

David J. Kalupahana The Buddhist conception of time and temporality

During the early period of Indian thought, time (*kāla*) baffled the Indian thinkers to such an extent that they came to look upon it not only as the cause of the universe but also as an all-pervading principle which governs everything in it.¹ But as speculation advanced, time came to be considered one of the causes which determines the course of natural phenomena. Thus, a later Jaina scholiast, Śilānka, attempting to explain the nonabsolutism in Jaina thought, maintained that time can be recognized as one of the causal factors in the evolution of nature, because it is found that certain events like the flowering of trees, etc., occur at certain times only, not all the time.² In the thought of the Upaniṣads, with its emphasis on permanence and eternity and the resulting denial of change and causation as being illusory, the problem of causation received scant attention. But in early Buddhism, where there is a denial of permanence, the conceptions of change and causality, and, hence, of time, occupied prominent places.

Causality (Pāli, *Paṭiccasamuppāda*; Skt., *pratītyasamutpāda*) is the central philosophy of early Buddhism. With the insight he gained as he sat contemplating under the bodhi tree on the bank of the river Nerañjarā, the Buddha realized that everything in this world of experience is causally produced. It was this insight that enabled him to eliminate all the doubts (*kañkhā*) he had entertained regarding the nature of existence.³ Thus, in early Buddhism, the recognition of the fact that everything is impermanent (*anicca*), conditioned (*saṅkhata*), and causally produced (*paṭiccasamuppāna*), along with the denial of anything permanent (*nicca*) or eternal (*dhuva*, *sassata*) led to fruitful speculation regarding time. But it must be emphasized that during this early period of Buddhist thought whatever reflections there were on the problem of time were invariably connected with speculation on the nature of things which are temporal (*kālika*).

Let us begin with the Buddha's conception of the universe. Unlike his later Mahāyāna disciples who maintained that there is no beginning (*anavarāgra*) of the world process (*samsāra*),⁴ the Buddha insisted that the beginning is totally inconceivable (*anamataḡga*).⁵ Although the beginning is inconceivable, yet it is possible to see periods of evolution (*vivaṭṭa*) and dissolution (*saṃvaṭṭa*) following one another.⁶ These periods are reckoned in terms of aeons (*kappa*), each of which is said to be of such immense duration that it can only be illustrated by means of similes, and these became very popular in Indian thought later on. One such simile is as follows: "If there were to be a great mountain, one league in width, one league in length and one league in height, a solid mass without chasms or clefts, and a man at the end of every hundred years, were to strike it once each time with a silken cloth, that mountain will sooner be done away with than would an

aeon.”⁷ This passage, while emphasizing the immensity of time, also shows that we can observe events only and use processes based on these events to measure time.⁸ Thus we derive time from events which are in time (*kālika*), but not vice versa.⁹

The processes of evolution and dissolution are said to take place in accordance with the causal principle which is stated as: “When this exists, that exists or comes to be; on the arising of this, that arises. When this does not exist, that does not exist or come to be; on the cessation of this, that ceases.”¹⁰ Since it has been pointed out that “there is a profound connection between the reality of time and the existence of an incalculable element in the universe,”¹¹ let us pause to consider the nature of the causal principle stated in the preceding formula. This causal principle was presented by the Buddha in the background of several theories, one of which was popular in the early Upaniṣadic tradition. In the early Buddhist texts, this is referred to as the theory of self-causation (*sayamkata-[vāda]*)¹² and was based on the belief in a self (*attan*) considered to be the essence of everything (*sabbaṃ*). Thus, “everything exists” (Pāli, *sabbaṃ atthi*; Skt. *sarvam asti*)¹³ means that this essence of everything exists. This leads to the view that the consequence preexists in the cause, the future in the present. Such a strictly determined causal principle would also mean that we can, by examining the present, predict with absolute certainty what will happen in the future, for the future is merely the hidden present. For this reason temporality becomes a mere illusion.

The Buddha’s theory of causality differs from this in that it is not a form of strict determinism of this sort. The very use of the term ‘when’ (and this idea is expressed by the use of the locative absolute construction in Pāli), which in this context is equivalent to the conditional particle ‘if’, should be sufficient to show that the future events cannot be predicted with absolute certainty. For this reason, we find that none of the extrasensory perceptions recognized in early Buddhism refer to the future. As is well known, omniscience (*sabbaññutā*), as later understood, was not claimed by the Buddha. We come across only two instances when the Buddha made any kind of prediction into the future with much certainty. One is the prediction that a ‘stream entrant’ (*sotāpanna*) is certain (*niyata*) to attain enlightenment (*sambodhi-parāyana*),¹⁴ and the other is that a person who has eliminated craving and thus attained enlightenment will not be reborn (*khīṇa jāti, nāparaṃ itthattāya*).¹⁵ Both these could be considered knowledge based on inductive inference (*anvaye ñāṇa*).¹⁶ Depending on such inductive inferences the Buddha recognized the future validity of the causal principle. This prompted him to make such declarations as: “Whether the Tathāgatas were to arise in this world or were not to arise, this causal status, this causal pattern, this conditionality remains.”¹⁷ If this causal pattern is said to exist

always in this world, and if “perceiving the *dhamma* means perceiving causality (*paṭiccasamuppāda*),”¹⁸ then it is possible to say that his teachings will be valid at all times. It is only in this sense that the teaching (*dhamma*) was described as being timeless (*akālika*).¹⁹ On the basis of this theory of causality, it is possible to define the three periods of time, past, present, and future, in the following manner: the past is the determined (= *bhūta*); the present is the moment of becoming (= *bhava*); and the future is the as yet undetermined (= *bhavya*).²⁰

Thus, using the terminology of Whitrow on the problem of time, it is possible to say that according to Buddhism, “the future is hidden from us—not in the present, but in the future.”²¹ Time is the mediator between the past and the present. Hence for that which is born (*jātassa*), death is a matter of time. This may be the idea behind the use of the phrases *kālaṃ karoti*²² (literally, “he does his time,” “is fulfilling his time”), which means dying, and *kālaṃ kaṅkhati*²³ (literally, “awaiting time”), that is, awaiting death. For this reason, time assumes the position of Māra, the personification of death. The famous quatrain in the Jātaka runs:

Time consumes all beings
including oneself;
the being who consumes time,
cooks the cooker of beings.²⁴

Although time is supposed to overwhelm ordinary human beings, yet the one who has attained enlightenment is able to bring time under his control. Just as he overwhelms Māra, the evil one, even so does he overcome time. He is said to overcome time, not because he attains to a state of permanent existence (as it was advocated in Mahāyāna),²⁵ but because of two important reasons. First, with the complete eradication of craving and attachment, he no longer has any longing for existence or anything associated with it. Hence, dying or ‘fulfilling time’ (*kālakiriyā*) never worries him, as it does the ordinary man. Secondly, he has put an end to continued becoming (*bhava*). Thus, immortality (Pāli, *amata*; Skt. *amṛta*) in early Buddhism becomes a synonym of no-rebirth (*a-punabbhava*).²⁶ He who has overcome the process of becoming also overcomes time, because there is no time apart from the process of becoming. As pointed out by Whitrow, “. . . the idea that time is ultimate and irreducible does not commit us to the unnecessary hypothesis that it is absolute, for moments do not exist in their own right but are mere classes of co-existent events.”²⁷

It was mentioned that during the pre-Buddhist period there was a theory which upheld that “everything exists.” The foundation of this theory seems to be the view that an event can never cease to be an event.²⁸ Because of the popularity this theory enjoyed during this period, the Buddha seems to have

taken much trouble to refute it. In addition to the argument from experience that he adduced to refute this theory, the Buddha also pointed out that it was the result of a linguistic fallacy.²⁹ His criticism runs thus:

Monks, there are these three linguistic conventions or usages of words or terms which are distinct, have been distinct in the past, are distinct at present and will be distinct in the future and which are not ignored by the recluses and brahmins who are wise. Which three? Whatever form (*rūpa*) there has been, which has ceased to be, which is past and has changed is called, reckoned or termed "has been" (*ahosi*); it is not reckoned as "it exists" (*atthi*) nor as "it will be" (*bhavissati*). (The same is said about the other four aggregates—sensation, perception, dispositions and consciousness.) . . . Whatever form is not arisen, not come to be, is called, reckoned or termed "it will be" (*bhavissati*) and is not reckoned as "it exists" or as "it has been." . . . Whatever form has become and has manifested itself is called, reckoned or termed as "it exists" (*atthi*) and is not reckoned as "it has been" or as "it will be."³⁰

It is very clear from this passage that the theory according to which the past and the future exist in the present or even the view that a thing exists during the past, the present, and the future are the results of unwarranted interpretation of linguistic usage. Here the temporal copulas "was," "is now," or "will be" in propositions which assert temporal relations between events are being confused with the timeless copulas of logic.

One of the arguments against the reality of time seems to be based on the view that it is not an object of the five types of sense experience. Hence it is nothing but a mysterious illusion of the intellect.³¹ For early Buddhism, which not only recognized six senses but also held that the sixth sense (that is, the mind) could be developed to perceive, with the help of memory, a long period of one's past history, time was an important ingredient of experience.³² As if rejecting the theory of atomic moments of time, which is recognized to be a logical abstraction,³³ the Buddha is represented as saying: "This physical body made up of the four primary existents is seen to exist for one, two, three, four, five, ten, twenty, thirty, forty, fifty, hundred or more years. That which is called the mind, thought or consciousness arises as one thing and ceases as another whether by night or by day."³⁴ This is a clear recognition of the two types of experience that we have. One is the experience of things which endure for some finite segment of time, and the other is the experience of momentary things. The latter experience is illustrated by the simile of the flowing river. According to the description in the early Buddhist texts, "there is no moment, no inkling, no particle of time that the river stops flowing."³⁵ These two types of experience of time can be compared to the experiences one has of the movement of the two hands of the clock, the hour hand and the second hand.³⁶ It is important to note that early Buddhism never reduced the experience of the former to the experience of the latter, although logical abstraction can always lead to such a hypothesis. In fact, a reduction of every

form of experience into further indivisible moments (Pāli, *khana*; Skt. *kṣaṇa*) was carried out during the period of scholasticism, and such a theory is conspicuous by its absence in the early discourses. Therefore, during the early period, although there were statements which could be interpreted to mean a theory of momentariness, the most dominant view was the one which recognized a finite segment of time as constituting our immediate experience. The recognition of this finite segment of time means that according to early Buddhism there is a duration of temporal experience with a certain unification of perspective. For this reason, unlike in the cases where a theory of moments dominated,³⁷ early Buddhism considered both time and causation as parts of our experience, not as mere inferences based primarily on the succession of momentary ideas. Thus, it is possible to maintain that early Buddhism presents us with an empiricist analysis of time.

With regard to the problem of time, early Buddhism seems to have followed the middle path, so famous in the history of Buddhist thought. It appears as if it considered absolute time as an extreme and an unnecessary hypothesis. The other extreme is the consideration of time as a mysterious illusion of the intellect. Avoiding both these extremes, the Buddha seems to have considered time as an essential feature of the universe and the experience of it.

With the development of scholasticism after the passing away of the Buddha, this empiricist philosophy of time and temporality changed completely. Unbridled speculation during the period of the Abhidharma led to the development of many theories which are more metaphysical than empirical.

In his desire to eliminate the pre-Buddhist conception of an eternal and immutable self (*attan*), the Buddha adopted the analytical method (*vibhajjavāda*) of reducing things to their components. Thus the human personality was analyzed sometimes into five aggregates (Pāli, *khandha*; Skt. *skandha*) and at other times into six elements (*dhātu*). Yet all these aggregates, as well as the elements, were the contents of experience, not of pure logical analysis. But with the development of scholasticism, this analytical approach was carried to its logical conclusion, and the result was the emergence not only of a theory of atoms (*paramāṇu*) but also a theory of moments (*khana*), spatial analysis giving rise to temporal atomicity.³⁸ The development of these two theories occasioned several other doctrines which are not compatible with the basic teachings of the Buddha.

One of the immediate results of the analysis of time into atomic units or *chronons* was the view that time is fleeting or flowing from the future into the present and from the present into the past. Thus, in the commentarial literature, we come across expressions such as *gacchante gacchante kāle* meaning "as time passed by" or "with the passage of time."³⁹

All these developments were summarized by Buddhaghosa in the *Atthasālinī*, his commentary on the *Dhammasaṅgani*, where he refers to the three

varieties of the present (*paccuppanna*).⁴⁰ The first is the protensive present (*addhā paccuppanna*) or the finite segment of time constituting our immediate experience. This is said to be the kind of present recognized in the discourses (*sutta*). The second is the flowing or the continuing present (*santati paccuppanna*), which was then accepted in the commentarial tradition (*aṭṭhakathā*). The third is the momentary present (*khaṇa paccuppanna*), which is not identified with any tradition. Yet it was the conception mentioned last which dominated the scholastic tradition.

Buddhaghosa's commentary on the *Vibhaṅga*, the second book of the *Abhidhamma Piṭaka*, in introducing the theory of moments, says that it is a doctrine peculiar to the Abhidhamma and not to the Suttanta. According to this, *rūpa* (matter or form) is classified as past, future, or present (*atītānāgatapaccuppanna*) in the Suttanta and this division is made on the basis of becoming (*bhavana paricchinna*). In the Abhidhamma, however, the division is made on the basis of moments (*khaṇena paricchinna*).⁴¹

These are different versions of the theory of moments. The Sarvāstivādins recognized four moments, the nascent (*jāti*), the static (*sthiti*), the decaying (*jarā*), and the cessant (*nāśa*).⁴² Post-Buddhaghosan Theravāda recognized three: the nascent (*uppāda*), the static (*ṭhiti*), and the cessant (*bhaṅga*).⁴³ The Sautrāntikas differed from all of them in accepting two moments only, the nascent (*utpāda*) and cessant (*vyaya*), and rejecting the static moment (*sthiti-kṣaṇa*).⁴⁴

The difficulties posed by the analysis of time into atomic units are innumerable. Although a moment was considered to be the unanalyzable unit of time, it was found that a distinction had to be made between a moment of thought and a moment of matter, because, as pointed out earlier, thought changes more rapidly than physical bodies.⁴⁵ Therefore, in the Theravāda Abhidhamma it is said that during the lifetime of a single moment of matter sixteen moments of thought arise and pass away.⁴⁶

The most difficult problem created by the theory of moments concerned the experienced continuity of temporal events. A moment was considered to be durationless, comparable to the dimensionless point of space, and hence, past, present, and future moments are utterly distinct from each other. They are discrete. To explain the problem of continuity arising as a result of the analysis of time into momentary and discrete units, the Buddhist schools offered various solutions. The most widely known and the most severely criticized of these different solutions was that proffered by the Sarvāstivādins who insisted that underlying the succession of momentary events is the substance or 'own-nature' (*dravya, svabhāva*) which remains unchanged.⁴⁷ Thus, a thing (*dharma*) has two aspects: the characteristic (*lakṣaṇa*) which is temporal (*kālika, kṣaṇika*) and the substance (*dravya*) which is eternal or

timeless. The term *sarvāstivāda* means the “theory that everything exists” (*sarvam asti*). This everything (*sarvam*) was the substance of everything which, they held, exists during the three periods, past, present and future. This theory was examined by the Theravādins in their *Kathāvatthu* where they make the Sarvāstivādins admit that not only everything past, present, and future exists, but that past, present, and future themselves exist, that is, they are independently real.⁴⁸ While the basic theory of the Sarvāstivādins was not much different from the Upaniṣadic theory of “everything exists” referred to and criticized by the Buddha, there is also a significant difference. Unlike the thought of the Upaniṣads which is idealistic, the Sarvāstivāda represented a school of realism and therefore, as pointed out by the Theravādins, they upheld the independent reality not only of things, but also of time. It is interesting to note that in support of their rejection of this theory of “everything exists” (*sarvam asti*), the Theravādins are represented as quoting a discourse from the Buddha on the nature of linguistic conventions referred to earlier.⁴⁹

The school of Buddhism known as the Sautrāntika rejected the Sarvāstivāda conception of substance (*svabhāva*) as being no different from the theory of self (*ātman*).⁵⁰ But the rejection of this underlying substance compelled them to the view that there is no duration whatsoever and that what *appears* as duration is a series of fleeting moments, like the cinematograph. This continuum of durationless instants, no doubt, is the result of logical abstraction, a theoretical construction based on the empirical data of consciousness. Unlike the Theravādins who recognized two different types of moments, that is, a moment of thought and a moment of matter, the Sautrāntikas made no such distinctions. The most important consequence of this conception of time was the theory that there are no instantaneous connections between external events and the observer.⁵¹ Hence there is no direct perception of an object; there is inferential knowledge (*anumāna*) only. Thus the Sautrāntikas were popularly known for their doctrine of “representationism,” that is, the inferability of the external object (*bahyārthānumeyavāda*).⁵²

In the *Mūlamadhyamakakārikā*, Nāgārjuna devotes one chapter to the examination of the problem of time.⁵³ It is indeed a very short but extremely important chapter. There is no doubt that it was the Sarvāstivāda conception of time which drew the criticism from Nāgārjuna. The theory, as explained by Candrakīrti, recognized the existence of the substance of things during the three periods. It was argued by the realist that since substance exists, time with which it is associated also exists.⁵⁴ It is this independent reality of time which Nāgārjuna takes up for criticism. His criticism was based on the fact that a thing (*bhāva*) or its substance (*bhāvasvabhāva*) and time (*kāla*) are relative to or dependent upon one another. Early Buddhism, as pointed

out earlier, would have stopped at this point, but Nāgārjuna did not. He employed his dialectic to demonstrate the unreality or nonexistence of time.⁵⁶ Nāgārjuna's argument was based on the assumption that two things cannot be related unless they are coexistent. Hence, if present and future are held to be contingently related to the past, then both present and future should be in the past. Otherwise they cannot be contingently related. On the other hand, present and future could not exist without being contingent on the past. Hence, according to Nāgārjuna, there is no justification for the recognition of a present and a future time.⁵⁶ The selfsame argument was used to refute the reality of the past. Past, present, and future, which were comparable to such concepts as above, below and middle (*uttamādhama-madhyama*), or arising, enduring, and passing away (*utpādasthitibhāṅga*), etc., could not thus withstand the onslaught of Nāgārjuna's dialectic.

The opponents argued that time exists because it has dimension and is measured in terms of moments, days, fortnights, months, and years.⁵⁷ Nāgārjuna pointed out that it is not possible to measure time. He maintained that nonenduring or nonstatic time cannot be measured, because it cannot be manipulated, and that an enduring or static time, although manipulatable, does not exist.⁵⁸ By way of conclusion, Nāgārjuna points out that if time exists depending on existential structure, then it cannot be obtained without such structure. But no existential structure is to be found, for he has already refuted such a structure.⁵⁹ Hence, according to him, time does not exist.

Nāgārjuna claimed that his exposition of the doctrine is based on the recognition of the two truths, the conventional (*saṃvṛti-satya*) and the ultimate truth (*paramārtha-satya*).⁶⁰ According to Candrakīrti, the ultimate truth is the independent (*aparapratyaya*), peaceful (*śānta*), without conceptual proliferation (*prapañcātīta*), nonconceptual (*nirvikalpa*), and without plurality (*anekārtha*).⁶¹ Hence, Nāgārjuna's, no doubt, was a transcendentalist criticism of phenomenal reality. This would become clear from a comparison of the standpoints adopted by the two schools, early Buddhism and Mādhyamika. When early Buddhism maintained that things are relatively real, Nāgārjuna insisted that things are unreal because they are relative, the real being the transcendental.

Summing up the whole discussion, I may say that (1) early Buddhism presented an empiricist and relativistic conception of time; (2) the Abhidharma scholasticism produced an absolutistic conception mainly because of its speculative approach, and (3) the Mādhyamikas, as a result of their transcendentalism, denied the reality of time.

1. *Atharvaveda Saṅgīhā*, ed. R. Roth and W. D. Whitney (Berlin: F. Dümmler, 1924), 19.54; *Maitri Upaniṣad* 6.14 (see *The Principal Upaniṣads*, ed. and trans. S. Radhakrishnan (London: George Allen & Unwin, 1953)).

2. *Sūtrakṛtāṅga* with the commentary of Śilānka, ed. A. S. Suri and C. Ganindra (Bhavanagara, Bombay, Vijayadeva Sura, 1950–1953), i.31–2, “Tathā kālo ’pi kartā, yato bakulacampakāśokapunnāganāgasahakārādīnām viśiṣṭa eva kāle puṣpaphalādyudbhavo na sarvadeti.”

3. *Udāna*, ed. P. Steinthal (London: PTS, 1948, reprint), p. 1: “Yadā have pātubhāvanti dhammā/ātāpino jhāyato brāhmaṇassa/ath’assa kaṅkhā vapayanti sabbā/yato pajānāti sahetudhammaṃ.”/

4. *Mūlamadhyamakakārikās* (hereafter cited as *MK*) des Nāgārjuna, avec la Prasanapadā commentaire de Candrakīrti (hereafter cited as *MKV*), publié par Louis de la Vallée Poussin (St. Petersburg: Academy of Sciences of USSR, 1903–1913), xi. 1.

5. *Samyutta Nikāya* (hereafter cited as *S*), ed. Leon Feer (London: PTS, 1884–1904), i.178 ff.; *Sāratthappakāsinī*, ed. F. L. Woodward (London: PTS, 1929–1937), ii.156, anamattaggo aviditaggo.

6. *Dīgha Nikāya* (hereafter cited as *D*) ed. T. W. Rhys Davids and J. E. Carpenter (London: PTS, 1890–1911), iii.84–5; *Taishō Shinshu Daizōkyō* (hereafter cited as *Taishō*), ed. J. Takakusu and K. Watanabe (Tokyo, The Taishō Shinshu Daizōkyō Kankō Kai, 1962, reprint), i.37b–c.

7. *S* ii.181–4; *Taishō* ii.242a–243b.

8. Whitrow, G. J., *The Natural Philosophy of Time* (London: Thomas Nelson & Sons, 1961), p. 34.

9. Cp. J. Alexander Gunn, *The Problem of Time* (London, 1929), p. 323 (quoted by Whitrow, *op. cit.* p. 36).

10. *Udāna*, p. 1; *Majjhima Nikāya* (hereafter cited as *M*), ed. V. Trenckner and R. Chalmers (London: PTS, 1948–1951), i.262–4; *S* ii.28, 70, 96; *MKV* 9; *Taishō* i.562c; ii.10a, 67a, 713c–714a.

11. Whitrow, *op. cit.*, p. 295.

12. *S* ii.18; *Taishō* i.76a; ii.81a, 86a–c.

13. *S* ii.17; *Taishō* ii. 85c.

14. *D* i.156; *Taishō* i.616c.

15. *M* i.184; *Taishō* i.658a. In fact, on one occasion it was anticipated that an outsider might point out that the Buddha has knowledge with regard to the past but not with regard to the future. The Buddha’s reply was that, with regard to the past, his knowledge follows in the wake of memory (*saññusūri*) and that, with regard to the future, the knowledge is that gained with enlightenment (*bodhiñāna*), namely, the knowledge that there is no more future rebirth. See *D* iii.134; *Taishō* i.75.

16. *S* ii.58; cp. *Taishō* ii.99c–100a.

17. *S* ii.25; *Taishō* ii.84b; *MKV* 40.

18. *M* i.190–1; *Taishō* i.467a, “Yo paṭiccasamuppādaṃ passati so dhammaṃ passati.”

19. *Aṅguttara Nikāya* (abbr. *A*), ed. R. Morris and E. Hardy (London: PTS, 1885–1900), iii.212, etc.; *Taishō* i.616c.

20. Cp., *op. cit.*, p. 295.

21. *The Natural Philosophy of Time*, p. 259.

22. *Vinaya Piṭaka*, ed. H. Oldenberg (London: PTS, 1879–1883), iii.80.

23. *S* i.187; *Sutta Nīpāta*, ed. D. Anderson and H. Smith (London: PTS, 1948), 516.

24. *Jātaka*, ed. V. Fausboll (London, 1895–1907), ii.260.

25. Kālo ghasati bhūtāni sabbān’eva sahattanā,
yo ca kālaghaso bhūto so bhūtapacaniṃ paci.

Cp. *Maitri Upaṇiṣad*, 6.15. See also *Theragāthā*, ed. H. Oldenberg and R. Pischel (London: PTS 1883), 661; *MKV* 386.

Speaking of the Tathāgata, the *Saddharmapuṇḍarīka-sūtra* (ed. H. Kern and B. Nanjio (St. Petersburg: Academy of Sciences of the USSR, 1912, p. 271)) says that he remains for ever (*sadā sthitaḥ*).

26. *S* i.174; *Taishō* ii.27b.

27. Whitrow, *op. cit.*, p. 313.
28. See J. M. E. McTaggart, *Nature of Existence* (Cambridge: At The University Press, 1927), ii.10.
29. *S* ii.17; *Taishō* ii.85c.
30. Cp. C. D. Broad, *Examination of McTaggart's Philosophy* (Cambridge: At The University Press, 1938), ii.316, "When I utter the sentence 'It has rained', I do *not* mean that, in some mysterious non-temporal sense of 'is', there *is* a rainy event, which momentarily possessed the quality of presentness and has now lost it and acquired instead some determinate form of the quality of pastness. What I mean is that raininess has been, and no longer is being, manifested in my neighbourhood. When I utter the sentence 'It will rain', I do *not* mean that, in some mysterious non-temporal sense of 'is', there is a rainy event, which now possesses some determinate form of the quality of futurity and will in course of time lose futurity and acquire instead the quality of presentness. What I mean is that raininess will be, but is not now being, manifested in my neighbourhood."
31. Whitrow, *op. cit.*, p. 313.
32. *D* iii.134; cp. *Taishō* i.75b-c.
33. Whitrow, *op. cit.*, p. 312.
34. *S* ii.94-7; *Taishō* ii.81c-82a.
35. *A* iv.137; cp. *Taishō* i.682b.
36. C. D. Broad, *Scientific Thought* (London: Routledge & Kegan Paul, 1923), p. 351.
37. As a result of the acceptance of the theory of moments, David Hume reduced causation to mere succession of ideas. His theory of moments is very clearly set out in *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: The Clarendon Press, 1888), p. 39 f.
38. Whitrow, *op. cit.*, p. 153.
39. *Dhammapāda-aṭṭhakathā* (London: PTS 1906-1914), i.319.
40. *Atthasālinī*, ed. E. Müller (London: PTS, 1897), p. 421.
41. *Sammohavinodanī* (hereafter cited as *VbhA*) ed. A. P. Buddhadatta (London: PTS, 1923), p. 7.
42. *Abhidharmadīpa* (hereafter cited as *Ad*), ed. P. S. Jaini (Patna, K. P. Jayaswal Research Institute, 1959), p. 104.
43. *VbhA* 7.
44. *Sphuṭārthābhīdharmakośavyākhyā* of Yaśomitra (hereafter cited as *Sakv*), ed. U. Wogihara (Tokyo: The Publication Association of Abhidharmakośavyākhyā, 1932-1936), p. 33.
45. *VbhA* 25, Rūpaṃ garupariṇāmaṃ dandhanirodhaṃ, arūpaṃ lahupariṇāmaṃ khippanirodhaṃ.
46. *Ibid.* 25-26, Rūpe dharente yeva soḷasa cittāni uppajjitvā nirujjhanti. Taṃ pana sattarasamena cittena saddhiṃ nirujjhanti.
47. *L'Abhidharmakośa de Vasubandhu*, traduction et annotations par Louis de la Vallée Poussin (Paris: Paul Geuthner, 1923-1925), v.52 ff.; *Taishō* xxix.104c; *Ad* 259; *Tattvasaṃgraha*, ed. E. Krishnamacharya (Baroda: Oriental Institute, 1926), i.504.
48. *Points of Controversy* (translation of *Kathāvatthu*), by S. Z. Aung and Mrs. Rhys Davids (London: PTS, 1915), p. 84 ff.
49. *Ibid.* p. 95 f.
50. *Sakv* p. 362.
51. Whitrow, *op. cit.*, p. 179, where it is given as a theory formulated by Albert Einstein.
52. *Sarvadārśanasamgraha*, ed. V. S. Abhyankar (Poona: Bhandarkar Oriental Research Institute, 1924), p. 36.
53. Chap. xix, Kālaparīkṣā.
54. *MKV* 382
55. *MK* xix.3, tasmāt kālo na vidyate.

56. *Ibid.* xix.1.
57. *MKV* 385.
58. *MK* xix.5.
59. See *MK* chapters iv, v, vii, xv, and xviii.
60. *Ibid.* xxiv.8.
61. *MKV* 493.