THE REBIRTH OF NATURE: THE GREENING OF SCIENCE AND GOD.

This review article will present a brief summary of the contents of this book and will add further reflections on two interesting topics that the author initiates. The title and subtitle indicate that the emerging concern for ecological matters is both technological and theological. To unpack the wealth of details that constitute this concern is the aim of the author's ten chapters divided into three parts.

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In Part One, he speaks of the loss of the sense of the sacred as being rooted in the mechanistic theory of nature. The consequent desecration of the world viewed as a mere machine initiated an orgy of environmental exploitation in the service of industry gone wild.

In Part Two, he discusses the negative aspects of mechanistic reductionism in its failure to comprehend its own discoveries and inventions in the holistic way that a previous animist mind-set comprehended. Without committing himself to belief in God or Christianity, he opts for spontaneous and purposive growth of the planet earth, but limits himself to quasi-scientific explanations like unified fields and resonances. (More comments on these later.)
Part Three contains exhortations for re-thinking animism and re-sacralizing nature by reviewing the traditions of Judaism and Christianity. In a vague way, Sheldrake believes that these traditions scientifically validate an animistic view of the world, but does not subjectively commit himself to a personal God. Furthermore, he approves of Marian devotion among Catholics, but mainly to promote honoring the earth as mother. The book ends with a prayerful hope for rebirth in a living world.

**NATURA NATURANS**

To return to Part Two, Chapter 4, entitled "Reanimation of the Physical World." Sheldrake mentions two topics of great interest but their treatment is left incomplete and their mutual interrelationship superficial.

The first refers to what medieval Scholastics labelled *natura naturans* as distinct from *natura naturata*. Sheldrake thought that this *naturans* or nurturing nature was considered divine and supernatural by the Scholastics, probably on the basis of a line from St. Isidore. But an analysis of Isidore’s original Latin statement reveals an indirect discourse from earlier authors with whom Isidore expressed neither agreement nor disagreement.\(^1\) A parallel interpretation would therefore allow this nurturing nature to be a created being capable of generating or giving birth to another created being. It may but need not be divine but can be a part of created nature. Sheldrake’s hypothetical examples such as physical, biological or psychological energy-fields as animating principles show his preference for a nurturing nature that is created.

**FRACTAL ATTRACTORS**

An even more interesting topic initiated by Sheldrake is his insight into a concept from fractal mathematics that emerged.

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1. "Natura dicta est ab eo, quod nasci aliquid faciat; gignendi enim et faciendi potens est. Hanc quidem Deum esse dixerunt, a quo omnia creata sunt, existunt." S. Isidor., *Etymolog.*, lib. XI, c. 1. (Cited by N. Signoriello in *Lexicon Peripateticum Philosophico-Theologicum* [Ed. 5; Rome: F. Pustet, 1931] 243-44.)
with computer graphics. Mathematicians call this concept an “attractor” because of the attraction that seems to be exerted on a point to make it move on the monitor screen in a very beautiful pattern characterized by three traits: (1) it cannot be predicted by any known mathematical laws; (2) it endlessly simulates itself as the scale becomes smaller and smaller; and (3) it bears a striking resemblance to botanical patterns in leaves and flowers. These three traits give the impression of spontaneity that resembles the growth process of living organisms such that no two processes, no two organisms, in fact no two flowers even of the same plant are exactly alike. Sheldrake recalls that the principle of such a growth process was called “entelechy” by Aristotle, suggesting purposeful self-organization by a “soul” of the organism. Without going beyond the realm of analogy, some principle that animates biological processes may be predicated of the earth’s biosphere as Sheldrake boldly proposes to do. He does, but not very convincingly.

MORPHIC RESONANCE

The proposal begins with replacing the “soul” of the earth with fields of vibratory energies that influence everything on earth through “morphic resonance.” This is the sense in which Sheldrake’s “new animism” might be understood. The biosphere is purposively organizing itself. Its self-organization is directed by fields through resonances. Analogous to sonic and electromagnetic waves that carry information, these fields organize systems “at all levels of complexity — including molecules, crystals, cells, tissues, organisms, societies of organisms . . .” (p. 110). For example, the information encoded in DNA molecules control the vital processes in living organisms according to the genetic programs they carry.

Readers may not immediately notice that words like “programs” and “information” tacitly presuppose communication between mind and mind, but they must not forget that mind cannot be properly predicated of molecules. This is the point where analogy ends and questions arise about the correct concept of entelechy, purposiveness or final causality. There is need for a change of context.
CHANGE OF CONTEXT

These two remarks (about nurturing nature and purposive growth) will now be lifted from Sheldrake’s context and transferred to a different but related context, namely, that of popular piety. For example, in folk Catholicism, there is widespread belief in “nature-spirits” inhabiting mountains, forests, rivers, islands and continents, — spirits missioned to take care of these for the sake of man. Because such beliefs are often expressed in the dramatic symbols of indigenous shamans and not in technical language, they are totally rejected as unscientific by the mechanistic mind-set. But speculations among Christian theologians might succeed in systematically integrating such beliefs in a way that would more effectively promote the environmental awareness and concern desired by Sheldrake.

This speculation starts with the concept of a nurturing nature that includes both an uncreated and a created source. Both Christogenesis (or the Pauline “building up of Christ’s body”) and angelology are linked with this nurture, where angelic functions are subordinated to Christic initiative, in the process of growth towards an animate biosphere.

In equating Christogenesis with cosmogenesis, Teilhard has concretely identified the responsible intelligence underlying biospheric growth, namely, Jesus Christ, the God-Man. Furthermore, Christian theology affirms the existence of angelic spirits and their role in the history of salvation (and perdition). The subordinate role of angelic functions is a requisite in Rahner’s angelology insofar as he gives increasing emphasis to its systematic integration within theological anthropology and Christology: God’s plan for human salvation is carried out partly by ministering angels (and opposed by hostile angels). In this Christological-anthropological dimension, can Rahner’s speculations be harmonized with Sheldrake’s observations regarding the reanimation of the physical world? On this point, Rahner was

silent, for the question emerging from Sheldrake’s observations had not yet been asked in Rahner’s time.

CHRISTIAN CONTEXT: FINAL CAUSALITY

As a first approximation towards answering such a question, it may be argued that God, besides being the efficient Cause of all creation, is also the final Cause attracting creatures, but only those creatures that are gifted with intelligence and freedom, that is, men and angels. Furthermore, like efficient causality, final causality is not limited to un-mediated influences but can also be mediated between links in a chain of causality. In other words, God invites the biosphere to grow; the invitation is addressed to men and angels; angelic spirits respond with movements carrying meanings that can be discerned by man; man responsibly mediates meanings on to the rest of the biosphere; he expresses these meanings in ecological concern and technological creativity.

Is this what Sheldrake is saying? Not exactly. But this is what he is ultimately seeking: ecological concern and technological creativity. In his care not to exclude eastern mysticisms, he diplomatically addresses his appeal to the animistic mind-set that they have in common with western Christianity.

PRINCIPALITIES AND POWERS

The animistic mind-set in Christianity includes a belief in principalities and powers hostile to the human race. Their hostility is carried out in so subtle a manner that Sheldrake fails to see its causal link with the mechanistic mind-set to which he attributes the seventeenth century emergence of a triumphant technology that is “built into the official orthodoxy of economic process . . . and has led to our present crisis.”

This causal link may now be discerned by hindsight. Disguised as angels of light, the hostile principalities and powers are bent on persuading man to outgrow his superstitious attitude towards nature and to treat nature merely as material objects unrelated to spiritual concerns, unrelated even to environmental concerns. Technological activity eventually became subordinated to a
warfare for the pursuit of industrial and economic power over the globe, over its populations, over continents, islands and oceans; the planet’s atmosphere became polluted with toxic fumes threatening life.

This counter-productive technology is apparently seen by Sheldrake merely as a result of the fifteenth century conflicts that shattered Christian unity between Protestants and Catholics with their different interpretations of religious meanings, their mutual accusations of heretical beliefs, and finally their turning in their confusion to the objectivity of a materialistic Science. He fails to see this conflict as itself a result of the darkness of human intelligence induced by the “rulers of the world of this darkness.” For this monstrous darkness, spanning continents and centuries of the history of salvation and perdition, is of so large a scale that human agency alone is utterly disproportional to explain it. The evil is abetted by superhuman forces, ranking very high in the hierarchy of angelic spirits. These are succeeding, through a chain of negative entelechies, in rendering human technology destructive instead of creative.

“GREENING OF SCIENCE AND GOD”

The meaning of this sub-title is somewhat ambiguous. To remove ambiguity, a reader might choose to understand the label “greening” as the cosmic process — designed by the Creator—in which chlorophyll (from the Greek chloros meaning green) and solar radiation combine to convert the atmosphere’s carbon dioxide and water into oxygen and carbohydrates for the purpose of supporting life. Through the attraction of final causality, the Creator also inspires created intelligences to minister to this cosmic process, i.e. to nurture an environmental science. This involves struggle against principalities and powers bent on desecrating and destroying nature. The rebirth of nature is truly a cosmic struggle.

In this struggle, Sheldrake’s subtitle evokes an act of faith in divine providence and an act of hope in human sciences. This reviewer proposes that human sciences explicitly include the science of discernment of spirits, for friendly principalities and powers are surely attempting to communicate with us. These are
the authentic extra-terrestrial intelligences who, through some kind of spiritual resonance, evoke experiences of serendipity among scientific researchers seeking participation in the exciting process of building a new earth.