

GOD'S ECSTASY

The Creation of a
Self-Creating World

BEATRICE BRUTEAU



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Chapter One

THE CONTEMPLATIVE AND THE COSMOS



PEOPLE WHO IDENTIFY THEMSELVES as contemplatives may shy away from science for a number of reasons. They may think that they have "no head for" numbers and the analytic kind of thing science deals with. They may feel that it's too impersonal, has no human warmth. It's too technical, too abstract, doesn't have immediate emotional appeal.

I want to suggest that we come at the question of contemplatives studying science from a different angle. Before we consider whether we are interested in the scientific study of this universe, let us ask whether God is "interested in" the universe, how it is structured, how it works, how it's developing. If we believe in a Creator-God, who is still in the act of creating this universe, how can we pretend to be interested in God, but not interested in what God is doing, in what (presumably) God is interested in? And if we were to attain our contemplative ideal of sharing in the divine life, would we not be sharing in the activity of creating the universe?

It is a curious and wonderful thing that the Godmade universe is made as a self-making universe. I think this is a very important point and has much to do with the whole idea of "sharing in" the divine life. We may say that the "divine" is that which has life in itself. John 5:26 says, "As the Father has life in himself, so he has granted the Son also to have life in himself." Now, if the Son is the Exegete, the Revealer, as John 1:18 tells us, and if the exegesis, the manifestation and revelation of the invisible God, is the cosmos, then may we not read: "As God has life in Godself, so God has made the cosmos to have life in itself"?

For me as a contemplative, the conclusion seems to be that to share in the divine life I must accept the vocation of consciously living in this self-creating universe. But consciously living in the activity of self-creating means that I need to know something about the whole thing, how it works, how it's moving, how to take my place in it, make my meaningful contribution to this general improvisation.

Joining in the creative work is really central to the whole contemplative enterprise. Cosmogensis — the generation of the cosmos — can be seen, as Teilhard de Chardin saw it, as “Christogenesis,” the growth of the “ever greater Christ.”¹ This Christ has been “growing in stature and wisdom” (Luke 2:52; read “complexity and consciousness”) these last dozen or so billion years and is nowhere near finished yet.

So there are two motivations for including some knowledge of science in our contemplative lives: one, we need to understand God’s artistic work in order to appreciate it properly and relate lovingly to the Creator; two, we need to know something of the work in order to join it, to participate in creating the world from here on. This last is the real way of loving, that is, by joining in the life of the beloved.

But again, there is looking at it from God’s point of view. If I may modify Psalm 19 slightly, I will say: “The heavens declare the glory of God and the earth manifests the divine handiwork.” What Earth and the other heavenly bodies are manifesting is the glory, the overflowing creative activity, that necessarily expresses and thus images the Creator. If the Trinity-Creator so puts Its heart into the natural world, showing and revealing Itself on every side, displaying Its glory, then we certainly ought to pay attention, to learn as much as we can, and to appreciate the amazing variety, subtlety, niceness of adjustment and interrelation, beauty, capacity for development, novelty, inventiveness and creativity in its turn of this cosmos.

It is, at the very least, the artwork of God, and if you know anything about art, you know how the artist is unavoidably present in the artwork, and how important it is to the artist that the artwork draw attention and succeed in communicating. Since the divine Artist has chosen to create, we cannot love the Artist without giving our best attention to the artwork.

A Renewed Sense of the Sacred

This looking from God’s point of view helps us to reassert our sense of the sacred, something we seem to have lost lately. The world has been presented to us as a great machine, something dead and in itself meaningless, something that rolls on relentlessly, ruthlessly, incapable of sensitivity or significance. It starts from a fluke of a fluctuation and thereafter operates by chance and necessity. It’s not trying to accomplish anything, it has no purpose, and we human beings have no special place in it. We are simply an accident, an improbable accident, and our request for meaningfulness meets with no reply from the universe. In

such a world, how could we have a sense of the sacred that would be anything other than a superstition fit only for scorn? Ever since we’ve had this mechanistic, accidentalistic worldview, we’ve been despondent, and when we’re despondent, we turn to artificial stimulants such as greed and success, inventions of local meaningfulness. But, deprived of the sense of the sacred wholeness of things, our bonds are weakening. Underneath we know that we’re whistling in the dark.

We dream of times gone by when there used to be a palpable sense of belonging to some great wholeness that was meaningful in itself and extended its meaningfulness to us. Keiji Nishitani describes it as a feeling that all of us, not just human beings, but all living things, were living from the same life, like leaves on a single tree. Each soul was life itself, taking some particular form, whether human, animal, or plant. This was the basis for a “sympathetic affinity” among the living, indicating a unity deeper than our everyday superficial relations.² The mysterious wholeness, beyond our individual selves, was the sacred, and we felt it as such. Can we not have that any more?

Somewhere deep down, we are all filled with mystical longing, longing for meaningful belonging, for profound union, longing to be securely embedded in the ultimate meaningfulness, and therefore we need to see all our world in that context. We long to feel the ultimate meaningfulness as real, all around us, concrete, real, intimate, tangible, communicating with us. To attain this in today’s climate, we need a new theology of the cosmos, one that is grounded in the best science of our day. It will be a theology in which God is very present, precisely in all the dynamisms and patterns of the created order, in which God is not rendered absent by the self-organizing activities of the natural world, but in which God is actual as the one who makes and the one who is incarnate in what is made by these very self-making activities.

Can our science be seen that way? Yes, I think so, and I would like to show it to you in those terms, so that all the world turns sacred again and we truly feel our unity and our wholeness and our belonging to the all.

Living Together in Wholeness

The view of the sacred world that I am proposing says that the world consists of communication — interactions among its components or members in which they exchange matter, energy, and information. I feel that we should recognize and celebrate it as a gigantic Eu- charist in which each one feeds all the others with each one’s own

gized by the "breath" of God so that it keeps on developing, becoming more complex — more diversified, more interactive, and therefore more unified. The universe shows the holy Oneness of Being.

This is our home. We might even say, this is who we are. All of us are this one being. We human beings are supported by everything the universe does with its various interactions that make the galaxies in their clusters and the stars with their attendant planets, some of which have the right conditions for biochemistry, which evolves to the point of self-consciousness and knowledge of all these universe interactions. When we are conscious and knowing, it's the universe that is conscious and knowing. And our consciousness and our knowing are still working in the same pattern: diversifying, interacting, unifying. We are not alien or strange or different. We are the universe's own.

What our sciences — our consciousness and knowing — are now suggesting to us is that maybe it is perfectly natural to a universe to become conscious and knowing. Maybe it's not highly improbable at all but quite to be expected. (I say "maybe" because this idea at the present time is still disputed and debated. But I am going to tell the universe story from this point of view.) In any case, our activities as human beings have the same very general form as all other activities in the universe, the form of diversified, interactive wholeness.

Moving and Growing

The wholeness I've been talking about is called, in the sciences, *system*. Systems are composed of units, or members, that move in relation to one another. Some of the movements can be quite complex. And when they are, wonderful things happen. Life is one of them. Notice that it's the moving together that makes it. The parts, separately, are not living. But when they all move in relation to one another in a certain way, then the whole group of interacting members becomes suddenly a new kind of unit, a living being. "Living" is the name of the kind of interactions, the kind of traffic, that is going on in that community. The collective behavior is greater — and different from — the mere aggregation of the parts.

The living beings keep organizing themselves, organizing the matter-energy-information around them as "inputs" or "food" for themselves, organizing these into their own beings. The particular atoms and molecules of which their bodies are composed are changing constantly — an oxygen molecule you inhale now may get built into you and stay for some time, but eventually it will be excreted in some way, its place hav-

being. Of course, this happens on various levels of organization and awareness and commitment. But they are all instances of what I call "living-together" — symbiosis — by that sharing of matter, energy, and information. And any symbiosis, sharing of life so as to make one whole being, is an image of the Trinity, the original symbiotic Unity. It is that presence of the Trinity as a pattern repeated at every scale of the cosmic order that makes the universe the manifestation of God and itself sacred and holy.

As contemplatives in the Christian tradition, we are familiar with the concept of the Mystical Body of Christ, the church, or the sacred community imaged as an organic unity, a single living organism. We have been taught to think of it as composed of a rich diversity of functions, all of them necessary and noble, contributing to the single, unified life. In fact, that very diversity is what makes for vitality, moving energy, and for unity, wholeness. Each member, making a particular contribution, draws the whole into tighter communion.

Lately there has been a willingness to extend the borders of this living Body, to consider that it really includes people who are not official members of whichever is "our" church and maybe are not even Christians. Now, keeping to this sense of organic, interlocking functional unity, expand still further. Get a feeling of a cosmic extension of shared life, shared relations, interactions making each part of the universe a significant contributor to the unity of the whole. Keep the sense of the sacred, the feeling that God is somehow resident here.

The church body is explicitly intended to be "like" the Trinity in the way that it is "one" — "that they may be one even as we are one" (John 17:22) — and this inter-living way can be extended as a model for the whole universe. Notice that it is the *actions* of the members toward one another that constitutes the unity. The Persons of the Trinity love one another to the extent of "indwelling" one another. The members of the Mystical Body are to love one another and share the various gifts of their lives. Now even the cosmos can be seen and meaningfully experienced as a vast network of interactions of all sorts, from our human interactions, through biological and chemical exchanges, all the way down to physical laws such as the gravitational attraction that governs the galaxies.

There is a sense in which it all constitutes one thing, which is why it is called a uni-verse. We need to experience it this way, feel it all as relevant to us and ourselves as relevant to it, all of us being here together, members of this one developing body with its repeated patterns of diversity, interaction, and wholeness. The universe may be said to be the original Adam, a great body of dust, organized into a system and ener-

ing been taken by a new oxygen molecule. Even whole protein molecules made of thousands of atoms are often unraveled every day and then remade if they are still wanted. But through all this making and unmaking, the wholeness and the sameness of the composed beings are preserved—more or less. The whole also changes—we grow up, we grow old—and yet we feel that we are still ourselves, and we recognize that continuity in others as well. The materials and the energies flow through us, but our form is, if not absolutely constant, at least continuous.

Matter, energy, and information are being sucked into our being, our living being, that very movement being our living. They are built into us, and the matter, energy, and information that we discard are dissipated into our environment. We are “dissipative structures.” The energy is degraded in the process, some of it lost as heat, but even so, most of what we dissipate can be taken up by some other system and organized into its self, its rejecta being passed on in turn to yet further systems.

The universe is not merely “running down,” as we have been told, fated at long last to go completely out of business. The universe is also very significantly “building up,” layer upon layer, all quite spontaneously, quite naturally. Protons and neutrons naturally clump together into atomic nuclei. Atoms spontaneously bond together to form molecules. Molecules following their own natural laws align with and adhere to and catalyze each other until living cells emerge as self-maintaining and self-reproducing units of wholeness. And so on.

New wholes are built of combinations of units from the previous level of wholeness. Dynamic combinations—it's the interactions that make them combine and that therefore constitute the unity of their wholeness. Layer after layer, level upon level. Cells interact as organisms, organisms interact as communities, whether of the same species or of different species, as in an ecosystem. All this is building up. An egg dropped on the floor and broken will not spontaneously reassemble itself, but an egg left to its own devices in a supportive environment will develop into an animal that will be party to producing another egg. Building up is also natural. It's what a universe does.

Certain things have to be right in the beginning (and we will discuss this later), but if a building-up universe can get as far as making stars, some exploding and some slow-burning, it stands a good chance, perhaps a very good chance, of going on to knit up its matter-energy-information into life, and if life, then on to intelligence. This is wonderful and sacred but not miraculous. Not against nature. It's perfectly natural; it's what nature does as the image of the living, being-sharing God.

It is an awesome thing to be in the hands of the living God, we say.

A dynamic God! Have we thought of it that way? We used to think in our theology that the changeless was superior to the changing. Now we tend to think differently. Everything we know is dynamic. The world is in constant motion—motion of vibration, motion from place to place, motion from one state or condition to another, motion of combining with others to give rise to new levels of emergent wholes, motion of developing, motion of evolving. All kinds of motions, even motions of destroying, dying, and decaying, are included. They all make up the living texture of the world and are now seen as vital parts of the total picture, a moving picture. We are about to see this interplay of building and tearing down as not necessarily bad. It is part of the way a finite world images an infinite but dynamic God.

The world of self-organizing beings evolves. They experiment with ways of interacting with their environments (both living and nonliving aspects) and the better ways are able to make more copies of themselves and become more prominent in their populations. Gradually—and sometimes not so gradually—their forms change. Species acquire variations of size and shape. New species appear. Whole new branches on the tree of life develop. Some commentators on this scene, Eric Lerner, for instance, say that there is a “natural tendency of all matter, both animate and inanimate, to evolve continuously toward higher rates of energy flow, toward the capture of greater currents of energy.”³ Others, Pierre Teilhard de Chardin, for instance, believe that a trend can be discerned in favor of increasing consciousness.⁴

The interactions are complicated. Organisms have to struggle with the environment, yet the environment is what sustains them. They often fight with members of their own kind, yet they also care for their own kind, in some circumstances at the individual's considerable expense. They may be in a predator/prey relationship with other species, or again, they may be in a symbiotic relationship of mutualism, in which each helps the other. The struggles against each other usually lead to discovering better ways to succeed in the struggle, first by one side, then the other. Even better ways to *find* better ways are developed, better ways to evolve are evolved.

It is one long fascinating story of the creation of novelty. When the Bible represents God as saying, “Behold, I make all things new,” it is saying something that is very true of nature. It is constantly renewing itself and constantly giving rise to forms that never existed before. And the most exciting thing about this novelty is that it is unpredictable. A theology that imagines that the whole history of the world from start to finish is already known is no longer a source of meaningfulness for us. It is not true to our experience. And the more our experience expands,

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the more we know about the world, the more meaningfulness for us will have to include unpredictable novelty. Not knowing what will happen will become for us not a deficiency but a sign of creativity, a far deeper sense of divinity.