THE THINKER

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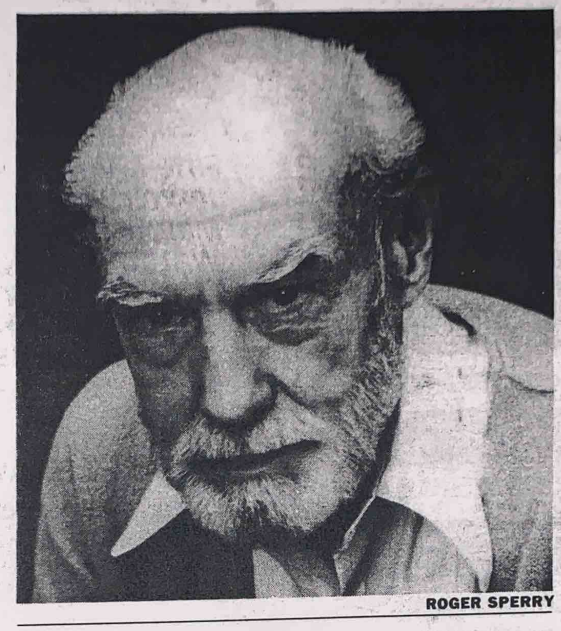
Sociologic factors may be important but the paradigms of science are not subject to change like fashions in headwear.

—Roger W. Sperry



ROGER SPERRY

And so Nobel Prize-winning neurobiologist Roger Sperry — whose pioneering work with split-brain patients in the last decade and a half triggered a scientific movement some claim is akin to a second Copernican revolution — flatly sounds the death knell for an interview that would illuminate L.A. in the past 10 years.

This is the story of invisible paradigms crashing together with the force of gigantic planets; of cassette tapes running out in the middle of interviews and one almost not having the psychic strength to turn them over; of tiny yet fatal semantic missteps; of acid-stomached, sickeningly late, caffeine-shaken evenings spent staring stupidly at excerpts from the *Noetic Sciences Review* or articles that begin, "Sperry has proposed a solution to the mind-body problem that is both physical monist and, surprisingly for many readers, interactionist"; of half-joking slurs on the interviewer's intelligence and integrity; of half-joking threats to willfully misrepresent every idea the interviewee has ever written, of which there are at least 1,000, mind-boggling, densely packed — ranging in scope from memory-processing at the micro-synaptic level to the clashing ideologies of world powers, all of which elegantly interlock like the brilliant clockwork orrery of a Ptolemaic universe.

Dialogue with Roger Sperry? You simply can't get any ideas you haven't thought about continuously for the last 15 years past a man who has been studying the brain for half a century. As he says, "If you study how the brain works, you don't trust its inner workings until they're checked by outside experiments, research — check and double-check." In short, "I don't trust off-the-cuff remarks." He doesn't trust yours, and yet, with complete fairness — even Nobel Prize winners are, after all, products of biology — he also doesn't trust his own. His initial impression of this article — an impression that was slowly, awkwardly dissipated — was that his published articles would be skillfully excerpted and put in interview form. A preliminary draft would then be presented to him so he could make final corrections before it went over to the *Weekly*.

Put another way: you don't read a bushelful of articles on Sperry and then go to him with the tape recorder to get a new angle. There is no new angle. That's the point. The passion and the controversy aren't going to come out in a sudden burst of verbal abandon — the passion and the controversy have already been shaped and articulated in Sperry's 150-plus articles spanning 50 years, in journals ranging from the *Journal of Comparative Neurology* to *American Zoologist* to *Scientific American* to *Zygon* to *Contemporary Philosophy* to the *Los Angeles Times*' Opinion section. If it's an important issue, he has already expressed it. If he hasn't already thought about it, it's probably because it's not an important issue: "Yes, but that is a truism," he'll reply when the issue of appropriating his ideas is raised, "and of no relevance to your topic."

And yet, Sperry suggests some profound lessons even in causing the premises of this article itself to deflate, collapse, crumple and utterly self-destruct. They are about the nature of historical time — in which 10 years is inconsequential in view of generations of eroding the biosphere, those generations nested within a five-century rift between religion and Western science, a rift Sperry thinks is erroneous. They are about how we define the nature of Los Angeles — where rather than having its own unique "flavor," Los Angeles is, to the neurobiologist, still but one good research site in terms of the availability of split-brain subjects, and if the world ends in nuclear holocaust tomorrow, Los Angeles will have no special privilege.

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But, of course, the most unexpected lesson is in how tell a story, what issues we tend to think are important in a land where cover stories in the *Times Magazine* are no longer on Brian Wilson but rather Brian Wilson's *psychologist*, not on Sally Field but Sally Field's *P.R. firm*. Why indeed talk about science at all when process has become as important as product; when how the message is being transmitted is as important as the message itself, and our memories have increasingly short trajectories, leading us to see a culture shaped by style — fashions in headwear — rather than the stately movements of evolution?

Roger Sperry was a central figure in a revolution in behavioral science that occurred in the '70s, now known as the "cognitive," "mentalist" or "humanist" revolution. For half a century, science had ignored subjective phenomena such as mental images, feelings, thoughts and memories in explaining human behavior, essentially reducing the human organism to the stimulus-reactive level of Pavlov's dogs. Sperry's breakthrough, which made him a kind of hero for humanists around the world, was to argue from a scientist's standpoint that consciousness is *causative* — that is, an emotion or a memory will actually direct the flow of nerve-impulse traffic science had exclusively considered before.

Anyone who has ever completed a "sludge" test in a high school chemistry lab implicitly understands the traditional scientific method. You are handed a test tube full of "sludge." In order to understand it, you break it into its parts using a battery of experimental methods you have painstakingly mastered throughout the semester. At the end you have several little piles of things: water, baking chips, sodium chloride, even dirt carefully scraped from the girls' track if your high school science instructor has been teaching the course too long. This is the reductionist method — reducing an entity to its parts in order to understand the whole. It is a method that has been the dominant paradigm in science since Bacon, enabling incredible technological triumphs such as splitting the atom and putting a man on the moon.

And yet, technological triumphs aside, Sperry is turning this around — reductionism is fine, he is saying, but it doesn't explain everything. The human brain, essentially, is not like sludge. If you dismantle it to little piles of cruft, you will not understand it. Rather than just reductionism, however, this is a new paradigm for all of science.

When a physicist looks at an airplane, for instance, he acknowledges that there are two worlds at hand: a microscopic one where quarks dance around each other according to bizarre, other-worldly laws, and a macroscopic one where familiar entities such as wings, propellers and wind patterns are king. The key is that you don't try to explain the plane's flight in terms of quarks. In fact, possibly, you can't.

Since the simple idea — that you can't always deduce a whole from its parts — may have profound implications beyond science, many claim it is of the scope of the Copernican and Darwinian revolutions. Sperry extrapolates that it opens the door between science and ethics, between science and religion even. Finally, perhaps the most profound consequence of the consciousness revolution is that now science may actually be used to stem problems such as world hunger, pollution and nuclear stockpiles — not through technological fixes, but through a deeper understanding of the causes and effects of human nature.

Now, this is the barest sketch of pages of articles and books that present the Sperry intellectual legacy in flawless detail. Ultimately what one begins to see as one unravels skein after skein of information is that it is like an ox. That is, it is complete and vital — and larger than life — in itself, but in the process of being taken to market, its parts must necessarily be packaged and processed. This is because there are so many different audiences, who speak so many different technical dialects: neurobiologists, psychologists, scientific historians, philosophers of metaphysics, theologians, policy makers, educators, proponents of the New Age . . . and even, perhaps, the "ordinary" reader.

And yet, while this very process might prove interesting to some, it is not a central Sperry concern. Although when a message is transmitted through society at large it may take on unexpected nuances, the world of academic publishing resists that process. It resists the idea that communication of ideas is like a game of "telephone." And certainly, in a world where one reprints rather than doing endless new "off-the-cuff" interviews, truths don't change — or if they do, they change very slowly.

But does it matter? In terms of relevancy, who is to say which paradigm will have the last word? After all, even in Los Angeles — the media capital of the world — biological forces may in fact determine our future more drastically than social ones. Perhaps, as Sperry argues, the human brain *has* evolved to a point where paranoia is a dominant *causative* force. Perhaps it is a biological phenomenon that nations are madly stockpiling nuclear arms — much as lemmings are driven, through some quirk of evolution, to jump into the sea.

He did not believe in neglecting biological explanations — or in overestimating them — but in his reflections he was primarily trying to do justice to the fact that historical processes go on a long time before they meet the eye . . . For beyond the failure or achievement of an individual, there were larger questions to be asked.

—J.C. Levenson,
The Mind and Art of Henry Adams ■