

# Science – Modern and Occult

## Part 1

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In ancient cultures there was not a clear separation between religion and science. Astronomy, mathematics, architecture, medicine... all were religious activities. Although the ancients did not have the exact measuring instruments of modern Science, they possessed a great deal of scientific knowledge, some of which is still being 'rediscovered' today. Philosophical thought was also closely associated with scientific knowledge, and civilizations such as the Greeks used their reason (instead of experiments) to explain the observed facts in Nature. Many of their scientific conclusions have often been found to be right.

It was during the Christian era that problems between religion, philosophy, and science began. Science could only be practised under the supervision of the clergy, and all scientific conclusions had to be adjusted to the Christian creed. At the same time, philosophy was used as a means to justify the orthodox belief. The Inquisition was introduced in Europe in an attempt to impede every possibility of freethinking, and anyone expressing ideas that were outside the orthodoxy was persecuted as a 'heretic.'

In this context, the birth of modern science in the Middle Age could only have happened as a rebellion against religious orthodoxy, which created a wide gulf between religion and science. At the beginning, this development had a positive effect—it shook the foundations of rigid dogmas and blind beliefs. But with time, science developed its own orthodoxy based on positivism and reductionism, which has also become quite dogmatic.

Today there is a great need to build a bridge between science and spirituality. Is this reunification at all possible? This does not seem feasible as long as science remains materialistic, religion dogmatic, and philosophy dialectical. But we find evidence of the existence of a more holistic knowledge in what the Theosophical literature calls 'occult science'.

This first part of the present article will show how the occult science can assist modern science with the research of the physical dimension of the universe. In the second part to be published next we will explore how modern science, with the help of its occult counterpart, can expand its field of research to more spiritual dimensions, thus bringing a revolution in our understanding of life, human beings, and the universe.

### The Occult Science

What is the occult science? Is it really a science? And why is it called 'occult'? Modern Theosophy proposes that there are non-physical dimensions in the universe that are *occult* (that is, 'hidden') to normal perception. Accordingly, in addition to the five senses we know, human beings possess non-physical senses, by which they can perceive this hidden aspect of the universe. These senses are the basis for what is called extra-sensory perception, a topic towards which science has an ambivalent attitude.

The Theosophical literature states that the possibility of this non-physical perception is latent in most humanity and, when properly trained, it can be used in a scientific manner. H. P.

Blavatsky claimed that the 'occult knowledge' she presented in her writings was obtained by using the scientific method, but applied to non-physical realities, and therefore using non-physical means of perception:

The system in question is no fancy of one or several isolated individuals. That it is the uninterrupted record covering thousands of generations of Seers whose respective experiences were made to test and to verify the traditions passed orally by one early race to another . . . That for long ages, the 'Wise Men' . . . had passed their lives *in learning, not teaching*. How did they do so? It is answered: by checking, testing, and verifying in every department of nature the traditions of old by the independent visions of great adepts; *i.e.*, men who have developed and perfected their physical, mental, psychic, and spiritual organisations to the utmost possible degree. No vision of one adept was accepted till it was checked and confirmed by the visions—so obtained as to stand as independent evidence—of other adepts, and by centuries of experiences.<sup>1</sup>

This article will present some of the teachings found in Blavatsky's book *The Secret Doctrine—A Synthesis of Science, Religion and Philosophy*, written in London in 1888. I will concentrate only on some physical and astronomical discoveries that *The Secret Doctrine (SD)* anticipated, while leaving aside other facts related to the fields of Biology, Anthropology, History, and Psychology that this book also foresaw.

## **Some Instances of Occult Knowledge**

### *1. The State of the Universe*

The accepted cosmological theory during Madame Blavatsky's time was that of a stationary universe, where galaxies were fixed in infinite space. However, she wrote about a universe alternately expanding and contracting, which aroused much controversy then. One of the stanzas presented in the *SD* says:

Father-Mother spin a web ... and this web is the universe ... It expands when the breath of fire is upon it and contracts when the breath of matter touches it ... The expanding and contracting of the Web ... expressing here the pulsatory movement; for it is the regular contraction and expansion of the infinite and shoreless Ocean.<sup>2</sup>

Almost 30 years later, when in 1917 Albert Einstein applied his newly formulated General Theory of Relativity to the universe, he found that it should be either expanding or contracting. Since this idea was not accepted in science, he added another term to his equation (known as the *cosmological constant*) to maintain a static universe. Some years later, the astronomer Edwin P. Hubble discovered that the universe is actually expanding, as all of the galaxies are getting farther away from one another. Einstein abandoned this extra term in favour of the

earlier and simplest form of his equation, and later regarded the addition of the cosmological constant as his 'greatest mistake'.

Although the *SD* foretold some concepts associated to the theory of the Big Bang by some sixty years, overall its teachings seem to be more in tune with the new model of a cyclic universe, which explains some difficulties found with the Big Bang theory.

## 2. Nature of the Sun and Origin of the Planets

At the end of the 19th century, the origin of the planets of our system was explained as the result of an accidental collision by a passing star that drew a filament of hot material from the sun. This material then condensed to form the planets. Blavatsky spoke against this theory and in favour of the nebular origin of the planets, which denies the pre-existence of the sun:

The Occult Doctrine rejects ... that the great planets have evolved from the Sun's central mass ... The first condensation of Cosmic matter of course took place about a central nucleus ... but our sun, it is taught, merely detached itself earlier than all the others, as the rotating mass contracted, and is their elder, bigger brother therefore, not their father.<sup>3</sup>

It is now universally accepted that the sun and the planets were formed together from a rotating and contracting nebula. At a stage where the material around the centre (the protostar) is quite cold, there begins a process of 'accretion' that finally forms the planets. This theory, called Solar Nebular Disk Model, was accepted by modern science over one hundred years after Blavatsky's writings.

Also, at the end of the 19<sup>th</sup> century, the most accepted scientific view about the nature of the sun was that it was a mass of ignited gas. Mme Blavatsky said:

Occult philosophy denies that the Sun is a globe in combustion, but defines it simply as ... a glowing sphere.<sup>4</sup>

Regarding this, in 1882, one of Blavatsky teachers, Mahatma K.H., wrote in a letter to an Englishman:

[The sun] contains less of anything like 'gases', mineral matter, or fire, though even we when treating of it in your civilized tongue are compelled to use such expressions as *vapour* and *magnetic matter* ... The sun is neither a solid, nor a liquid, nor yet a gaseous globe, but a gigantic ball of electromagnetic Forces.<sup>5</sup>

We know today that the sun is not burning in the sense of ordinary combustion, but suffers a process of nuclear fusion with a great liberation of energy. Its constitution is neither solid, liquid, nor gaseous, but an electromagnetic state of matter called plasma.

## 3. Gravitation

There are many phenomena in our Solar System that make one wonder how it began in such a coordinated manner. The planets revolve round the sun uniformly. Their orbits are slightly elliptic and nearly on a same plane, while their orbital speeds vary as per the inverse square-root of their distance from the sun. A century ago, the motion of the planets was explained on the ground of Newton's law of gravitation, something that Blavatsky denied. Indeed, she went further than that to claim that gravitation was not even a real phenomenon. She wrote:

... that magnetism exists in nature, is as certain as that gravitation does not; not at any rate, in the way in which it is taught by Science.<sup>6</sup>

In Newton's enunciation of the law of gravitation nothing is stated about its cause. The accepted concept in the 19<sup>th</sup> century was that gravity was an inherent property of matter. Blavatsky wrote:

Astronomers who see in gravitation an easy-going solution for many things, and a universal force which allows them to calculate thereby planetary motions, care little about the cause of attraction. They call Gravity a law, a cause in itself. We call the forces acting under that name effects, and very secondary effects, too.<sup>7</sup>

Some decades after the publication of the *SD*, Newton's theory of gravitation was revised by Einstein, who postulated that gravity is not a property of matter itself, and reinterpreted this physical phenomenon as due to the distortion of the space-time continuum. In addition, the force of gravity is the only one of the four fundamental forces of physics that cannot be formulated from the standpoint of Quantum Mechanics. The postulated 'graviton' cannot be found. All this supports the criticism of Blavatsky about a subject that was unquestionable for many years.

#### 4. Nature of Atom and Force

When the *SD* was published, materialistic science was at its peak. Its philosophy was based on the view that the fundamental building block of the universe was some hypothetical particle called 'atom' (from the Greek *atomos*: *a-* 'not' + *tomos* 'divisions') which was the smallest possible unit of matter. Thus, the atoms were thought to be little compact balls of a given element—indivisible and impenetrable. Blavatsky strongly opposed this view, and said that the Occult Science supports the doctrine of the infinite divisibility of the so-called 'atom'. As she explained:

The atom is elastic, ergo, the atom is divisible, and must consist of particles, or sub-atoms. And these sub-atoms? ... They are elastic also; and in that case they too are subject to divisibility. And thus ad infinitum. But infinite divisibility of atoms resolve matter into simple centres of force, *i.e.*, precludes the possibility of conceiving matter as an objective substance.<sup>8</sup>

Today we know that atoms are composed of subatomic particles which, in their turn, are also divisible. Actually, in quantum physics, particles are not even regarded as objective tiny pieces of matter but rather ‘excitations of quantum fields,’ a definition not too far from Blavatsky’s ‘centres of force’ in the previous quote.

The other concept put forward by Blavatsky was that, in spite of the apparent stability of matter, its atoms are in constant motion:

Occultism says that in all cases when matter appears inert, it is the most active. A wooden or a stone block is motionless and impenetrable to all intents and purposes. Nevertheless, and de facto, its particles are in ceaseless eternal vibration, which is so rapid that to the physical eye the body seems absolutely devoid of motion ... But to physical Science this will be an absurdity.<sup>9</sup>

In fact, Mme Blavatsky knew there was energy ‘hidden’ in the atom. She used the word ‘atomic energy’ on a couple of occasions:

Anyhow Occultism is audacious enough to maintain that electric or magnetic fluids (the two being really identical) *are due in their essence and origin to that same molecular motion, now transformed into atomic energy.* . .<sup>10</sup>

Blavatsky was not referring here to nuclear energy. She would call the atoms of the physicists ‘molecules’ because they were divisible. The ‘molecular motion,’ which she claimed was the origin of electricity, was obviously the motion of the electron—a source of energy in the so-called ‘atom.’ But electrons and other subatomic particles were unknown at the time, and the nature of forces such as light, magnetism, electricity, etc., was not understood. Mme Blavatsky said that what we call forces were still ‘material’, although of a subtler nature:

But what is in reality Matter? We have seen that it is hardly possible to call electricity a force, and yet we are forbidden to call it matter under the penalty of being called unscientific!<sup>11</sup>

It is not in the least unscientific to speak of the substantiality of the so-called Forces. Subject to some future specific name, this force is substance of some kind, and can be nothing else.<sup>12</sup>

[But] the Occult Sciences do not regard either electricity or any of the forces ... as matter in any of the states known to physical Science; to put it more clearly, none of these ‘forces,’ so-called, are either solids, gases, or fluids.<sup>13</sup>

It was only at the end of the 19<sup>th</sup> century and beginning of the 20<sup>th</sup> that science discovered that phenomena such as light, heat, chemical affinity, electricity, and so on, were mediated by subatomic particles such as electrons, photons, etc. But accepting the substantiality of forces and the energy within the atom made the boundaries between matter and energy too blurry, something that the materialistic paradigm of the 19th century was not ready to accept. This

paradigm eventually came to an end with Einstein who, in 1905, showed the equivalence between matter and energy. Today we know that matter is but 'condensed energy', and that energy is mediated by subatomic particles. This discovery was foretold by one of Blavatsky's Adept Teachers when he wrote that:

[Force is incapable of] existing per se ... independently or in any other wise than through matter; in other words that force is but matter in one of its highest states.<sup>14</sup>

In a century of discoveries, modern physics has come very close to the Theosophical view of (physical) matter and energy. Even recently, with the evidence about the existence of the Higgs Boson (the so-called 'god-particle') the Theosophical concept of *ether* may be brought back into the scientific awareness!

### **The Future of Science?**

Modern science is limited to facts that are measurable within the physical realm. Mme. Blavatsky maintained that only when science moves beyond these limits will be able to attain a holistic vision:

To make of Science an integral whole necessitates, indeed, the study of spiritual and psychic, as well as, physical Nature.<sup>15</sup>

But the question arises, is it possible at all to bring within the field of science that which is beyond the physical realm? Theosophy says that it is. Just as every human being can verify the postulates of current science if he undergoes proper scientific training, the occult science also asserts that all its teachings can be corroborated, when one is properly trained.

Examples of this are the English Dr Annie Besant and C. W. Leadbeater, two well-known Theosophists who underwent an occult training, developed clairvoyance, and took some pioneering steps in this direction at the end of the 19th century.

In 1895 they began to research the nature of atoms by extra-sensory means, and published their findings through several articles in this journal. Their gathered observations were published in book form in 1908, under the title of *Occult Chemistry: Investigations by Clairvoyant Magnification into the Structure of the Atoms of the Periodic Table and Some Compounds*. They continued their research in this field intermittently up until 1933, and two more editions of *Occult Chemistry* were published.

During their research they were able to observe the nucleus of different atoms and saw they consisted of different subatomic particles, before the scientific discovery of the proton (which was reported in 1919) and the neutron (discovered in 1932). By counting the amount of subatomic particles they found five previously unknown atoms (*protactinium, technetium, francium, astatine, and promethium*) which were eventually isolated by modern science between the '20s and '40s. They also noticed some unknown variations in the atoms of neon, argon, krypton, xenon, and platinum.<sup>16</sup>

In 1913, five years after the first publication of *Occult Chemistry*, the existence of these variations in atoms (called 'isotopes') was demonstrated by Professor Francis W. Aston, who was later awarded the Nobel Prize in chemistry for this.

It is interesting to notice that Professor Aston was aware of the researches carried out by Besant and Leadbeater, and even admitted having used one of the names they chose for one of the isotopes. In a footnote to the paper announcing his discovery to the annual meeting of the British Association he stated:

By theosophic methods entirely unintelligible to mere students of physics [Besant and Leadbeater] claimed to have determined the atomic weight of all elements known and several unknown at the time. Among the latter occurs one to which they ascribe an atomic weight of 22.33 (H=1) and which they called 'Meta Neon'. As this name seems to suit as well as any other what little we know of the properties of the new gas, I have used it in this paper.<sup>17</sup>

In 1943 C. Jinarajadasa, who assisted Besant and Leadbeater in their research, contacted Professor Aston at the Cambridge University, but he answered he was not interested in Theosophy. This is an example of the strong reluctance the scientific community shows to deal with non-physical means of researching.

These were not their only or most important discoveries. According to theoretical physicist Stephen M. Phillips, PhD., their findings match generally the Superstring Theory that modern science developed in the 1980s.<sup>18</sup>

So, how could modern science and its occult counterpart work together? It is clear that science could not regard clairvoyant findings as proof for anything, until physical means to measure these discoveries are developed, so that any scientist in the world can make the measurement. However, the findings of the occult science could be taken as theoretical hypotheses to direct further research. After all, this is common in the field of physics. Many of the theoretical predictions in Einstein's Theory of Relativity remained unproven for years, until the methods to test them were developed. And the same is happening today with many facts postulated in the current models of Quantum Physics, which our technology is still unable to measure. The Higgs Boson was proposed by Professor Peter Higgs in 1964 and only this year scientists are in a position to test whether it exists or not by using the LHC, a gigantic particle accelerator at CERN, near Geneva, Switzerland.

Actually, Dr Phillips himself is a living example of how this cooperation can work. In his early interpretation of the findings published in *Occult Chemistry* he postulated that Besant and Leadbeater observed the fundamental particles of matter at the level the sub-quarks. Taking these observations as a basis, he developed a mathematical model predicting the existence of 'sub-quarks' that he called 'omegon', and describing the characteristics this new particle should have.<sup>19</sup> Whether his scientific predictions turn out to be right or not is of secondary importance, because in science there are many models built on the interpretation of sound data that turn out to be inaccurate. But this serves as an example of how psychic abilities, when well trained, can be useful for research in the scientific field.

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## References

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- <sup>2</sup> SD I, 83-84.
- <sup>3</sup> SD I, 101.
- <sup>4</sup> SD I, 541.
- <sup>5</sup> Vicente Hao Chin, Jr., *The Mahatma Letters to A. P. Sinnett in chronological sequence* (ML) No. 93B (Quezon City: Theosophical Publishing House, 1993), 321.
- <sup>6</sup> SD I, 497.
- <sup>7</sup> SD I, 490.
- <sup>8</sup> SD I, 519.
- <sup>9</sup> SD I, 507-8, fn.
- <sup>10</sup> H. P. Blavatsky, *Collected Writings* (CW) vol. XII (Wheaton, IL: Theosophical Publishing House, 1980), 398.
- <sup>11</sup> CW IV (1991), 221.
- <sup>12</sup> SD I, 511.
- <sup>13</sup> SD I, 517.
- <sup>14</sup> ML 93B, 321.
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