SECTION III. (Continued).

CHAPTER XXXV.

VIBRATION.

Résümé.—The form of the logia pertaining to ākāśa, etc.—Reason for the form.—Objections.—Answers.—Vibration, the manifestor of qualities.—Expansion and contraction, action and reaction, in-breathing and out-breathing, spanda and sphūraṇa.—Logia connected with other substances and qualities.—Relations with space, time, manas and buddhi.—The conditions and laws governing vibration.—The physiology of human vocal vibrations.

In the preceding chapter we dealt with the two less-known tattvas and their logia. The logia relating to ākāśa are, 'I-This-Sound-Not,' 'Sound-I-Not,' 'Not-I-Sound' and 'Sound-Not-I.' Here, in the first logion, the 'this' takes the place of ākāśa, while sound is obviously the attribute thereof.

Why was not the logion worded like thus, viz., 'I-Ākāśa ful-Soundful-not'? Ākāśa possessing, sound possessing, would have been good and proper adjectives for the Self, would they not? (The superimposed 'identity'
would run better and more feasibly by means of the idea of possession than that of absolute identity, and especially with reference to the quality, sound, etc., which is patently the object only of the subject and so almost impossible to identify with it, while the substance ākāśa may somehow be thus even identified with I, for we speak of ‘my body’ as ‘I’?

True, but the use of the suffix maṭup (changing, by grammatical rule into vān, to make ākāśa-vān, shabda-vān, etc., and having the significance of the suffix ‘ful’) while making up good and proper adjectives would have been against the spirit of the logion. It would have indicated on its face a distinction, a separateness between the possessor and the possessed, whereas the purpose is to indicate and feel identity (and not mere possessorship; and it should be remembered that the guṇa, or quality, sound, etc., cannot be identified apart from substance and movement, and, indeed, for purposes of manifestation and cognition, in the cognitive aspect of the idealism, has even to come first).  

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1 This is why in the Sādhya, the ‘qualities,’ sound, etc., are called the tānamātras and are said to precede the bhūtas or tattvas and the indriyas, for the qualities are the determinants of the substance to the cognizer, and Indian cosmogony proceeds from Consciousness, the cognizer, outwards, instead of the reverse. The ideation of the quality determines the vibration, and also the substance.

Another question. Why use the word ‘this’ at all in the first logion; even without it, the logion would have been complete enough and would have implied the ‘this,’ as ‘I-Sound-Not’? The answer is, because, here, sound and I are both of the nature of kriya, action, function, and are both present as such in the ‘this.’ Indeed, it might be said as another extreme, on the opposite side, that the proper form of the logion would have been ‘Sound-this-not,’ for sound as quality corresponds with, is first identified by, and is regarded as identical with the Self, and may therefore well take the place of the Self in the logion. For this very reason, the logion connected with the description of paramāṇus, ‘super-atoms,’ are ‘Sound-Ākāśa-Not,’ ‘Not-Ākāśa-Sound,’ ‘Sound-Not-Ākāśa,’ etc.

It should be noted here that all guṇas, qualities, are manifested by means of spanda and sphurāna. Spanda is the abhirupa, vibration, of atoms, that is to say, their upakārya, 1 which takes place in them of itself,
independently. We thus find that sound arises by many vibrations of one atom. Touch, etc., also arise, in every atom, in the same way. The atom is smaller than the smallest; it cannot be perceived by the eye or the ear. And yet, by means of vibrations, sound, etc., arise or exist therein (which are cognisable by our senses). We thus see that the annuvardhana, growth, development, evolution of everything depends upon and is an affair of spanda. The absence of spanda is sphuraṇa. It may be said that kriya is universal and incessant, and that there are atoms within atoms, and so sphuraṇa, as cessation of activity, is impossible and is naught. But on the other hand, a beginning and an end are also necessary for every spanda (and these obviously imply a cessation of what preceded, however infinitesimal in time and space that cessation might be), and so the necessity for the appearance for sphuraṇa also is restored. Sphuraṇa is the pṛati-kriya or reaction to the kriya or action of spanda. In other words it is the prasambhava, the reduction from possibility into actuality, of the ‘actuality’ of inactivity, the kriya of nishkriya, during the existence or manifestation of action. Briefly, it is a matter of the necessity of both. But, surely, there is a difference between pṛati-kriya and nishkriya, reaction and inaction, as between positive and negative, being and non-being; how can the two be identified? This way; just consider that inaction, cessation from activity, is the seed and root and commencement of reaction; so much so is this the case that inaction has been said to be the substratum and supporting background of both action and inaction. Hence, in an exposition of spanda, sphuraṇa appears as the originator of reaction as well as action. Because there is no distinction between producer and produced, originator and originated, cause and effect, therefore is nishkriya declared to be both active and reactive. Hence the
declaration that the world vibrates and strains, 
‘spanda te and sphurata te,’ inbreathes and outbreathes, in every atom.

Spanda, vibration, corresponds to A; sphurana, strain (?), to U; and sphulana, swelling, expansion or circular movement (?), the negation of both, to M. As the Brahma-
sutra says: By spanda and sphurana is sphulana, and that is jagat, the ‘moving
world.’ Or as the Mimamsa: The vyavahara behavior, activity, of spanda and sphurana
is karma, movement, action.1

1 Modern Samskirt has lost the distinction between spanda, sphurana, and
sphulana. The Akhaya-chandra, a thesaurus of verb-roots, puts them all together, sphurati, sphulaati and
spanda te, as meaning spandana, striving. In current works, all these are indiscriminately used
(sphulaati is less common) in the sense of striving, struggling, writhing; sphurati is also used in the
sense of throbbing, palpitating; and again of sparkling, twinkling; and finally of shining on or appearing
in the mind as an idea. Another form, sphurata, has the sense of “being able.” It is obvious that
all these senses are allied and pass from one to another gradually. Sphulana has at present more
the significance of pulling, swelling up and down, spherical expansion and contraction.

In this condition of things the translation of the text is naturally only tentative, and has been made

Atoms may be ‘experienced,’ perceived, by Yoga. And the counsel is therefore given to aspirants to strive to so ‘experience’ them,

with reference to possible similarities in modern thought. ‘Vibration’ needs no recommendation. Sphurana or ‘strain’ may be regarded as
the condition of the neutral moment or point, on ‘both sides’ of which the vibrations take place, the turning
point between action and reaction. Sphulana seems to be the ‘breathing’ of the atom, if it is
regarded not as a vortex-ring, but as a vortex-bubble. Sphulinga, spark, seems to be connected
with sphulana, the result of excessive swelling apparently being the radiating off of sparks. Mrs.
Besant’s Occult Chemistry will help the reader in making up his opinions as to the sense of the text
with reference to the various kinds of movements of the atom.

In the human being, regarded as an atom-unit for purposes of analogy, we may discern many currents
up and down and also round and round with intervening pauses, on various planes, physical, etheric,
astral, mental, etc. The skeleton of the human trunk has a resemblance to the atom as pictured
in Occult Chemistry—which picture, by the way, represents it not as a ring but as a spheroidal cell or
wire-work ball. Breathing regarded as physical sphulana, is subdivided into inspiration, expiration
and retention. The day is similarly subdivided for purposes of Sanhhyya. And so on.
On the perception of atoms, exact knowledge arises as to the precise vibrations, strains, etc., whereby the sense-qualities are produced, and this knowledge leads on to the successful performance of the work (of the hierarchs).

As there are four logia connected with ākāśa, so are there four for each of the other elements, vāyu, tejas, āpa, prabhavī. Thus: 'I-this-touch-not,' 'touch-not-I,' 'I-not-touch,' 'not-I-touch.' By the energising of these logia, touch comes into manifestation as the quality of vāyu. In connexion with tejas, in the logia, 'I-this-rūpa-not,' etc., the word rūpa means the (specific, differential) object of the existing organ of vision, the eye; the other logia are 'Form-not-I,' 'I-not-form,' 'Not-I-form.'

We have thus seven logia, which also are regarded as root-logia. They may be co-ordinated thus (from a new standpoint). Whatever is

1 This specific statement seems to be made in order to distinguish the connotation of rūpa, here, 'visible form including color,' from that more general sense of the word 'form' which may be said to attach to all substances, cognisable by other senses than the eye also—as in the metaphysical Vedānta-phrases nāma-rūpe, name and form, both being embodied in the objects and being expressible in the terms of any and every sense-organ.

found by experience as 'between' the I and the 'This'—that is time. This may be observed even in the pronunciation of every letter-sound. In such pronunciation, the pradesha, indication or determination (? or location) of the work that is done by the extreme tip of the tongue, by its front part, its middle and its root—this successive determination (?) or location itself is time. It comes between 'I and This,' between 'This and not,' and between 'Not and I.' The condition of, or during, the pronunciation of Not, I, This, is also included in that (Not, I, This?) and here we have the origin of time (?). Time existing, the existence of space is apprehended by means of work or motion; (they are the necessary conditions of all experience). Again, that wherein I, This and Not are placed, where they are persistently believed to be, on arrival at or in which, I and This cease to manifest or to be perceived—that is desha or space, śūnya or vacuum, of the nature of Negation, wherein I and This move or are apprehended.1 After space and time have thus originated (i.e., begun to be apprehended), śūnya,

1 All this context is very subtle and elusive, as is but natural when we are dealing with such 'emptinesses,' abstractions, as space and time. In this real abstract character, of course, they are simultaneously manifest or non-manifest, as we like
another, other, appears by that same Svabhava by which time and space are projected. ‘I-those-other-not’ is the appertinent logion. Here ‘I’ is space, ‘this’ is time, and ‘other’ substance there is not than these. By the operation of this ‘other’, there arises ‘I’ within ‘I’, ‘this’ within ‘this’, and ‘not’ within ‘not’. The I within the I is manas. Because of this fact is manas counted among the dravyas. And, further, because of this interiorness is it the function of manas to prevent simultaneous cognitions (as of a doorkeeper who allows only one visitor to pass in a time). Because there is a svabhava, a nature or character, present in the I, therefore is an interiorness put into it, and inness (implying the opposing outness) to think about it, together with equally empty ‘motion.’ But when they are semi-concrete, doing duty for buddhi and mahat, some slight succession is wanted, in manifestation, and yet is difficult to make out, for a mere unity cannot manifest. Therefore the immense travail of thought, and the turning and turning about. Because of this, the Purāṇas find it so difficult to decide precedence between the Trinity, especially, Shiva and Vishnu. ब्रह्म by ब्रह्म has the father and now the son, etc., of either of the other, the three corresponding to time, space and motion.

implies non-simultaneity, non-oneness. Anātah, ‘within’, ‘inner’, is equivalent to, or implies anatara or interval. Hence manas cannot apprehend things simultaneously, as one, but does so in succession, as separate. But, on the other hand, simultaneity or oneness is also in the Svabhava, and Svabhava and ‘I’ are not separate but one and the same; therefore the whole I-ness of the I is buddhi whereby simultaneity of cognition (knowledge of many things as parts of one and as one, i.e., as strong together by the I-ness, the unity, of the I into an unbroken continuance) arises. The appearance

1 The reader who is familiar with theosophical views as to the seven principles of man, the permanent atoms, the nature of the mental and budhiic atoms, the budhiiic web of life, the gradual transfer of the centre of consciousness from one plane and body to another, the limitation or expansion of consciousness by such transfer, the lower concrete mind with manas attached to kama, the higher abstract mind with manas attached to buddhi, the monadic triad of a mano-buddhi-manas (as present connected with the three planes of akasha, vayu-agni), to be later located in annupada-akasha-vayu, and then again in adi-anupada-aka-akasha, etc., etc.,—will find much suggestion for thought and explanation of ‘whys’ in the text here.
of simultaneity or unity in that which is not synchronons or one is buddhi, as the Nyāya says. On the foundations of these, space, time, manas (standing for mahaṭ) and buddhi, is the whole world built.

Out of and in these all the various substances and qualities arise successively one out of another. Thus ‘I-this-sound-not’ is a complete logion. In this there takes places the yoga-vibhaṣa, conjunction-division, varied combination, of the nature of ‘sound-not-I’ (?). Because of this there appears prayatna, effort, volition, in the Self. And because of the effort, there arise anusvarata and pari-varata, persistence and change, permutations and combinations (in the atoms?). The result of this is, finally, that vāyu arises as the carrier or vehicle of sound. And the quality of sound itself, at the time of spreading forth or being ‘carried,’ becomes transformed into the quality of touch, by the sūnda or vibration of sound. So out of the vibration of touch, visibility; and so, successively, taste and smell.

It seems that what is here called buddhi and mahaṭ (manas) is called mahaṭ and ahaṅkāra in the current Śākhyas.

Metaphysics and physics are obviously brought very close together here. One almost feels that the long-sought goal of reducing to psychical elements, the substance by the vibration of which, something new results, a new substance or a new all physical phenomena.” (Max Verworn, General Physiology, p. 38, translated by Leo) has been reached. But it is a case of only ‘feeling,’ and there too ‘almost.’ The break of the connecting tradition makes it nearly impossible to understand clearly the sentences of the text. It is only the modern ideas of science and the views of Theosophy that help one to make ‘guesses at the true meaning’ in such elusive portions of the work, which, by reaction, help one to understand the ‘whys’ of Theosophy and science better. It is a case of mutual help.

The changes rung here, on the words of the primary logion, in order to deduce from it all psychical and physical phenomena are very subtle and I have, no doubt, often failed to catch and reproduce the true meaning of the author. I can only hope that some reader, more richly endowed with intuition and the buddhi which sees the unity in the diversity, may be more fortunate in fixing the true sense.

As to the successive development of the dravyas and guṇas, one out of another, the metaphysical deduction may be put as below, as one way: In seeking (from the empirical standpoint of the successive) to define to itself ‘What am I?’ the Self does a veil of that most tenuous and filmy matter
quality—we have a duality here, viz., the previous vibration and the product of the vibration. 
A v a s t h ā, condition, state, comes from or arises out of vibration and from vibration arises the succession of two, three, four, etc. Therefore is it said that all is produced by vibration.

which may be called ādī-tatvā possessed of the quality of mere ‘configuration,’ ‘geometrical’ or archetypal forms, the next remove after the first pure mere ‘objectivity’ or ‘this-ness’ of Mūla-prakṛti. But ‘almost’ simultaneously with this identification of the I with a film, the need for a contradistinguishing ‘this’ appears. Nothing can be determined without something else from which it is to be distinguished. Therefore the a n u pādāka- tatvā appears as a foil, the reticulation in the plasm. But yet again a connecting link, by the medium of which the two may be held in contradiction and yet connexion or juxtaposition, is wanted. Therefore ākāśa appears as m anas or a haṅkāra; as nucleus amidst plasm and reticulation. So we have ātma-buddhi-man as.

And each successive appearance must be, can only be, out of the previous one, by a differentiation a ‘heterisation,’ ‘othering.’ And so the gradual descent of the ‘triplet,’ and a corresponding ascent.

By another necessity, each previous plane needs, produces and uses the next one as a carrier or vehicle, just as the soul needs a body. See the Science of Peace, p. 295, 296 and footnote in Sec. VI, viṣṇa.

Vibration arises in ākāśa because of the presence of the Self in it; and it does so under a fixed law that such a vibration shall take place in such a truti or moment (a definite measure of time), or from such a moment to such a moment. There is also another law, viz., that this is the a v a s t h ā, condition, limitation, of this and this vibration, in such and such a manner (?), and again, a n a v a s t h ā, absence of finality or definition by means of such (another) vibration.¹

The universality of vibration has been declared everywhere. As the Brahma-Sūtra says: Vibration only is the manifestation of kriyā, action. And therefore is it said in the Science of Grammar: Such a s habda, sound, is produced by such and so much of a vibration. The number of vibrations is the principle or secret of

¹ The presence of the Self causes vibration, through prayaṭṇa, as explained above, a little while ago. The periodicity of vibrations is obvious. The next very vague sentence seems to mean that any particular substance retains its definite nature only so long as the atoms concerned are vibrating in a particular manner, and that when they begin to vibrate in a certain other manner, it loses its definiteness and the whole mass of it passes into the so-called ‘critical’ stage intervening between two definite forms.
the production of all sounds. By so much vibration we have ḍḥvani, inarticulate sound; by so much spashta, articulate, clear; by so much their upanyasa, juxtaposition, composition, collocation, placing and spreading out one near and after another (?). This very vibration, when it takes place in the pronunciation of letters, i.e., human speech, is called prayatna, (the technical 'vocal effort' of Samskṛt grammar). As the Śīkṣā says: Prayaṭna is the vibration of the kamarla, 'lotus,' nerve-plexus, (the arnikā-plexuses mentioned before). As is the vibration of the kamarla, rapid or slow, such is the quality of the sound, sweet, soft, harsh, etc. Because of the alpatva, fewness, smallness, finer or subtler quality, of the atoms used in the formation of the bodies of women and the greater rapidity of the vibrations of their kamarla, and the greater (number or range of) shabḍaspanḍa, sound-vibrations, the feminine voice is generally soft-toned. Of course there are many women too whose voices are not soft; in their case the vibrations are not rapid (enough). The voices of children may be usefully studied in this connexion, for a clearer knowledge of the vibrations of sound.