

Frank Herbert

LISTENING TO THE LEFT HAND

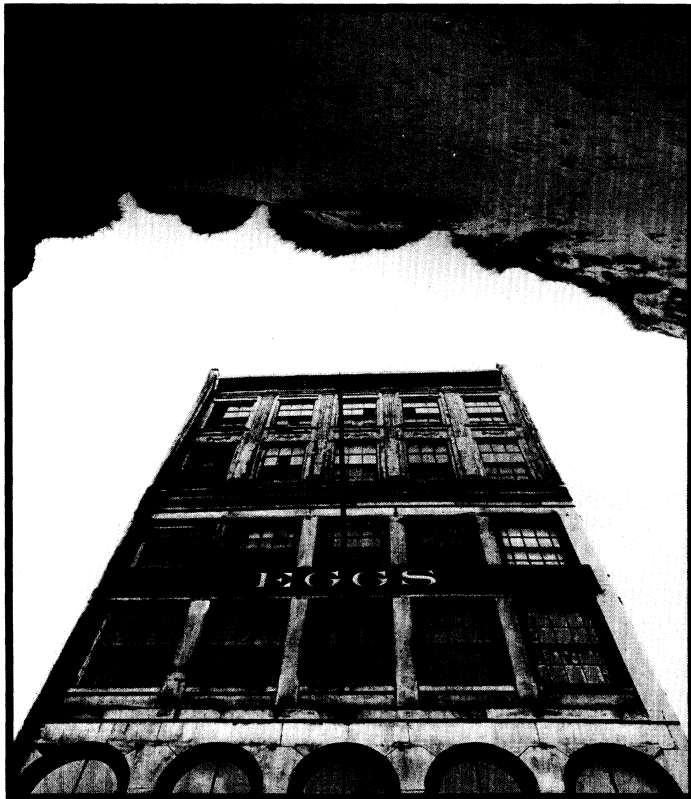
The dangerous business of wishing for absolutes in a relativistic universe

Frank Herbert is the author of several science fiction novels, among them Dune and The God Makers.

WHEN I WAS YOUNG and my world was dominated by indestructible adults, I learned an ancient way of thinking that is as dangerous as a rotten board in a stepladder. It told me that the only valuable things were those I could hold unchanged: the love of a wise grandfather, the enticing mystery of the trail through our woodlot into the forest, the feeling of lake water on a hot summer day, the colors (ahh, those colors) when I opened my new pencil box on the first day of school . . .

But the grandfather died, a developer bulldozed the woodlot, loggers clear-cut the forest, the lake is polluted and posted against swimming, smog has deadened my ability to detect subtle odors, and pencil boxes aren't what they used to be.

Neither am I.



There may be a quiet spot in my mind where nothing moves and the places of my childhood remain unchanged, but everything else moves and changes. There's dangerous temptation in the nostalgic dream, in the expertise of yesteryear. The nameless animal that is all of us cannot live in places that no longer exist. I want to address myself to the survival of that nameless animal, looking back without regrets at even the best of what was and will never be again. We should salvage what we can, but even salvaging changes things.

The way of this change is called "process" and it requires that we be prepared to encounter a multiform reality. Line up three bowls on a table in front of you. Put ice water in the one on the left, hot water in the one on the right, and lukewarm water in the middle one. Soak your left hand in the ice water and right hand in the hot water for about a minute, then plunge both hands into the bowl of lukewarm water. Your left hand will tell you the water of the middle bowl is warm, your right hand will report cold. A small experiment in relativity.

We live in a universe dominated by relativity and change, but our intellects keep demanding fixed absolutes. We make our most strident demands for absolutes that contain comforting reassurance. We will misread and/or misunderstand almost anything that challenges our favorite illusions.

It has been noted repeatedly that science students (presumably selected for open-mindedness) encounter a basic difficulty when learning to read X-ray plates. Almost universally, they demonstrate an inability to distinguish between what is shown on the plate and what they believe will be shown. They see things that are not there. The reaction can be linked directly to the preset with which they approach the viewing of a plate. When confronted by proof of the extent to which preconceptions influenced their judgment, they tend to react with surprise, anger, and rejection.

We are disposed to perceive things as they appear, filtering the appearance through our preconceptions and fitting it into the past forms (including all the outright mistakes, illusions, and myths of the past forms). If we allow only the left hand's message to get through, then "cold" is the absolute reality to which we cling.

When our local reality has attached to it that other message: "This is the way out," then we're dealing with a form of "holy truth." *Cold* becomes a way of life.

False limits

WE MUST BEGIN TO SEE OURSELVES without the old illusions, whatever their character may be. The apparently sound step can drop us from the ladder when we least expect it. Herman Kahn's opus on the year 2000 never mentioned environmental concerns. A Presidential committee appointed in 1933 by Franklin D. Roosevelt to "plot our course" through 1952 had not a word about atomic energy, antibiotics, jet propulsion, or transistors. Such levels of perception are worse than inadequate; they impose deadly false limits. They beguile us with a promise that "we know what we're doing."

The man with broken bones stretched out beneath his ladder doesn't need to look at the rotten step to know what he did wrong. He believed a system that had always worked before would work once more. He had never learned to question the mechanisms and limits imposed by his perceptions.

In questioning those mechanisms and limits on a larger scale we move into an arena dominated by the powerful impositions of genetic heritage and individual experience, the unique influenced by the unique. Here is the conglomerate of behavior-biology, the two so entangled they cannot be separated if we hope to understand their interlocked system. Here is "process."

You and I, while we strive for a one-system view of this process, are at the same time influenced by it and influence it. We peer myopically at it through the screens of "consensus reality," which is a summation of the most popular beliefs of our time. Out of habit/illusion/conservatism, we grapple for something that changes as we touch it.

Must we stop the river's motion to understand *riverness*? Can you understand *riverness* if you are a particle in its currents? Try this:

Think of our human world as a single organism. This organism has characteristics of a person: internal reaction systems, personality (admittedly fragmented), fixed conceptualizations, regular communications lines (analogue nerves), guidance systems, and other apparatus unique to an individual. You and I are no more than cells of that organism, solitary cells that often act in disturbing concert for reasons not readily apparent.

Against such a background, much of the total species-organism's behavior may be better understood if we postulate collective aberrations of human consciousness. If the human species

can be represented as one organism, maybe we would understand ourselves better if we recognized that the species-organism (all of us) can be neurotic or even psychotic.

It's not that all of us are mad (one plus one plus one, etc.) but that all-of-us-together can be mad. We may even operate out of something like a species ego. We tend to react together with a remarkable degree of similarity across boundaries that are real only to individual cells, but remain transparent to the species. We tend to go psychotic together.

Touch one part and all respond.

The totality can learn.

This implies a nonverbal chemistry of species-wide communication whose workings remain largely unknown. It implies that much of our collective behavior may be preplanned for us in the form of mechanisms that override consciousness. Remember that we're looking for patterns. The wild sexuality of combat troops has been remarked by observers throughout recorded history and has usually been passed off as a kind of boys-will-be-boys variation on the male mystique. Not until this century have we begun to question that item of consensus reality (read *The Sexual Cycle of Human Warfare* by N.I.M. Walter). One of the themes of my own science fiction novel, *Dune*, is war as a collective orgasm. The idea is coming under discussion in erudite journals such as *The General Systems Yearbook*.

Assume this concept then. In it, the giant species-organism is perpetually involved with a moving surface of many influences where every generative encounter is felt as change throughout the system. Some of the cells (we individuals) feel the changes with the brutal impact of a napalm explosion. To others, the transition from one condition to another comes at such a snail crawl that it's barely noticed. But always the species, involved with its longer and larger career, responds to the changes at whatever pace conditions permit.

The species-organism

UNDERSTANDING THAT PACE and its conditions requires a different approach to the total human system, that nameless animal of a species-organism. In this approach you no longer can listen only to the right hand that tells you "this is the cold way it has always been." You listen as well to the left hand saying "warm-warm-warm." Somewhere in between left and right you begin to get a glimmering view of things in process now. That glimmering offers the following observations:

- Something like pheromones (external hormones) interacting between members of the human species to weld groups into collective-ac-

tion organs. (How does a mob unite and hold itself together?)

- Isolation cues that separate groups into identifiable substructures, a system possibly influenced by diet. (Aside from accent and mannerisms, how do members of the British upper class recognize each other?)

- Conflict igniters, possibly sophisticated abstractions of primitive postures and vocal signals. (How do you know that the man coming toward you is angry?)

- Glandular responses to changes in territorial circumstances, responses of remarkable similarity throughout large populations, but with a more complex substitution system than implied by most observers. (Why did most of the occupants of Chicago's high-rise Lake Shore ghetto abandon it within three years, and what did that experience do to their life expectancy and subsequent behavior?)

In all of the above, you can expect a suppression of group and individual consciousness and an amplification of group conformity. But even if you answered each of these deductions to our present general satisfaction, you would only have begun the process of understanding. Expect that, too, to change.

In our culture, when you make this approach to process thinking, you immediately raise a conflict over whether we individuals (and the groups we form) are reacting on the basis of information. Classical theories of individualism and free will that underlie consensus reality in our society assume a lawless character for the species as a whole. ("Human nature will never change.") Classical theory assumes that we are profoundly different from blind cells, that human individuals are informed, and that their reactions can be ascribed to a rational basis except in cases of accident and madness. To assume for the species as a whole a response pattern partly habituated (and thus unconscious by definition) threatens belief in *reason*, whose raw stuff (information) is assumed to be openly (consciously) available to all.

But television directors, politicians, the psychiatric profession, advertising/public relations firms, and sales directors are seeking out predetermined preferences to exploit mass biases. In a very real sense, we already are conducting conversations (communicating) with the species as an organism. For the most part, this communication is *not* directed at *reason*.

Process and the species-organism represent a complex mixture whose entire matrix can be twisted into new shapes by genius (Einstein) or madness (Hitler). The course of this process can be misread by an entire species despite wide evidence of disaster. To understand this matrix, consider the problems of rat control. We've learned that a quick-acting poison doesn't work well in eliminating rat colonies. Grain treat-

ed with a fast poison tends to kill only one or two rats from a colony. Rats translate the message "grain-kill" without any need for verbalizing. We can, however, kill off entire colonies with a slow poison such as Warfarin. When one rat must go back to the grain seven or eight times before dying, other members of his colony tend not to make the lifesaving connection.

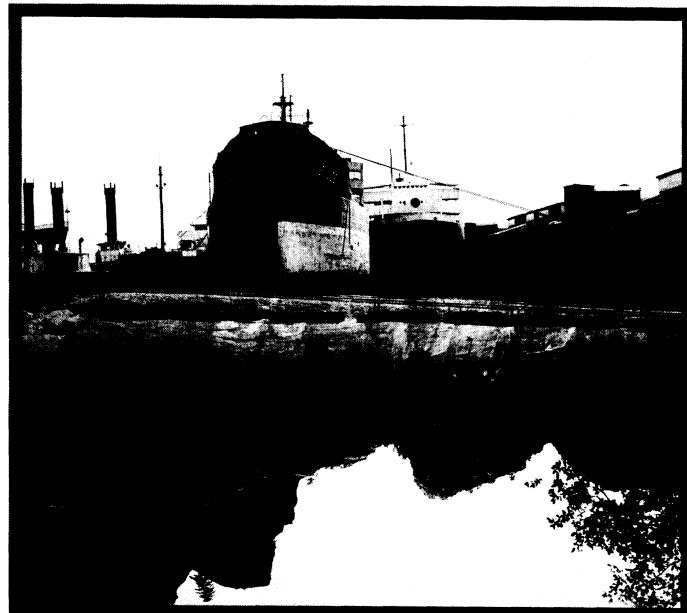
This gives you an idea of what limits may apply to a species' time sense. The presence of a threat may be known, but its context can remain frustratingly diffuse. What is this strange new lethal disease attacking my fellows? It calls up an ancient scenario out of primitive times when our beliefs were geared to living in the presence of an outer darkness that pressed upon us with terrifying force, mysteriously and inescapably painful. How do you placate the angry spirits of the poisoned waters?

"We peer myopically through the screens of 'consensus reality,' which is a summation of the most popular beliefs of our time. We grapple for something that changes as we touch it."

The linear habit

MANY THINGS COMPLICATE our ability to recognize threats to the species. Not the least of these many may be contained in the observation of Søren Kierkegaard: "Life can only be understood backward, but it must be lived forward."

This Janus-faced view of life comes right out of the old linear swamp. It carries an attractive sense of reality, but it assumes that our affairs flow with an absolute linearity from way back there to somewhere wa-a-a-ay up front. This allows for no optical illusions in time, no com-



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pressions or expansions, and it ignores much of our latest computer hardware (ten billion years in a nanosecond) as well as other odd Einsteinian curves and spirals that intrude upon our consensus reality. It's well to recognize the low probability that one lonely cause underlies any event that inflicts itself upon an entire species. Neither Hitler nor Einstein sprang from a spontaneous and singular generating event. Worldwide pollution has no singular origin.

Yet, the linear orientation of our perceptions (1, 2, 3 . . . ; A, B, C . . . ; Monday, Tuesday, Wednesday . . . ; January, February, March . . .) makes it extremely difficult to break away from the belief that we occupy a universe where there are straightforward linked cause-and-effect events plus a few other odd events we call accidents. We are habituated to a noncircular, non-inclusive way of interpreting a universe whose circularity and all-inclusiveness keep cropping up in the phenomena we investigate. Events of tomorrow *do* change our view of yesterday; an ancient Greek's accident is our better-understood phenomenon. The linear habit remains, however. It dictates that we consign accidents to the unconscious. We keep loading the unconscious with events we do not understand. This burden inflicts itself upon our sense of reality.

Devotion to that linear consensus leads us inexorably into a confrontation with the mathematician who tells us: "We inevitably are led to prove any proposition in terms of unproven propositions." He's telling me that all of my pet beliefs inevitably go back to a moment where I am forced to say: "I believe this because I believe it." Faith!

Mathematics and physics may yet drive the old realities over the brink. For instance, we now can project complex models of human societies through analogue computers and within a few seconds get impressive readouts on the consequences of paper decisions projected for hundreds of years. This is, of course, subject to the omnipresent warning pasted over computers operated by cautious men of science. That warning reads: "Garbage in—garbage out."

In engineering terms, we are looking for *re-sultants*—sums of social forces through which to examine our world. This often produces a more realistic approach than taking up the components one by one. Any auto mechanic knows there are engine problems for which it's better to make ten adjustments at once. Still, singularity as a belief confounds our attempts to "repair the system."

Technological playthings distort and amplify our performances to the point where we may believe we are *discovering* futures that we invent in the present. This may be the most elemental reality we have ever encountered, but the distortions born of mating our unexamined desires to our technology have tangled future and pres-

ent almost inextricably. Future/past/present—they remain so interwoven deep in the species' psyche that our day-to-day activities are often concealed from us. We put out our own Warfarin, unaware of lethal consequences and forgetful of where we have hidden it.

Few who examine our planetwide problems doubt that we live in a Warfarin world. The thrust of my argument is that we are not raising our awareness to the level demanded by the times, we are not making the connections between poisons and processes—to the despair of our species.

Success as failure

PLANNERS OFTEN APPEAR unwilling to believe that a history of success can produce the conditions of disaster. Rather, they believe that success measured in current terms is sufficient justification for any decision about tomorrow. (To those who doubt that success can bring ruin to a community, look at the Boeing Corporation, a study of unusual poignancy in its demonstration of disaster brewed from success.)

You glimpse here a hidden dimension of powerful influence upon our survival. Here are the locked-up decisions predicated on capital investments and operating costs. Governments, large corporations, and service industries know they must build today according to long-range projections. Those projections tend to come from planners who know (unconsciously or otherwise) what the directors want to hear. Conversely, directors tend not to listen to disquieting projections. (Boeing's directors were being told as far back as the early 1950s that they had to diversify and that they should begin exploring the potential of rapid transit.)

Planning tends to fall into the absolutist traps I've indicated. Warm is better than cold; we'll listen only to the left hand. The limits under which powerful private assessments of "the future" are made predict mistakes of gigantic lethal magnitude.

If we define futurism as exploration beyond accepted limits, then the nature of limiting systems becomes our first object of exploration. That nature lies within ourselves. Some who say they are talking about "a future" are only talking about their own limits. The dominant pattern in current planning betrays a system of thinking that does *not* want to abandon old assumptions and that keeps seeking a surprise-free future. But if we lock down the future in the present, we deny that such a future has become the present—and the present has always been inadequate for the future.

My explanation of this pattern goes partly to where we commonly believe *meaning* is found—in printed words (such as these), in the noises

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of a speaker, in the reader's or listener's awareness, or in some imaginary thought-land between these. We tend to forget that we human animals evolved in an ecosystem that has demanded constant improvisation from us. In a mirror sense, we reflect this history of mutual influences in all our systems and processes, including the human brain, our consciousness, and our thinking patterns. The virtuosity of our customary speaking response tends to conceal from us how this behavior is dominated by improvisation. This nonawareness carries over into that "talking" with our universe by which we shape it and are shaped by it.

It dismays some people to think that we are in some kind of a jam session with our universe and that our survival demands an ever-increasing virtuosity, an ever-improving mastery of our instruments. Whatever we may retain of logic and reason, however, points in that direction. It indicates that the creation of *human* societies probably should become more of an art form than a plaything of science.

To plan for the future, to attempt to guide ourselves into "the better life" projected by our utopian dreams, we are involving ourselves with profound creative changes and influences. Many of these already are at their work unrecognized around us. Inevitably, we change our frames of reference, our consensus reality. It becomes increasingly apparent that today's changes occur in a relativistic universe. It is demonstrably impossible in such a universe to test the reliability of one expert by requiring him to agree with another expert. This is a clear message from those physicists who demonstrate the most workable understanding of our universe-in-operation. After Einstein, they tell us: *all inertial frames of reference are equivalent.*

This is saying that there is no absolute frame of reference (local reality) within the systems we recognize, no way to be certain you have measured any absolutes. The very act of introducing the concept *absolute* into a question precludes an answer with sensible meaning. (Which hand will you believe, the "cold" hand or the "warm" one?) It serves no purpose to ask whether absolutes exist. Such questions are constructed so as to have no answer *in principle.*

Accordingly, both Pakistan and India could be equally *right* and equally *wrong*. This applies also to Democrats and Republicans, to Left and Right, to Israel and the United Arab Republic, to Irish Protestants and Irish Catholics. Remember: "We inevitably are led to prove any proposition in terms of unproven propositions." We do not like unproven propositions.

If we face up to this consciously, that might cut us away from everything we *want* to believe, from everything that comforts us in a universe of unknowns. We would be forced to the realization that the best logic we can construct

for a finite system (which describes our condition at any selected moment) might not operate in an infinite system. No matter how tightly we construct our beautiful globes of local reality, no matter how many little Dutch boys we assemble to apply fingers to any holes that may appear, we still have built nothing more than a dike, impermanent and essentially fragile.

Breaking patterns

IT WOULD SEEM THAT A FUTURIST concerned with our survival and our utopian dreams needs to listen, to observe, and to develop expertise that fits the problems as they occur. But that is not the pattern that dominates human behavior today. Instead, we shape our interpretations of our problems to fit existing expertise. This existing expertise defends its local reality on the basis of past successes, not on the demands of our most recent observations.

The consequences of such an approach can be deadly far beyond the circle in which the planning decisions originate. And in the hierarchical arrangements of human societies it often is just one person who finally makes the profound choice for us all. The reasons behind such decisions can be perfectly justified by the contexts within which they are made. (Have I ever failed you before?)

In the universe thus described, we are destined forever to find ourselves shocked to awareness on paths that we do not recognize, in places where we do not want to be, in a universe that displays no concern over our distress and that may have no *center* capable of noticing us. God-as-an-absolute stays beyond the reach of our definitions, beyond our questions, beyond any demands we can articulate. The old patterns of thinking, patched together out of primitive communications attempts, continue to hamstring us.

Play a game with me, then, and maybe you'll understand what I am attempting to describe. Here's a list of numbers arranged according to a logical order. The solution to that order (see page 124) embodies what I mean when I suggest we leap out of our conventional limits. The numbers: 8, 5, 4, 9, 1, 7, 6, 10, 3, 2.

As you consider how the way we approach a question limits our ability to answer, I'd like you to reflect upon a short paraphrase of Spinoza, changed only to read "species" where the original read "body."

No man has yet determined what are the powers of the species; none has yet learned from experience what the species may perform by mere laws of nature (chemical, genetic or other) or what the species may do without rational determination. For nobody has known as yet the frame of the species so thoroughly as to explain all of its operations. □