Other creatures have it just about as easy. A blood fluke starts out as an egg in human feces. If it happens to fall into fresh water, it will live only if it happens to encounter a certain species of snail. It changes in the snail, swims out, and now needs to find a human being in the water in order to bore through his skin. It travels around in the man's blood, settles down in the blood vessels of his intestine, and turns into a sexually mature blood fluke, either male or female. Now it has to find another fluke, of the opposite sex, which also just happens to have traveled the same circuitous route and landed in the same unfortunate man's intestinal blood vessels. Other flukes lead similarly improbable lives, some passing through as many as four hosts.

But it is for gooseneck barnacles that I reserve the largest measure of awe. Recently I saw photographs taken by members of the Ra expedition. One showed a glob of tar as big as a softball, jetsam from a larger craft, which Heyerdahl and his crew spotted in the middle of the Atlantic Ocean. The tar had been in the sea for a long time; it was overgrown with gooseneck barnacles. The gooseneck barnacles were entirely incidental, but for me they were the most interesting thing about the whole
expedition. How many gooseneck barnacle larvae must be dying out there in the middle of vast oceans for every one that finds a glob of tar to fasten to? You've seen gooseneck barnacles washed up on the beach; they grow on old ship's timber, driftwood, strips of rubber—anything that's been afloat in the sea long enough. They do not resemble rock barnacles in the least, although the two are closely related. They have pinkish shells extending in a flattened oval from a flexible bit of "gooseneck" tissue that secures them to the substratum.

I have always had a fancy for these creatures, but I'd always assumed that they lived near shores, where chance floating holdfasts, are more likely to occur. What are they doing—what are the larvae doing—out there in the middle of the ocean? They drift and perish, or, by some freak accident in a world where anything can happen, they latch and flourish. If I dangled my hand from the deck of the *Ra* into the sea, could a gooseneck barnacle fasten there? If I gathered a cup of ocean water, would I be holding a score of dying and dead barnacle larvae? Should I throw them a chip? What kind of a world is this, anyway? Why not make fewer barnacle larvae and give them a decent chance? Are we dealing in life, or in death?

I have to look at the landscape of the blue-green world again. Just think: in all the clean, beautiful reaches of the solar system, our planet alone is a blot; our planet alone has death. I have to acknowledge that the sea is a cup of death and the land is a stained altar stone. We the living are survivors huddled on flotsam,
living on jetsam. We are escapees. We wake in terror, eat in hunger, sleep with a mouthful of blood.

The faster death goes, the faster evolution goes. If an aphid lays a million eggs, several might survive. Now, my right hand, in all its human cunning, could not make one aphid in a thousand years. But these aphid eggs—which run less than a dime a dozen, which run absolutely free—can make aphids as effortlessly as the sea makes waves. Wonderful things, wasted. It's a wretched system.

Any three-year-old can see how unsatisfactory and clumsy is this whole business of reproducing and dying by the billions. We have not yet encountered any god who is as merciful as a man who flicks a beetle over on its feet. There is not a people in the world that behaves as badly as praying mantises. But wait, you say, there is no right and wrong in nature; right and wrong is a human concept. Precisely: we are moral creatures, then, in an amoral world. The universe that suckled us is a monster that does not care if we live or die—does not care if it itself grinds to a halt. It is fixed and blind, a robot programmed to kill. We are free and seeing; we can only try to outwit it at every turn to save our skins.

This view requires that a monstrous world running on chance and death, careening blindly from nowhere to nowhere, somehow produced wonderful us. I came from the world, I crawled out of a sea of amino acids, and now I must whirl around and shake my fist at that sea, and
cry Shame! If I value anything at all, then I must blindfold my eyes when I near the randomly shaped Swiss Alps. We must as a culture disassemble our telescopes and settle down to backslapping. We little blobs of soft tissue crawling around on this one planet's skin are right, and the whole universe is wrong.

Or consider the alternative.

Julian of Norwich, the great English anchorite and theologian, cited, in the manner of the prophets, these words from God: "See, I am God: see, I am in all things: see, I never lift my hands off my works, nor ever shall, without end.... How should anything be amiss?" But now not even the simplest and best of us sees things the way Julian did. It seems to us that plenty is amiss. So much is amiss that I must consider the second fork in the road, that creation itself is blamelessly, benevolently askew by its very free nature, and that it is only human feeling that is freakishly amiss. The frog I saw being sucked by a giant water bug had, presumably, a rush of pure feeling for about a second, before its brain turned to broth. I, however, have been sapped by various strong feelings about the incident almost every day for several years.

Do the barnacle larvae care? Does the lacewing who eats her eggs care? If they do not care, then why am I making all this fuss? If I am a freak, then why don't I hush?

Our excessive emotions are so patently painful and harmful to us as a species that I can hardly believe that they evolved. Other creatures
manage to have effective matings and even stable societies without great emotions, and they have a bonus in that they need not ever mourn. (But some higher animals have emotions that we think are similar to ours: dogs, elephants, otters, and the sea mammals mourn their dead. Why do that to an otter? What creator could be so cruel, not to kill otters, but to let them care?) It would seem that emotions are the curse, not death—emotions that appear to have devolved upon a few freaks as a special curse from Malevolence.

All right then. It is our emotions that are amiss. We are freaks, the world is fine, and let us all go have lobotomies to restore us to a natural state. We can leave the library then, go back to the creek lobotomized, and live on its banks as untroubled as any muskrat or reed. You first.

Of the two ridiculous alternatives, I rather favor the second. Although it is true that we are moral creatures in an amoral world, the world's amorality does not make it a monster. Rather, I am the freak. Perhaps I don't need a lobotomy, but I could use some calming down, and Tinker Creek is just the place for it. I must go down to the creek again. It is where I belong, although as I become closer to it, my fellows appear more and more freakish, and my home in the library more and more limited. Imperceptibly at first, and now consciously, I shy away from the arts, from the human emotional stew. I read what the men with telescopes and microscopes have to say about the landscape, I read about the polar ice, and I drive myself deeper and deeper into exile from my own kind. But, since I cannot avoid the library altogether—the human culture..
that taught me to speak in its tongue—I bring human values to the creek, and so save myself from being brutalized.

What I have been after all along is not an explanation but a picture. This is the way the world is, altar and cup, lit by the fire from a star that has only begun to die. My rage and shock at the pain and death of individuals of my kind is the old, old mystery, as old as man, but forever fresh, and completely unanswerable. My reservations about the fecundity and waste of life among other creatures are, however, mere squeamishness. After all, I'm the one having the nightmares. It is true that many of the creatures live and die abominably, but I am not called upon to pass judgment. Nor am I called upon to live in that same way, and those creatures who are are mercifully unconscious.

The picture of fecundity and its excesses and of the pressures of growth and its accidents is of course no different from the picture I have long cherished of the world as an intricate texture of a bizarre variety of forms. Only now the shadows are deeper. Extravagance takes on a sinister, wastrel air, and exuberance blithers. When I added the dimension of time to the landscape of the world, I saw how freedom grew the beauties and horrors from the same live branch. This landscape is the same as that one, with a few more details added, and a different emphasis. Instead of one goldfish swimming in its intricate bowl, I see tons and tons of goldfish laying and eating billions and billions of eggs. The point of all the eggs is of course to make goldfish one by one—nature loves the idea of the individual, if
not the individual himself—and the point of a goldfish is pizazz. This is familiar ground. I merely failed to acknowledge that it is death that is spinning the globe.

It is harder to take, but surely it's been thought about. I cannot really get very exercised over the hideous appearance and habits of some deep-sea jellies and fishes, and I exercise easy. But about the topic of my own death I am decidedly touchy. Nevertheless, the two phenomena are two branches of the same creek, the creek that waters the world. Its source is freedom, and its network of branches is infinite. The graceful mockingbird that falls drinks there and sips in the same drop a beauty that waters its eyes and a death that fledges and flies. The petals of tulips are flaps of the same doomed water that swells and hatches in the ichneumon's gut.

That something is everywhere and always amiss is part of the very stuff of creation. It is as though each clay form had baked into it, fired into it, a blue streak of nonbeing, a shaded emptiness like a bubble that not only shapes its very structure but that also causes it to list and ultimately explode. We could have planned things more mercifully, perhaps, but our plan would never get off the drawing board until we agreed to the very compromising terms that are the only ones that being offers.

The world has signed a pact with the devil; it had to. It is a covenant to which every thing, even every hydrogen atom, is bound. The terms are clear: if you want to live, you have to die; you cannot have mountains and creeks without
space, and space is a beauty married to a blind man. The blind man is Freedom, or Time, and he does not go anywhere without his great dog Death. The world came into being with the signing of the contract. A scientist calls it the Second Law of Thermodynamics. A poet says, "The force that through the green fuse drives the flower/ Drives my green age." This is what we know. The rest is gravy.