Rupert Sheldrake is a theoretical biologist whose book, A New Science of Life: The Hypothesis of Formative Causation, continues to evoke a storm of controversy. Following is the second in a series of articles wherein Sheldrake presents his ideas for amplifying Jung's concept of the collective unconscious and archetypal psychology. He concluded his first article with these words:

The approach I am putting forward is very similar to Jung's idea of the collective unconscious. The main difference is that Jung's idea was applied primarily to human experience and human collective memory. What I am suggesting is that a very similar principle operates throughout the entire universe, not just in human beings. If the kind of radical paradigm shift I am talking about goes on within biology?if the hypothesis of morphic resonance is even approximately correct?then Jung's idea of the collective unconscious would become a mainstream idea: Morphogenic fields and the concept of the collective unconscious would completely change the context of modern psychology.

SOCIETY AS SUPERORGANISM

In Part II of this essay, I want to explore some ideas about the social and cultural aspects of morphic fields and morphic resonance. A familiar comparison might be that of a hive of bees or a nest of termites: each is like a giant organism, and the insects within it are like cells in a superorganism. Although comprised of hundreds and hundreds of individual insect cells, the hive or nest functions and responds as a unified whole.

My hypothesis is that societies have social and cultural morphic fields which embrace and organize all that resides within them. Although comprised of thousands and thousands of individual human beings, the society can function and respond as a unified whole via the characteristics of its morphic field. To visualize this, it is helpful to remember that fields by their very nature are both within and around the things to which they refer. A magnetic field is both within a magnet and around it; a gravitational field is both within the earth and around it. Field theories thus take us beyond the traditional rigid definition of "inside" and "outside."

A superorganism concept of animal societies dominated behavioral biology until about the early 1960s. Then?as Edward O. Wilson, the founder of sociobiology, notes in his book, The Insect Societies (1971)?there was a general shift in paradigm in favor of mechanistic reductionism, which explained animal societies purely in terms of interactions among genetically?programmed individuals. The superorganism concept has not been forgotten, however, and forces itself again and again upon people who think about animal societies.

There is an inherent problem in the concept: if one says that the animal society is a kind of organism, then what kind of organism is it? What is it that can possibly organize all the individual animals within it? I am suggesting that there is a morphic field which embraces all the animals, a field which literally extends around all the animals within it. This field coordinates their movements just as the morphic field of the human body coordinates the activities and movements of the cells and tissues and organs. This concept better describes the characteristic phenomena of animal societies than the idea that they are all individually interacting yet separate things.

MARAI S AND THE WHITE ANTS
For example, it explains how termites building columns which are adjacent yet separate know how to build arches so that the two sides meet at exactly the right place in the middle. Termites are blind, and the inside of the nest is dark, so they can't do it by vision. Edward O. Wilson considers it unlikely that they do it by hearing or acoustic methods, because of the constant background of sound caused by the movement of termites within the mound. The only hypothesis that Wilson, who represents the most hard-nosed reductionist school of thought, considers likely is that they do it by smell. And even he agrees that that seems farfetched.

If, in fact, the column construction is going on within a social morphic field which embraces the whole nest and which contains a "mold" of the future arch, then the termites' movements are coordinated by this field and it's much easier to understand how the columns can meet. If that is the case, it should be possible to investigate it experimentally.

In the 1920s, South African biologist Eugene Marais wrote The Soul of The White Ant, in which he described experiments investigating the effect of damaging South African termite mounds. Marais took a large steel plate several feet across and several feet deep and hammered it into the center of a termite mound. The termites repaired the mound on both sides of the steel plate, building columns and arches. Their movements were coordinated even though they approached the wall from different sides. Amazingly, the termites on opposite sides of the steel plate built arches that met at the steel plate at exactly the right position to join if the plate had not blocked their way. This seemed to demonstrate that there was some kind of coordinating influence which was not blocked by a steel plate. Obviously, this would be impossible to do by smell, as Wilson suggests, since even termites can't smell subtle odors through a steel plate.

Unfortunately, no one has ever repeated these experiments, even though it would not be difficult to repeat them in a country where termites are common. If Marais' result was replicated, it would strongly suggest that there was a field coordinating the actions of the individuals.

WAYNE POTTs AND THE MANEUVER WAVES OF BIRDS

As another familiar example of the superorganism concept, consider schools of fish: when predators swim into a school, the fish dart quickly to the side in a coordinated way in order to clear a path through the middle. They move very fast in response to quite unexpected stimuli, yet they do not bump into each other. The same is true of flocks of birds. A whole flock can bank as one without the birds bumping into each other.

Recently, studies investigating the banking of large flocks of dunlins by American researcher Wayne Potts have been conducted. He filmed their maneuvers at a very rapid rate of exposure, so that he could later slow the process down and examine it frame by frame. When he did so, he found that the rate of propagation of what he calls the "maneuver wave" is extremely fast: about 20 milliseconds from bird to bird. This is much faster than the birds' minimum reaction time to stimuli. He measured their startle reaction time using dunlins in the laboratory in dark or dim light. He set off photographic flashbulbs and measured how long it took the birds to react. He found that it took the individual birds about 80?100 milliseconds; that is, they reacted as individuals four to five times more slowly than the rate at which the maneuver wave moved from bird to bird. The banking maneuver could begin anywhere within the flock?at the front or back or at the side. It was usually initiated by a single bird or a small group of birds, and then propagated outwards much faster than could be explained by any simple system of visual cuing and response to stimuli.

THE COLLECTIVE BEHAVIOR OF HUMAN GROUPS

If one thinks of the flock as being coordinated by a morphic field and the "maneuver wave" as a wave in the morphic field, then this phenomenon is much easier to understand than it is when explained in terms of ordinary sensory physiology. The above examples illustrate a few of the areas in which actual empirical studies are possible?areas which suggest the existence of group minds or group fields in the coordination of collective animal behavior. It has often been suggested that a similar phenomenon may be at work in human groups, especially in the behavior of crowds. A number of studies has been conducted by social psychologists on what they call "collective behavior," which includes the behavior of crowds, football hooligans, rioting mobs, and lynching mobs, as well as rapidly spreading social phenomena such as fashions, fads, rumors, crazes, and jokes. All such phenomenon would fit readily into the concept of group morphic fields.
In interviews, athletes on successful teams commonly compare their teams to a composite organism where everybody fits in and knows where their teammates are going to be. The team behaves more like a single organism than like a composite of separate individuals. Through practice together, teams build up this response to each other; words such as empathy or sixth sense are often used to describe the feeling they share.

If we think of societies and social groups as being coordinated by morphic fields, then we realize that the groups themselves come together and dissolve as teams do? but their fields are more enduring. We are in these fields virtually all the time: family fields, or national fields, or local fields, the fields of various groups to which we belong. We are contained within these larger collective patterns of organization much of the time but because they are always present, we cease to be aware of them. We take them for granted, just as we take the air we breathe for granted, because the air is also always present. However, if we are held under water for a while, we no longer take the air for granted; we quickly become conscious of our need for it! Similarly, people placed in solitary confinement quickly become aware of the importance of social interaction.

Many anthropologists have commented on an almost indefinable "something" which holds the members of the society together. French sociologist Emile Durkheim spoke of this as the "conscience collective" (in French, the word conscience means both conscience and consciousness). He believed that one of the major functions of the "conscience collective" was to maintain the cohesion of the social group. It behaved similarly to a group field, and many of the activities of the group consciousness were concerned with maintaining and stabilizing the continued existence of the group field itself.

**MCDougall's Group Mind and the Shadow**

In the 1930s William McDougall, who wrote The Group Mind (1920/1972) and several other books on social psychology, theorized that a group mind existed which included all members of a society and which had its own thoughts, its own traditions, and its own memories. If we think of such a group mind as an aspect of the morphic field of the society, it would indeed have its own memory since all morphic fields have in-built memory through morphic resonance.

The problem with ideas like this one is that it is not possible yet to define what the group mind is or how it could be measured. Given the positivistic mood of sociology which prevailed then (and now), McDougall's concept of the group mind was not developed further. Traumatic social conditions then dampened any remaining receptivity to notions involving group forces. By the 1930s, the shadow side of collective consciousness had taken tangible form in Nazi Germany. Because this shadow side was all too real, most people were frightened of any concept suggesting group minds or group consciousness. Certainly we have all seen the shadow side of group consciousness only too clearly in the last few decades. What we need to realize, however, is that there is much to be learned from thinking about the more positive side of group fields or group consciousness.

In more recent sociological and anthropological theory, a holistic approach to society has become quite common. In fact, compared with the biological and physical sciences which have been based on reductionist principles, a great deal of sociological and anthropological theory has taken a consistently holistic perspective. It was within this broader intellectual environment, characterized by Durkheim's conscience collective and McDougall's group mind, that Jung formulated his concept of the collective unconscious.

**Is Society an Organism?**

The idea that human society is an organism is extremely widespread; it is perhaps one of the most common metaphors extending throughout the history of Western thought. It exists in our language in phrases such as the body politic, head of state, arm of the law. These are organic metaphors which imply the unified, organic nature of society. The same notion is also common in religious metaphors, and is expressed in such descriptions of the Christian church as the mystical body of Christ. More specifically, Christ compared himself to the vine of which the people were the branches, again connoting an organic unity. Even in 17th-century political thought, which was far more atomistic in tone, philosopher Thomas Hobbes compared society to a leviathan, a great monster, using still another organic metaphor.

Although many of us still think of society as a form of collective, living organism, the earth is now considered to
be dead. This wasn't always so; in Latin, mater means mother and materia means matter. Thus, in the Indo-European languages, matter comes from the same root as mother. Unfortunately, since the 17th century, Mother Nature in Western consciousness has been turned into dead matter; the mother has become unconscious, only preserved as a dim memory in the word matter. Instead, it is the economy that has become alive. We speak of a growing economy which can be sick or healthy, and which goes through cycles. Economies have all the attributes of giant living organisms, with an autonomy which even politicians, businessmen and bankers cannot control. The economy has become a self-regulating, self-organizing system, very much alive in a supposedly dead world. Thus the economy has come to life at the expense of the earth, and that is one of the problems with which many people are currently grappling.

The concept of morphic fields containing in-built memory helps to explain many features of society: for example, there are traditions, customs, and manners which enable societies to retain their organizing principles - their autonomy, pattern, structure, and organization - even though there is a continuous turnover of individuals through the cycles of birth and death. This is similar to the way in which the morphogenetic field of the human being coordinates the entire body even though the cells and tissues within the body are continuously changing.

RITUALS: SPIRITUAL AND SECULAR

There are certain contexts in which social memory not only becomes conscious but is actually invoked in all societies; this is through ritual. Rituals are found in all societies all over the world, both in cultural and religious contexts. For example, in our own society the Jewish feast of Passover recalls the dreadful visitation of death throughout Egypt when all the first-born were killed, except the first born of the Jews who were protected by the ritual blood of sacrificial lambs smeared on the doorways of Jewish houses. In the Christian Mass, the ritual of Holy Communion, in which Christians drink the blood and eat the body of Jesus - refers back to the primal Last Supper when the Passover feast was transformed and Jesus himself became the sacrificial victim.

In every society there are also hundreds of social and cultural rituals. In America, there is the national custom of the Thanksgiving dinner which commemorates the first Thanksgiving dinner offered by Pilgrims upon their safe settlement in New England. We also have many minor rituals of everyday life, such as the rituals of greeting and parting. Saying good-bye, for example, originally meant "God be with you." When we say good-bye, we give a ritualized blessing which retains some of the power of the original ritual, even though most people are no longer conscious of its original meaning. Similar ritual acts on large and small scales permeate even our modern "enlightened" societies.

What do people think they're doing in rituals? In major rituals, the ritual is usually associated with a story which refers back to a frequently forgotten primal event. For example, Guy Fawkes night is a secular ritual in England: every November 5th, bonfires are lit all over England, fireworks are set off, and effigies are burned over the bonfires. In this case, the ostensible story concerns a man named Guy Fawkes, one of the Roman Catholic conspirators in the so-called "Gunpowder Plot" who tried to blow up the House of Parliament in the 17th century.

However, lying behind that supposed explanation is a much older ritual: the Celtic festival of the dead. On November 1st, the ancient Celtic pre-Christian festival of the dead was celebrated whereby the old year was burned in effigy, as effigies are burned on Guy Fawkes day. During this period, it was believed that there was a "crack in time" when the living and the dead, the past, the present, and the future all came together. The eve of the festival of the dead was Halloween, when the spirits and ghosts came out and the dead walked again. Similarly, in the Christian calendar, November 1st is "All Saints Day" and November 2nd is "All Souls Day," when the souls of the departed are commemorated and requiem masses are said in churches even today. So, behind our present-day celebrations lay a much older ritual background: a pattern behind a pattern. Many of these ancient rituals are alive and well in the modern world.

RITUALS AS MORPHIC RESONANCE WITH ANCESTORS

In general, rituals are highly conservative in nature and must be performed in the right way, which is the same way they have been performed in their past. If rituals involve language, the most important of them use sacred languages. For example, Brahmanic rituals in India use Sanskrit, a language which is no longer spoken except
by Brahmins, and the Sanskrit phrases must be pronounced the correct way in order for the rituals to be
effective. We find a similar practice in a Christian context. The Coptic church in Egypt dates back to ancient
times when Coptic was the spoken language; so in modern Cairo, you can attend a Coptic service and the
language you hear is the otherwise dead language of ancient Egypt. The survival of ancient Egyptian in the
Coptic liturgy was one of the important clues that enabled the unraveling of the language of ancient Egypt with
the help of the Rosetta Stone. Similarly, the Russian Orthodox church uses Old Slavic, and, until recently, the
Roman Catholic church used Latin. There are hundreds of such examples.

Ritual acts must be performed with the correct movements, gestures, words, and music throughout the world.
The same pattern is found from one country to another as participants perform the ritual in the same way it has
been performed countless times in the past. When people are asked why they do this, they frequently say that
this enables them to participate with their ancestors or predecessors. So rituals have a kind of deliberate and
conscious evocation of memory, right back to the first act. If morphic resonance occurs as I think it does, this
conservatism of ritual would create exactly the right conditions for morphic resonance to occur between those
performing the ritual now and all those who performed it previously. The ritualized commemorations and
participatory re-linking with the ancestors of all cultures might involve just that; it might, in fact, be literally true
that these rituals enable the current participants to reconnect with their ancestors (in some sense) through
morphic resonance.

MANTRAS AS SPIRITUAL TRANSMISSION

In light of this idea, various aspects of religious ritual can be viewed with a new significance. For example,
consider the use of mantras in the Eastern traditions. Mantras are sacred sounds or words which often have no
explicit meaning. The best known of the Indian mantras is OM. A Christian mantra (and, in fact, it is also a
Jewish and Muslim mantra) is AMEN. Although it translates literally as, "So be it," it has a much deeper
significance as a mantric phrase. When chanted in its original form of AMEN, it was an extremely powerful
mantra. It survives at the end of Christian prayers and hymns even though most people are unaware of why it is
there.

In Tibetan and Hindu tradition, the mantra is communicated to the disciple by the guru (or master) as part of an
initiation. Using the mantra, the disciple is able to connect with the guru as well as with the entire tradition that
transmitted the mantra through the guru? In Tibetan Buddhism there is often an actual visualization during the
chanting of the mantra. The acolytes visualize the guru who has given it to them floating above their heads, and
then visualize the entire lineage of masters and gurus behind him, right back to the Buddha himself. There are
Tibetan pictures of people sitting and meditating with a tree growing out of their heads ? a tree filled with faces
and figures. These are called "lineage trees," and they represent the spiritual lineage through which the
transmission comes to the disciple.

Just as morphic resonance provides a more comprehensible explanation of the power of mantras, it also helps
explain certain prohibitions that might not otherwise make sense. All religions have prohibitions on blasphemy
(the wrong use of sacred words), such as the Judeo-Christian admonition not to take the Lord's name in vain.
People are often instructed to use mantras only in the appropriate context and not to bandy the word around in
casual conversation. I myself have heard Hindu gurus caution that inappropriate use will weaken the mantra.
This makes impressive sense when explained in terms of morphic resonance: Instead of acting as a key tuning
one into the meditative states of one's own past and of the past of the guru or lineage of gurus, the mantra
would also tune one into all the casual conversations at which the word had been bandied around. Thus,
externeous influences which would dilute or weaken the intended effect of the mantra would be brought in via
the phenomenon of morphic resonance.

RELIGIOUS "PATHS" AND ARTISTIC "SCHOOLS"

Other aspects and characteristics of religious traditions become clear when viewed in terms of morphic fields.
Many religious teachers compare their way to a path, as in Christianity when Jesus says, "I am the Way," or as
in Buddhism where there is the eightfold path of the Buddha. The notion is that through a religious initiation,
the individual is set on a path which the initiator of the path? Buddha or Christ?has trod before them, and on
which many other people since then have also trod. The people who have gone along that path create a
morphic field? and not only those who established the initial path, such as Buddha or Christ, but all those who
followed after them contribute to the morphic field, making the pathway easier to traverse. In Christianity the concept is explicitly stated in the Apostles' Creed through the doctrine of the "Communion of Saints." Those who follow the path of Jesus are not only aided by Jesus himself but also by the communion of saints — all those who have trodden the path before.

If we take the notion of "schools of thought" or "schools of art," we have another area of traditions in which groups of people share in a common ideal and a common pattern of activity. Here again, artistic and philosophical traditions make more sense when considered in terms of organizing and enduring morphic fields. Art historians write about the flow of influence from the Venetian school to the Flemish school, for example. This mysterious flow of influence could be understood as the result of the process of successive schools of art tuning into the morphic fields of the earlier schools. (I am indebted to Susan Gablik, 1977, for this idea.) If we think of paintings as having morphic fields for their actual structures, we can then see how a kind of "building up" occurs through morphic resonance. A painting in a given school is created; other people see it. Every time a new painting in that school is made, it alters the field of the school. There is a kind of cumulative effect. Just as an animal within a species draws upon the morphic fields of the species and, in turn, contributes to those same fields, a work of art produced within a school draws upon the morphic field of the style of the school and contributes to it, so that the style evolves.

KUHN'S SCIENTIFIC "PARADIGMS" AS MORPHIC FIELDS

A very similar analysis applies to the history of science. We can think of different schools of thought and different areas of inquiry in science as having their own morphic fields. In fact, we speak about the field of physics, the field of biology, the field of geophysics, the field of metallurgy, and so on. It is my opinion that we could take literally the very use of the word field in this context. Within each field of science there are sub?groups: in physics, for example, there are astrophysicists, quantum theorists, and so on, and sub?schools within those sub?groups. Entrants to each must go through the proper initiations; they must study and pass the right exams; and all have their own folklore, mythology, and founding fathers. This is essentially the insight of Thomas S. Kuhn in his great book, The Structure Of Scientific, Revolutions (1970). He says that science is a social activity, and that scientists are initiated into the professional group by the practicing group of scientists. These social groups are self?regulating and self?organizing, just like any other field structure. Scientists strongly resent it if outsiders come along and tell them how to run their outfit. Physicists, for example, feel that they are the best people to judge what should go on in physics. Even if governments want to regulate the science of physics to their own ends, then they do it with the help of physicists. They have to set up committees and grant?giving agencies on which physicists sit for peer group reviews.

We see the same pattern in other professional groups: in trade unions, in the American Medical Association, in groups of engineers, and so on. Kuhn pointed out that at any given time, there is a consensus within each group about the way reality operates and the way that problems should be solved. This is what he called a paradigm. In his book, Kuhn uses the word paradigm in two senses, as he makes clear in his second edition. The paradigm is not just a conceptual way of looking at things, a model; rather, it is a shared consensual view of reality upon which the professional group depends. In each group, the members recognize those they consider proper co?members of the professional group, and those whom they recognize as outsiders — as not being within their group. This is the social aspect of paradigm.

But a paradigm also includes a model of the way problems can and should be solved. The Newtonian paradigm has a model of the way to solve physical problems; Newton's gravitational equations are an example of such a model. As students progress through the stages undergraduate, graduate, and post?doctoral work, they are given increasingly difficult problems to solve. But they are always given examples of how these problems should be solved — a "style" of doing the solving — which is acceptable within the paradigm.

A shift in paradigm involves both a new way of solving problems (because there is a new way of thinking about the problems involved), and also the building up of a new social consensus among practitioners. Both Gablik and Kuhn have pointed out that the concept of paradigm in the sciences is similar to the notion of style in art: paradigms have the kind of cumulative, developmental, evolutionary quality that characterizes styles in artistic traditions. Indeed, Kuhn went so far as to model his theory of scientific development on art history. Previously, science had been treated as if it were a purely rational activity based on the cumulative building?up of knowledge, completely independent of the social and professional dimensions taking place within the scientific
process. Kuhn demonstrated that the same kind of patterns which were accepted by many historians of art were also at work within the sciences.

A view of paradigms as morphic fields helps us to understand why they are so strongly conservative in nature, for once the paradigms are established, there is a large social group contributing to the consensual reality of the paradigm. A very powerful morphic resonance is evolved by this way of doing things; and that is why paradigm changes tend to be rather rare, and why they meet with strong resistance.

REFERENCES


© 1995 - 2003 Rupert Sheldrake. All rights reserved.
Privacy Statement