

IN 1981, Rupert Sheldrake, a young plant biologist from Cambridge, published a book that created a notable stir along the fringes of the scientific community. In *A New View of Life*, Sheldrake unhatched a dazzling Theory of Everything, the goal of which was nothing less than to replace the physics-based worldview of modern biology with an organismic model that made life and mind more "basic" than matter and mathematics. He called the theory the theory of "morphic resonance".

Not only did Sheldrake offer the hypothesis, but he proposed experiments that might test it, and invited others to do the same. Many did, among them *New Scientist*, which sponsored a contest, offering a prize to anyone who could devise a solid, empirical test to prove or refute Sheldrake.

While all the experiments to date remain inconclusive, Sheldrake's continued emphasis on empirical proof has helped to keep him scientifically respectable, despite the radically unorthodox character of his thought. In this respect, he needs all the credentials he can muster, because, as one might suspect, any theory that sweepingly rejects standard, reductionist science easily enlists enthusiasts whose embrace can be the kiss of professional death.

Indeed, Sheldrake does have such a lay audience of New Age admirers who look to him as the man to unify science and religion, logic and mysticism. In their eyes, Sheldrake's "new view" explains everything from pyramid power to mental telepathy. One wonders if Sheldrake welcomes such support; in any case, he continues to think and write like a confirmed scientist, if a divergent one. His latest book is a tour de force by a gifted theoretical imagination that will command the respect even of colleagues who reject his thesis.

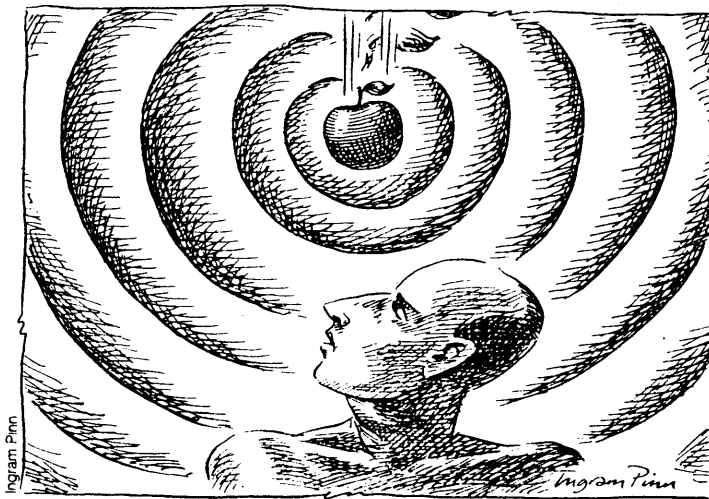
The Presence of the Past is a comprehensive presentation of morphic resonance, replete with pointed if polite thrusts at conventional science. The main line of attack is on the philosophical inadequacy of materialistic theory. This is surely the strategic point to begin rethinking modern science, which is lumbered with a concept of "matter" that is as embarrassingly outmoded as the anthropomorphic God of Christianity.

What is there left of matter, after all, now that atoms have been dissolved into waves and quantum fluctuations? Is a

Habits of nature

The Presence of the Past
by Rupert Sheldrake, Collins, pp 391, £15

Theodore Roszak



quark a thing, or an event, or a knot tied in pure space? These days, physicists play with ideals such as singularities and cosmic strings which bear no relationship to the physicality that Newton or Boyle or Dalton would ever recognise. One sometimes feels that there is no meaning left to "matter" in science beyond "mindless" or "godless".

For his purposes, Sheldrake fastens on the most tenuously materialistic idea in science: the field. Field theories are at the core of modern physics; they are also among the most mysterious of entities. Physicists feel comfortable with fields as long as they can express them mathematically, pursuing the concept no further. But what precisely is a field? Do fields really exist outside of human models of the natural world?

The inventor of fields, Michael Faraday, believed they did exist. He thought of them as patterns of force in "mere space"; still a form of "physical" reality in his eyes. But along such lines, the solidity of tangible matter begins to weaken in the direction of pure form.

Sheldrake also believes in the real existence of physical fields. But, in addition, he holds that there are biological fields that are somehow "nested" within physical fields and give form to the bodies and behaviour of living things in the same way that a magnetic field gives form to the iron filings around it. "Morphogenetic fields," he argues, "are physically real, in the sense that gravitational, electromagnetic, and quantum matter fields are physically real.

Each kind of cell, tissue, organ and organism has its own kind of field."

Preferring organic metaphors, Sheldrake characterises these fields as a kind of "memory", embedded in nature, built up out of countless repetitions of behaviour on the part of plants and animals. The repetitions create "habits" which can be communicated non-physically across space and time.

In this way, morphic fields, by their resonance, account for that most troubling of scientific problems, action at a distance. They also account for evolution: fields change as successful, new structures or kinds of behaviour come into existence, as in the case of blue tits who learnt so rapidly to peck open the foil tops of milk bottles across England in the 1940s.

Finally, social entities and human culture are also governed by morphic fields "organised in nested hierarchies of fields within fields". Such fields "contain as it were the average forms of previous experience defined in terms of probability. This idea corresponds to Jung's conception of archetypes as 'innate psychic structures'."

Sheldrake reviews several experiments that have looked for evidence of morphic resonance, some with crystals, others with protein molecules. The most interesting involve human learning. Is there, for example, a field for a Japanese nursery rhyme that millions of minds have learnt over centuries? If so, a non-Japanese ought to be able to memorise the rhyme more rapidly than a nonsense text which is

unsupported by any field. This turns out to be so, but critics have disputed the reality of the result.

Sheldrake is frank to admit that the experiments have so far been inconclusive. Given the sweep and subtlety of his theory, it may never achieve a satisfactory proof, for indeed what he offers is more than simply a theory; it is a new worldview.

Whatever one's conclusion about morphic resonance, however, books such as this are the life's blood of science: bold, speculative efforts that seek grand unities in nature that do full justice to human thought, including the theorising imagination of scientists themselves. Even when the exercise does not entirely convince—and there are many obscure and knotty aspects of Sheldrake's vision—it stretches the mind and forces one to question scientific orthodoxy.

Sheldrake manages to do this in an engaging, provocative, thoroughly competent way that skilfully ushers the general reader into the most exotic realms of modern science. By the time he finishes, one is almost prepared to believe that the new world-view is at hand. □

The
Core
Store

Scientific and Engineering Software

The source for IBM PC, XT and AT software for CAD, graphics, data acquisition, design analysis, project management, signal analysis, statistics, mathematics, process control, finite element analysis, graph plotting, S & E programming tools, CAD/CAM and equation solving.

S & E catalogue now
available – over 100
software packages
described

The Core Store Ltd
59 Station Road
Northwich
Cheshire CW9 5LT
Tel: 0606 45420