

The Buddhist Conception of Mahabhutas as Primary Elements of Matter

MOST of the schools of Indian thought, notably, the Sāṃkhya, the Vedānta, and the medical tradition as represented by Caraka and Suśruta, recognize five *mahābhūtas* (elemental substances), viz. *pṛthivī* (earth), *ap* (water), *tejas* (fire), *vāyu* (air), and *ākāśa* (ether).¹ That *ākāśa* is the fifth is admitted by the Nyāya-Vaiśeṣikas, too. But in many respects it differs from the other four: It is a non-corporeal (*amūrta*) substance devoid of tactility (*sparśa*) and characterized by ubiquity (*vibhū*), absolute continuity, and infinite magnitude. As such, unlike the other four substances, it is not, in the ultimate analysis, composed of atoms. Thus, although *ākāśa* is introduced as a *mahābhūta*, in view of its peculiar characteristics, it has to be distinguished from the other four and is, in a way, on a par with such intangible substances as *kāla* (time).² In Jainism, on the other hand, it is not ranked with what is called *bhūdacatukka*, “the elemental tetrad,” which consists of *pṛthivī*, *ap*, *tejas* and *vāyu*. Both *ākāśa* and *bhūda-catukka* are brought under the general heading, *ajīva*, non-spirit; but only the latter is brought under the more specific, *puggala*, matter.³

The position of Buddhism in regard to this question is similar to that of Jainism. That is to say, only *paṭhavī*, *āpo*, *tejo* and *vāyo* are brought under the heading, *mahābhūta*. It is of course true that, as pointed out by Mrs. Rhys Davids, in the Nikāyas sometimes *ākāśa* is enumerated immediately after, and apparently as co-ordinate with, the above four items.⁴ But this does not mean that *ākāśa* is the fifth *mahābhūta*, just as much as *viññāna* (consciousness), which, too, is sometimes enumerated after the five items in question,⁵ is not the sixth *mahābhūta*. It may be noted here that, when *ākāśa* and *viññāna* are mentioned along with *paṭhavī*, *āpo*, *tejo* and *vāyo*, the general designation used in respect of all the six items is *dhātu*. On the other hand, the term, *mahābhūta* is always used in a more specific sense, i.e. as referring only to the last four items.

1. See Seal, *Positive Sciences of the Hindus*, Delhi, 1925, Ch. I.

2. See Bhaduri, *Nyāya-Vaiśeṣika Metaphysics*, Poona, 1947, Ch. III.

3. See *Pañcastikāyasāra*, ed. Chakravartinayanar, Allahabad, 1920, pp. 79ff.

4. Cf. e.g. D. III, 274; M. I, 431 ff.

5. Cf. e.g. M. III, 31; A. I, 176.

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In the later scholasticism, too, the situation remains unchanged. True, on the nature of *ākāśa*, the scholiasts advance more than one interpretation. But on its non-recognition as a *mahābhūta*, they all agree.

With this clarification as to the number of *mahābhūtas*, we may now proceed to consider how they are understood in Buddhism.

In the Nikāyas they are defined in simple and general terms and are illustrated mostly with reference to the constituents of the human body: *Paṭhavī-dhātu* is that which is hard (*kakkhaḷaṇi*) and rigid (*khariḡataṇi*), e.g. hair of the head or body, nails, teeth, skin, flesh, etc. *Āpo-dhātu* is water (*āpo*) or that which is watery (*āpogataṇi*), e.g. bile, phlegm, pus, blood, sweat, tears, etc. *Tejo-dhātu* is fire or heat (*tejo*) or that which is fiery (*tejogataṇi*), e.g. the heat in the body which transmutes food and drink in digestion. *Vāyo-dhātu* is air (*vāyo*) or that which is airy (*vāyogataṇi*), e.g. "wind discharged upwards or downwards, wind in the abdomen or belly, vapours that traverse the several members, inhalings and exhalings of breath".⁶

What one can gather from these definitions is that from the very beginning Buddhism did not make a radical departure from the popular conception of the *mahābhūtas*. There are, however, some Nikāya passages which seem to imply that they were understood in a more "abstract" way,⁷ i.e. as interpreted in the Abhidhamma. (To this we shall come soon.) But within the Nikāyas themselves such implications are not worked out into a clearly formulated theory.

It is really in the Abhidhamma that we meet with such a situation. Here we are presented with a different conception of the *mahābhūtas*. Much of the earlier terminology is retained, but the earlier definitions are modified. The subject is presented in greater detail and with more precision. New theories are evolved and new interpretations advanced, so as to bring the whole subject in line with the other subsequent developments of the doctrine.

For the Abhidhamma, too, *kakkhala* and *khara*, which mean hard and rigid respectively, bring out the essential nature of *paṭhavī-dhātu*, the earth-element.⁸ The first is said to represent its characteristic (*lakkhana*) and the

6. See *M.* I, 431 ff.

7. Cf. *D.* I, 215 ff.; *D.* III, 87; *S.* I, 15.

8. See *Dhs.* p. 177; *Vbh.* p. 82.

second its mode (*ākāra*).⁹ The question is raised whether *kakkhaḷatta*, hardness, is itself not the *paṭhavī-dhātu*. It is maintained that, although this is the case, yet for the convenience of definition, *paṭhavī-dhātu* is said to possess the characteristic of *kakkhaḷatta*.¹⁰

It will be seen that according to the Nikāyan definition what is (comparatively) *kakkhaḷa* (hard) is *paṭhavī*, whereas according to the Abhidhammic definition *kakkhaḷatta* (the fact of hardness) is itself *paṭhavī*.

The conception of *paṭhavī-dhātu* in this way is not confined to the Theravāda alone. Parallel definitions are met with in other schools of Buddhist thought. In its Chapter on the Genesis of the World, the *Mahāvastu* says that when the living beings who lived at a new evolution of the world, began to eat whole mouthfuls of the essence of this earth as food, their bodies came to possess the characteristics of *gurutva*, heaviness, *kharatva*, roughness, and *kakkhaṭatva*, hardness.¹¹ The implication is given that *gurutva*, *kharatva* and *kakkhaṭatva* represent the essential nature of *paṭhavī-dhātu*. The *Abhidharmakośa* and its *Vyākhyā*, too, use the latter two terms in their definition of this element.¹² In the *Abhidharmasamuccaya* it is defined as *kaṭhinatā*, a term which could be interpreted as meaning rigidity or solidity. As such, this interpretation is almost the same as that given by the Theravādins. Thus there is general agreement among the Buddhist scholiasts in maintaining that what is called *paṭhavī-dhātu* stands for the phenomenon of hardness, rigidity, solidity or compactness in matter.

Paṭhavī-dhātu is also explained as that which extends or spreads out—*pattharati ti paṭhavī*.¹³ Extension is occupation in space. "Tri-dimensional extension gives rise to our idea of a solid body. As no two bodies can occupy the same space at the same time, Buddhists derive their idea of hardness (*kakkhaḷatta-lakkhaṇa*) from *paṭhavī*."¹⁴ Thus the interpretation of *paṭhavī-dhātu* as the element of extension brings into relief a different method of approach.

9. See *Vism.* p. 286.

10. Cf. *Nanu ca kakkhalattam'eva paṭhavīdhātū ti? Saccam'etaṃ. Tathā pi viññātā-viññātasaddatthātāvasena abhinne pi dhamme kappanāsiddhena bhedena evaṃ niddesō katō. Evaṃ hi atthavisesāvabodho hoti ti—VismT.* pp. 362—3.

11. Cf. *Yato ca bhikṣavaste satvā taṃ pṛthivīrasamālopakāarakamāhāramāhārensuh' atha teṣaṃ kūye gurutvaṃ ca kharatvaṃ ca kakkhaṭatvaṃ ca upanīpate.—op. cit.* I, 339

12. *AK.* Ch. I, 22; *AKvy.* I, 57, 66.

13. *Vism.* p. 287; *Abhv.* p. 64.

14. Aung, *Compendium of Philosophy*, P.T.S., 1910, p. 155, n.l.

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In the commentaries, we get further discussions on the peculiar function of this element. Buddhaghosa observes that it acts as a foundation, a sort of fulcrum, and that it manifests itself as receiving (*sampaññāna-paccupaṭṭhānā*).¹⁵ This is further explained to mean that the other three *mahābhūtas* are established on it (*paṭhavī-paṭiṭṭhitā*), and that therefore it serves as a support, a basis (*paṭiṭṭhānaṃ*), for them.¹⁶ That this view is shared by the Vaibhāṣikas is shown by their contention that the "bearing up" or supporting (*saṃdharāṇa*) of ships by water (= ocean) is a sufficient ground for the inference that the *pṛthivī-dhātu* is present in water.¹⁷

The above conception of the function of *paṭhavī-dhātu* appears to be only a refinement of the popular view that the earth, as it is ordinarily understood, is a receptacle, a sort of dumping ground for all types of material things. It is, in fact, significant to note that the *Vibhāvīnī Tikā* observes that, just as what we conventionally call earth is the support of trees, mountains, etc., even so the earth-element is a support for the other material elements.¹⁸

Āpo-dhātu represents the fact of viscosity (*sincha*) and cohesion or "binding together" in matter (*rūpassa bandhanattaṃ*).¹⁹ *Bandhanatta* or cohesion refers more to its function. "For the *āpo-dhātu* binds together iron, etc. in masses, makes them rigid. Because they are so bound, they are called rigid; similarly, in the case of stones, mountains, palm-seeds, elephant-tusks, ox-horns etc.. All such things the *āpo-dhātu* binds and makes rigid."²⁰ *Paggharana*, flowing, and *nissandabhāva*, state of streaming, are also cited as two other characteristics of this element²¹—a view which suggests the popular and common-sense idea of water. However, this does not mean that *āpo-dhātu*, as it came to be interpreted in the *Abhidhamma*, is identical with water. No *mahābhūta* can exist independently of, or in isolation from, the other three. Hence *āpo-dhātu* is present not only in water but also in air, fire, etc.

In the schools of Sanskrit Buddhism, too, the *ap-dhātu* is defined in a similar manner. It stands for *dravatva*, liquidity, and *snehatva*, viscosity in

15. *Vism.* p. 289; see also *Asl.* p. 332, *Mvn.* p. 58.

16. *Ibid. loc. cit.*

17. See *AKvy.* I, 33.

18. See *ADSVT.* p. 110.

19. See *Dhs.* p. 177; *Vbh.* p. 83.

20. *Ayapiṇḍi-ādini hi āpō-dhātu ābandhivā thaddhāni karōti, tāya ābaddhattā tāni thaddhāni nāma honti. Pāsāṇapabbatātālatti-hatthidantagosīṅgādisu pi es'eva nayō. Sabbāni h'etāni āpodhātu eva ābandhivā thaddhāni karōti.*—*Asl.* p. 335.

21. See *Vism.* p. 289; *Asl.* p. 336; *Abhk.* p. 250; *Mvn.* p. 58.

matter.²² It may be noted here that the *ap*-substance of the Vaiśeṣikas, too, has the same two characteristics: *āpo dravaḥ snigdhaḥ*.²³ But according to the Vaiśeṣikas, liquidity and viscosity are qualities inherent in the *ap*-substance. No such dichotomy is recognized by the Buddhists. Notwithstanding these metaphysical differences, the parallelism goes still further. The Vaiśeṣikas maintain that *saṃgraha*, cohesion or agglutination, is a distinct quality produced by fluidity and viscosity operating together.²⁴ The Buddhists maintain that *āpo-dhātu*, which stands for the facts of liquidity and viscosity, performs the function of *saṃgraha*. Hence it is that according to the Vaibhāṣikas, the phenomenon of cohering or non-broken continuity in a blazing fire is due to the presence therein of *āpo-dhātu*.²⁵ The same idea is recognized by the Theravādins, too, when they say that *āpo-dhātu* manifests itself by its action of cohesion. (*āpo-dhātu-saṅgaha-paccu-paṭṭhānā*.)²⁶

Tejo-dhātu signifies the phenomenon of heat, the terms being used are *usma* or *usuma*. In the Sanskrit sources we get *uṣṇatva* and its corresponding Pali form, *uṇhatta*, is the standard term used in the Pali commentaries and *ṭīkā*s.

One significant feature of the Theravāda conception of *tejo-dhātu* concerns the question of *sīta*, cold. The Vaiśeṣikas, for instance, maintain that *uṣṇa*, heat, is the peculiar quality of the fire-substance (*tejasa uṣṇatā*) and that *śīta*, cold, is that of the water-substance (*apsu śītatā*).²⁷ Since the natural touch of water is cold, "other substances (bodies) are cold only in proportion to the extent to which water enters into their composition".²⁸ That the Vaibhāṣikas, too, associate *śīta* with *āpo-dhātu* is shown by their contention that the touch of cold in wind points to the presence therein of *āpo-dhātu*.²⁹ In the opinion of Bhadanta Srilābha, one of the celebrities of the Sautrāntika School, "Le feu élémentaire existe dans l'eau, puisque celle-ci est plus ou moins froide."³⁰ This statement, too, carries the implication that heat and cold are represented by *tejo-dhātu* and *āpo-dhātu* respectively.

22. See *AK*, Ch. I, 23, n. 3.

23. *VS*, p. 56.

24. See Bhaduri, *Nyāya-Vaiśeṣika Metaphysics*, Poona, 1947, p. 126.

25. *AKvy*, I, 33.

26. *Asl*, p. 332; *Abhv*, p. 65; *Abhvk*, p. 250.

26. *Asl*, p. 332; *Abhv*, p. 65; *Abhvk*, p. 250.

27. *VS*, p. 59.

28. See Bhaduri, *op.cit.* p. 120.

29. *AKvy*, I, 33.

30. *AK*, Ch. II, 146.

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The position taken up by the Theravādins in regard to this question is quite different. In the works of the Abhidhamma Piṭaka, we do not get any explicit statement concerning the position of *sīta*, cold, in relation to the *mahābhūtas*. Nevertheless, there is no possibility of its being considered as represented by *āpo-dhātu*, because this particular primary element, as maintained by the Theravādins, does not come within the sphere of the tangible (*phoṭṭhabbāyatana*).³¹

It is only in the *ṭīkā* literature that we are presented with a clear statement on this subject: "Although cold (*sīta*) is known by the sense of touch, it is really *tejo*. The sensation of cold (*sīta-buddhi*) is obtained when the heat is less, for there is no distinct quality (*guṇa*) called cold... Hence it is that, during the summer season when people having first stayed in the sun, enter the shade, they experience the sensation of cold. And when they stay there for a long time, they experience the sensation of heat."³²

Thus, in the view of the Theravādins, cold is not the peculiar characteristic of *āpo-dhātu* (as is believed by many other Buddhist schools), but is the relative absence of heat. And heat is represented by *tejo-dhātu*.

The characteristic function of *tejo-dhātu* is *paripācana*, i.e. ripening or maturing.³³ For this is the element which heats, matures, sharpens, and imparts heat to all other material elements.³⁴

Vāyo-dhātu, the air-element, as defined in the *Dhammasaṅgani*, signifies *thambhitatta*, inflation or distension, and *chambhitatta*, fluctuation or mobility.³⁵ While the other three *mahābhūtas* stand for the facts of solidity, cohesion, and the temperature of cold and heat, this represents the more restless and dynamic aspect of matter.

The standard term used in the Pali commentarial works to describe *vāyo-dhātu* is *samudīraṇa* which means mobility or motion.³⁶ In the Sanskrit sources *samudīranatvaṃ* occurs in combination with *laghu* or *laghutā* (light

31. See below, p. 20.

32. *Kīncāpi hi sītataṃ phusitvā gayhati, sū pana tejo yeva. Mande hi uṇhatte sītabuddhi, sītataṃ-saṅkhātassa kassa cī guṇassa abhāvato . . . Tathā hi ghammakāle atāpe thatvā chāyama pavīṭṭhānaṃ sītabuddhi hoti. Tath'eva cirakālaṃ ṭhitānaṃ uṇhabuddhi.*—*ADSVT*. p. 111; see also *VismT*. p. 459; *VismS*. V, 75 ff.

33. See *ADSVT*. p. 10.

34. See *Asl*. p. 332.

35. *Op.cit.* p. 177; see also *Vbh*. p. 84.

36. See e.g. *Asl*. p. 250, *Vism*. p. 381.

or lightness).³⁷ For the Theravādins, *lahutā*³⁸ represents one of the secondary elements of matter, i.e. one that is dependent on the *mahābhūtas*. This seems to be the reason why they do not associate it with the definition of *vāyo-dhātu*, which is one of the primary elements of matter. The *Abhidharmakośa* takes note of a similar problem when it observes that, according to a Sūtra passage *vāyo-dhātu* is *laghutva*, whereas according to the Prakaranas *laghutva* is a secondary material element. It seeks to reconcile the two views by stating that “le *dharma* qui a pour nature la motion (*īraṇātma*), c’est l’élément vent; sa nature (legèreté) est manifestée par son acte de motion (*īraṇākarma*).”³⁹ Since the Theravādins recognize *lahutā* as a secondary element of matter, in their opinion, it is not associated with one particular *mahābhūta*, but is dependent on all the four.⁴⁰ These are but minor differences. There is general agreement among the Buddhist schools that *vāyo-dhātu* is representative of mobility or motion (*īraṇa*, *samudīraṇa*).

With the development of the theory of momentariness (*kṣaṇa-vāda*), the above definition of *vāyo-dhātu* as representative of mobility or motion could not be retained without modification. Suffice it to note here that according to this theory, all elements of existence, mental as well as material, are of momentary duration. They are characterised by instantaneous being, in the sense that they arise and perish in continual succession, projecting a picture of static existence.⁴¹ Closely connected with this theory is the denial of motion. As the *Abhidharmakośa* observes: “Le conditionné n’existe pas au delà de l’acquisition de son être: il périt à la place où il est né; il ne peut de cette place aller à une autre.”⁴² If *vāyo-dhātu* is representative of mobility or motion, how is this statement to be reconciled with the denial of motion?

In keeping with the theory of momentariness motion, too, is given a different interpretation: “Par motion, on entend ce qui fait que la série d’états qui constituent une chose va se reproduisant dans des lieux différents; de même qu’on parle de la motion d’une flamme.”⁴³ Accord-

37. See e.g. *AK*. Ch. I, 23; *AKvy*. I, 33.

38. See the list of material elements (*rūpa-dhammā*) given in *Dhs*. p. 188.

39. *Op.cit.* Ch. I, 23.

40. See *Dhs*. p. 189

41. See *AK*. Ch. IV, 4 ff.; also Silburn, *Instant et Cause*, Paris, 1955, p. 12 ff.; Stecherbatsky, *Buddhist Logic*, Petrograd, 1935, Vol. I, p. 20 ff.

42. *Op.cit.* Ch. IV, 4—5.

43. *AK*. Ch. I, 22—3.

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ingly, motion has to be understood, not as the movement of an element of matter from one locus in space to another (*de'sāntaragamana*), but as the appearance of different elements of matter in adjacent locations (*de'sāntarotpatti*).⁴⁴ For in the case of momentary elements, wherever appearance takes place there itself takes place disappearance—*yatraivotpattiḥ tatraiva vinā'saḥ*.⁴⁵ The classic example given in this connection is the light of the lamp. The so-called light of the lamp, it is contended, is nothing but a common designation given to an uninterrupted production of a series of flashing points. When the production changes place one says that the light has changed. But in reality other flames have appeared in another place.

It is interesting to notice that this new definition of motion has somehow or other found its way to Theravāda scholasticism that flourished after the time of Buddhaghosa. In the earlier Pali commentaries *vāyo-dhātu* is understood as indicative of motion; but therein motion is not denied. In the later works, notably the *ṭīkā's*, motion is denied, that is to say, it is interpreted as *desantaruppatti*, the appearance of momentary elements in adjacent locations.⁴⁶ This new development has necessitated a modification of the earlier definition of *vāyo-dhātu*. Hence it is that the scholiasts seek to define *vāyo-dhātu* as the cause of "motion" (= *desantaruppatti*). It is that which causes or brings about the arising of momentary elements in adjacent locations (*desantaruppatti-hetu-bhāvena . . gametī ti*).⁴⁷ The recognition, on the part of the Theravādins, of this new definition of motion is no matter for surprise, for they, too, developed a theory of moments, which, except for minor details, presents a close parallelism to that of the schools of Sanskrit Buddhism.

From the fore-going description of the *mahābhūtas* it should appear that, as interpreted by the Ābhidhammikas, *paṭhavī* stands for solidity and extension, *āpo* for visciduity and cohesion, *tejo* for the temperature of cold and heat, and *vāyo* for motion or (according to the later interpretation) the cause of "motion." The four are not the qualities or attributes of *bhūta-rūpa*, the primary matter; they are its constituents. In this respect, they are like the three *guṇas* of Sāṃkhya, which form the constituents of *prakṛti*, the ultimate causal nexus of the world of non-self.

44. *AKvy.* I, 33; see also *Le Traité de la Demonstration de l'Acte (Karmasiddhiprakarana)* tr. E. Lamotte, *Mélanges chinois et bouddhiques*, IV, 1936, pp. 151 ff.

45. *AKvy.* I, 33.

46. See *VismT.* p. 359; *ADSVT.* p. 110; *Abhv.* p. 249.

47. *VismT.* p. 359.

The four *mahābhūtas* are co-ordinate and represent four distinct forces or phenomena in the realm of matter. The characteristics (*lakkaṇa*) functions (*rasa*), and manifestation (*paccupaṭṭhāna*) of one are different from those of another.⁴⁸ The non-alteration of their characteristics is constantly alluded to. However much one *mahābhūta* is influenced by the others, it never abandons its essential nature. In this connection the *Attha-sālini* refers to a Sutta passage, where it is stated that the four *mahābhūtas* might alter their characteristics sooner than it were possible for the Ariyan disciple endowed with assured faith in the Buddha to alter.⁴⁹ The implication is that both are impossibilities. What all this amounts to is that the four *mahābhūtas*, which stand for four distinct ultimate data of all material phenomena, are neither transmutable into one another nor reducible to a common ground.

There is, however, a way in which they group themselves into two pairs, each having one common characteristic. Buddhaghosa observes that *paṭhavi-dhātu* and *āpo-dhātu* are similar in heaviness (*garukattā sabhāgā*) and that *tejo-dhātu* and *vāyo-dhātu* are similar in lightness (*lahukattā sabhāgā*).⁵⁰ This theory seems to have been developed from the observation of some of the features of the *mahābhūtas* as understood in the popular or literal sense. It is also reminiscent of the contention of the Vaiśeṣikas, namely that weight is possessed only by two elemental substances—earth and water.⁵¹

Another fundamental feature of the *mahābhūtas* is that they always exist together (*sahajāta, sahabhū*). No *mahābhūta* can exist independently of the other three.⁵² The nascence, subsistence and evanescence⁵³ of one do always synchronize with those of the others. It is precisely for this reason that their relation is described as one of reciprocal co-nascence (*aññam'añña-sahajāta*).⁵⁴ That is to say, since no *mahābhūta* can come into being independently of the others, in this sense, each is postulated as a condition by way of co-nascence in relation to the other three.

The commentators seek to explain the mutual conditionality of the *mahābhūtas* under all possible combinations and permutations: Taking each

48. . . sabbāsam pi dhātūnaṃ salakkaṇādīto nānattaṃ. Aññān'eva hi paṭhavīdhātuyā lakkaṇarasapaccupaṭṭhānāni, aññāni āpo-dhātu-ādīnaṃ.—*Vism.* p. 387.

49. *Op.cit.* p. 336.

50. *Vism.* p. 289.

51. See Bhaduri, *Nyāya-Vaiśeṣika Metaphysics*, Poona, 1947, p. 135.

52. See *Tkp.* pp. 3, 14, 36 ff.; *AK.* Ch. II, 248.

53. *Cf.* theory of moments.

54. See *Tkp.* pp. 3, 14.

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one beginning with earth, there are three others whose occurrence is due to that one, thus with three due to one, their occurrence takes place in four ways. Likewise each one beginning with earth, occurs in dependence on the other three, thus with one due to three, their occurrence takes place in four ways. But with the last two dependent on the first two, with the first two dependent on the last two, with the second and fourth dependent on the first and third, with the first and third dependent on the second and fourth, with the first and fourth dependent on the second and third, with the second and third dependent on the first and fourth, they occur in six ways with two elements due to two.⁵⁵ The fundamental principle involved in the relation by way of reciprocal co-nascence is that when one element arises, what is related to it, too, must arise simultaneously. With this as the basis, the commentators have shown how each of the *mahābhūtas* becomes, at one and the same time, the condition as well as the conditioned in relation to the others, under different combinations and permutations.

Closely connected with this is the inseparability of the *mahābhūtas*. They exist in inseparable (*avinibhoga*) association: they are not positionally resolvable, one *mahābhūta* cannot be separated from the rest.⁵⁶ Buddhaghosa explains this characteristic of inseparability in a rather mysterious way: "And just as whomsoever the great creatures such as the spirits grasp hold of (possess), they have no standing place either inside him or outside him and yet they have no standing independently of him, so too these elements are not found to stand either inside or outside each other, yet they have no standing independently of one another."⁵⁷ What is attempted to show is that they have no thinkable standing place relative to each other.

This explanation as to the relative position of the *mahābhūtas* is sought to be justified on the following grounds: If they were to exist inside each other, then they would not perform their respective functions. If they were to exist outside each other, then they would be resolvable, and in such a case, the theory of inseparability (*avinibhuttavāda*) would have no validity.⁵⁸

55. *Path of Purification*, tr. Bhikkhu Nānamoli, Colombo, 1956, p. 405. (*Vism.* p. 391)

56. See *Vism.* p. 381.

57. *Path of Purification*, tr. Bhikkhu Nānamoli, Colombo, 1956, p. 401. (*Vism.* p. 387)

58. *Yadā hi imā dhātuyo aññam'aññassa anto thitā na sakiccarā siyūṃ . . . Atha bahiṅgā vinibhuttā siyūṃ. Tathā sati avinibhuttavādo hāyeyya.*—*VismT.* p. 364; see also *Abhk.* p. 248.

Each *mahābhūta* assists the remaining three by performing its peculiar function: The earth element which is held together by water, maintained by fire, and distended by air is a condition for the other three great primaries by acting as their foundation. The water element which is founded on earth, maintained by fire, and distended by air is a condition for the other three primaries by acting as their cohesion. The fire element which is founded on earth, held together by water, and distended by air is a condition for the other three primaries by acting as their maintaining. The air element which is founded on earth, held together by water, and maintained by fire, is a condition for the other three primaries by acting as their distension.⁵⁹ Thus each *mahābhūta* depends on, and is depended on by the other three.

Since the four *mahābhūtas* are necessarily co-existent and positionally inseparable, the position taken up by the Buddhists in respect of the question how they enter into the composition of material aggregates is quite clear: In every instance of matter all the four *mahābhūtas* are necessarily present. On this view there is general agreement among the Buddhist schools. The Vaibhāṣikas, for instance, maintain that the presence of *jala*, *tejas* and *vāyu* in an earthy substance (*prthivī-dravye*) is inferred from its cohesion, maturing and expansion respectively; the presence of *prthivī*, *tejas* and *vāyu* in water is shown by its support of ships, its heat and motion; the presence of *prthivī*, *udaka* and *vāyu* in a blazing fire is shown by its solidity (*sthairya*), cohesion or unbroken continuity, and mobility; and the presence of *prthivī*, *ap* and *tejas* in the air is shown by its action of holding up, its touch of cold and its touch of heat.⁶⁰

Accordingly, all material things or aggregates are necessarily “tetra-bhautic.” With this view may be contrasted the Vedāntic view, according to which there can be “mono-bhautic” substances as earthy, watery, etc. But this statement needs qualification. For, in the view of the Vedāntins there are five *sūkṣma-bhūtas* (subtle) corresponding to the five *mahābhūta* (gross). And according to the theory of *pañcīkaraṇa*, quintuplication “the five *sūkṣma-bhūtas* are present as ingredients, though in different proportions, in each *mahābhūta*.”⁶¹ Hence from the standpoint of the *sūkṣma bhūtas*, each and every material thing turns out to be “penta-bhautic”.

59. *Path of Purification*, tr. Bhikkhu Nānamoli, Colombo, 1956, p. 403. (*Vism.* p. 289).

60. *prthivī-dravye saṃgraha-pakti-vyūhana-darśanāc cheśānām jala-tejo-vāyūnām astitvaṃ anumīyate. apsu navu-saṃdhāranōṣṇateranakarma-darśanāt prthivī-tejo-vāyūnām astitvaṃ. agnī-jvālāyām sthāirya-saṃpiṇḍana-calana-darśanāt prthivyudaka-vāyūnām astitvaṃ. vāyau saṃdhāraṇa-śītoṣṇa-sparśa-darśanāt prthivy-ap-tejasām astitvaṃ iti vaibhāṣikāḥ.*—*AKey.* I, 33.

61. Seal, *Positive Sciences of the Hindus*, Delhi, 1925, p. 154.

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It is in fact the view of the Vaiśeṣikas that stands in clear contrast to the Buddhist theory. The difference between the Buddhists and the Vaiśeṣikas in regard to this question will be clear if we consider how they explain the constitution of the human body. According to the former, it is composed of all the four *mahābhūtas* (*cātummahābhūtiko'yaṃ kāyo*). According to the latter, it is essentially earthy, because the other substances do not enter it as its substantive or material causes. This Vaiśeṣika theory is based on the following arguments:

The conjunction of things perceptible and imperceptible is itself imperceptible. Hence, since *ākāśa* and *vāyu* are imperceptible, to maintain that the human body is a conjunction of the five *bhūtas* is tantamount to saying that it is itself imperceptible.⁶² Secondly, it is one of the theses of the Vaiśeṣikas that the quality in the effect is preceded by the corresponding quality in the cause.⁶³ It is also maintained that no effect can take place except through the combination of two component elements. Therefore, if earth unites with water to form a compound, the compound will be devoid of odour, for odour is present only in earth. Similarly a compound of earth and fire will have no odour and taste, for they are possessed only by earth. Likewise a compound of earth and air will be odourless, tasteless and colourless, for odour, taste and colour belong to earth and not to air. Now all the foregoing qualities are present in the human body. Therefore, it is to be concluded that it is not a combination of all the *bhūtas*.⁶⁴

The above argument of the Vaiśeṣikas is partly based on the contention that air possesses only touch, fire possesses colour and touch, water possesses taste, colour and touch, and that earth possesses all the foregoing qualities and smell. For the Buddhists smell, taste, colour, etc. are not the qualities of the *mahābhūtas*; they are a set of secondary elements of matter dependent on the latter. In point of fact, a theory similar to that of the Vaiśeṣikas is cited by Buddhaghosa only to be refuted as unsatisfactory. The main theme of his argument may be stated as follows:

If smell were the special quality of earth, then the smell of cotton which has an excess of earth in it, should be greater than that of fermented liquor which has an excess of water in it. Again, if colour were the special quality of fire, then the colour of hot water which has an excess of fire in it, should

62. Bhaduri, *Nyāya-Vaiśeṣika Metaphysics*, Poona, 1947, p. 152.

63. *Kāraṇaguṇapūrvakaḥ kāryaguṇō dr̥ṣṭah*—*VS.* p. 63.

64. See Bhaduri, *op. cit.* p. 151 ff.

be brighter than that of cold water. Neither of these things is true. Therefore the theory in question should be abandoned.⁶⁵ It is also observed that, of the *mahābhūtas* which are not separable, one from another, one cannot say that this is a quality of that one or that is a quality of this one.⁶⁶

The fact that Buddhism does not conceive the *mahābhūtas* as eternal and ever-perduring substances has also some relevance to its attitude towards the composition of material aggregates. A piece of ice, according to the Buddhist conception, should be composed of all the four *mahābhūtas*. Its solidity, cohesion, etc. point to their presence therein. For the Vaiśeṣikas, ice is essentially a watery (*ap*) substance. In their view, all matter is ultimately reducible to the four kinds of eternally existing atoms, namely, the earthy, the watery, the fiery and the airy. Since no substance is destroyable, decomposition of a compound means its reversal to the original position. Hence when ice melts it becomes water, and water is ultimately composed of watery atoms.⁶⁷ From the Buddhist standpoint, whether ice remains as it is, or whether it becomes water when melt, or vapour when excessively heated, in all these different states the four *mahābhūtas* are present.

Although all the four *mahābhūtas* are present in every instance of matter, yet there is no quantitative difference between them. In other words, they enter into the composition of material things in equal proportion.⁶⁸ There is as much *āpo-dhātu* in a blazing fire as there is in wood or water. It is argued that, if there were to be a quantitative difference between the *mahābhūtas* that enter into the composition of material aggregates, then the thesis that they are inseparable would not be logical (*na yujjeyya*).⁶⁹ This theory is not confined to the Theravada alone. This is what the schools of Sanskrit Buddhism call “*tulya-bhūta-saś-bhāva*”.⁷⁰

If the *mahābhūtas* are present in equal proportion in each and every material aggregate, what explains the diversity of the latter? For it is a matter of common experience that, in many respects, a comparatively

65. Cf. *Te vattabbā: iccheyyāma yadī apādhikassā āsavassa gandhato pathvī-dhike kappāse gandho adhikataro siyā, tejādhikassa ca uñhodakassa vañṇato sītudakassa vañṇo parihāyetha. Yasmā pan'etaṃ ubhayam pi natthi, tasmā pahāyeth'etaṃ p'etesam nissaya-bhūtānaṃ viśesakappanaṃ.*—*Vism.* p. 444.

66. *Avinibbhogavuttīsu hi bhūtesu ayaṃ imassa guṇō ayaṃ imassa guṇo ti na labbhā vattun ti.*—*ibid.* loc. cit.

67. See Bhaduri, *op. cit.* Ch. VI.

68. See *Vism.T.* pp. 450 ff.; *Abhk.* pp. 273 ff.

69. *Aññathā hi avinibbhogavuttitā na yujjeyya.*—*Vism.T.* p. 451.

70. See *AKvy.* I, 124.

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hard stone is different from water, and both from a blazing fire. Or to put it differently: now the Theravādins say that the *mahābhūtas* with the exception of *āpo-dhātu* are tangible (*phoṭṭhabbāyatana*), while the schools of Sanskrit Buddhism say that all the four are tangible (*spraṣṭavyāyatana*).⁷¹ Such being the case, what accounts for the diversity in tactile sensations? For it is a matter of common experience that one does not get the same sensation when one touches, say, a flower and a blazing fire.

The diversity, it is maintained, is not due to a difference in quantity (*pamāṇa*), but due to a difference in capability (*sāmatthiya*) or extrusion (*ussada*).⁷² That is to say, in a given material thing, one *mahābhūta* is more intense than the others. For instance, in a comparatively solid thing, say, in a stone, although all the *mahābhūtas* are present in equal proportion, yet the *paṭhvi-dhātu* is more intense or more extruded than the others. So is *āpo-dhātu* in water, *tejo-dhātu* in fire, and *vāyo-dhātu* in air.

In the *Atthasālinī* we get more details on this subject. It says that the *mahābhūtas* (except *āpo-dhātu*) reach the avenue of the sense of touch simultaneously. Although they strike the sentient body simultaneously, yet bodily cognition of them does not arise at once. For the object of touch is determined by one of two alternative factors, namely, deliberate attention (*ābhūñjita-vasena*) and extrusion (*ussada-vasena*).⁷³

The first alternative is illustrated as follows: When the bowl is filled with food and brought, one who takes up a lump and examines whether it is hard or soft, is considering only the element of extension, though there may be heat and mobility present. One who investigates by putting the hand in hot water, is considering only the element of heat, though extension and mobility are present. One who lets the wind beat upon the body by opening the window in the hot season, is considering, while the wind beats gently and softly, only the element of mobility, though extension and heat are present.⁷⁴

The other alternative, where the element of deliberate attention is absent, is explained with reference to *ussada*, i.e. extrusiveness of one element

71. See below, p. 20.

72. See *VismT.* p. 451; *Abhk.* p. 273.

73. *Kim pana etāni tīni mahābhūtāni ekappahāren'eva āpātham āgacchanti ulāhu no ti? Agacchanti. Evaṃ āgatāni kāyappasādaṃ ghaṭṭenti ti? Ghaṭṭenti. Ekappahāren'eva tāni ārammaṇaṃ katvā kāyaviññānaṃ uppajjati n'uppajjati ti? N'uppajjati. Kasmā? Abhūñjitavasena vā hi ussadavasena vā ārammaṇakaraṇaṃ hoti.*—op.cit. p. 333.

74. *Expositor*, tr. Maung Tin, P.T.S., 1920—21, Vol. II, 434 (= *Asl.* p. 333).

in relation to others. "But he who slips or knocks his head against a tree, or in eating bites on a stone, takes as his mental object only the element of extension, on account of its extrusiveness, though where he slipped, etc., heat and mobility were present. One treading on fire makes only the element of heat his object owing to its extrusiveness, although extension and mobility are present therein. When a strong wind blows striking the ear as if to make one deaf, although extension and heat are present therein, the element of mobility alone is made the object owing to its extrusiveness."⁷⁵

That intensity determines as to which element should become the object of touch is recognized by many of the schools of Sanskrit Buddhism, too. The *Abhidharmakośa*, for instance, poses the question as to why all the elements do not become the object of touch simultaneously. And the answer given is almost the same as that which we mentioned as the second alternative: "On perçoit dans un aggrégat donné celle des substances (*dravya*, terre élémentaire, etc.) qui se trouve la plus vive (*paṭutama*, *sphuta-tama*), et non pas les autres. De même, lorsqu'on touche un faisceau de brins végétaux et d'aiguilles (*sūcītūlikatāpa*), on perçoit les aiguilles; lorsqu'on mange de la bouillie salée, on perçoit la saveur du sel."⁷⁶

From the *Abhidharmakośa* one gathers that the scholiasts had advanced more than one explanation in respect of this subject. In the first place, there is the opinion of Bhadanta Srilābha, according to which "les aggrégats comportent les quatre grands éléments, puisque, étant donnée l'action de certaines causes, les choses solides deviennent liquides, etc.. Le feu élémentaire existe dans l'eau, puisque celle-ci est plus ou moins froide, ce qui s'explique par la présence, on quantité plus ou moins grande, du feu élémentaire."⁷⁷ This theory attempts to explain the differences in the objects of touch as being due to a quantitative difference of the *mahābhūtas*. Thus the degree of hotness in water is dependent on the quantity of *tejo-dhātu* with which it is mixed (*miśrībhāva*, *vyatībhāva*).⁷⁸ The Theravādins and the Vaibhāṣikas refuse to believe in a quantitative difference; such a conception, says the *ṭīkā* to the *Visuddhimagga*, does not accord well with the theory of the inseparability of the *mahābhūtas*.⁷⁹ Srilābha's interpretation is criticised in the *Abhidharmakośa* itself. It observes that the varia-

75. *Ibid. loc. cit.* (tr. slightly changed).

76. *Op. cit.* Ch. II, 146.

77. *Ibid. loc. cit.*

78. *Ibid. loc. cit.*

79. *VismT.* p. 451.

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bility, say, of cold is due to the variability of the intensity of the *āpo-dhātu* and not due to the fact that it gets mixed with its opposite, i.e. heat which is represented by *tejo-dhātu*.⁸⁰

Still more different is the explanation given by the Sautrāntikas: "les grands éléments qui ne sont pas perçus dans un aggrégat donné y existent à l'état de semence (*bijatas, śaktitas, sāmārthyatas*), non pas en acte, non pas en soi (*svarūpatas*). C'est ainsi que Bhagavat a pu dire: 'Dans ce morceau de bois, il y a beaucoup de *dhātus* ou substances minérales'. Bhagavat entend que ce bois contient des semences, des potentialités (*śakti*) de nombreux *dhātus*; car l'or, l'argent, etc., n'existent pas actuellement dans le bois."⁸¹ This theory of the Sautrāntikas appears to be analogous to that of the Theravādins and the Vaibhāṣikas. There is, however, this fundamental difference to be noticed: For the latter, excess (*adhikatā*) of one element means that it is characterized by more intensity or capability. They do not say that the other elements are in an "état de semence". All what they say is that in a given object of touch all the four elements are present and that those elements which are comparatively intense become the object of touch.

Closely connected with this principle of intensity (*ussada*) is another sense in which the names of the *mahābhūtas* are used. According to the Abhidhammic interpretation of the *mahābhūtas*, one cannot speak of material things as *paṭhavī, āpo, tejo, and vāyo*. For in each and every instance of matter all the four are present. However, there is a sense in which the Abhidhammikas speak of material aggregates named after the *mahābhūtas*. This is established with reference to the above-mentioned principle of intensity. If in a given material aggregate the *paṭhavī-dhātu* is characterized by a comparatively high degree of intensity (*ussada*) or capability (*sāmatthiya*), then (as a matter of convention) that material aggregate is also called *paṭhavī*. In such instances the term is sometimes followed by *adhika*, "excessive" (in intensity or capability), e.g. *paṭhavī-adhika*. Similarly are used the names of the other three *mahābhūtas*.⁸²

This kind of description is, in a way, an attempt to accommodate the earlier conception of the *mahābhūtas*, according to which hair, nails, teeth, etc. are *paṭhavī*, blood, mucus, etc. are *āpo* and so on. However, as inter-

80. *Op. cit.* Ch. II, 146.

81. *AK.* Ch. II, 147.

82. See *Vism.* p. 357; *Abhek.* p. 274.

preted in the later scholasticism, strictly speaking, no *mahābhūta* is visible. The attribution of visibility, as the *Abhidharmakośa* says, is from the point of view of common usage: “Dans l’usage commun, ce qu’on désigne par le mot ‘terre,’ c’est de la couleur et de la figure”—*pr̥thivī varṇasamsthānam ucyate lokasaṃjñāyā*.⁸³ According to the *Kathāvattu* and its commentary, the Andhakas object to the recognition of *mahābhūtas* as not visible. “But do we not see”—so runs the argument—“earth, a stone, a mountain, water, fire blazing, trees waving in the wind. . .?”⁸⁴ This objection, it needs hardly any mention, has hardly any relevance to the Abhidhammic interpretation of the *mahābhūtas*. It is only reminiscent of their earlier conception.

The inclusion of the *mahābhūtas* in *phoṭṭhabbāyatana* shows that, although not visible, they are tangible. They can be known by the sense of touch. From the point of view of the Theravādins this statement needs qualification. For, as indicated above, in their opinion, only three *mahābhūtas*, namely, *paṭhavī*, *tejo* and *vāyo* come under *phoṭṭhabbāyatana*.⁸⁵ In contrast, the schools of Sanskrit Buddhism include all the four in the sphere of the tangible.⁸⁶

Why the Theravādins have excluded *āpo-dhātu* from the sphere of the tangible is partly explained by what we have observed about the position of *sīta*, cold, in relation to the *mahābhūtas*. Unlike the Vaibhāsikas, for instance, the Theravādins do not associate cold with the *āpo-dhātu*. For the latter, cold is not a force distinct from, but is only the relative absence of, heat (= *tejo-dhātu*).⁸⁷ As such, in the view of the Theravādins, both cold (*sīta*) and heat (*uṇha*), in other words, all degrees of temperature, are represented by, and therefore testify to the presence of, *tejo-dhātu*.⁸⁸

Āpo-dhātu, as stated above, is representative of *bandhanatta*, the fact of “binding together” or cohesion, and *davatā*, fluidity. But these, according to Buddhists, are not felt by the sense of touch.⁸⁹ “When one puts his

83. *AK*. Ch. I, 23.

84. *Kvu*. p. 331; *KvuA*. p. 93.

85. See *Dhs*. pp. 143, 179, *Vbh*. p. 72.

86. See *AK*. Ch. I, 18 ff.

87. See above, p. 7.

88. Cf. *Kimidaṃ phoṭṭhabbaṃ nāma? Paṭhavī-tejō-dhātuttayaṃ. Kasmā paṇ ettha āpo-dhātu aggchūtā? Nānu sītā phusitvā gayhati? Saccam gayhati. Na pana sū āpo-dhātu, tejō-dhātu eva. Mande hi uṇhabhāve sītabuddhi. Na hi sītaṃ nāma koci guṇo atthi—VismT.* p. 459; see also *ADSVT*. p. 111.

89. See *ADSVT*. p. 111; *VismS*. V, 257.

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hand into cold water, the softness of water felt is not *āpo*, but *paṭhavi*;⁹⁰ the cold felt is not *āpo*, but *tejo*; the pressure felt is not *āpo*, but *vāyo*.⁹¹ Its cohesion and fluidity, whatever be their degree of intensity or capability, are not felt by the sense of touch. Hence *āpo-dhātu* is excluded from *phoṭṭhabbāyatana* and is included in *dhammāyatana*.⁹² That is to say, it cannot be known by any of the senses other than the mind (*mano*). It is known by a process of inference.

The general position assigned to the *mahābhūtas* may now be considered. If one were to examine how they are interpreted in other systems of Indian thought, one would notice that in Buddhism they were assigned a comparatively primary position. What the Sāṃkhya considers as *mahābhūtas* are not the ultimate irreducible constituents of matter, for they are evolved immediately from the *tannātras* and ultimately from the *prakṛti*, the uncaused first cause of the world of non-self.⁹³ According to the Vedāntins, the *mahābhūtas* are produced from the *sūkṣma-bhūtas*. The former are a species of gross matter and the latter a species of subtle matter.⁹⁴ For the Jains the ultimate constituents of *puggala*, matter, are not the four elements (*dhādu-catukka*), but the homogeneous atoms (*paramāṇu*). The latter are recognized as the essential causes of the former.⁹⁵ The Nyāya-Vaiśeṣikas postulate four kinds of atoms corresponding to the four elemental substances, namely, earth, water, fire and air.⁹⁶ This may be described as an attempt to reconcile the older theory of the *mahābhūtas* with the later atomic theory.

In Buddhism, unlike in many other systems of Indian thought, the *mahābhūtas* are assigned a primary position in the sense that they are recognized as the ultimate irreducible data of matter. It is of course true that a given instance of matter consists of not only the four *mahābhūtas* but also of a set of *upādā-rūpas*, such as colour, smell, taste, etc. But these so-called *upādā-rūpas*, as conceived in Buddhism, are always dependent on, and therefore secondary to, the *mahābhūtas* (primary elements).⁹⁷ Even

90. because softness is relative absence of hardness = *paṭhavi-dhātu*.

91. Aung, *Compendium of Philosophy*, P.T.S., p. 155, n. 6.

92. See *Dhs.* p. 179.

93. See Seal, *Positive Sciences of the Hindus*, Delhi, 1925, Ch. I.

94. *Ibid. loc. cit.*

95. Cf. *Adesumattamutto dhāducatukkassa kāraṇaṃ jo du| so neo paramāṇo parināmaḡuṇo sayamasaddō||* — *Pañcastikāya-sāra*, ed.

Chakravartinayanar, Allahabad, 1920, p. 28.

96. See Bhaduri, *Nyāya-Vaiśeṣika Metaphysics*, Poona, 1947, Ch. 3.

97. See *Dhs.* p. 153.

the development of the theory of *rūpa-kalāpas*, i.e. the Theravāda form of atomism,⁹⁸ did not, in any way, reduce the *mahābhūtas* to a secondary position. For in every *rūpa-kalāpa*, the smallest unit of matter, all the four *mahābhūtas* are necessarily present.⁹⁹ Although they are postulated as the ultimate (primary) elements of matter, the *mahābhūtas* are not to be understood as uncaused or as ever-perduring entities. They, too, come under the laws of "phenomenal" (*saṅkhata*) existence. As Buddhaghosa says, they are *anicca* in the sense of liability to destruction, *dukkha* in the sense of being a source of suffering, and *anatta* in the sense of having no ever-perduring essence.¹⁰⁰

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98. For more details on this theory, see *ADS*. pp. 27 ff.; *ADSVT*. pp. 56 ff.; *SS*. pp. 5 ff.; *NRS*. pp. 17 ff.

99. Cf. *Aññamaññen'upatthaddhā sesarūpassa nissayā catudh'evaṃ kalāpesu mahābhūtā pavattare.*—*NRP*. p. 34.

100. See *Vism.* p. 446.

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Abbreviations

(All Pali texts, unless otherwise stated, are those
of the Pali Text Society)

A.	Aṅguttaranikāya.
Abhvk.	Abhidhammatthavikāsinī, ed. A. P. Buddhadatta, Colombo, 1961.
Abhvt.	Abhidhammāvatāra.
ADS.	Abhidhammatthasaṅgaha.
ADSS.	Abhidharmārthasaṅgrahasannaya, ed. Paññāmolī Tissa, Ambalān-goda, 1926.
ADSVT.	Abhidhammatthasaṅgaha-Vibhāvīnī-Tikā, ed. D. Paññānanda, Colombo, 1889.
AK.	L'Abhidharmakośa de Vasubandhu, I—VI, tr. L. de la Vallée Poussin, Paris, 1923—31.
AKvy.	Abhidharmakośa-vyākhyā (Sphūṭārthā), I—II, ed. U. Wogihara, Tokyo, 1932—36.
Asl.	Atthasālinī.
D.	Dīghanikāya.
Dhs.	Dhammasaṅgānī.
Kvu.	Kathāvatthu.
KvuA.	Kathāvatthupparakaraṇa-Aṭṭhakathā.
M.	Majjhīmanikāya.
Mvn.	Mohavicchedanī.
NRP.	Nāmarūpapariccheda.
NRS.	Nāmarūpasamāsa.
S.	Saṃyuttanikāya.
SS.	Saccasaṅkhepa.
Tkp.	Tikapaṭṭhāna.
Vbh.	Vibhaṅga.
Vism.	Visuddhimagga.
VismS.	Viśuddhimārgasannaya, I—VI, ed. M. Dharmaratna, Colombo, 1890—1917.
VismT.	Visuddhimagga-ṭīkā (Paramatthamañjūsā), ed. M. Dharmānanda, Colombo, 1928.
VS.	Vaiśeṣika Sūtras of Kanāda, ed. N. Sinha, Allahabad, 1911.