

PHYSICAL FORCES
AND
SPIRITUAL
INTELLIGENCES

K. CHODKIEWICZ

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By
K. CHODKIEWICZ

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PHYSICAL FORCES AND SPIRITUAL INTELLIGENCES

by K. Chodkiewicz

'Science does not deal with ultimate origins.'

Sir Oliver Lodge

Primitive man, who lived his life closer to nature than we do, saw in the Sun the fiery God of the day and in the Moon the Goddess of night; in wind, storm, rain and lightning he felt the all-pervading breath of elemental powers whom he personified as living beings, sometimes benevolent, but more often destructive and frightening. Ancient mythologies and religions peopled the earth and the skies with innumerable gods and goddesses representing these elemental powers, whom they thought to be the spiritual causes of all the external phenomena occurring in the visible world. Madame Blavatsky mentions in *The Secret Doctrine* (I, 468),¹ that the people of India still firmly believe in the powers of their Brahmins over winds and storms. When Jesus (Luke, viii, 24) 'arose and rebuked the Wind and the raging of the Water, and they ceased and there was a calm', He certainly did not rebuke the inanimate wind and waves, but the elemental forces causing them. We know from history that Xerxes ordered the flogging of the waters of the Hellespont, thus punishing symbolically the God and Ruler of these Straits, when the bridge he was building there was destroyed by a storm. The Emperor Constantine sentenced the philosopher Sopatrus to death for *un-chaining* the winds and thus preventing ships loaded with grain from arriving in time to put an end to famine. The explorers and travellers in exotic countries are of the opinion that the efficacy of weather magic, as practised there, may not be illusory but related to some influences of the human psyche, especially of primitive races, on the collective elemental powers in nature.² Before the First World War I myself saw villagers and peasants in the Eastern Provinces of my country move in solemn procession to the fields during spells of drought, chanting hymns and praying for rain, and sometimes their incantations seemed to have effect, for the rain really came! All these myths, beliefs, prayers and incantations, which

¹ All references to *The Secret Doctrine* are made from 1888 edition.

² J. Layard: *Stone Men of Malekula*, 1942, p. 576.

are today generally labelled as 'superstitions', this magic of Nature, so deeply ingrained in the souls of common people, seem to indicate that these Spiritual Intelligences may exist; they may have and use the physical forces as vehicles and instruments for their external manifestation, just as we, Spirits, have and use our bodies to act in the worlds of form. So they may constitute the ultimate and final cause of many of the phenomena occurring in nature. It would be interesting to examine and investigate some of these forces and phenomena from the occult point of view and to try to find whether they can be explained as materialist science does, mechanically, or if this kind of explanation does not suffice and must be sought elsewhere, in worlds outside the scope of the mechanistic cosmoconception.

Let us start with gravitation. There were, and still are, many different theories of this universal force or phenomenon, but none explains fully what gravity really is. In antiquity and the middle ages gravity was thought to be a property of *position* and not an attribute of matter. Aristotle believed that everything in the universe had its proper station to which, when displaced, it endeavoured to return. Stones fell because they endeavoured to reach the centre of the earth, their proper place, whereas gases and fires moved towards their appointed spheres above the earth and below the orbit of the moon.

Newton considered gravitation as the reaction of an ethereal medium, the ether of space, which, being distorted by material bodies, extended appropriate pressure against them. He was, however, conscious of the fact that his law of dynamics only explained the working of this force and not its origin or nature. In his third letter to Bentley, he said:

'It is inconceivable that inanimate brute matter should, without the mediation of something else which is not material, operate and affect other matter, without mutual contact, as it must do, if gravitation, in the sense of Epicurus, be essential and inherent to matter. That one body may act upon another at a distance, through a vacuum, without the mediation of anything else by and through which their action may be conveyed from one to another, is to me so great an absurdity that I believe no man who has in philosophical matters a competent faculty of thinking, can ever fall into it. Gravity must be caused by an agent acting constantly under certain laws; but whether this agent be material or immaterial, I have left to the consideration of my readers.'

Modern relativitists, however, dismiss gravity as a force altogether. They explain gravitational pull as a distortion of the space-time continuum, making it practically a behaviour of space. But as this continuum is a conception only, a mental structure, it is difficult to see how it can be 'distorted' and act, as gravity certainly does. Behind all the known physical laws of movement and energy there ever looms this enigmatic, simple and irresistible force, always acting, never resting, eternally pressing, pushing and pulling, attracting and repelling, binding and dividing.

The basic principle underlying the whole structure of Einstein's relativity theory is the fact that the speed of light is a constant factor throughout the whole known universe; that nothing can move in the space-time continuum with a velocity exceeding that of light. But here gravity seems to be an exception, and a very weighty one. It acts *instantaneously*, without respect to distance, small or large. No plan has been yet devised to measure the speed of its working. The creation of any gravitational unit anywhere in galactic space seems to react simultaneously on all surrounding bodies. It is the same with the destruction of such a unit. Gravity also acts without any visible contact. When we think in terms of matter only, how are we to explain the action of the sun on our earth through the immense distance of 93 million miles and through the complete void and emptiness of solar space? And, as Sir Oliver Lodge remarks, 'It really does not matter whether the space is measured in millions of miles or in millionths of an inch: the puzzle is the same.'¹

When we take Newton's First Law of Dynamics which states that: 'all bodies attract each other in direct ratio to their mass,' we only express an observed fact in nature but cannot explain its cause. It is the same with the Second Law, that they attract each other 'in inverse ratio to the square of their distance'. Here we could ask with Maeterlinck, the Belgian philosopher² 'Why is it always and everywhere the *square*; why, whatever may be the star, planet, nebula or white dwarf, whatever its chemical composition, temperature, density or remoteness—why never the double, the triple or the cube? Why should a number multiplied by itself be the prime law and the magic formula of the universe?' We shall therefore not be surprised, when the late Sir James Jeans, being quite conscious of the inability to explain the real and final cause of this all-pervading force, thus defined gravitational attraction: 'What we call the "law of gravitation"

¹ *Making of Man*, 1924, p. 26.

² *The Supreme Law*, p. 151.

is, strictly speaking, nothing more than a mathematical formula giving the acceleration of a moving body.¹

The atom of modern physics is supposed to be constituted of a nucleus of protons and neutrons, and electrons orbiting around this nucleus. The composition of the proton is as yet unknown, but it is suggested that its basic structure also contains electrons in various combinations (mesons, etc.). So finally the electron remains a fundamental unit of all matter in the universe. But this electron has practically no Newtonian mass and seems rather to be a whirl of electric energy in perpetual motion. In having no mass at all, it cannot be subjected to the attractive pull of gravitational forces, and so here in the realm of the atomic and subatomic worlds the 'law of gravitation' does not work and the Newtonian laws of dynamics must give place to a new law, namely that of relativity, as suggested by Einstein. The atomic gravitational field we must, therefore, dismiss as non-existent.

Taking now the solar gravitational field into consideration, we also find some difficulties with respect to Newtonian laws. If we imagine our solar system as a big flat wheel, which it really is, with the sun as the hub and the planets as its spokes, we would expect that if the sun keeps the planets on their orbits through its gravitational pull, the whole wheel should rotate uniformly, which means more slowly nearer the centre and with rising speed farther away from the centre, towards the rim. But it is practically vice-versa: the planets nearer to the sun move with much greater orbital speed than the outer planets, as proved by astronomical research.²

A postulate of the gravitational field is that in the centre of the field should be a body of a mass larger than the bodies kept outside the centre of the field by gravitational attraction. That is correct with regards to our own and other solar systems, but it does not fit into higher aggregations of stars. When we observe a globular cluster of stars, with its almost perfect spherical form, we do not see the central mass postulated by gravitational laws. The telescope shows only separate stars (sometimes as many as 50,000), almost evenly distributed in space with a small congestion towards the centre of the cluster. But there is no super-sun in this centre, which could outweigh the masses of the members of the cluster and act as a centre of

¹ *The Mysterious Universe*, 1934, p. 111.

² The problem is fully dealt with by C. E. Last, in his book *Man in the Universe*, 1954, p. 56.

attraction. And yet the whole cluster moves as a unit through space and rotates in such a manner as would make it seem to be endowed with a central nucleus.

When we come to a still larger cosmic unit, such as our galaxy of stars, the Milky Way, we are faced with the same puzzling question; there is not a mammoth super-sun in the centre of the galaxy, yet this galaxy rotates once every 200 million years on its axis, around a gravitational centre somewhere near the constellation of Sagittarius. Here, we see that the gravity postulate breaks down completely. There must be something wrong with the whole hypothesis; its mechanical and mathematical side seems to fit into *some* aggregations of matter, but does not fit into either the atomic or the galactic worlds. Madame Blavatsky saw this discrepancy quite clearly. In *The Secret Doctrine* (I, 497) she made the following remarks:

‘... Kepler gave a pretty fair description of cosmic magnetism. That such magnetism exists in nature, is as certain as gravitation does not; not at any rate, in the way in which it is taught by Science, which never took into consideration the different modes in which the dual Force—that Occultism calls attraction and repulsion—may act within our solar system, the earth’s atmosphere, and *beyond* in the Kosmos.’

As gravitation is supposed to be the ‘behaviour’ of space, so another force, *inertia*, is labelled ‘a property of matter’ of all material bodies. It means that matter has no power or ability to change its own state in space, whether it is at rest or in motion. A railway-truck, stationary on the rails, cannot move by itself, it needs either a push or a pull to change its position, and to achieve this change of state an appropriate external force must be used. It may be a man pushing the truck slowly inch by inch until it gathers momentum, or it may be a railway engine which moves it; once started, it goes on with persistence and terrific force and a very strong force or friction is necessary to arrest this movement. This is generally done by putting on the brakes. Friction is the factor which counteracts this motion, first, friction between the wheels and the rails, secondly resistance by the surrounding air. If the same truck could move above the ground and in a perfect vacuum, it would run for ever, as nothing would be present to slow it down.

People sometimes wonder how the ‘Sputnik’ No. 2 has circled the earth for more than three months. It has done so more than 1,000

times and as the circumference of our globe is about 25,000 miles, this artificial satellite has travelled about 25 million miles in space, only 5 million miles less than the distance between the earth and Mars when nearest to our globe. The 'Sputnik' initially needed only one mighty push from the carrier rocket, and thereafter it has, of its own volition, gone on and on. It would circle the earth for ever, if it ran in a perfect vacuum, but this is not the case, as in the ionosphere in which its orbit is, are thinly distributed atoms of chemical elements. The collision of the satellite with these atoms, or molecules made up of them, retards its speed and causes shrinkage of its orbit, ending finally with its crash or burning up in denser air, as happens in the case of meteors.

This is a very good example of the persistence of motion in matter. It is the same with our earth. Once put in orbital motion (nobody knows by whom)—it should go eternally in a straight line through space. It does not, because the gravitational pull of the sun bends this line into an ellipse, the orbit on which our globe circles around the sun. And with our globe we and all other material objects constantly accompany the earth in this irresistible movement, with the speed, the astronomers tell us, of 18·5 miles per *second*. Let us imagine what would happen if the whole earth with its outer solid crust suddenly vanished into nothing, disappeared, become atomized into cosmic dust or gas. Nothing would happen to us, or rather our bodies. We would become tiny planets, each one of us, and we would *proceed* to move in space on the same orbit and with the same speed of motion. That is inertia of matter.

Here, occultists may ask what this inertia really is, what causes a material body either to stay in one spot or to move incessantly, without end. Why should one push be sufficient to cause an object to move for *ever*? Whose energy is it, which suddenly shows itself as this driving force? This motion is a characteristic property of matter, and as we know, all matter is *always* in motion, from the minutest atom to the mightiest galaxy. A static and motionless universe is unthinkable and impossible. Everything is moving, vibrating, attracting and repulsing, and this motion is eternal and never ceasing, it lasts through aeons of time and through the vastness of universal space. Who or what is behind it?

It must be an attribute of the Absolute, and in our system it is a manifestation and revelation of one aspect of the God of the System, the Solar Logos, its Creator, Preserver and Ruler. The 'forces'

mentioned are the results of an outpouring of His divine energies, Fohatic vibrations, radiated into the whole system on three lines of activity, through Three Persons of the Trinity. Fohatic energy, flowing on the line of the Holy Spirit, is transmuted into heat and light, magnetism and electricity, cohesion and chemical affinity, gravitation and inertia. The Book of Dzryan, the ancient cosmogonic treatise, clearly illustrates this problem. In *The Secret Doctrine*, Stanza III, verses 8 and 9, we read:

8. Where was the Germ and where was now Darkness? Where is the Spirit of the Flame that burns in thy lamp, oh Lanoo? The Germ is That, and That is Light, the White Brilliant Son of the Dark Hidden Father.

9. Light is Cold Flame, and Flame is Fire, and Fire produces Heat, which yields Water: the Water of Life in the Great Mother.

In verse 8, we have a discourse between the Teacher and his pupil, the Lanoo. The pupil has been instructed previously in the mysteries of Pralaya and Manvantara and now is asked to say what is the Ultimate Cause behind the Fohatic forces. As the pupil is probably not able to give the right answer, the Master gives it himself, explaining that the germ of all existence is That, which is simultaneously the first Light, the White Brilliant Son of the Dark Hidden Father, primordial matter in the state of Pralaya. The germ, the primordial matter, did not vanish at the dawn of the new manvantara, it exists now in the first act of Creation, as innumerable shining points of cosmic dust within the Solar Nebula. The Spirit of the Flame, Fohatic energy, which causes the chemical process of burning, cannot be seen in the flame; without this energy, however, without the eagerness of the atoms of oxygen to join other chemical elements, which is 'burning', this process would be impossible. The Master advises the pupil that spiritual energies are ultimate causes of chemical processes in nature, and that matter and energy are only two different aspects of the same inner Reality, called in Indian philosophy That. The neuter form of the pronoun is used here to indicate that this Reality, the Logos, is above the duality masculine-feminine, Spirit and Matter, and so the subatomic units of the first act of Creation, the solar nebula, are One with the Logos, are Logos Himself, are *That*.

In v. 9 the pupil is given further instruction on Fohatic forces, solar energies, emanating from the 'Word', along the lines of activity

of the Three Persons, the Holy Trinity, and how the Logos builds up and keeps alive His system. Fohat symbolizes the pure divine energy, Cold Flame, radiating from the Logos Himself. This pure energy, flowing in three quanta, three great Outpourings of Logoic Force, is transformed, changed and adapted according to need, and shows as Fire, Heat and Water. Fire here symbolizes Spiritual and mental energies, the Atma, Buddhi and Manas principles, domain of the First Person of the Trinity, God the Father. Heat means the psychic and the vital forces, Kundalini and Prana, which build life in material frames, the field of activity of the Second Person, God the Son. Water symbolizes all the physical forces inherent in matter, the realm of the Holy Spirit.

Madame Blavatsky, in her commentary to these verses, saw the close relation and intimate connection between the outer manifestation of all these forces and their inner Spiritual source. She thus writes in this manner:¹

‘The Sun is matter, and the Sun is spirit. Our ancestors, the “heathen”, along with their modern successors, the Parsis, were, and are, wise enough in their generation to see in it the symbol of Divinity, and at the same time to sense within, concealed by the physical symbol, the bright God of Spiritual and terrestrial Light. Such belief is now regarded as superstition only by rank materialism, which denies Deity, Spirit, Soul—and admits no intelligence outside of the mind of man. . . .’

In ancient Greece, in the Magnesia district of eastern Thessaly, between the Vale of Tempe and the Pagasaeon Gulf, lived the Thessalian tribe of the Magnetes. There it was that people collected a black stone, which was known to attract its own particles and also pieces of iron. The name of the district was applied to the stone as ‘magnes’, or its genitive ‘magnetos’, which in modern times became the ‘magnetite’ of the mineralogists.

Later on it was discovered, we do not know by whom, that this stone could impart its property to metallic iron, and so magnets came into being. By rubbing a bar of hard iron with the magnetite, the bar became a magnet itself. This bar could be straight or bent into U form, it did not matter, the magnetic field once imparted was always there.

Someone, probably in China, in the eleventh century A.D., sus-

¹ *The Secret Doctrine*, I, 479.

pended a magnetized rod or needle by its centre and found to his surprise that it always turned in the same direction, roughly North-South. This invention was introduced into Europe probably by Mohammedan sailors and became the marine compass still in use today, guiding ships in the right direction over the vast spaces of the oceans. Since then magnetite has been called 'lodestone' or 'loadestone', the stone that gives a lead. Medieval alchemists are supposed to have discovered that the attractive power of the lodestone was *weakened* by the presence of garlic or of a diamond, a statement naturally flatly rejected by modern physics.

The chemical composition of magnetite is an iron oxide, formula Fe_3O_4 . It is generally black and very hard and contains 72.4 per cent of metallic iron. There are two more metals showing the same, although much weaker attractive power, or rather the willingness to become magnets, and they are Cobalt (Co) and Nickel (Ni), both on the evolutionary line of iron and closely related to it.¹

William Gilbert of Colchester (1540–1603), published in 1600 his great book *De Magnete*, and his chief contribution was the discovery that our earth itself is a huge magnet. This discovery laid the foundation for the systematic study of terrestrial magnetism. Michael Faraday and Henry made observations in 1829 on magneto-electric induction, which proved that a bar of iron can be magnetized temporarily by an electric current circling around it, and so dynamos and all the other electro-magnetic machines came into being. An extensive study of paramagnetic and diamagnetic materials, and particularly of the effect of high temperatures on their magnetic properties, was made by P. Curie. He found that when iron or nickel are heated beyond a certain point (hence known as 'Curie Point') any traces of their attractive power disappear completely; they lose their magnetic properties. That has quite definitely been proved.

Now the main point is how to explain the firmly established existence of a powerful magnetic field around our earth. We know perfectly all the details of this field; we found how these magnetic loops are distributed and we know the periodic variations of the field, but we cannot explain what causes this magnetic field, what keeps it alive and what makes the magnetic currents flow in the way they do. If our globe is a huge magnet, it must have within its inner core, near its centre, a *bar* of iron or nickel, placed in a general direction along the earth's axis. But *no such bar exists*. The inner core

¹ See *First Principles of Theosophy*, diagram 77—"The Periodic Law".

of the earth is supposed to be constituted by metals, predominantly iron and nickel, but this huge sphere of metallic iron is completely molten, as seismological evidence shows. Perhaps it is in another state, the so-called 'critical state', owing to the tremendous pressure of the outer crust of the earth; in any case the temperature of this mass must be very high, hundreds of degrees above the 'Curie Point', so the magnetic properties of the iron in the core cannot be there; our 'magnet-bar' is non-existent.

Not being able to account for the earth's magnetism in this way, geophysicists thought that the earth, not being a 'permanent magnet', might by chance be an 'electro-magnet', i.e. its magnetism could be caused by electric currents flowing through the core of the globe. They tried (Elsasser) to explain the earth's magnetism by convective currents in the earth's mass, which produce an uneven heating of the crust and cause thermo-electric currents along the Equator. Other astronomers however (Gamow), think that these currents are too slow to produce the electro-magnetic effect.

A more ingenious hypothesis is suggested by R. A. Lyttleton. He thinks that the conical movement of the earth's axis once in 26,000 years, which causes the well-known precession of equinoxes, may be partially responsible for the earth's magnetic field. This movement is supposed to cause periodic shiftings of the molten iron core under the solid crust of our globe and these movements could result in the creation of the field. He, however, confesses that 'The explanation of the cause of this magnetism and where exactly it originates, are still among the great unsolved scientific problems, despite prolonged research on the subject.'¹

So there we are. We do not know *why* the magnetic needle points north and why the earth's magnetic currents flow, since according to theoretical considerations they really should not be there at all.

To that, we occultists answer that the magnetic field is built from a type of etheric fluid emanating from a powerful Nature Spirit whose physical body is our earth, and who is referred to in Theosophical literature as 'The Spirit of the Earth'. As our physical body has a kind of dim, primitive consciousness, which we call the 'physical elemental', so is our earth kept alive by such an elemental consciousness, which is responsible for the magnetic field, created by its vital etheric currents. Without the constant willingness of this powerful Elemental, the magnetic field would not exist. It is his

¹ *The Modern Universe*, London, 1956, p. 35.

action and service; he is the 'Intelligence' behind this phenomenon and this was probably known to medieval alchemists, who considered the emanations of the lodestone a kind of etheric fluid, which did not agree with the emanations of garlic and could not withstand the strong radiations of a diamond.

Our earth is efficiently shielded against the constant bombardment of meteors, and solar and cosmic radiations, by a protective layer of atmospheric air, and without this shield the life on our globe would be in continuous danger and could easily be annihilated. Scientists have calculated that in every twenty-four hours the total number of meteors of different sizes entering our atmosphere may reach something like 750,000,000,000,000,000.¹ The vast majority of them are smaller than grains of sand; some 5 million reach as much as a tenth of an inch across, but only five to ten are large enough to pass through atmosphere and hit the earth's surface. We may imagine what the surface of our globe would be like if *all* this cosmic debris fell upon it with a speed of about thirty miles per second or more! With respect to the solar and cosmic radiation, scientists have found that the layer of earth's atmospheric air is as impenetrable as a mass of water 10 yards deep.

But that is not all. In 1666, the English scientist, Samuel Pepys, found during the Dutch war that hundreds of people crowded in one of London's parks, were listening to the boom of naval guns of the Fleet fighting a battle in the English Channel. This gun fire, as he verified, was not heard at all either in Dover, or on the other side of the Channel. Similar observations were made in 1883, during the Krakatau eruption, in Sunda Straits, the passage between Java and Sumatra. The thundery roar of this volcanic eruption was heard in Australia, Bangkok, the Philippines and in Ceylon, but in a large area around the Sunda Straits there was a 'belt of silence'. The phenomenon was difficult to explain but finally the German explorer Von den Borne, observing the same phenomenon during the great explosion in Westfallen in 1903 and comparing it with previous observations, suggested that such sounds slowly diminish in intensity with the distance from the centre until they die completely, after which they appear once more farther away. Further research has shown that the sound of a big explosion is heard in an area of about 60 miles radius, then comes an area of silence, about 120 miles broad,

¹ A. C. Clarke, *The Exploration of Space*, 1951, p. 90.

then the explosion can be heard once more, which means that a part of the sound-waves travelling upward meet some level of the atmosphere which is an insulating layer, rebound from it and return to the earth's surface at the same angle, i.e. at greater distance from the centre of explosion.

Further investigations have shown that between 20 and 30 miles up there exists a very thin and delicate layer of the gas Ozone. Ozone (the word means 'smelling stuff'), was discovered in 1840, when the great chemist Schönbein found that this smell was produced by a special gas, formed in the air by electric discharges. We often smell it after a storm. The vitalizing energy of ozone is so powerful and so destructive for putrefying organic matter and disease-producing bacteria, that at the end of the century it was used for the purification of the water-supply in large towns and in many other cleansing processes.

What is ozone? The atoms of oxygen, combining with the atoms of nitrogen to make our atmospheric air, do not appear in the air singly, but join in two's, making oxygen *molecules*. In higher atmospheric regions, in what we call the 'stratosphere', under the influence of electric discharges, lightning, auroras, etc., these molecules are split into single atoms, which now join together into three's and build a new kind of molecule, ozone. Ozone is therefore an oxygen molecule consisting of *three* oxygen atoms. This molecule is rather frail, as it can last in very low temperatures only; in normal temperatures it quickly disintegrates and the atoms return to their former molecular structure. The smell of ozone fades very quickly after a storm.

Fabry and Buisson found that the layer of ozone high up in the stratosphere, if placed at sea-level, would be between one-sixteenth and one-seventeenth of an inch thick. In the stratosphere, however, under different atmospheric pressure, it may be larger in depth. It has been further discovered (Lindenmann and Dobson) that this ozone layer is caused, not by ultra-violet radiation alone, but also by electrical discharges from the aurora. It adapts itself to the changing temperature, change of seasons, etc.; it becomes thicker or thinner, it hovers higher up or lower down, according to its changing surroundings, but it is *always* there, protecting life on our earth from the deadly ultra-violet rays of the Sun. It has, far up in the stratosphere, a weighty influence on the life of all earthly creatures, especially those living on land, for the ultra-violet rays of the sun cannot penetrate deep into

the sea. The layer is a huge filter for the sun's radiation and without it life would severely suffer by the excessive amount of ultra-violet rays passing through the atmosphere. A thin layer of this gas, only the thickness of a visiting card, is our only defence against ultra-violet death, yet, if the ozone shield was twice the thickness, life would be equally impossible, as it would cut off health and vitality from our bodies.

Scientists cannot explain *why* ordinary oxygen molecules, hovering in the air, suddenly changes their structure into ozone, and why it is oxygen and not for example nitrogen, which builds this protective shell. It is also not known how these ozone molecules keep the ultra-violet rays off and let through as much of them as is needed for life and not detrimental to it.

From the occult point of view the answer is not difficult. As shown in *Occult Chemistry*, an atom of oxygen consists of two rapidly gyrating 'snakes', as its main subatomic components. We know that a power wheel or any rapidly turning wheel, although it has many empty segments between its spokes, becomes in motion an impenetrable surface. A stone thrown on it never gets through. Something like that happens with the oxygen atoms in a molecule of ozone. Six 'snakes' in such a molecule, gyrating in pairs with inconceivable speed, create a living shield, subatomic but strong as armoured plate, from which cosmic particles bounce away. The ozone layer thus acts as a huge spherical shell and verily protects life on this planet: We cannot regulate the thickness of this shield, it is done by the Spiritual Intelligences, powerful Nature Spirits and Rulers of the Elements who, with their subordinates, keep the layer in its place. To occultists, the layer is the Physical Body of these Intelligences, pulsating with their life and energy.

We have, high above in the sky, more envelopes shielding us and our home, the earth. The next above the stratosphere is the eerie and turbulent world of the ionosphere, which is exposed to the undiluted radiation of the sun with its visible light, X-rays, infra-red rays and jets of hydrogen particles. It is also bombarded constantly with cosmic rays, which cause havoc among other particles and atoms, stripping them of their electrons and converting them into bare nuclei, called in physics *ions*, hence the name 'ionosphere'. Here scientists discovered three layers of such ions, which act as reflecting mirrors for radio waves and make possible world-wide radio broadcasting. They reflect the radio waves in the same manner as the ozone layer

does with the radio waves. The lowest is the D layer, located on the fringe between the strato- and ionospheres. Farther up, about 60 to 70 miles above the earth's surface, is the E layer, sometimes called the Heaviside-Kennelly layer, from the names of its discoverers. Much higher up is a broad band known as the F (or Appleton) layer, which reflects the short waves (100 m.), whereas the E layer is the mirror for medium waves (300 to 400 m.) and the D layer for very long radio waves.

Here we may ask the question, *who* organizes these ionic shells, who distributes them in space above the earth and what is the purpose of this arrangement? We do not think that the Intelligences concerned keep up these protective shells for the sake of world-wide radio broadcasts only; these layers must have some important part to play and they quite certainly protect us from some danger of which we are as yet not aware.

It is interesting to note that H.P.B. in *The Secret Doctrine* (I, 555) declares the Creative Word, i.e. Fohat, as the Builder of ozone molecules. She writes as follows:

‘For Sound generates, or rather attracts together, the elements that produce an Ozone, the fabrication of which is beyond chemistry, but within the limits of Alchemy. It may even *resurrect* a man or animal whose astral “vital body” has not been irreparably separated from the physical body by the severance of the magnetic or odic chord. As One Saved Thrice From Death by that power, the writer ought to be credited with knowing personally something about it.’

The vast expanse of space around our globe is, for occultists, not an empty place, devoid of every trace of life, but is full of living beings and entities, of Intelligence on various levels of consciousness, of Angels and Devas, nature and elemental spirits, which may manifest themselves in our physical world as physical forces and energies. They are the animating factors, causes of visible effects, although they are hidden behind this veil of manifestation. We see only the machines and know a little of how they work, but we are convinced that the mechanics must exist as well, Superior Minds which thought of, and built, these machines and keep them running for ages, to our benefit and that of other living Creatures.

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