have a world, since love is realised and expressed in the perichoresis of the divine persons. But the three persons share an infinite "space" of divine life, a space of dynamic giving and receiving, of infinitely playful invention

26. Peacocke, *Theology for a scientific age,* 174-5.

27. See John O'Donnell, *Hans Urs von Balthasar* (Collegeville: The Liturgical Press, 1992) 139-53.

and exploration. Within this space the divine persons freely make room for the otherness of finite creatures.

Jürgen Moltmann says that the trinitarian relationship of the divine persons is "so wide the whole creation can find space, time and freedom in it". He suggests that this involves a "withdrawal" of God to make space for creation.[28] God makes space for the emergence of a universe and for the evolution of living creatures. Elizabeth Johnson agrees with these insights and points out that to be made so as to have room inside yourself for another is quintessentially a female experience. All human beings have lived and moved and had their being inside a woman. This is a powerful image for the divine generativity by which the universe is brought forth within God.[29]

Evolution is in God, within the trinitarian relations, expressing the ecstatic fecundity of this love. But it is also true that the trinitarian God is in creation and present to every creature. The God of mutual relations is the God of continuous creation. Continuous creation is itself a relation. It is the intimate relation between each creature and God by which the creature exists. "Reality is intrinsically relational," Stephen Happel writes, "because God is present as inner relationality."[30] The relation of creation means that the transcendent God, Persons-In-Mutual-Communion, is immanent to every creature, with a wonderfully differentiated interior relation to each of them, constantly luring each to be and become. As Bill Stoeger puts it, "God acts immanently in nature – in every 'nook and cranny' of nature, at the core of every being and the heart of every relationship – to constitute and maintain it just as it is and just as it evolves."[31] And from the side of the creature, this relationship of creation is the creature's own finite and specific participation in God's own being and trinitarian relationships. This two-sided relation is not distinct from divine action but is itself divine action.

The insight that God is Persons-in-mutual-relations suggests a worldview and a praxis in which relations are primary. If the central religious message is that relations are primary then this grounds our commitment to other humans, a commitment to equal and mutual relations. It also grounds our ecological commitment to other creatures. We understand ourselves as caught up with them in a relational world as fellow creatures before a relational God.

---

28. Jürgen Moltmann, *The Trinity and the Kingdom of God: the doctrine of God* (London: SCM, 1981) 109-10. Moltmann connects his thought at this point with the Jewish doctrine of *zimzum,* developed by Isaac Luria.

29. Johnson, *She Who Is,* 234-5.

30. Stephen Happel, "Divine providence and instrumentality", in Robert John Russell, Nancey Murphy and Arthur R. Peacocke (eds.), *Chaos and complexity* (Vatican City: Vatican Observatory Publications, 1995) 200.

31. William R. Stoeger, "Describing God's action in the world in light of scientific knowledge of reality," in *Chaos and complexity,* 256-7.