# The Fateful Rift: The San Andreas Fault in the Modern Mind

# WALKER PERCY

would like to begin with two large but I hope digestible propositions. The first is that our view of the world, which we get consciously or unconsciously from modern science, is radically incoherent.

A corollary of this proposition is that modern science is itself radically incoherent not when it seeks to understand things and subhuman organisms and the cosmos itself but

when it seeks to understand man, not man's physiology or neurology or his blood stream, but man *qua* man, man when he is peculiarly human. In short, the science of man is incoherent.

The second proposition is that the source of the incoherence lies within science itself, as it is practiced in the world today, and that the solution of the difficulty is not to be found in something extra-scientific, such as New-Age religion, but within science itself. When I say science, I mean science in the root sense of the word, as the discovery and knowledge of something which can be demonstrated and verified within a community.

What I am raising here is not the standard humanistic objection to science, that it is too impersonal, detached, abstracted, and that accordingly it does not meet human needs,

Like Charles Pierce, I insist upon the qualitative and irreducible difference between dyadic and triadic phenomena. does not take into account such human experiences as emotions, art, faith, and so on. Scientists are used to and understandably unimpressed by such challenges. No, my purpose is rather to challenge science, as it is currently practiced by some scientists, in the name of science.

Surely there is nothing wrong with a humanist, even a novelist, taking a look at his colleagues across the fence in

the sciences and saying to them in the friendliest way: "Look, fellows, it's none of my business, but hasn't something gone awry over there that you might want to fix?"

We novelists would surely be grateful if scientists demonstrated that the reason novels are increasingly incoherent these days is because novelists are suffering from a rare encephalitis, and even offered to cure them.

My proposal to scientists is far more modest. That is to say, I am not setting up either as physician or as the small boy noticing the naked emperor. What I am doing is more like whispering to a friend at a party that he'd do well to fix his fly.

For it can be shown, I think, that in certain areas, science, as it is currently practiced, fails on its own terms, not in ruling out traditional humanistic concerns as "unscientific" or "metaphysical" or "non-factual," but in certain areas fails rather in the confusion and incoherence of its own theories and models. This occurs, I think it can be shown, in the present-day sciences of man.

The puzzling thing is that the incoherence

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is both known and unknown, as familiar on the one hand as a member of one's own family and as little remarked. It is like a longstanding family embarrassment, like Uncle Louie who, it is true, is a little strange but has been that way so long that one has finally grown used to him.

The embarrassment occurs, as I say, when the sciences, so spectacularly successful in addressing the rest of the cosmos, address man himself. I am speaking of such sciences as psychology, psychiatry, linguistics, anthropology, and sociology.

CHRONIC INCOHERENCE

Something odd happens. It is not merely, as the excuse sometimes runs, that the subject matter, man, is complex and difficult. So is the cosmos. But in the case of the cosmos there is a presumption that the areas of ignorance are being steadily eroded by the advance of science. In the case of the sciences of man, however, the incoherence is chronic and seems to be intractable.

ake a familiar example, psychology, **I** Psych 101, the college survey course. Here's what one studies or at least hears about, and I mention only those items most familiar to sophomores: neurons, signals, synapses, transmitter substance, central nervous system, brain, mind, personality, self, consciousness, and, later perhaps, ego, superego, archetypes.

What is remarkable to a Martian visitor or a college freshman who doesn't know any better is that there seem to be two sorts of things, very dissimilar things, named in the list. The words early in the list refer to things and events which can be seen or measured, such as neurons, which are cells one can see through a microscope. The words that come later, such as self, ego, consciousness, cannot be seen as things or measured as energy exchanges. They can only be described by some such word as mental or mind.

Here again, I'm not telling you anything you don't already know, and here again you may ask: "So what?"

For is it not a commonplace, and in fact the very nature of the beast, that in psychology we deal with "mental" and "physical" entities, with mind and matter, and I will not quarrel with however you wish to define matter, as stuff or things or electrons and protons in motion?

But in fact, in speaking of the "mental" and the "physical," of the psyche and the brain, and with however much hope and sophistication we wish to phrase it, are we not admitting that we are still hung up on the horns of the ancient dualism of Descartes, however much we wish to believe we had gotten past it? Descartes, if you recall, divided all reality between the res cogitans, the mind, and the res extensa, matter. God alone, literally, knew what one had to do with the other.

But in natural science we do not like to admit that we are still split by a 300-year-old dualism. Nor should we.

Might we not in fact reasonably expect that the appropriate scientists, psychologists in this case, tell us what one has to do with the other, or how to get from one to the other, from "matter" to "mind"? If they are not going full steam ahead on bridging this peculiar gap, they must at least have some inkling.

As far as I can tell, they are not and do PROBLEMS not. In Psych 101, the problem of the ancient dualism is usually dismissed in a sentence or two, like Reagan dismissing the national debt. Or the solution is not sought but declared found.

OF DUALISM

Here are some samples:

Mind is a property of the organization of neurons, their circuitry and the neurotransmitters between them.

Or: The relation of brain to mind is directly analogous to that of computer to its software

Or: The only difference between us and the Apple computer is complexity.

But here's the best statement I've come across of such awkward things as mind and consciousness. It is from a textbook, Physiology of Behavior, by Neal R. Carlson. "What can a physiological psychologist say about human self-awareness? We know that it is altered by changes in the structure or chemistry of the brain. We conclude that consciousness is a physiological function, just like behavior."

These statements are something less useful than truisms. To say that mind is a property or function of the organization of the brain is almost the same as saying that Raphael's Orleans Madonna is a property of paint and color.

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I refer to this gap in scientific knowledge as an incoherence, from the Latin *incohaerere*, a not-sticking-together. This gap is incoherent and intractable, at least from the present posture of natural science. That is to say, no amount of effort by "brain" scientists and "mind" scientists can even narrow the gap.

Can anyone imagine how a psychology of the psyche, like that of Freud or Jung, however advanced, can ever make contact with a Skinnerian psychology of neurons, however modified and elaborated it is, for example, by some such refinement as Gestalt and "cognitive" psychology?

There are similar incoherences in other sciences of man.

Sociology and cultural anthropology have to do with groups and cultures, with people: that is to say, human organisms. But sociology deals with such things as self, roles; anthropology with such things as sorcery, rites. But how do you get from organism to roles and rites?

Linguistics is about the sounds people make. Many organisms make sounds, to attract attention in courtship, to scare off predators, to signal to other creatures the finding of food, to call their young, and so on. So do human organisms. But they, human organisms, also make sounds which form sentences to tell the truth about things, lie, or don't make any sense at all. How did this come to pass?

E ven the great scientist Darwin, who connected everything else, had trouble when he came to this peculiar activity.

DARWIN'S EXPLANATION Here's how Darwin went about it. The mental act, Darwin claimed, is essentially of the same nature in an animal as it is in man. How does he know this? He writes: "When I say to my terrier, in an eager voice (and I have made the trial many times), 'Hi, hi, where is it?' she at once takes it as a sign that something is to be hunted, and generally first looks quickly all around, and then rushes into the nearest thicket, to scent for any game, but finding nothing, she looks up into any neighboring tree for a squirrel. Now do these actions not clearly show that she had in her mind a general idea or concept that some animal is to be discovered and hunted?"

This is a charming account, and it is not necessary to comment on it except to note

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that later scientists would probably smile and shrug, but some of them might add: Well, maybe not dogs, but what about dolphins or chimps?

Both Darwin and Freud were great men, maestros of the organism and the psyche, made huge contributions, but nowadays no one would claim that either had bridged the gap. Darwin addressed himself to one side of it in his study of the origin of species. Freud treated a very different though hardly less savage struggle, the warfare between the id and superego. Darwin and Freud were true revolutionaries and were accordingly accused by their enemies of being too radical. When in truth, as it now appears, they were no, radical enough. For neither can account for his own activity by his own theory. For how does Darwin account for the "variation" which is his own species and its peculiar behavior, in his case, sitting in his study in Kent and writing the truth as he saw it about evolution? And if Freud's psyche is like ours, a dynamism of contending forces, how did it ever arrive at the truth about psyches, including his own?

Perhaps the oddest thing about these incoherences is the fact that we do not find them *WE DO NOT FIND THEM ODD* 

We do not find it odd to jump from the natural science of the biology of creatures to a formal science of the utterances of this particular creature without knowing how we got there.

We do not find it odd that there is only one science of chemistry and neurology but at last count over 600 different schools of psychotherapy, and growing. We accept the explanation that, after all, the brain is vastly more complicated than a molecule of sodium chloride or even a nerve cell. That may be true, but it doesn't explain why the physical sciences are converging whereas the psychic "sciences" are diverging—and getting nuttier as they do.

In what follows, I wish to call your attention to the work of an American scientist who, I believe, laid the groundwork for a coherent science of man, and did so a hundred years ago. Most people have never heard of him, but they will.

The man I speak of is Charles Sanders Peirce (1839-1914), scientist, logician (he gave us symbolic logic), philosopher, and

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# founding father of semiotics, the science of signs, a discipline in high fashion these days. He was a difficult, eccentric man. One of his peculiar accomplishments was that he could write down a question which was bothering him with one hand and with the other simultaneously write the answer.

Although I speak here of Charles Peirce's "discovery," it was not altogether original with him, stemming as it did from the realism of the medieval scholastics. By realism he and his predecessors meant that there is a real world and that it is possible to a degree to know it and to talk about it and be understood. Not only are material things and events real. So are the ideas and words with which we use to think and talk about them. As Peirce put it, "there are real things out there whose characters are independent of our opinion of them."

lthough this may seem a commonplace **L** to us, just ordinary common sense, this connection among things and words and knowledge has been under attack for 300 years, by Descartes, who split off mind from matter, and by the English nominalists who even now split off words and ideas from things. One made knowledge unexplainable; the other made it impossible. And this is to say nothing of the European materialism and idealism of Peirce's time, the first of which set out to explain everything by the doctrine of matter in motion, the other by that of subjectivity, such as Hegel's idealism. One put everything in one box, the box of things; the other put everything in the mind box. But neither told how to get from one box to the other.

Fortunately, modern scientists have taken none of these still regnant philosophies seriously-whether nominalism, materialism, or idealism. If they had, there would have been no Newton or Einstein or Darwin. For if the world is not real or could not be known, why bother with it?

Despite inadequate philosophies, science has advanced spectacularly, particularly physics and biology. Yet, as we have seen, they, the scientists, are still trapped in the ancient dualism and still cannot explain what the mind box has to do with the thing boxmuch to the detriment and confusion of the social sciences.

The great contribution of Charles Peirce, a rigorous scientific realist, was that he preserved the truth, as he saw it, of philosophical realism from Aristotle to the 17th century, salvaged it from the medieval language of the scholastics which is now all but incomprehensible to us, recast it in terms familiar to scientists, to the most simple-minded empiricists, and even to us lavmen. It, Peirce's realism, cannot now be escaped or fobbed off as scholastic mumbo-jumbo.

Peirce saw that the one way to get at it, the great modern rift between mind and matter. was the only place where they intersect, language. Language is words and meanings. It is impossible to imagine language without both.

In brief, he said that there are two kinds of natural events in the world. These two kinds of events have different parameters and variables. Trying to pretend there is only one kind of event leads to all the present misery which afflicts the social sciences, and even more important, at least for us laymen, it brings to pass a certain cast of mind, "scientism," which misplaces reality and creates vast mischief and confusion when we try to understand ourselves.

Peirce said it indirectly and I make bold to TRIADIC say it directly, and I repeat the statement EVENTS because it could not be more revolutionary: There is not one but two kinds of natural events in the world. One he called dyadic, the other triadic.

Dyadic events are the familiar subject matter of the physical and biological sciences: A interacting with B; A, B, C, D interacting with each other. Peirce called it "a mutual action between two things." It can apply to molecules interacting with other molecules, a billiard ball hitting another billiard ball, one galaxy colliding with another galaxy, an organism responding to a stimulus. Even an event as complex as Pavlov's conditioned dog salivating at the sound of a bell can be understood as a "complexus of dyads." The sound waves from the bell, the stimulation of the dog's auditory receptors, the electrical impulses in the efferent nerves. the firing of the altered synapses in the brain, the electrical impulses in the efferent nerves to the salivary glands, and so on-the whole process is understandable as a sequence of dyadic events.

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Such events indeed are the familiar subject matter of the natural sciences, from physics and chemistry to biology and to Psych 101.

But there is another kind of event, quite as "real," quite as natural a phenomenon, quite as observable, which cannot be so understood, that is, cannot be construed by the dyadic model. It is language. The simplest example I can think of, and it is anything but simple, is the child's early acquisition of language, an 18-month-old suddenly learning that things have names. What happens here is the same sort of thing that happens when a lecturer utters a complex sentence about the poetics of T. S. Eliot.

NAMING

What happens when the child suddenly grasps that the strange little sound *cat*, an explosion of air between tongue and palate followed by a bleat of the larynx followed by a stop of tongue against teeth, means this cat, not only this cat but all cats? And means it in a very special way: not *look over there for cat, watch out for cat, want cat, go get cat,* but *that is a cat.* Naming is the new event, and of course soon after the appearance of this naming "sentence" appear other primitive sentences: *there cat, cat all gone, where cat*?

As Peirce put it, this event cannot be explained by a dyadic model, however complex. Words like cat he called symbols, from the Greek *symballein*, to throw together. Because the child puts the two together, the word and the thing, a triadic model is required. For even though many of the familiar dyadic events are implicated, the heart of the matter is a throwing together, one entity throwing together two others, in this case cat the creature and cat the sound image.

This even is a piece of behavior, true enough, but any behavioristic reading of it as a sequence of dyads will miss the essence of it.

He, Peirce, was particularly interested in using the dyadic-triadic distinction to understand communication by a discipline which he called semiotics, the science of signs. He distinguished between an index and a symbol. A low barometer is, for a human, a sign, an index, of rain. The word *ball* is for my dog an index to go fetch the ball, but, if I say the word *ball* to you, you will receive it as a symbol, that is, look at me with puzzlement and the suspicion that may-

be I've gone over the hill, and perhaps say, "Ball? What about it?"

The difference between the two, variously and confusedly called index and symbol, sign and symbol, signal and sign, was perhaps most dramatically illustrated by Helen Keller's famous account: her first understanding of words spelled in her hand, like cup, door, water, to mean go fetch cup, open door, I want water, and then the memorable moment in the pump house when it dawned on her that the word water spelled in one hand meant the water running over the other. It was nothing less than the beginning of her life as a person.

The triadic event, as Peirce would say, always involves meaning, and meaning of a special sort. The copula "is," spoken or implied, is nothing less than the tiny triadic lever that moves the entire world into the reach of our peculiar species.

his strange capacity seems to be unique in Homo sapiens, and even though there is nothing unscientific about assigning a "species-specific" trait to this or that species, if the evidence warrants, many scientists, including Darwin, find this uniqueness offensive. We are all familiar with the heroic attempts in recent years by psychologists and primatologists to teach language to primates other than Homo sapiens, particularly chimpanzees, using ASL, the sign language of the deaf. The premise behind such research is that chimps don't speak because their vocal apparatus does not permit speech. The most famous chimp was Washoe, whom Alan and Beatrix Gardner claimed to have taught language, that is, the ability not only to understand and signal "words," the common nouns of language, but also to form these words into sentences.

But we are also familiar with the discrediting of these claims, mainly as a result of the work of Herbert Terrace. Terrace adopted a chimp, which he named Nim Chimpsky, with every expectation of teaching Nim language as one would a human infant. What he learned was that Nim, though undoubtedly as smart as Washoe, was not really using language. What he and Washoe were really doing was responding to small cues by the trainer to do this or that, the appropriate behavior rewarded by a banana or whatever. The trainers were doubtlessly not acting in **COMPLEXUS** 

OF

DYADS

bad faith. What Washoe and Nim Chimpsky were exhibiting, however, was not the language behavior of the human two-year-old but the classical reinforced response of the behaviorists. As Peirce would say, both Weshoe's and Nim's "language" can be understood as a "complexus of dyads."

One can draw a picture with things (matter) and arrows (energy) connecting them setting forth the behavior both of the chimp Washoe and the pre-language human infant with its responses to sights and sounds, its crying for mama and milk.

But one cannot draw such a picture of an 18-month-old human who looks at mama, points to cat, and says *da cat*.

One would naturally suppose that the appropriate scientist, the developmental psychologist, the psycholinguist, whoever, would zero in on this, the transformation of the responding organism into the languaged human.

Unfortunately, such is not the case. What one finds in the scientific literature is something like this: a huge amount of information about the infant as organism, its needs and drives, its behavior and physiology. But when it begins to speak, what? What is thought to happen? What one finds are very careful studies of the structure of the earliest utterances and their development, the rules by which an 18-month-old will say *that a my coat* but not *a that my coat*. Rules, grammar, linguistic structure is what we find, the same formal approach which issues later in the splendid disciplines of structural linguistics and even in "deconstruction."

NOTICING THE CHASM We go from biology (dyadic science) to grammar (triadic science) without anybody seeming to notice anything strange. Such *belle indifference* can only have come to pass either because the scientist has not noticed that he has jumped the chasm or because he has noticed but is at a loss for words.

It is as if we lived in a California house straddling the San Andreas Fault, a crack very narrow but very deep, which has however become as familiar as an old shoe. You can get used to anything. We can hop back and forth, feed ourselves and the dyadic dog on one side, or sit on the other, read Joseph Campbell or write a triadic paper and never give it a second thought. Once in a while we might look down into the chasm, become

alarmed, and take up a New-Age religion like Gaia.

On one side are the dyadic sciences, from atomic physics to academic psychology, the latter with its behaviorism and the various refinements and elaborations thereof; on the other are the "mental" psychologies with such entities as consciousness, the unconscious, dreams, egos, ids, archetypes and such.

trust, incidentally, that when I speak of Advadic phenomena as descriptive of "matter" in motion, it will be understood that I am using the word matter to mean whatever you please as long as it is also understood that such phenomena, at least at the biological level, are not challenged by socalled chaos science or the indeterminacy of particle physics, however vagarious and mystical the behavior of some particles and however chaotic some turbulences. Which is to say: Even though it has been tried, it is surely a silly business to extrapolate from the indeterminacy of subatomic particles to such things as the freedom of the will. At the statistical level, large numbers of atoms behave lawfully. Boyle's law still obtains. If the will is free, it is no thanks to Heisenberg. As for chaos theory, it has been well described not as a repudiation of Newtonian determinism but as its enrichment. Accordingly, like Charles Peirce, I insist on the qualitative and irreducible difference between dyadic and triadic phenomena.

But if scientists, both "physical" scientists and "mental" scientists, can operate comfortably on both sides of the Cartesian split, what happens when the serious scientist is obliged to look straight down at the dysjuncture? That is to say, what is one to make of language, that apparently unique property of man, considered not as a formal structure but as a natural phenomenon? Where did it come from? What to make of it in anatomical, physiological, and evolutionary terms? The chasm must make one dizzy.

Not many psychologists or neuro-anatomists want to look down. Norman Gesschwind is one who has. He points out that there are recently evolved structures in the human brain which have to do with speech and understanding speech, such as the inferior parietal lobule, which receives informa-(Continued on page 51)

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tion from the "primary sensory projection systems," that is, the cerebral cortex which registers seeing and feeling water and hearing the word water. These are described as "association areas." But Charles Peirce would call such associations dyadic events, as he would "information processing systems" such as the computer. A computer, in fact, is the perfect dyadic machine.

What do biologists and anthropologists make of the emergence of language in the evolutionary scheme? The advantages of language in the process of natural selection are obvious. The psychologist Julian Jaynes would go further and say that "the language of men was involved with only one hemisphere in order to leave the other free for the language of gods." Maybe, but setting aside for the moment "the language of gods," what goes on with the language of men? Jaynes doesn't say.

This is what Richard Leakey, the anthropologist, says, describing what happens in a human (not a chimp) when a human uses a word as a symbol, in naming or in a sentence: "Speech is controlled by a certain structure of the brain, located in the outer cerebral cortex. Wernicke's area of the brain pulls out appropriate words from the brain's filing system. The angular gyrus . . . selects the appropriate word."

Pulls out? Selects? These are transitive verbs with subjects and objects. The words are the objects. What is the subject? Draw me a picture of Wernicke's area pulling out a word or the angular gyrus selecting a word. Is there any way to understand this, other than supposing a tiny homunculus doing the pulling and selecting?

Then there is what is called speech-act theory of John Austin, John Searle, and others, promising because it studies the actual utterance of sentences. Thus Austin distinguishes between sentences which say something and sentences which do something. The sentence "I married her" is one kind of speech act, an assertion about an event. "I do," uttered during the wedding ceremony, is another kind, part of the performance of the ceremony itself. The classes of speech-act behavior have multiplied amid ongoing debate, but once again the emperor's little boy

becomes curious. "Speech acts?" he asks. "What do you mean by acts? You never use the word acts in describing the behavior of other creatures." An act entails an actor, an agent who initiates the act. Draw me a picture of a speech act. Where, what, is this creature, the actor?

**B**ut how does Charles Sanders Peirce help us here? Are we any better off with Peirce's thirdness, his triadic theory, than we were with Descartes' *res cogitans* and *res extensa*?

Let me first say that I do not have the competence to speculate on the brain structures which may be implicated in triadic behavior. Nor would I wish to if I had the competence. Such a project is too uncomfortably close to Descartes' search for the seat of the soul, which I believe he located in the pineal gland.

No, what is important to note about the triadic event is that it is there for all to see, that in fact it occurs hundreds of times daily -whenever we talk or listen to somebody talking-that its elements are open to inspection to everyone, including natural scientists, and that it cannot be reduced to a complexus of dvadic events. The chattering of an entire population of rhesus monkeys is so reducible, but the single utterance of a two-yearold child who points and says that a flower cannot be so understood, even though millions of dyadic events also occur, light waves, excitation of nerve endings, electrical impulses in neurons, muscle contractions and so on.

Admitting that there is such a thing as an irreducible triadic event in language behavior, are there any considerable consequences for our anthropology, that is, for the view of man which comes as second nature to the educated denizen of modern society?

There are indeed. And they, the consequences, are startling indeed.

For once one concedes the reality of the triadic event, one is brought face to face with the nature of its elements. A child points to a flower and says flower. One element of the event is the flower as perceived by sight and registered by the brain: blue, five-petalled, of a certain shape. Another is the spoken word flower, a gestalt of a peculiar little sequence of sounds of larynx vibrations, escape of air between lips and teeth and so on.

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But what is the entity at the apex of the triangle, that which links the other two? Peirce, a difficult, often obscure writer, called it by various names, interpretant, interpreter, judger. I have used the term coupler as a minimal designation of that which couples name and thing, subject and predicate, links them by the relation which we mean by the peculiar little word "is." It. the linking entity, was also called by Peirce "mind" and even "soul."

Fere is the embarrassment and it cannot be gotten round, so it might as well be said right out: By whatever name one chooses to call it-interpretant, interpreter, coupler, whatever-it, the third element, is not material.

NOT

It is as real as a cabbage or a king or a neu-MATERIAL ron. but it is not material. No material structure of neurons, however complex, and however intimately it may be related to the triadic event, can itself assert anything. If you think it can, please draw me a picture of an assertion.

> A material substance cannot name or assert a proposition.

> The initiator of a speech act is an act-or, that is, an agent. The agent is not material.

Peirce's insistence on both the reality and nonmateriality of the third element is of critical importance to natural science because its claim to reality is grounded not in this or that theology or metaphysics but in empirical observation and the necessities of scientific logic.

Compare the rigor and clarity of Peirce's semiotic approach to the ancient mind/body problem to current conventional thinking about such matters. We know the sort of answer the psychologist or neurologist gives when we ask him what the mind is: that it is a property of brain circuitry and so on.

We now know, at least an increasing number of people are beginning to know, that a different sort of reality lies at the heart of all uniquely human activity-speaking, listening, understanding, thinking, looking at a work of art-namely, Charles Peirce's triadicity. It cannot be gotten round and must sooner or later be confronted by natural science, for it is indeed a natural phenomenon. Indeed it may well turn out that consciousness itself is not a "thing," an entity, but an act, the triadic act by which we recognize

reality through its symbolic vehicle.

But, finally, what can one say about this entity and event, the reality of which Charles Peirce demonstrated 100 years ago and which we ourselves encounter a hundred times a day?

To begin with, what to call it, this entity which symballiens, throws together word and thing? As we have seen, Peirce used a number of words: interpreter, interpretant, asserter, mind, "I," ego, even soul. They may or may not be semantically accurate, but for the educated denizen of this age they suffer certain semantic impairments, "Interpretant" is too ambiguous, even for Peirce scholars. "Soul" carries too much furniture from the religious attic. "Ego" has a different malodor, smelling as it does of the old Cartesian split.

Then don't name it, for the present, but talk about it, like Lowell Thomas coming upon a strange creature in his travels, in this case a sure enough beast in the jungle.

There are certain minimal things one can say about it, this coupler, this apex of Peirce's triangle.

For one thing, it is there. It is located in time and space, but not as an organism. It has different parameters and variables.

For another, it is peculiarly and intimately THE involved with others of its kind so that, un- SOCIAL TRIAD like the solitary biological organism, it is impossible to imagine its functioning without the other, another. All solitary organisms have instinctive responses, but Helen Keller had to receive the symbol water from Miss Sullivan before she became aware of the water. Peirce's triad is social by its very nature. As he put it, "Every assertion requires a speaker and a listener." The triadic creature is nothing if not social. Indeed he can be understood as a construct of his relations with others.

Here's another trait. It, this strange new creature, not only has an environment, as do all creatures. It has a world. Its world is the totality of that which is named. This is different from its environment. An environment has gaps. There are no gaps in a world. Nectar is part of the environment of a bee, cabbages and kings and Buicks are not. There are no gaps in the world of this new creature, because the gaps are called that, gaps, or the unknown or out there, or don't know.

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For this creature, moreover, words, symbols and the things symbolized are subject to norms, something new in the world. They can be fresh and grow stale. They can be dull and everyday, then sharp as a diamond in the poet's usage.

It is possible here to do no more than call attention to the intriguing and, I think, quite felicitous way in which the properties of this strange triadic creature as arrived at by a scientist and logician 100 years ago, flow directly into the rather spectacular portrait of man by some well-known 20th-century philosophers who came at the same subject, *Homo symbolificus*, from the wholly different direction of European phenomenology.

I will mention only a couple.

There is Martin Heidegger who uses the word *Dasein* to describe him, the human creature, a being there. The *Dasein*, moreover, inhabits not only an *Umwelt*, an environment, but a *Welt*, a world.

Most important, this *Dasein*, unlike an organism, exists on an ethical axis. It can live "authentically" or "inauthentically." It is capable of *Verstehen*, true understanding, and *Rede*, authentic speech, which can deteriorate into *Neugier*, idle curiosity, and *Gerede*, gossip.

Gabriel Marcel and Martin Buber speak of the human being as radically dependent upon others, as an I-thou which can deteriorate into an I-it. Marcel describes the being of a human as a being-in-a-situation.

Sartre is less optimistic. His human being is a solitary consciousness existing in a dead world of things. As for the "other," Marcel's person, Buber's thou, Peirce's listener, Sartre says only that *L'Enfer*, *c'est les autres*. Hell is other people. Finally, the *Dasein*, which has undergone a "fall," a *Verfallen* into an unauthentic existence, can recover itself, live authentically, become a seeker and wayfarer, what Marcel calls *Homo viator*.

The modern psychologist and social scientist cannot, of course, make heads or tails of such existentialist traits as "a falling into unauthenticity" or a sentence of Marcel's such as this: "It may be of my essence to be able to be not what I am." He, the scientist, generally regards such notions as fanciful or novelistic or "existentialist." But perhaps he, the scientist, lacks an appropriate scientific model. At any rate, it is possible that he, the modern scientist of man, will be obliged to take account of these fanciful notions, not by the existentialists but by their cold, hardheaded compatriot, Charles Peirce.

Here is a prophecy. All humanists, even novelists, are entitled to make prophecies. Here is mine. The behavioral scientist of the future will be able to make sense of the following sort of sentence which at present makes no sense to him whatever: There is a difference between the being-in-the-world of the scientist and the being-in-the-world of the layman.

And lastly, with this new anthropology in hand, Peirce's triadic creature with its named world, Heidegger's *Dasein* suffering a *Verfallen*, a fall, Gabriel Marcel's *Homo viator*, man as pilgrim, one might even explore its openness to such traditional Judeo-Christian notions as man falling prey to the worldliness of the world, and man as pilgrim seeking his salvation.

But that's a different story.

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