THE SCIENCE OF BREATH

AND THE

PHILOSOPHY OF THE TATTVAS

TRANSLATED FROM THE SANSKRIT, WITH INTRODUCTORY AND EXPLANATORY ESSAYS ON

NATURE'S FINER FORCES

REPRINTED FROM "THE THEOSOPHIST," WITH MODIFICATIONS AND ADDITIONS

BY

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Its one absolute attribute, which is *itself*, eternal, ceaseless Motion, is called in esoteric parlance the "Great Breath," which is the perpetual motion of the Universe, in the sense of limitless, ever-present *Space*.

—*H.P. Blavatsky: The Secret Doctrine.*

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NATURE'S FINER FORCES,

AND THEIR INFLUENCE UPON

HUMAN LIFE AND DESTINY.

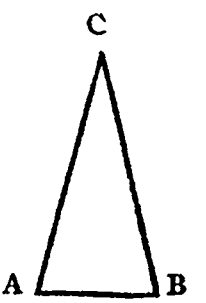
I.

THE TATTVAS.

THE Tattvas are the five modifications of the Great Breath. Acting upon Prakriti this Great Breath throws it into five states, having distinctive vibratory motions, and performing different functions. The first outcome of the evolutionary state of Parabrahman is the Âkâsha Tattva. After this come in order the Vâyu, the Tejas, the Apas and the Prithivî. They are variously known as Mahâbhûtas. The word Âkâsha is generally translated into English by the word *ether*. Unfortunately, however, to modern English science sound is not known to be the distinguishing quality of ether. Some few might also have the idea that the modern medium of light is the same as Âkâsha. This, I believe, is a mistake. The luminiferous ether is the subtle Tejas Tattva, and not the Âkâsha. All the five subtle Tattvas might no doubt be called ethers, but to use the term ether for Âkâsha,

without any distinguishing epithet, is misleading. We might call Âkâsha the sonoriferous ether, the Vâyu the tangiferous ether, Apas the gustiferous ether, and Prithivî the odoriferous ether. Just as there exists in the universe the luminiferous ether, an element of refined matter without which it has been found that the phenomena of light find no adequate explanation, so do there exist the four remaining ethers, elements of refined matter, without which it will be found that the phenomena of sound, touch, taste and smell find no adequate explanation.

The luminiferous ether is supposed by modern science to be matter in a most refined state. It is the vibrations of this element that are said to constitute light. The vibrations are said to take place at right angles to the direction of the wave. Nearly the same is the description of the Tejas Tattva given in the book. It makes this Tattva move in an upward direction, and the centre of the direction is, of course, the direction of the wave. Besides, it says that one whole vibration of this element makes the figure of a triangle.



Suppose in this figure A B is the direction of the wave; B C the direction of the vibration. C A is the line along which, seeing that in expansion the symmetrical arrangements of the atoms of a body are not changed, the vibrating atom must return to its symmetrical position in the line A B.

The Tejas Tattva of the ancients is then exactly the

luminiferous ether of the moderns, so far as the nature of the vibration is concerned. There is no conception, however, of the four remaining ethers, at all events in a direct manner, in modern science. The vibrations of Âkâsha, the sonoriferous ether, constitute sound; and it is quite necessary to recognize the distinctive character of this form of motion.

The experiment of the bell in a vacuum goes to prove that the vibrations of the atmosphere propagate sound. Any other media, however, such as the earth and the metals, are known to transmit sound in various degrees. There must, therefore, be some one thing in all these media which gives birth to sound—the vibration which constitutes sound. That something is the Indian Âkâsha.*

But Âkâsha is all-pervading, just as is the luminiferous ether. Why, then, is not sound transmitted to our ears when a vacuum is produced in the bell-jar? The real fact is that we must *make a difference* between the vibrations of the elements which constitute sound and light, etc., and the vibrations of the media which transmit these impressions to our senses. It is not the vibrations of the ethers—the subtle Tattvas—that cause our perceptions, but the ethereal vibrations

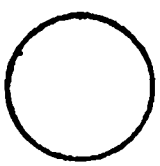
* The reader might be put in mind of the phenomena of the telephone, and still better those of the photophone. It is clear that the rays which transmit sound in the latter are not the *visual* rays of the sun. They are surely *audible* rays. The former are the vibrations of the *luminiferous* ether. What are the latter? The vibrations, of course, of the *sonoriferous* ether, the constituent of the Indian Prâna, which is called Âkâsha.

transferred to different media, which are so many modifications of gross matter—the Sthûla Mahâ-bhûtas. The luminiferous ether is present just as much in a darkened room as in the space without. The minutest space within the dimensions of the surrounding walls themselves is not void of it. For all this the luminosity of the exterior is not present in the interior. Why? The reason is that our ordinary vision does not see the vibrations of the luminiferous ether. It only sees the vibrations of the media which the ether pervades. The capability of being set into ethereal vibrations varies with different media. In the space without the darkened room the ether brings the atoms of the atmosphere into the necessary state of visual vibration, and one wide expanse of light is presented to our view. The same is the case with every other object that we see. The ether which pervades the object brings the atoms of that object into the necessary state of visual vibration. The strength of the ethereal vibrations which the presence of the sun imparts to the ether pervading our planet is not sufficient to evoke the same state in the dead matter of the darkening walls. The internal ether, divided from the external one by this dead mass, is itself cut off from such vibrations. The darkness of the room is thus the consequence, notwithstanding the presence therein of the luminiferous ether. An electric spark in the vacuum of a bell-jar must needs be transmitted to our eyes, because the glass of the jar which stands in contact with the internal luminiferous ether has a

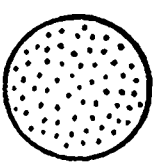
certain degree of the capability of being put into the state of visual vibration, which from thence is transmitted to the external ether and thence to the eye. The same would never be the case if we were to use a porcelain or an earthen jar. It is this capability of being put into the state of visual vibration which in glass and similar objects we call *transparency*.

To return to the sonoriferous ether (Âkâsha). Every form of gross matter has, to a certain extent, which varies with varying forms, what we may call *auditory transparency*.

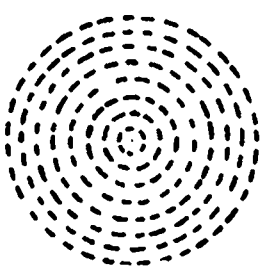
I have now to say something about the nature of the vibrations. Two things must be understood in this connection. In the first place the external form of the vibration is something like the hole of the ear.



It throws matter which is subject to it, into the form of a dotted sheet.



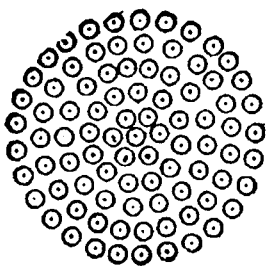
These dots are little points, rising above the common surface so as to produce microscopic pits in the sheet. It is said to move by fits and starts (Sankrama), and to move in all directions (Sarvatogama). That means to say that the impulse falls back upon itself along the line of its former path, which lies on all sides of the direction of the wave.



It will be understood that these ethers produce in gross media vibrations similar to their own. The form, therefore, into

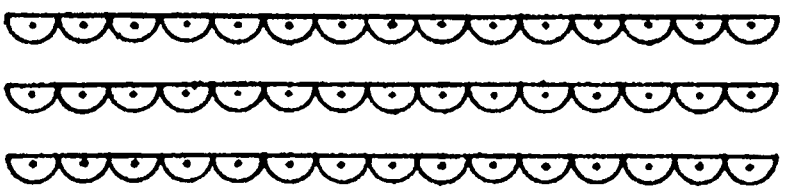
which the auditory vibrations throw the atmospheric air is a true clue to the form of the ethereal vibration. And the vibrations of atmospheric air discovered by modern science are similar.

I come now to the tangiferous ether (Vâyu). The vibrations of this ether are described as being spherical in form, and the motion is said to be at acute angles to the wave (Tiryak). Such is the representation of these vibrations on the plane of the paper.



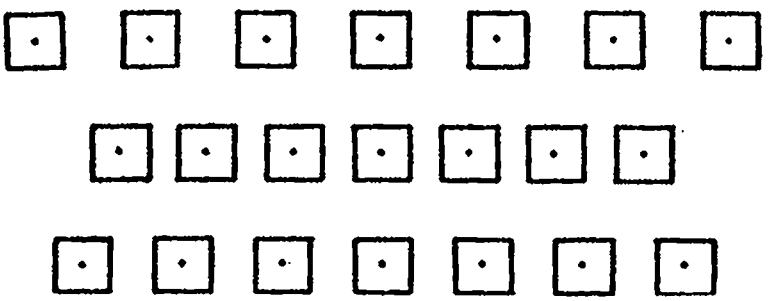
The remarks about the transmission of sound in the case of Âkâsha apply here, too, *mutatis mutandis*.

The gustiferous ether (Apas Tattva) is said to resemble in shape the half moon. It is, moreover, said to move downward. This direction is opposite to that of the luminiferous ether. This force, therefore, causes contraction. Here is the representation of the Apas vibrations on the plane of paper.



The process of contraction will be considered when I come to the qualities of the Tattvas.

The odoriferous ether (Prithivî) is said to be quadrangular in shape. Thus:



This is said to move in the middle. It neither moves at right angles, nor at acute angles, nor upwards, nor downwards, but it moves along the line of the wave. The line and the quadrangle are in the same plane.

These are the forms, and the modes of motion, of the five ethers. Of the five sensations of men, each of these ethers gives birth to one, thus:

1. Âkâsha, sonoriferous ether, sound.
2. Vâyu, tangiferous ether, touch.
3. Tejas, luminiferous ether, colour.
4. Apas, gustiferous ether, taste.
5. Prithivî, odoriferous ether, smell.

In the process of evolution these coëxisting ethers, while retaining their general relative forms and primary qualities, contract the qualities of the other Tattvas. This is known as the process of Panchîkarana or division into five.

If we take, as our book does, H, P, R, V and L, to be the algebraical symbols for (1), (2), (3), (4), (5), respectively, the ethers after Panchîkarana assume the following forms:

$$(1)\ H = \frac{H}{2} + \frac{P}{8} + \frac{R}{8} + \frac{V}{8} + \frac{L}{8}$$

$$(2)\ P = \frac{P}{2} + \frac{H}{8} + \frac{R}{8} + \frac{V}{8} + \frac{L}{8}$$

$$(3)\ R = \frac{R}{2} + \frac{H}{8} + \frac{P}{8} + \frac{V}{8} + \frac{L}{8}$$

$$(4)\ V = \frac{V}{2} + \frac{R}{8} + \frac{H}{8} + \frac{P}{8} + \frac{L}{8}$$

$$(5)\ L = \frac{L}{2} + \frac{V}{8} + \frac{R}{8} + \frac{H}{8} + \frac{P}{8}$$

One molecule of each ether, consisting of eight atoms, has four of the original principal ethers, and one each of the remaining four.

The following table will show the five qualities of each of the Tattvas after Panchîkarana.

	Sound.	Touch.	Taste.	Colour.	Smell.
(1.) H.	Ordinary..	.....	.....	.....	.....
(2.) P.	Very light.	Rather cool.	Acid.....	The blue of the cloud..	Acid.....
(3.) R.	Light.....	Very hot....	Hot.....	Red.....	Hot.....
(4.) V.	Heavy.....	Cool.....	Astringent.	White.....	Astringent.
(5.) L.	Deep.....	Slightly hot.	Sweet.....	Yellow....	Sweet.....

It might be remarked here that the subtle Tattvas exist now in the universe on four planes. The higher of these planes differs from the lower in having a greater number of vibrations per second. The four planes are:

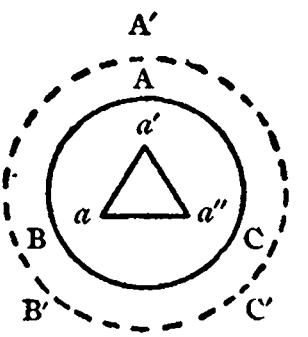
1. Physiological.....Prâna.
2. Mental.....Manas.
3. Psychic.....Vijñâna.
4. Spiritual.....Ânanda.

I shall now, however, discuss some of the secondary qualities of these Tattvas.

1. *Space.*—This is a quality of the Âkâsha Tattva. It has been asserted that the vibration of this ether is shaped like the hole of the ear, and that in the body thereof are microscopic points (Vindus). It follows, evidently, that the interstices between the points serve to give space to ethereal minima, and offer them room for locomotion (Avakâsha).

2. *Locomotion.*—This is the quality of the Vâyu Tattva. Vâyu is a form of motion itself, for motion in all directions is motion in a circle, large or small. The Vâyu Tattva has itself the form of spherical motion. When to the motion which keeps up the form of the different ethers is added the stereotyped motion of the Vâyu, locomotion is the result.

3. *Expansion.*—This is the quality of the Tejas Tattva. This follows evidently from the shape and form of motion which is given to this ethereal vibration. Suppose A B C is a lump of metal:



If we apply to it a brand of fire, the luminiferous ether in it is set in motion, and that drives the gross atoms of the lump into similar motion. Suppose *a* is an atom. This being impelled to assume the shape of the Tejas, vibration goes towards *a′*, and then takes the symmetrical position of *a″*. Similarly does every point change its place round the centre of the piece of metal. Ultimately the whole

piece assumes the shape of A′ B′ C′. Expansion is thus the result.

4. *Contraction.*—This is the quality of the Apas Tattva. As has been remarked before, the direction of this ether is the reverse of the Agni, and it is therefore easy to understand that contraction is the result of the play of this Tattva.

5. *Cohesive Resistance.*—This is the quality of the Prithivî Tattva. This, it will be seen, is the reverse of Âkâsha. Âkâsha gives room for locomotion, while Prithivî resists it. This is the natural result of the direction and shape of this vibration. It covers up the spaces of the Âkâsha.

6. *Smoothness.*—This is a quality of the Apas Tattva. As the atoms of any body in contraction come near each other and assume the semi-lunar shape of the Apas, they must easily glide over each other. The very shape secures for the atoms easy motion.

This, I believe, is sufficient to explain the general nature of the Tattvas. The different phases of their manifestation on all the planes of life will be taken up in their proper places.

II.

EVOLUTION.

It will be very interesting to trace, according to the theory of the Tattvas, the development of man, and the formation of the world.

The Tattvas, as we have already seen, are the modifications of Svara. Regarding Svara, we find in our book:

"In the Svara are the Vedas and the Shâstras, and in the Svara is music. All the world is in the Svara; Svara is the spirit itself."

The proper translation of the word Svara is *the current of the life-wave.* It is that wavy motion which is the cause of the evolution of cosmic undifferentiated matter into the differentiated universe, and the involution of this into the primary state of non-differentiation, and so on, in and out, for ever and ever. Whence does this motion come? This motion is the spirit itself. The word Âtmâ used in the book, itself carries the idea of eternal motion, coming as it does from the root *at*, eternal motion; and it may be significantly remarked, that the root *at* is connected with, is, in fact, simply another form of, the roots *ah*, breath, and *as*, being. All these roots

have for their original the sound produced by the breath of animals. In the Science of Breath the technical symbol for inspiration is *sa*, and for expiration *ha*. It is easy to see how these symbols are connected with the roots *as* and *ah*. The current of the life-wave spoken of above is technically called Hansa-chasa, *i.e.*, the motion of *ha* and *sa*. The word Hansa, which is taken to mean God, and is made so much of in many Sanskrit works, is only a symbolic representation of the two eternal processes of life—*ha* and *sa*.

The primeval current of the life-wave is, then, the same which in man assumes the form of inspiratory and expiratory motion of the lungs, and this is the all-pervading source of the evolution and the involution of the universe.

The book goes on:

"It is the Svara that has given form to *the first accumulations of the divisions* of the universe; the Svara causes involution and evolution; the Svara is God Himself, or more properly the Great Power (Maheshvara)."

The Svara is the manifestation of the impression on matter of that power which in man is known to us as the power which knows itself. It is to be understood that the action of this power never ceases. It is ever at work, and evolution and involution are the very necessity of its unchangeable existence.

The Svara has two different states. The one is known on the physical plane of life as the sun-breath, the other as the moon-breath. I shall, however, at

the present stage of evolution designate them as positive and negative respectively. The period during which this current comes back to the point whence it started is known as the day and night of Parabrahman. The positive or evolutionary period is known as the day of Parabrahman; the negative or involutionary portion is known as the night of Parabrahman. These nights and days follow each other without break. The sub-divisions of this period comprehend all the phases of existence, and it is therefore necessary to give here the scale of time according to the Hindû Shâstras.

I shall begin with a Truti as the least division of time.

THE DIVISIONS OF TIME.

$26\frac{2}{3}$ Trutis = 1 Nimesha = $\frac{8}{4\,5}$ second.
18 Nimeshas = 1 Kâshtha = $3\frac{1}{5}$ seconds = 8 Vipalas.
30 Kâshtha = 1 Kalâ = $1\frac{3}{6}$ minutes = 4 Palas.
30 Kalâ = 1 Mahûrta = 48 minutes = 2 Ghârîs.
30 Mahûrtas = 1 day and night = 24 hours = 60 Ghârîs.
30 days and nights and odd hours = 1 Pitrya day and night = 1 month and odd hours.
12 months = 1 Daiva day and night = 1 year = 365 days, 5^{hr}, 30′, 31″.
365 Daiva days and nights = 1 Daiva year.
4,800 Daiva years = 1 Satya Yuga.
3,600 Daiva years = 1 Tretâ Yuga.
2,400 Daiva years = 1 Dvâpara Yuga.
1,200 Daiva years = 1 Kali Yuga.
12,000 Daiva years = 1 Chatur Yuga (four Yugas).
12,000 Chatur Yugas = 1 Daiva Yuga.
2,000 Daiva Yugas = 1 day and night of Brahmâ.
365 Brahmic days and nights = 1 year of Brahmâ.
71 Daiva Yugas = 1 Manvantara.
12,000 Brahmic years = 1 Chatur Yuga of Brahmâ and so on.
200 Yugas of Brahmâ = 1 day and night of Parabrahman.

These days and nights follow each other in eternal succession, and hence eternal evolution and involution.

We have thus five sets of days and nights. 1, Parabrahmic; 2, Brahmic; 3, Daiva; 4, Pitrya; 5, Manusha. A *sixth* is the Manvantaric day, and the Manvantaric night (Pralaya).

The days and nights of Parabrahman follow each other without beginning or end. The night (the negative period) and the day (the positive period) both merge into the Sushumnâ (the conjunctive period) and emerge into the other. And so do the other days and nights. The days all through this division are sacred to the positive, the hotter current, and the nights to the negative, the cooler current. The impressions of names and forms, and the power of producing an impression, lie in the positive phase of existence. Receptivity is given birth to by the negative current.

After being subjected to the negative phase of Parabrahman, Prakriti, which follows Parabrahman like a shadow, has been saturated with evolutionary receptivity; as the hotter current sets in, changes are imprinted upon it, and it appears in changed forms. The first imprint which the evolutionary positive current leaves upon Prakriti is known as Âkâsha. Then, by and by, come into existence the remaining ethers. These modifications of Prakriti are the ethers of the first stage.

Into these five ethers, as now constituting the objective plane, works on the current of the Great

Breath. A further development takes place. Different centres come into existence. The Âkâsha throws them into a form which gives room for locomotion. With the beginning of the Vâyu Tattva these elementary ethers are thrown into the form of spheres. This was the beginning of *formation*, or what may also be called solidification.

These spheres are our Brahmândas. In them the ethers assume a secondary development. The so-called division into five takes place. Well, but in this Brahmic sphere in which the new ethers have good *room* for *locomotion*, the Tejas Tattva now comes into play, and then the Apas Tattva. Every tattvic quality is generated into, and preserved in, these spheres by these currents. With the Apas the formation is complete. In process of time we have a centre and an atmosphere. This sphere is the self-conscious universe.

In this sphere, according to the same process, a third ethereal state comes into existence. In the cooler atmosphere removed from the centre another class of centres comes into existence. These divide the Brahmic state of matter into two different states. After this comes into existence another state of matter whose centres bear the name of Devas or suns.

We have thus four states of subtle matter in the universe.

1. Prâna, life matter, with the Sun for centre.
2. Manas, mental matter, with the Manu for centre.
3. Vijñâna, psychic matter, with Brahmâ for centre.

4. Ânanda, spiritual matter, with Parabrahman as the infinite substratum.

Every higher state is positive with regard to the lower one, and every lower one is given birth to by a composition of the positive and negative phase of the higher.

1. Prâna has to do with three sets of days and nights in the above division of time.

(*a*) Our ordinary days and nights.

(*b*) The bright and dark half of the month which are called the Pitrya day and night.

(*c*) The northern and southern halves of the year, the day and night of the Devas.

These three nights acting upon earth-matter impart to it the receptivity of the cool, negative shady phase of life-matter. The respective days coming in after, these nights imprint themselves upon it. The earth herself thus becomes a living being, having a north pole, in which a central force draws the needle towards itself, and a south pole in which is centred a force which is, so to say, the shade of the north polar centre. It has also always the solar force centred in the eastern half, and the lunar—the shade of the former—centred in the western half.

These centres come, in fact, into existence even before the earth is manifested on the gross plane. So also do the centres of other planets come into existence. As the sun presents himself to the Manu there come into existence two states of the matter in which the sun lives and moves—the positive and the nega-

tive. As the solar Prâna, after having been for some time subjected to the negative shady state, is subjected in its revolutionary course to the source of its positive phase, Manu, the figure of Manu is imprinted upon it. This Manu is, in fact, the universal mind, and all the planets with their inhabitants are the phases of his existence. Of this, however, more hereafter. At present we see that earth-life or Terrestrial Prâna has four centres of force.

The positive phase acting upon it when it has been cooled by the negative current imprints itself upon it, and earth-life in various forms comes into existence. The essays on Prâna will explain this more clearly.

2. Manas has to do with Manu. The suns revolve round these centres with the whole of their atmospheres of Prâna. This system gives birth to the Lokas or spheres of life, of which the planets are one class.

These Lokas have been enumerated by Vyâsa in his commentary on the *Yogashâstra* (Pâda iii. Sûtra 26).

The aphorism runs thus:

"By meditation upon the sun is obtained a knowledge of the physical creation."

On this says the revered commentator:

"There are seven Lokas (spheres of existence)."

1. Bhûrloka extends to the Meru.

2. Antarikshaloka extends from the surface of the Meru to the Dhruva, the pole-star, and contains the planets, the Nakshatras, and the stars.

3. Svarloka lies beyond, is fivefold and sacred to Mahendra.

4. Maharloka, sacred to Prajâpati.
5. Janaloka, sacred to Brahmâ.
6. Taparloka, sacred to Brahmâ.
7. Satyaloka, sacred to Brahmâ.

It is not my purpose to try at present to explain the meaning of these Lokas. It is sufficient for my present purpose to say that the planets, the stars, the lunar mansions are all impressions of Manu, just as the organisms of the earth are impressions of the sun. The solar Prâna is prepared for this impression during the Manvantaric night.

Similarly Vijñâna has to do with the nights and days of Brahmâ, and Ânanda with those of Parabrahman.

It will thus be seen that the whole process of creation, on whatever plane of life, is performed most naturally by the five Tattvas in their double modifications, the positive and negative. There is nothing in the universe which the Universal Tattvic Law of Breath does not comprehend.

After this very brief exposition of the theory of tattvic evolution comes a series of Essays, taking up all the subtle states of matter one by one, and describing more in detail the working of the tattvic law in those planes, and also the manifestations of these planes of life in humanity.

III.

THE MUTUAL RELATION OF THE TATTVAS AND OF THE PRINCIPLES.

THE Âkâsha is the most important of all the Tattvas. It must, as a matter of course, precede and follow every change of state on every plane of life. Without this there can be no manifestation or cessation of forms. *It is out of Âkâsha that every form comes, and it is in Âkâsha that every form lives.* The Âkâsha is full of forms in their potential state. It intervenes between every two of the five Tattvas, and between every two of the five principles.

The evolution of the Tattvas is always part of the evolution of a certain definite form. Thus the manifestation of the primary Tattvas is with the definite aim of giving what we may call a body, a prâkritic form, to the Îshvara. In the bosom of the Infinite Parabrahman there are hidden innumerable such centres. One centre takes under its influence a certain portion of the Infinite, and there we find first of all coming into existence the Âkâsha Tattva. The extent of this Âkâsha limits the extent of the universe, and out of it the Îshvara is to come. To this end out of this Âkâsha comes the Vâyu Tattva. This

pervades the whole universe and has a certain centre which serves to keep the whole expanse together, and as one whole separate from other universes (Brahmândas).

It has been mentioned, and further on will be more clearly explained, that every Tattva has a positive and a negative phase. It is also evident on the analogy of the sun that places more distant from the centre are always negative to those which are nearer. We might say that they are cooler than these, as it will be seen further on that heat is not peculiar to the sun only, but that all the higher centres have a greater amount of heat than even the sun itself.

Well, then, in this Brahmic sphere of Vâyu, except for some space near the Parabrahmic Âkâsha, every atom of the Vâyu is reäcted upon by an opposite force. The more distant and therefore the cooler one reäcts upon the nearer and therefore the hotter. The equal and opposite vibrations of the same force cancel each other, and both together pass into the âkâshic state. Thus, while some of this space remains filled up by the Brahmic Vâyu on account of the constant outflow of this Tattva from the Parabrahmic Âkâsha, the remainder is rapidly turned into Âkâsha. This Âkâsha is the mother of the Brahmic Agni Tattva. The Agni Tattva working similarly gives birth through another Âkâsha to the Apas, and this similarly to the Prithivî. This Brahmic Prithivî thus contains the qualities of all the preceding Tattvas besides a fifth one of its own.

The first stage of the universe, the ocean of psychic matter, has now come into existence in its entirety. This matter is, of course, very, very fine, and there is absolutely no grossness in it as compared with the matter of the fifth plane. In this ocean shines the intelligence of Îshvara, and this ocean, with everything that might be manifest in it, is the self-conscious universe.

In this psychic ocean, as before, the more distant atoms are negative to the nearer ones. Hence, except a certain space which remains filled with the psychic Prithivî on account of the constant supply of this element from above, the rest begins to change into an Âkâsha. This second Âkâsha is full of what are called Manus in their potential state. The Manus are so many groups of certain mental forms, the ideas of the various genera and species of life to appear further on. We have to do with one of these.

Impelled by the evolutionary current of the Great Breath, Manu comes out of this Âkâsha, in the same way as Brahmâ did out of the Parabrahmic Âkâsha. First and uppermost in the mental sphere is the Vâyu, and then in regular order the Tejas, the Apas, and the Prithivî. This mental matter follows the same laws, and similarly begins to pass into the third âkâshic state, which is full of innumerable suns. They come out in the same way, and begin to work on a similar plan, which will be better understood here than higher up.

Everybody can here test for himself that the more distant portions of the solar system are cooler than

the nearer ones. Every little atom of Prâna is comparatively cooler than the next one towards the sun from itself. Hence equal and opposite vibrations cancel each other. Leaving, therefore, a certain space near the sun as always filled up with the Tattvas of Prâna, which are there being constantly supplied from the sun, the rest of the Prâna passes into the âkâshic state.

It might be noted down here that the whole of this Prâna is made up of innumerable little *points*. Of these *points* I shall in future speak as Trutis, and might say here that it is these Trutis which appear on the terrestrial plane as atoms (Anu or Paramânu). They might be spoken of as solar atoms. These solar atoms are of various classes according to the prevalence of one or more of the constituent Tattvas.

Every point of Prâna is a perfect picture of the whole ocean. Every other point is represented in every point. Every atom has, therefore, for its constituents, all the four Tattvas, in varying proportions according to its position in respect of others. The different classes of these solar atoms appear on the terrestrial plane as the various elements of chemistry.

The spectrum of every terrestrial element reveals the colour or colours of the prevalent Tattva or Tattvas of a solar atom of that substance. The greater the heat to which any substance is subjected the nearer does the element approach its solar state. Heat destroys for the time being the terrestrial coatings of the solar atoms.

The spectrum of sodium thus shows the presence of the yellow Prithivî, that of lithium, the red Agni, and the yellow Prithivî, that of cæsium, the red Agni, the green admixture, the yellow Prithivî, and the blue Vâyu. Rubidium shows red, orange, yellow, green and blue, *i.e.*, the Agni, Prithivî and Agni, Prithivî, Vâyu and Prithivî, and Vâyu. These classes of solar atoms which all together make up the wide expanse of the solar Prâna, pass into the âkâshic state. While the sun keeps up a constant supply of these atoms, those that are passing into the âkâshic state pass on the other side into the planetary Vâyu. Certain measured portions of the solar Âkâsha naturally separate themselves from others, according to the differing creation which is to appear in those portions. These portions of Âkâsha are called Lokas. The earth itself is a Loka called the Bhûrloka. I shall take up the earth for further illustration of the law.

That portion of the solar Âkâsha which is the immediate mother of the earth, first gives birth to the terrestrial Vâyu. Every element is now in the state of the Vâyu Tattva, which may now be called gaseous. The Vâyu Tattva is spherical in shape, and thus the gaseous planet bears similar outlines. The centre of this gaseous sphere keeps together round itself the whole expanse of gas. As soon as this gaseous sphere comes into existence, it is subjected to the following influences among others.

1. The superposed influence of the solar heat.

2. The internal influence of the more distant atoms on the nearer ones and *vice versâ*.

The first influence has a double effect upon the gaseous sphere. It imparts more heat to the nearer hemisphere than to the more distant one. The superficial air of the nearer hemisphere having contracted a certain amount of solar energy, rises towards the sun. Cooler air from below takes its place. But where does the superficial air go? It cannot pass beyond the limit of the terrestrial sphere, which is surrounded by the solar Âkâsha, through which comes a supply from the solar Prâna. It, therefore, begins to move in a circle, and thus a rotatory motion is established in the sphere. This is the origin of the earth's rotation upon its axis.

Again, as a certain amount of the solar energy is imparted to the gaseous terrestrial sphere, the impulse of the upward motion reaches the centre itself. That centre itself, therefore, and along with it the whole sphere, moves towards the sun. It cannot, however, go on in this direction, for a nearer approach would destroy that balance of forces which gives the earth its peculiarities. A Loka which is nearer to the sun than our planet cannot have the same conditions of life. Hence, while the sun draws the earth towards himself, those laws of life which have given it a constitution, by which for ages it must roll on, keep it in the sphere they have assigned to it. Two forces thus come into existence. Drawn by one the earth would go towards the sun; checked by the other it must

remain where it is. These are the centrifugal and the centripetal forces, and their action results in giving the earth its annual revolution.

Secondly, the internal action of the gaseous atoms upon each other ends in the change of the whole gaseous sphere, except the upper portion, into the âkâshic state. This âkâshic state gives birth to the igneous (pertaining to the Agni Tattva) state of terrestrial matter. This changes similarly into the Apas, and this again into the Prithivî.

The same process obtains in the changes of matter with which we are now familiar. An example will better illustrate the whole law.

Take ice. This is solid, or what the Science of Breath would call in the state of Prithivî. One quality of the Prithivî Tattva, the reader will remember, is cohesive resistance. Let us apply heat to this ice. This heat as it passes into the ice is indicated by the thermometer. When the temperature rises to 78° the ice changes its state. But the thermometer no longer indicates the same amount of heat; 78° of heat have become latent.

Let us now apply 536° of heat to a pound of boiling water. As is generally known, this great quantity of heat becomes latent while the water passes into the gaseous state.

Now, let us follow the reverse process. To gaseous water let us apply a certain amount of cold. When this cold becomes sufficient to entirely counteract the heat which keeps it in the gaseous state, the vapour

passes into the âkâshic state, and from thence into the Tejas state. It is not necessary that the whole of the vapour should *at once* pass into the next state. The change is gradual. As the cold is gradually passing into the vapour, the Tejas modification is gradually appearing out of, and through the intervention of, the Âkâsha, into which it had passed during latency. This is being indicated on the thermometer. When the whole has passed into the igneous state, and the thermometer has indicated 536°, the second Âkâsha comes into existence. Out of this second Âkâsha comes the liquid state at the same temperature, the whole heat having again passed into the âkâshic state, and therefore is no longer indicated by the thermometer.

When cold is applied to this liquid, heat again begins to come out, and when it reaches 78°, this heat having come out of and through the Âkâsha into which it had passed, the whole liquid has passed into the igneous state. Here it again begins to pass into the âkâshic state. The thermometer begins to fall down, and out of this Âkâsha begins to come the Prithivî state of water—ice.

Thus we see that the heat which is *given out* by the influence of cold passes into the âkâshic state, which becomes the substratum of a higher phase, and the heat which is *absorbed* passes into another âkâshic state, which becomes the substratum of a lower phase.

It is in this way that the terrestrial gaseous sphere changes into its present state. The experiment de-

scribed above points out many important truths about the relation of these Tattvas to each other.

First of all it explains that very important assertion of the Science of Breath which says that every succeeding tattvic state has the qualities of all the foregoing tattvic states. Thus we see that as the gaseous state of water is being acted upon by cold, the latent heat of steam is being cancelled and passing into the âkâshic state. This cannot but be the case, since equal and opposite vibrations of the same force always cancel each other, and the result is the Âkâsha. Out of this comes the Tejas state of matter. This is that state in which the latent heat of steam becomes patent. It will be observed this state has no permanence. The Tejas form of water, as indeed of any other substance, cannot exist for any length of time, because the major part of terrestrial matter is in the lower and therefore more negative states of Apas and Prithivî, and whenever for any cause any substance passes into the Tejas state, the surrounding objects begin at once to reäct upon it with such strength as at once to force it into the next âkâshic state. Those things which now live in the normal state of the Apas or the Prithivî find it quite against the laws of their existence to remain, except under external influence, in the Tejas (igneous) state. Thus an atom of gaseous water before passing into the liquid state has already remained in the three states, the âkâshic, the gaseous, and the Tejas. It must, therefore, have all the qualities of the three Tattvas, and so it no

doubt has. Cohesive resistance is only wanted, and that is the quality of the Prithivî Tattva.

Now when this atom of liquid water passes into the icy state, what do we see? All the states which have preceded must again show themselves. Cold will cancel the latent heat of the liquid state, and the âkâshic state will come out. Out of this âkâshic state is sure to come the gaseous state. This *gaseous* (Vâyava) state is evidenced by the gyrations and other motions which are set up in the body of the liquid by the mere application of the cold. The motion, however, is not of very long duration, and as they are ceasing (passing into the âkâshic state) the Tejas state is coming out. This, too, however, is not of long duration, and as this is passing into the âkâshic state, the ice is coming into existence.

It will be easy to see that all the four *states* of terrestrial matter exist in our sphere. The gaseous (Vâyava) is there in what we now call the atmosphere; the igneous (Tejàs) is the normal temperature of earth life; the liquid (Apas) is the ocean; the solid (Pârthiva) is the *terra firma*. None of these states, however, exists quite isolated from the other. Each is constantly invading the domain of the other, and thus it is difficult to find any portion of space filled up only with matter in one state. The two adjacent Tattvas are found intermixed with each other to a greater extent than those that are removed from each other by an intermediate state. Thus Prithivî will be found mixed up to a greater extent with water than with

Agni and Vâyu, Apas with Agni than with Vâyu, and Vâyu with Agni more than with any other. It would thus appear from the above, according to the science of Tattvas, that the flame and other luminous bodies on earth are not in the *terrestrial* Tejas (igneous) state. They are in or near the solar state of matter.