

Chapter 15

Microscopic Perfection

Theoretically we can trace the invisible atom with all its qualities clear to Infinity via the two contrasts of Electromagnetic Density and the unrestricted Other Density; therefore a thorough analysis of material things such as biological bodies should reveal parallel factors detectable in Space. If we study the tiniest of biological living forms unattached to Earth (the single cell organisms) and find in their life style factors that parallel life styles of Celestial Systems, we will broaden our concept of Life on Earth and find that it too, is closely related to Cosmic Life. This relationship is not in conflict with many current astronomy findings.

Whereas, in the recent past, life support was said to come to Earth as sunlight, now many scientists conclude that we in fact, live within the Sun—that the pulsing, flaring, circulating Sun forces are a massive field that encloses planet Earth's field as well as those of other planets in our Solar System. If we find that certain configuration of biological structure resembles that of Celestial Systems, we may then conclude that energy factors do so also; that the energy which drives, heats and cools the Celestial Systems is one and the same energy that drives, heats and cools biological bodies. Most of the elements of Earth have been detected in Electromagnetic Space, and Celestial Systems are known to be built of these

elements. Since Earth is a unit within the Celestial System, then all biological bodies on Earth are directly related to all things of Space. Nobody physically pours fuel into the bodies of the Celestial System to keep them maneuvering. If we conclude that food is absorbed by biological bodies to supply them with fuel for re-active ability, and that the reaction is to Electromagnetic Light, we may then assume that Celestial Systems and biological bodies are driven for mobility by fleet lines of force that first make up the elements of these bodies and then drive them as long as they sustain Living Pulse. Because we as warm-blooded bodies require a constant supply of food to remain in good health, we can easily become programed to believe that the food we eat is totally the power we move with. To soften this belief, let us remember that many species of cold-blooded animal life remain strong and healthy over long periods of time without food, which proves that food requirements vary with polarity balance. We cannot afford to cling to past concepts dictated by the experience of senses; to do so denies us personal revelations that result from being in tune with Cosmic changes that are upon us. Preconceived ideas concerning the biological body can hold us at an arms length from achieving commercial grade energy without the use of fuel. If food for instance, can be seen to be upgraded Earth polarity of proper resonance to match Space resonance, rather than a direct and only source of tissue energy, then new doors will open to reveal a common energy source without limit. If the smallest of biological bodies can be seen to be a biological reaction, we are ready to search all biology for further clues on how to achieve greater freedom from want and especially to know that we need not go backward to meet our energy needs.

The single cell is the tiniest of all living organisms; and the tiniest of appendages that move a body are "cilia" and/or "flagella" that extend as tiny microscopic hairs out of the body of single cells such as protozoa, sperm, flagellates, etc. These tiny, eyelash-type appendages are sometimes on a surface of a cell as a thick mat resembling stalks of grain in a

field; they also line many intestinal tracts, mat the surface of mucous membrane, reproductive tracts, etc. They are used in biological bodies to sweep fluids across a surface as well as to move single cell bodies in a fluid media. All in all they are a universal tool which operates in fluid or damp earth. A recently discovered fact concerning a cilium appendage is that if it is severed from the host body by a laser beam, this invisible, tiny hair swims off for a short distance, on its own. This can mean one of two things: (1) *stored energy in the microscopic hair acts upon that hair-like stem by automation even after it is detached from the host body.* (2) *stored energy of biological, atomic make-up when alive always stands in a teeter-totter balance and ready for action when called upon by Life forces. When this appendage is severed from the host body, it is still living biology for a short time and it reacts accordingly to fulfill its purpose. Because this living organism lives within a moving sea of contrasting Electromagnetic Light, it reacts as a biological pump. If the pump is also the appendage, then the appendage moves about in a designed manner.* This writer chooses the second because he is seeking to show cause rather than to gather more data to be filed away for future reference. Many articles that have been written end up with more data, while the cause sinks deeper into the unseen. If this unseen can be visualized to resemble Celestial science, then the activity will be seen in Electromagnetic Light, even as is logical of the atom which reacts at the velocity of light to Electromagnetic Space that has this velocity.

Until recently when the electron microscope came to the aid of science, cilia were thought to be attached by ligaments to muscles within the cell. Now it is known that this is not the case. A cilium appendage has no direct tissue coupling but performs as though it does. In biology there are many examples of quick resonance and slow resonance. Many insect wings beat to the time of a high speed cavity resonator. The electrical charge of an electric eel organ travels the length of the organ far faster than nerve pulses travel or trigger. Flowers follow the Sun or open petals to the Sun so slowly that the motion is

not detected. Cilia sweep, twist and stroke at variable speeds not unlike what walking and running is to us. As cilium appendage must twist in different directions at several points, sometimes at the same time, the appendage must have a possible 360° application of power.

The illustration of a cell membrane and cilia (Fig. 14) was inspired by a drawing by Meltzer, in Sept. 1976 *National Geographic*. Figures 15 through 18 are slight modifications of illustrations contained in an article "How Cilia Move" by Peter Satir, which appeared in Oct. 1974 *Scientific American*. In our illustrations, pains were taken to conserve visible contrasts, as without them an energy teeter-totter cannot react. A visible contrast is evidence that there is a direct tie between biology and Space that gives it life support and power. Figure 14 depicts a cilium appendage as an extension of the cell membrane and its inner structure in cutaway form. This is about 100,000 times the size of an average cilium appendage. Note that the appendage body is elliptical as is a vein in our vascular system, and especially note that there is evidence of a spiral at the base of the appendage.

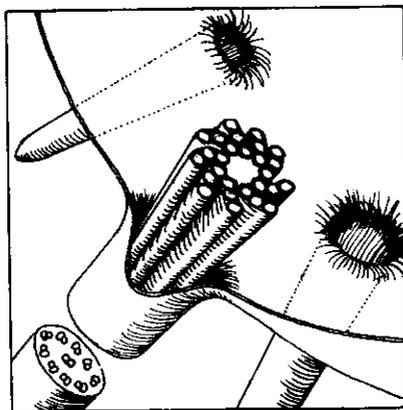


Fig. 14, CELL MEMBRANE AND CILIA

Figure 15 is a reasonably accurate depiction of what an electron microscope presented as a micrograph of cross sections of gill cell cilia of a mussel. Note that the ring of doublet pairs just inside the membrane is an ellipse and that the membrane is a variation of an unequal, 4-sided tetrahedron so common to biological structure.



Fig. 15, REPRODUCTION OF ELECTRONMICROSCOPE MICROGRAPH

Note especially that symmetry is common to the center while unsymmetry is common to the outer membrane.

Figure 16 is a more clearly detailed depiction of what the electron microscope saw of a cross section of a cilium sheath. It also shows a six sided hexagon near the top as a bridge and an axis point.

Figure 17-a is a side view of a cilium sheath which consists of a central pair of true spheres bound together by cubic structure rings. This central pair has a direct antenna reference to 9 pair of doublets which make the outer ring of molecular muscle which, as 9 pairs, is equally divided into 18 spheres and spheroids side by side.

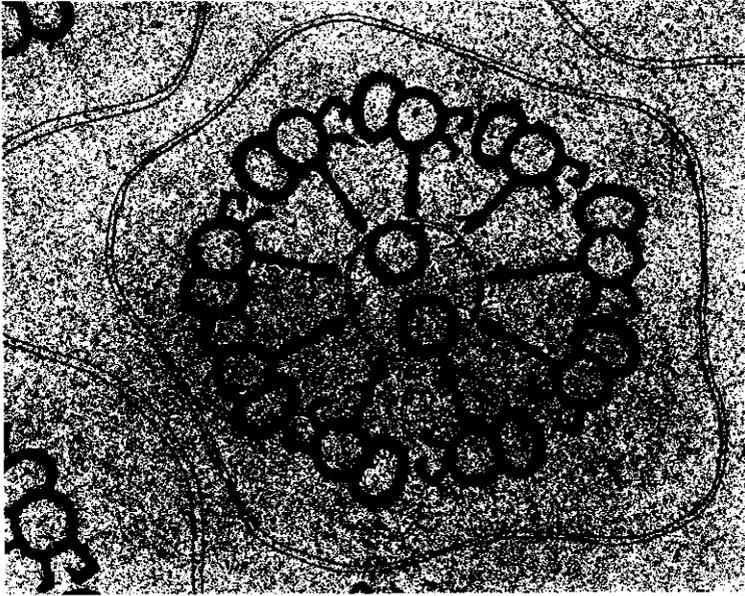


Fig. 16, CROSS SECTION OF CILIUM SHEATH

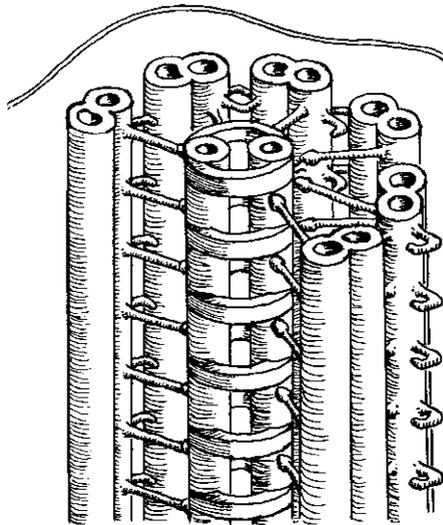


Fig. 17a, SIDE VIEW OF CILIUM SHEATH WITH CUBIC RINGS

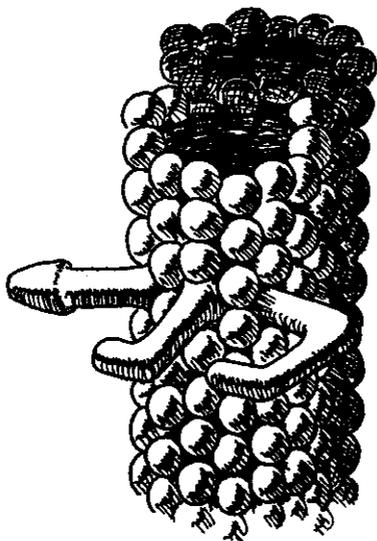


Fig. 17b, ENLARGED DETAIL OF MOLECULE STRUCTURE
OF A DOUBLET PAIR

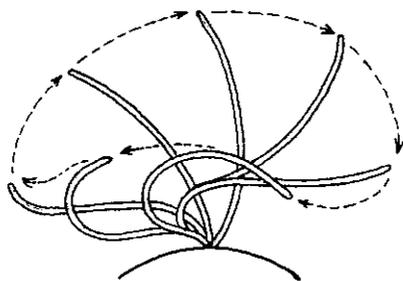


Fig. 18, CILIA TWIST

Figure 17-b is an enlarged detail of molecule structure of a doublet pair and its antennae.

Figure 18 shows how long and short cilia twist at different points in a progressive manner, and that to do this, a 360° angle of applied force is necessary.

Without a Space contrast reference as the driving source, a researcher must resort to giving great activating powers to ATP (adesonine triphosphate) and great power to sugars made from food, plus great internal thinking ability to the microscopic hairs that perform with precision. With Space contrast as both supply and drive, serving a free Wisdom beyond Electromagnetic Light, the cilia appendages become as natural to the cell as walking and running is to us. We do not direct our muscle movements any more than an electronic computer punches its own keys. We consciously desire to move, the motion is automatic within a subservient energy setting of Electromagnetic Light.

Going back to the drawings, we can see a mini Solar System. The two true spheres in the center of the ring resemble a stationary binary sun center. The square stock rings that appear to be at a slight slant, represent unbalanced positive force common to a sun center. The antennae that lead outward to the 9 pair of doublets represent central control to a 360° responsive ring of two contrasts which are a sphere and a spheroid (ellipse). The sphere has antennae common to outgoing force and the ellipse does not. The spheroid has a reference to the outer membrane which has several light and dark layers, as depicted in membrane data.

A sphere and cube know White Light, while a spheroid and rhombohedron know Dark Light. They know each other at any level of the electromagnetic Density with the same subtle fascination that a mature boy and a mature girl know each other. Secondary contrasts happen within primary contrasts, thus projected denser outgoing White Light is instilled in the nucleus of the cilia and ingoing Dark Light is present from the surface inward. The basic contrast of the cilia is between the core and the surface and a secondary contrast is present in the outer ring of spheres and spheroids. This ring of doublets consists of an earthly teeter-totter. The center of Mother Earth is a dense core compared to the outer mantle which is less dense. Mother Earth is both positive and negative in the Sun's field. So also, by contrast do the cilium rings perform in the cilium fields.

The cilia serve the cell. At the base of the cilia is a minute vortex; within the cell nucleus are two vortices. The DNA chain is depicted in beautiful color in Sept. 1976, *National Geographic*. In these illustrations, the DNA chain is a double helical spiral, and the connection between the two sidebands are depicted as spheres and curved couplings; the curved ones are depicted as darker than the sphere couplings.

In the January 1978, *Scientific American* is a beautiful presentation of illustrations from Mass. Inst. of Tech. and Duke U. School of Medicine, of X-ray diffraction analysis of RNA messenger molecules. These illustrations of the molecules are reasonably good resemblances of logarithmic spirals. When one analyzes element chain figures of atomic numbers and weights, they too fall into the category of an accumulative density spiral. As the term Spiral Galaxy is an example of Celestial Spirals, then all spirals in physics must have a common cause and common origin. The cell and its cilia are a copy of Cosmic unity. It is visible to us mentally if we do not try to think with our recording organ, brain, or try to see the cause of a thing exclusively in that which is investigated.

For those who wish to inspect what has been revealed of cell life by modern instrumentation, there are several copies of *Scientific American* that cover a broad field. For cilia see Oct. 1974; for RNA see Jan. 1978; for living cells see Oct. 1975; for cell membrane see Dec. 1975. The 15th edition of *Encyclopædia Britannica* also covers these topics but lacks revealing illustrations for some of them. The deeper we look to find similarities in biology common to factors in Celestial Systems, the more evidence we uncover for Cosmic Unity.

In line with living single cell organisms, there are massive deposits of single cell skeletons past and present. Diatoms, which are microscopic algae with cell walls strongly impregnated with silica, are among the most abundant organisms on Earth. Huge deposits of industrially important diatomaceous earth are diatom skeletons. Microscopic single-celled radiolarians, though not as abundant as diatoms, are abundant in earth waters. Past deposits of their delicate symmetrical skeletons

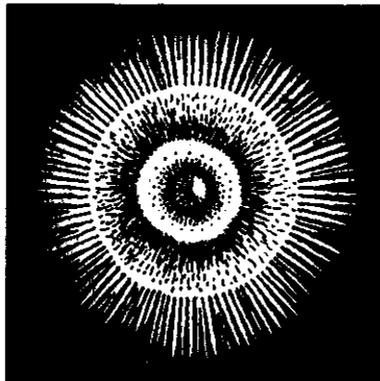
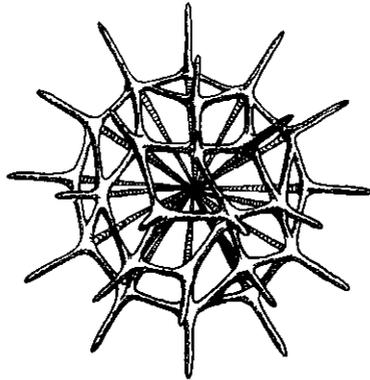
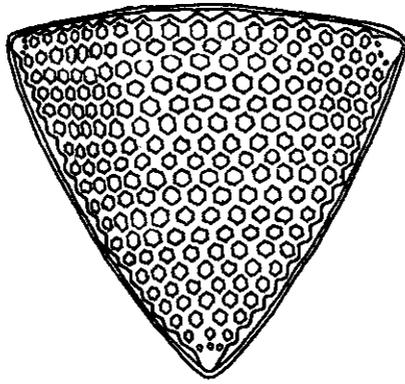


Fig. 19, DIATOM AND RADIOLARIAN SKELETONS

are the major constituent of marine sediments in some areas. In line with electromagnetic contrasts, diatoms that in skeletal structure present uneven tetrahedral patterns are more abundant in cold waters and the sun-like symmetrical radiolarians are found in warmer waters. Likewise recent studies of trochospiral shells show that rigid-coiled (destral) shells indicate populations from warm waters, while left-coiled (sinistral) shells characterize residents of cold waters. Each balance of Light leaves its personal tracks. (Fig. 19)

Radiolarian and diatom skeleton structure are combined symmetry and unsymmetry. The symmetry relates to the nucleus and outward, while the unsymmetry generally in the form of four-sided unbalanced tetrahedra, is the "meat" of the skeleton. Always one sees external reflection and internal reflection. All single cell organisms are born and survive in water. Water so vital to Life is unsymmetrical.

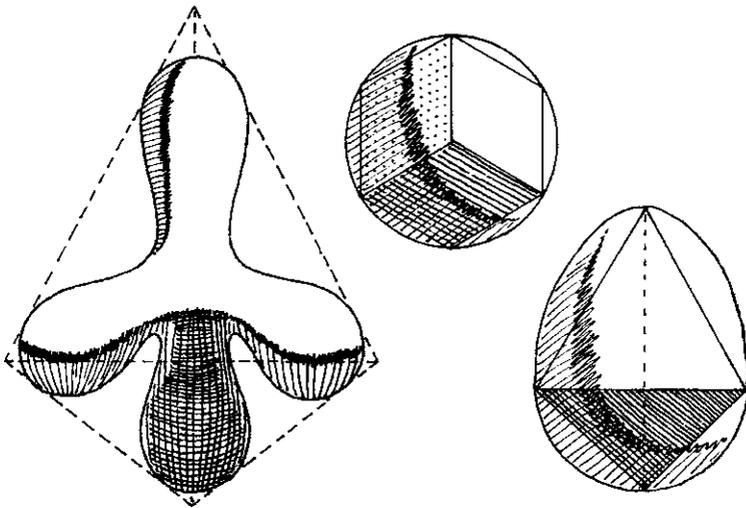


Fig. 20, WATER MOLECULE (a, b, c)

If from data on atomic arrangements we draw a molecule of water, we see a 4-sided tetrahedron. This shape will not fit into a cube, but when we enclose it into curved lines we have a crystalline egg. (Fig. 20: a, b, c) Is it any wonder that a young science sees life in form as a product of the sea? A natural vortex in Space is also an egg shape, as is the RNA chain of elements in the cell nucleus. Electromagnetic Light is the womb of Electromagnetic Space, and nothing whatsoever is exempt from its influence. The contrasting tracks of Electromagnetic Light are everywhere visible. By their tracks and by their works we shall know them. When we know them personally, they will serve us as Consciousness at any conscious level we can personally conjure and give attention to. The sky is truly the limit and the home of electromagnetic substance and drive.