

"An Unfortunate Dualist" from *This Book Needs No Title* by Raymond M. Smullyan. 1980 by Raymond M. Smullyan. Published by Prentice-Hall, Inc., Englewood Cliffs, N J.

Once upon a time there was a dualist. He believed that mind and matter are separate substances. Just how they interacted he did not pretend to know-this was one of the "mysteries" of life. But he was sure they were quite separate substances. This dualist, unfortunately, led an unbearably painful life-not because of his philosophical beliefs, but for quite different reasons. And he had excellent empirical evidence that no respite was in sight for the rest of his life. He longed for nothing more than to die. But he was deterred from suicide by such reasons as: (1) he did not want to hurt other people by his death; (2) he was afraid suicide might be morally wrong; (3) he was afraid there might be an afterlife, and he did not want to risk the possibility of eternal punishment. So our poor dualist was quite desperate. Then came the discovery of the miracle drug! Its effect on the taker was to annihilate the soul or mind entirely but to leave the body functioning exactly as before. Absolutely no observable change came over the taker; the body continued to act just as if it still had a soul. Not the closest friend or observer could possibly know that the taker had taken the drug, unless the taker informed him. Do you believe that such a drug is impossible in principle? Assuming you believe it possible, would you take it? Would you regard it as immoral? Is it tantamount to suicide? Is there anything in Scriptures forbidding the use of such a drug? Surely, the body of the taker can still fulfill all its responsibilities on earth. Another question: Suppose your spouse took such a drug, and you knew it. You would know that she (or he) no longer had a soul but acted just as if she did have one. Would you love your mate any less? To return to the story, our dualist was, of course, delighted! Now he could annihilate himself (his soul, that is) in a way not subject to any of the foregoing objections. And so, for the first time in years, he went to bed with a light heart, saying: "Tomorrow

morning I will go down to the drugstore and get the drug. My days of suffering are over at last!" With these thoughts, he fell peacefully asleep. Now at this point a curious thing happened. A friend of the dualist who knew about this drug, and who knew of the sufferings of the dualist, decided to put him out of his misery. So in the middle of the night, while the dualist was fast asleep, the friend quietly stole into the house and injected the drug into his veins. The next morning the body of the dualist awoke-without any soul indeed-and the first thing it did was to go to the drugstore to get the drug. He took it home and, before taking it, said, "Now I shall be released." So he took it and then waited the time interval in which it was supposed to work. At the end of the interval he angrily exclaimed: "Damn it, this stuff hasn't helped at all! I still obviously have a soul and am suffering as much as ever!" Doesn't all this suggest that perhaps there might be something just a little wrong with dualism? Raymond M. Smullyan

Reflections by Douglas Hofstadter

"O Seigneur, s'il y a un Seigneur, sauvez mon âme, si j'ai un âme. " "O Lord, if there is a Lord, save my soul, if I have a soul." --Ernest Renan Prière d'un sceptique Smullyan provides a provocative riposte to Searle's thrust-an intentionality-killing potion. The soul of a sufferer is annihilated and yet, to all external eyes, the suffering goes on unabated. What about the inner "I"? Smullyan leaves no doubt as to how he feels. The point of this little fable is the logical absurdity of such a potion. But why is this? Why can't the soul depart and leave behind a soulless, feelingless, yet living and normal-seeming being? Soul represents the perceptually unbreachable gulf between principles and particles. The levels in between are so many and so murky that we not only see in each person a soul but are unable to unsee it. "Soul" is the name we give to that opaque yet characteristic style of each individual. Put another way, your soul is the "incompressible core" that determines how you are, hence who you are.

But is this incompressible core a set of moral principles or personality traits, or is it something that we can speak of in physical terms-in brain language? The brain's neurons respond only to "local" stimuli-local in both space and time. At each instant (as in the Game of Life, described in the Reflections on "Non Serviam"), the neighboring neurons' influences are added together and the neuron in question either fires or doesn't. Yet somehow all of this "local" behavior can add up to a Grand Style-to a set of "global" principles that, seen on the level of human behavior, embody long-term goals, ideals, interests, tastes, hopes, fears, morals, and so on. So somehow all of these long-term global qualities have to be coded into the neurons in such a way that, from the neurons' firings, the proper global behavior will emerge. We can call this a "flattening" or "compressing" of the global into the local. Such coding of many long term, high-level goals into the synaptic structures of billions of neurons has been partially done for us by our millions of ancestors, way back in the evolutionary tree. We owe much not only to those who survived, but also to those who perished, since it is only thanks to the multiple branchings at every stage that evolution could work its miracles to give rise to a creature of such complexity as a person. Consider a simpler animal, such as a newborn calf. An hour-old calf not only can see and walk, but will instinctively shy away from people. Such behavior comes from ancient sources-namely, the higher survival rate of "protocows" that had genes for this kind of behavior. Such behavior, along with a million other successful adaptations, has been "flattened" into neural patterns coded for in the bovine genes, and is now a ready-made feature of each calf as it comes off the assembly line. Seen on its own, the set of cow genes or human genes seems a miracle-nearly inexplicable. So much history has been flattened into molecular patterns. In order to demystify this, you would have to work backward, reconstructing the evolutionary tree-and not just the branches that survived! But we don't see the whole tree of predecessors, successful and otherwise, when we look at an individual cow, and so we can be amazed by the long-term purposes, goals, and so forth that we see flattened in its brain structure.

Our amazement is particularly great when we try to image how, inside its head, millions of individually purposeless local neural firings are adding up to a coherent purposive style-the soul of one c In humans, by contrast, the mind and character continue to shaped for years after birth, and over this long time span neurons absorb feedback from the environment and self-modify in such a way as to but up a set of styles. The lessons of childhood are flattened into unconscious firing patterns, and when all of these tiny learned neural patterns act in concert with the myriad tiny neural patterns coded for in genes, a human perceiver will see one large pattern emerge-the soul of one human. is why the idea of a potion that "kills the soul" and yet leaves the behavior patterns invariant makes no sense. Under pressure, of course, a soul-a set of principles-may party fold. What might have seemed "incompressible" may in fact yield t greed, fame, vanity, corruption, fear, torture, or whatever. In this way, "soul" can be broken. Orwell's novel 1984 gives a vivid description of the mechanics of soul breaking. People who are brainwashed by cults o terrorist groups that hold them captive for long periods of time can lose the global coherence of drives so carefully compressed over years into, their neurons. And yet there is a kind of resilience, a tendency to return to some sort of "resting position"-the central soul, the innermost core -even after horrendous, grueling episodes. This could be called "ho meostasis of the spirit." Let us move to a jollier note. Imagine a soul-free universe, a mechanistic universe with nary a speck of free will or consciousness to be found not a perceiver anywhere. This universe might be deterministic or mi be filled with arbitrary, random, capricious, and causeless events. It i law-governed enough, though, that stable structures can emerge an((evolve. In this universe, then, are swarming many distinct, tightly knit self-sufficient little objects, each one with an internal representation system of enough complexity as to engender a deep, rich self-image. In each one of them this will give rise to (and here we onlookers must be pardoned for smiling with wry amusement) the illusion of free will-when in fact, of course, this is just a cold universe and these objects that populate, it are just robotlike, rule-

bound machines, moving around in deterministic (or capricio-deterministic) trajectories, and kidding themselves that they're exchanging meaningful ideas when in reality they're just mechanically chattering back and forth by emitting and absorbing long trains of empty, hollow, meaningless electromagnetic or perhaps acoustical waves. Having imagined this strange universe filled with illusions, one can now take a look out at this universe and see all of humanity in this disorienting light. One can de-soul-ify everyone in the world, so that they're all like Sullyan's zombie or Searle's Chinese-speaking robo~ seeming to have an inner life but in fact as devoid of soul as is a clacking typewriter driven by a cold, feelingless computer. Life then seems a crud hoax on all those soul-free shells, erroneously "convinced" (although how can a heap of dead atoms be convinced?) that they are conscious: And this would be the best possible way to look at people, were not for one tiny fact that seems to mess it up: I, the observer, am one of them, yet am undeniably conscious! The rest of them are, for all I know just bundles of empty reflexes that feign consciousness-but not this one After I've died-well, then this vision will be an accurate accounting of the way things are. But until that moment, one of the objects will remain special and different, because it is not being fooled! Or ... might there be something just a little wrong with dualism? Dualists maintain, as Sullyan puts it, that mind and matter are separate substances. That is, there are (at least) two kinds of stuff: physical stuff and mental stuff. The stuff our minds are made of has no mass, nor physical energy-perhaps not even a location in space. This view is : mysterious, so systematically immune to clarification, that one may well wonder what attracts anyone to it. One broad highway leading to dualism goes through the following (bad) argument: Some facts are not about the properties, circumstances, and relations of physical objects. Therefore some facts are about the properties, circumstances, and relations nonphysical objects. What's wrong with this argument? Try to think of examples of facts that are not about physical objects. The fact that the narrator in Moby Dick called Ishmael is a fact in good standing, but what is it about? One might want to insist (implausibly)

that it is really about certain ink shapes certain bound stacks of printed pages; or one might say (somewhat mysteriously) that it is a fact all right, but it is not about anything at all; waving one's hands a bit, one might say that it is a fact about an abstract object-in much the way the fact that 641 is a prime number is a fact about an abstract object. But almost no one (we suppose) is attracted the view that it is a fact about a perfectly real but nonphysical person named Ishmael. This last view takes novel writing to be a method of ghost manufacture; it takes too literally the familiar hyperbole about an author's characters coming to life, having wills of their own, rebelling against the creator. It is literary dualism. (Anybody might seriously wonder if Jack the Ripper was really the Prince of Wales, for they were both real people -- or maybe a single real person. A literary dualist might seriously wonder if Professor Moriarty were really Dr. Watson.) Dualists believe that over, and above the physical things and events there are other, nonphysical things and events that have some sort of independent existence. When asked to say more, dualists divide into two schools: those who hold that the occurrence or existence of a mental event has no effect whatsoever on subsequent physical events in the brain, and those who deny this and hold that mental events do have effects on physical events in the brain. The former are called epiphenomenalists and the latter are called interactionists. Smullyan's fable nicely disposes of epiphenomenalism (doesn't it?), but what of interactionism? Ever since Descartes first struggled with it, interactionists have had the apparently insuperable problem of explaining how an event with no physical properties-no mass, no charge, no location, no velocity-could make a physical difference in the brain (or anywhere else). For a nonphysical event to make a difference, it must make some physical event happen that wouldn't have happened if the nonphysical event hadn't happened. But if we found a sort of event whose occurrence had this sort of effect, why wouldn't we decide for that very reason that we had discovered a new sort of physical event? When antimatter was first postulated, by physicists, dualists didn't react with glee and taunts of "I told you so!" Why not?

Hadn't physicists just supported their claim that the universe had two radically different sorts of stuff in it? The main trouble with antimatter, from the dualists' point of view, was that however exotic it was, it was still amenable to investigation by the methods of the phys, sciences. Mind-stuff, on the other hand, was supposed to be off limit/ science. But if it is, then we have a guarantee that the mystery will never go away. Some people like that idea.