

dredth to a tenth of the action that Einstein's theories predict is in the universe. At the annual meeting of the American Association for the Advancement of Science in 1967, there was a formal acknowledgment by Princeton University physicist John A. Wheeler that the universe may contain billions of "black bodies" which are invisible because they operate implosively rather than explosively.

Indeed, to achieve a balanced account of the universe, we shall have to pay much more attention to syntropy. This will be difficult because syntropy is essentially invisible. Ordinarily, a healthy forest which is syntropically impounding energy through photosynthesis attracts much less attention than a forest fire which is entropically devastating many acres of timber land. Heretofore, scientists have been trying to chart all the forest fires in the universe, but they have scarcely acknowledged the existence of growing trees.

The Big Bang Theory, in other words, is a bust. Granted that on a clear night one can see evidence of explosions all across the sky, one is still faced with the problem on a sober morning of explaining how all those fires are fueled.

In general, it seems that massive or very dense systems spin outward away from the center of the universe (or at least our region of it) while stardust, radiation and loose quanta of action gravitate inward towards the center. As action collects towards the center, it is impounded in massive systems which accelerate away from the center as they become increasingly compact. As systems become increasingly compact, they become increasingly explosive; so that, when a system is as far out and dense as it can possibly be, it explodes completely and returns piecemeal towards the center. (It may be that the interaction between "Matter" and "antimatter" plays a critical role in the maintenance of dynamic equilibrium.)

We do not yet have a cogent, empirically-based mathematical model to go with the dynamic equilibrium theory of the universe, so that the testing of alternative hypotheses is very difficult. But we have ample evidence that humanity does belong in the universe. We are not merely a quirk. We are not fundamentally doomed. Indeed, we have every reason to proceed with con-

fidence that the universe contains many healthy forests, and so long as we can maintain a symbiotic relationship with one or more of these forests we shall survive and prosper.

Old Worlds and New: Our Purpose for Living

The ultimate meaning of human existence—the greedy imperialism of civilized man as well as the hunting and food gathering of early *homo sapiens*—begins to emerge. Our purpose for living is to synthesize the stuff of the universe into complex and orderly forms. Our synergetic functioning (best expressed in the magnificent human capability for communication and comprehension) countervails against the energetic forces of explosion and disorganization to help maintain the dynamic equilibrium of the universe.

We may regard ourselves as important catalytic agents in the development of planets. With our global trade and communications networks, with an integrated global energy grid soon to be established, we are in the process of transforming old Mother Earth into a vast organism, more beautiful and intelligent than we can imagine.

Our evolutionary potential is twofold: we are destined to merge with this planet and bring it to fruition, and we are destined to leave this planet and fulfill our synergetic lust for new worlds.

Some of us will stay behind. Some of us will go.

Part of us wishes to develop Earth as an ongoing work of art. Part of us wishes to get away—assuming new forms, learning new skills and working with new media on other planets in this solar system and beyond.

Each of us has a unique role to play against the backdrop of universe. But, as we move in different directions, we are all bound together by our common involvement in the great syntropy.

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**The Future of Man*, Harper & Row, New York, 1964, page 78.

