

On the Buddha's 'Kammic Fluff': The Last Meal Revisited

Peter Masefield[†] and Nicolas Revire¹

Abstract

This paper reconsiders the last meal of the Buddha from the little studied perspective of 'kammic fluff' (*kammapilotika*). Although marginal in the Nikāyas, this idea is more prominent in the commentarial accounts of the Buddha's death, and suggests that the Buddha's final meal aided the Buddha, rather than directly caused his death. Additionally, we examine other evidence from some Theravāda traditions of mainland South East Asia: modern mural paintings from Cambodia and Thailand which indicate that the Buddha's death possibly resulted from a complication of a chronic peptic ulcer involving the vomiting of blood, and a little known Pali text of 'Indo-Chinese' origin, which supports this interpretation, and assumes that the Buddha's final illness was caused by the remnants of his former *kamma*.

¹ This paper is part of a larger research project led by Nicolas Revire dealing with Pali and vernacular hagiographies of the Buddha as depicted in the narrative texts, murals, reliefs and sculptures of mainland South East Asia. The first paper in the series has been published as Revire 2019. The author wishes to acknowledge support of the Center for Khmer Studies, the École française d'Extrême-Orient, and the Thai Research Fund. We are also grateful to Dr Nithi Nuangjamnong of Naresuan University who shared graciously the photos published here a Figs 1, 3–4 and 6. Final thanks are also due to Alex Wynne, the editor of this journal, for his essential assistance with Pali sources and editorial rigor.

The Buddha Siddhattha Gotama is recorded in the *Mahāparinibbānasutta* (and the *Udāna*) as having, shortly prior to his final demise or *parinibbāna*, taken his last meal in the house of Cunda Kammāraputta, i.e., ‘the smith’s son’, in Pāvā (D II 126ff; Ud 81ff). It is said that the Buddha told Cunda that he, and he alone, should be served with such *sūkaramaddava* as had been prepared, whilst the monks accompanying him should be served any other foods, both hard and soft, that had been prepared.² Moreover, he told Cunda that any leftover *sūkaramaddava* should be buried in a pit, since he beheld none in the cosmos—humans and *devas* alike—other than the Tathāgata able to thoroughly digest it.³ Then, some time after the Buddha finished his meal, he was afflicted by a grating affliction, whilst severe stomach pains, accompanied by blood and diarrhoea,⁴ that were potentially fatal,⁵ ensued. Nonetheless, he managed to suppress these and make his way, shortly afterwards, on foot to Kusinārā,⁶ where he attained final *parinibbāna*. This account has led many to conclude that it was Cunda’s alms that had led to the Buddha’s death. According to Mettanando & von Hinüber (2000: 106–107),

the onset of the Buddha’s illness was rapid. The disease started while eating, so the Buddha assumed that there was something wrong with this unfamiliar delicacy and he suggested to his host that the food be buried ... Soon the Buddha suffered severe stomach pain and passed blood from his rectum.

² D II 127: *yaṃ te Cunda sūkaramaddavaṃ paṭiyattaṃ tena maṃ parivisa | yaṃ paṇ’ aññaṃ khādanīyaṃ bhojanīyaṃ paṭiyattaṃ tena bhikkhusaṅghaṃ parivisa ||*

³ D II 127: *yaṃ te Cunda sūkaramaddavaṃ avasiṭṭhaṃ taṃ sobbhe nikhaṇāhi || nāhaṃ taṃ Cunda passāmi sadevake loke samārake sabrahmake sassamaṇabrāhmaṇīyā pajāya sadevamanussāya yassa taṃ paribhuttaṃ sammā pariṇāmaṃ gaccheyya aññatra Tathāgatassa ||*

⁴ D II 127: *kharo ābādho uppajji lohitaṃ pakkhandikā bālhā vedanā vattanti ||* It is worth noting that this passage is syntactically ambiguous, and that the expressions *kharo ābādho* and *lohitaṃ pakkhandikā* are quite rare in the Nikāyas. For the former, see Vin III 72, IV 70; for the latter, see M I 316; the occurrence at Ja V 422 (no. 536) is paracanonical. The expression *bālhā vedanā* only occurs in the accounts of the Buddha’s death.

⁵ *māraṇantikā*; potentially fatal, yes, but not necessarily so, as should be clear from what follows. Defined, at Sv 546, as *maraṇantaṃ maraṇasantikaṃ pāpanasamattā* and, at Ud-a 401, as *maraṇantā maraṇasamīpapāpanasamattā*, i.e., capable of causing one to reach death’s door.

⁶ Ud 82: *atha kho Bhagavā āyasmantaṃ Ānandaṃ āmantesi | āyāma’ Ānanda yena Kusinārā ten’ upasaṅkamissāma ||*

This short summary is quite misleading. The text of D II 127 tells us that even before starting to eat, the Buddha told Cunda not to serve the *sūkaramaddava* to anyone else, and then bury the remnants afterwards. After Cunda followed the Buddha's instructions, serving the food in the manner prescribed, the Buddha told him to bury the remnants of the *sūkaramaddava*, which he did, after which the Buddha delivered a Dhamma sermon. The text then states explicitly that the Buddha got up from his seat and left (*uṭṭhāyāsanā pakkāmi*), and only then became ill, an unspecified period of time after eating (*bhagavato ... bhattaṃ bhuttāvissa kharo ābādho uppajji ...*). In other words, the disease did not start precisely 'while eating' (although see below for commentarial evidence to this effect).

As regards the illness, the text says that the Buddha suffered severe stomach pain but does not explicitly state that he 'passed blood from his rectum'. The term used in this passage is *lohitapakkhandikā*, which could be taken as a *dvanda* compound, viz., 'blood and diarrhoea', rather than 'bloody diarrhoea'. This point is important, for a *dvanda* interpretation of the compound would suggest that the Buddha vomited blood, and if so his death could be ascribed to a peptic or stomach ulcer. This was ruled out by Mettanando & von Hinüber, but their claim that the Buddha 'passed blood from his rectum' rests on the unwarranted assumption that the compound *lohitapakkhandikā* is to be analysed as a *kammadhāraya* rather than *dvanda*. However, they point out that 'for ulcers higher than the ligament of Treitz ... when there is severe bleeding, it would manifest as bloody vomiting, not a passing of blood through the rectum' (2000: 107). The *dvanda* interpretation of the compound *lohitapakkhandikā* thus raises the possibility that the Buddha died from a peptic ulcer; as we will see, the notion that a spell of bloody vomiting (*haematemesis*) preceded the Buddha's death has been maintained in some Theravāda traditions of mainland South East Asia.

What about the Buddha's statement that only he can digest the *sūkaramaddava*, and that its remnants should be buried? This part of the narrative could indeed imply that the meal was regarded as dangerously harmful. But if the *sūkaramaddava* was harmful, this would also wrongly suggest that the immediate cause of the Buddha's death was food poisoning. This has been correctly ruled out by Mettanando & von Hinüber (2000: 107), based on the account of the Buddha's symptoms. Indeed, other aspects of the canonical and commentarial accounts suggest that there was probably nothing wrong with the meal itself. We should first note that the identity of the meal does not necessarily

suggest that it was harmful. In the *Udāna* Commentary (Ud-a 399ff), which is rather more thorough than the account given in the *Dīghanikāya* Commentary (Sv 516ff), Dhammapāla gives several possibilities as to the denotation of the term *sūkaramaddava*:

It is said in the Great Commentary that *sūkaramaddava* is the already available meat⁷ of the pig that is tender and succulent. Some, however, say that *sūkaramaddava* is not pig's meat (but rather) bamboo shoots that pigs (*sūkarehi*) have trampled upon (*maddita*), others that it is a mushroom that has come into being at a spot that pigs (*sūkarehi*) have trampled upon (*maddita*), whilst still others proclaim that *sūkaramaddava* is the name for a certain elixir.⁸

It is quite clear that, by the time of the commentarial period, knowledge as to what *sūkaramaddava* may once have denoted had been lost.⁹ Nonetheless,

⁷ The word *pavattamaṃsa* recurs at Vin I 217 in the incident in which the female layfollower Suppiyā instructs a servant to find same so that she might prepare meat-broth for a sick monk, such servant, however, returning empty-handed, on account of the fact that it was an Uposatha day on which animal slaughter was not permitted, as a result of which Suppiyā had to cut flesh from her own thigh for the purpose. Sp 1094 explains *pavattamaṃsa* as 'meat that is already dead' (*matass'eva maṃsam*), in accordance with which I.B. Horner renders same as 'meat that is to hand', adding the note 'i.e., already killed, and not to be killed on purpose for the monk' (B Disc IV 296 n. 1). This also seems supported by Sv-pt II 218, which states that *sūkaramaddava* is the meat of the wild boar (*vanavarāhamāṃsa*), and that 'meat that is already dead' is implied at Sv 568 since Cunda, an *ariyasāvaka* and *sotāpanna*, and the rest, in preparing the food for the Lord and the order of monks, did so blamelessly. Nānamoli (2001: 357), who takes *sūkaramaddava* as 'hog's mincemeat', similarly renders *pavattamaṃsa* as 'meat already on sale in a market'. Moreover, *pavattamaṃsa* is, presumably, to be distinguished from *āmakamaṃsa*, raw or uncooked, meat, and which is not allowed (D I 5; M I 180); or else this is why the commentaries explain *paṭiyādāpetvā* (had prepared) as *pacāpetvā* (had cooked).

⁸ Ud-a 399f: *sūkaramaddavan ti sūkārassa mudusiniddham pavattamaṃsan ti mahā-aṭṭhakathāyaṃ vuttaṃ || keci pana sūkaramaddavan ti na sūkaramaṃsam | sūkarehi madditavamaṃsakalīro ti vadanti || aññe sūkarehi madditappadese jātaṃ ahichattakan ti || apare pana sūkaramaddavaṃ nāma ekaṃ rasāyanan ti bhaṇiṃsu || Sv 568 gives the first and last of these only, some editions adding in parentheses that it is a recipe for cooking soft-boiled rice in the five products of the cow (*eke bhaṇanti sūkaramaddavan ti pana mudu-odanassa pañcagorasayūsapācanavidhānassa nām' etaṃ | yathā gavapānaṃ nāma pākanāman*).*

⁹ See *inter alia* Wasson 1982, and Mettanando & von Hinüber 2000 who discuss the possible nature of the *sūkaramaddava*-dish; *contra*, see Bareau 1968 who critically examines other parallel passages in Sanskrit and Chinese where something called *sūkaramaddava* seems totally absent. On this ground, Bareau concludes that the Pali sources discussing the last meal of the Buddha may have been corrupt and of later elaboration.

sheer common sense suggests that the Great Commentary (*Mahā-aṭṭhakathā*), no longer extant, is much more reliable in this regard, if only for the fact that *sūkaramaddava*, possibly consisting of pig's meat,¹⁰ was simply one of the huge number of dishes that Cunda must have had prepared in his household and, we may presume, from ingredients freely available in the local markets, in advance, in anticipation of a visit by a 'great' and hungry Saṅgha.¹¹

Although the precise identity of *sūkaramaddava* had seemingly been forgotten well before the commentarial period, this need not mislead us into thinking that there was anything inherently pernicious in 'this mysterious food' (as An has it, 2005: 121 n. 5). And this remains true whether it were pig's meat, bamboo shoots, mushrooms or whatever.¹² Indeed, the Buddha declares that not only no blame should attach to Cunda, but also that, of all meals received by the Lord, the two most meritoriously efficacious were that given by Sujātā, prior to the night of his awakening, and that given by Cunda, prior to his final extinction:

Of exactly the same fruition, of exactly the same ripening, are these two almsfoods, being of greater fruition and of greater advantage than other almsfoods in the extreme. What two? That almsfood after consuming which the Tathāgata awakens to the unsurpassed perfect awakening, and that almsfood after consuming which he attains *parinibbāna* into that element of *nibbāna* that is without remnant of substrate.¹³

¹⁰ It is a common interpretation in Thailand that *sūkaramaddava* consists of pig's meat. Modern Thai mural paintings depicting the life of the Buddha often represent a pig being cooked and barbecued, or a wild boar being prepared and ready to be offered by Cunda to the Lord and his fellow monks (Figures 1–3).

¹¹ One that was 'great' by way of its greatness of good qualities and its greatness in number (Ud-a 399: *mahatā bhikkhusaṅghenā ti guṇamahattasāṅkhyāmahattehi mahatā*).

¹² It should be borne in mind, however, that pig's meat and mushrooms—if this is indeed the nature of that meal—are taboo in India, especially in the brahmin cast, on which, see Bareau 1968 and Wasson 1982.

¹³ D II 136f: *dve' me piṇḍapātā samasamaphalā samasamavipākā ativiya aññehi piṇḍapātehi mahapphalatarā ca mahānisamsatarā ca || katame dve | yañ ca piṇḍapātaṃ paribhuñjītvā Tathāgato anuttaraṃ sammāsambodhiṃ abhisambujjhati | yañ ca piṇḍapātaṃ paribhuñjītvā anupādisesāya nibbānadhātuyā parinibbāyati ||* On the rather blurred distinction between the terms *nibbāna* and *parinibbāna*, also involved in this passage, see Masefield 1979.

The Buddha also points out Cunda's kammic benefits from offering the meal as follows:

By Cunda has been heaped up a deed conducive to (long) life-span
 ... to (good) complexion ... to happiness ... to heaven ... to fame
 ... to sovereignty.¹⁴

Perhaps the early Buddhist tradition had certain reasons to wish to absolve Cunda of any blame; perhaps he and/or his family were important supporters of the Saṅgha. But the account explicitly states that the Buddha was able to digest the meal, and that he subsequently continued his journey on foot; the Buddha was not, apparently, impaired or incapacitated as a result of the meal.¹⁵ The commentarial account continues in this vein. Whatever the precise nature of the dish, Dhammapāla makes it clear that, although the affliction arose after the Buddha had eaten the meal, it did not do so *as a consequence* of his having partaken of that food. Instead, he claims that meal eased the pain brought on through the recurrence of an illness that had originated, ten months previously, in the hamlet of Beluva near Vesāli (but suppressed throughout the interval by way of meditative attainment),¹⁶ thereby allowing him to complete the final leg of his journey to Kusinārā where he would attain final *parinibbāna*. The verses beginning 'after eating Cunda's meal' were codified by the compilers of the scriptures afterwards:

'And along with the *sūkaramaddava*, to the one who had partaken thereof': there arose to the one who had partaken thereof, though not with his having partaken thereof as its condition. For if (that affliction) had arisen to him without his having partaken thereof, it would have been far too grating; whereas, on account of his having

¹⁴ Ud 85: *āyusaṃvattanikaṃ āyasmatā Cundena kammāraputtēna kammaṃ upacitaṃ | vaṇṇa-saṃvattanikaṃ āyasmatā Cundena kammāraputtēna kammaṃ upacitaṃ | sukhasaṃvattanikaṃ āyasmatā Cundena kammāraputtēna kammaṃ upacitaṃ | saggasāṃvattanikaṃ āyasmatā Cundena kammāraputtēna kammaṃ upacitaṃ | yasasaṃvattanikaṃ āyasmatā Cundena kammāraputtēna kammaṃ upacitaṃ | ādhipateyyasaṃvattanikaṃ āyasmatā Cundena kammāraputtēna kammaṃ upacitaṃ ti ||*

¹⁵ It is therefore hard to credit Walshe's dismissal of the claim that the *sūkaramaddava* the Buddha ate could only be digested by the Tathāgata, as follows: '(or so we are told). The trouble was, of course, that in fact even the Tathāgata failed to digest it!' (1987: n. 418).

¹⁶ E.g., D II 99: *atha kho bhagavato vassūpagatassa kharo ābādhō uppajji | bālhā vedanā vattanti māraṇantikā || tā sudaṃ bhagavā sato sampajāno adhvīvēsesi avihaññamāno ||*

partaken of that succulent food, the pain became diminished, as a result of which same he was able to continue on foot.¹⁷

Moreover, it is abundantly clear from Dhammapāla's commentary that the meal of *sūkaramaddava* was given by Cunda in good faith:

For it was this, they say, that Cunda, the smith's son, gave out of a desire to have the Teacher live for a long time, hoping, after hearing that the Lord was to attain *parinibbāna* that same day: 'Surely he will remain a while longer once he has consumed this'.¹⁸

From the canonical account, supported by Dhammapāla's interpretation, it becomes evident that Cunda's meal of *sūkaramaddava* in fact aided the Buddha and should not be blamed for his death. If so, then what, we may ask, was it about the dish that rendered it incapable of being thoroughly digested by anyone other than the Tathāgata, such that any leftovers needed to be buried, and what was responsible for the blood and diarrhoea that ensued? Let us again return to the commentaries.

According to the *Udāna* Commentary,¹⁹ the reason lies in the fact that the *devatās* of the four great continents and lesser islands had infused the *sūkaramaddava* with nutritive essence (*ojas*), thereby rendering it incapable of being digested by anyone other than the Tathāgata.²⁰ However, according to the *Milindapañha*, this they did on every occasion the Tathāgata ate,²¹ thereby again implying there was nothing special about Cunda's meal *per se*, or at least prior to its being offered.

¹⁷ Ud-a 401 (= D-a II 568): *Cundassa bhattaṃ bhuñjivā ti ādikā aparabhāge dhammasaṅgāhakehi thapitā gāthā || tattha bhuttassa ca sūkaramaddavenā ti bhuttassa udapādi | na pana bhuttapaccayā || yadi hi abhuttassa uppajjissā atikharo abhavissā | siniddhabhojanaṃ pana bhuttattā tanukā vedanā ahoṣi | ten'eva padasā gantuṃ asakkhi ||*

¹⁸ Ud-a 400: *tañ hi Cundo kammāraputto ajja bhagavā parinibbāyissatī ti sutvā app'eva nāma naṃ paribhuñjivā ciratarāṃ tiṭṭheyā ti satthu cirajīvitukamyatāya adāsī ti vadanti ||*

¹⁹ Ud-a 400: *tasmīṃ kira sūkaramaddave dvisahassadīparivāresu catūsu mahādīpesu devatā ojaṃ pakkhipiṃsu | tasmā taṃ añño koci sammā jīrāpetuṃ na sakkoti ||*

²⁰ Or even by themselves, if Spk I 235f in a similar context is to be believed—see CD 447 n. 450 for a translation. See also [Figures 1–2](#) where Sakka appears flying in the air, with his typical green complexion, and infusing the pig's meat with divine nutriment.

²¹ Mil 231: *sabbakālaṃ mahārāja Tathāgate bhuñjamāne devatā dibbaṃ ojaṃ gahetvā upatiṭṭhitvā uddhaṭuddhaṭe ālope ākiranti ||*

The phenomenon of the dangers surrounding leftover food is outside the scope of this paper. Nonetheless, we may note that, apart from the practice of leaving uneaten alms for other *bhikkhus* (who, if they do not eat it, must throw it away into water or a place without grass),²² there are a few other instances in the Nikāyas where the Buddha tells others to bury leftovers. At S I 167ff ≠ Sn p. 15, for instance, we find the brahmin Sundarika Bhāradvāja, following his performance of the Agni-oblation, going in search of some other brahmin to whom he might offer the remnant (*havyasesa*) of that offering leftover in his ladle.²³ The commentary on this explains that he did so in the belief that, since the oblation placed in the fire had been eaten by Mahābrahmā, he needed to offer the remnant to another brahmin, if he were to please his forebears and successfully find his way to the Brahmaloaka.²⁴ He therefore offers the remains to the Buddha (S I 168f), whom he mistakes for a brahmin, but the latter refuses to accept same, since he does not accept any food that has been chanted over by verses (*abhigītam*), adding the following, in much the same tone of the *Cundasutta*:

I do not behold anyone in this world with its *devas*, with its Māra, with its Brahmā, with its generation of recluses and brahmins, with its (generation of) *devas* and men, for whom that consumed could become thoroughly digested, except for a Tathāgata or a *sāvaka* of the Tathāgata.²⁵

He then continues, saying that that brahmin should, instead, throw it away 'in a place where there is little grass, or immerse it in water devoid of living beings', such that, when he did so, it 'hissed and seethed, and steamed and smoked, just like a ploughshare, that had been heated all day, when plunged into water'.²⁶

²² Vin I 157ff, I 352, II 216; M I 207, III 157.

²³ S I 167: *atha kho sundarikabhāradvājo brāhmaṇo aggim juhivā aggihuttaṃ paricaritvā uṭṭhāyāsanā samantā catuddisā anuvilokesi | ko nu kho imaṃ havyasesaṃ bhujjeyyā ti ||*

²⁴ Spk I 233: *aggimhi tāva pakkhittapāyāso Mahābrahmunā bhutto | ayaṃ pana avaseso atthi | taṃ yadi brahmuno mukhato jātassa brāhmaṇassa dadeyyaṃ | evaṃ me pitarā saha putto pi santappito bhavyeṃ | suvisodhito c'assa brahmalokagāmmaggo—Cp translation at CD 447 n. 447; also KS I 209 n. 5.*

²⁵ S I 168f: *na khvāhan taṃ brāhmaṇa passāmi sadevake loke samārake sabrahmake sassamaṇa-brāhmaṇiṇyā pajāya sadevamanussāya yasseso havyaseso bhutto sammā pariṇāmaṃ gaccheyya aññatra brāhmaṇa Tathāgatassa vā Tathāgatasāvakaṃ vā ||*

²⁶ S I 169: *atha kho Sundarikabhāradvājo brāhmaṇo taṃ havyasesaṃ appāṇake udake opilāpesi || atha kho so havyaseso udake pakkhitto ciccīṭayati | ciccīṭayati | sandhūpāyati | sampadhūpāyati || Seyyathāpi nāma phālo divasasantatto udake pakkhitto ciccīṭayati | ciccīṭayati*

Passing aside the question as to why Buddhaghosa should have thought that an oblation offered to Agni had been consumed by Mahābrahmā,²⁷ it is nonetheless a fact that the late Vedic or Brahmanic milieu into which the Buddha arose was one admitting of very strict rules on the use of leftover food, including that gained by a brahmin student on his almsround. Hence, it is of interest to find, in Āpastamba's *Dharmasūtra*,²⁸ that such a student should, *inter alia*, 'after he has eaten [food gained on his almsround] ... not leave any food uneaten. If he is unable to do so, he should bury the leftovers in the ground, [or] throw them in the water', the same text going on to list a hierarchy of individuals to whom such food might then be offered, prior to its disposal. It surely cannot be a coincidence that this is almost word for word the same as that put into the mouth of the Buddha in the above quoted *Samyutta* passage (S I 167f).

The Buddha's instruction to bury the remnants of his final meal thus reflects Brahmanic ideas and practices about what to do with leftovers. If so, the canonical texts and their commentaries are consistent in indicating that there was nothing in the least unusual, let alone harmful, about the Buddha's last meal. So what, we may finally ask, really caused the Buddha's death?

According to the *Apadāna* and its Commentary, as well as the *Udāna* Commentary, various afflictions suffered by the Buddha were a consequence of his 'kammic-fluff' (*kammapiḷotika*): the minor, leftover consequences of former deeds already long since atoned for in hell and elsewhere.²⁹ This concept is used to explain various sufferings experienced by the Buddha during his final human existence, including headaches,³⁰ backache,³¹ cracked skin on his feet,³² the

| sandhūpāyati | sampadhūpāyati | evam eva so havyaseso udake pakkhitto ciccitāyati | cīcīcīāyati
| sandhūpāyati | sampadhūpāyati ||

²⁷ As C.A.F. Rhys Davids observes: 'So obsolete apparently was Agni-worship become in Buddhaghosa's day, or even in that of his authorities, that he sees only the "Great Brahmā" as the object of these rites' (KS I 209 n. 4).

²⁸ Olivelle 1999: 11. See also Deussen 1980: I, 148: 'The residue (*ucchiṣṭam*) of the offering... is to be eaten only by a brāhmaṇa', quoted in CD 447 n. 447.

²⁹ On this concept, see Masefield 2010 and Anandajoti 2012: 10ff. A summary of the relevant section of the *Apadāna* Commentary can also be found in the translation of Ud-a 263ff. *Pilotika*, literally means 'a small piece of cloth, a rag, a bandage' (PED, sv.), that is, 'the hanging thread(s) at the end of a woven cloth' (Sanjukta Gombrich, personal communication).

³⁰ Ap 300, vv. 3363–64. See also Ud-a 265.

³¹ Ap 126: *tasmā kadāci piṭṭhidukkhe uppanne sārīputtamoggallāne ito paṭṭhāya dhammaṃ desethā ti vatvā sayam sugatacīvaraṃ paññāpetvā sayati | kammapiḷotikaṃ nāma buddhamapi na muñcati ||*

³² Ap 300, v. 3362.

false accusations of Ciñcamānavikā and Sundarī,³³ not to mention the various machinations on the part of his major adversary, Devadatta.³⁴ The Ap-a thus gives the reason for the Buddha's resurgence of the illness that first originated in Beluva as being due to the time when he, as a doctor in a past life, had purged the son of a wealthy banker.

atisāra:³⁵ a purging of blood and diarrhoea (*lohitapakkhandhikā*). In the past, the Bodhisatta made his living as a physician, after apparently being reborn in the home of a householder. When he was treating a particular banker's son, who was afflicted³⁶ with illness, he prepared and administered a medicine, but owing to his negligence on the day he was to be paid, he gave another medicine which caused a purging with vomit (*vamanavirecanam*). The banker gave him a lot of money. As a result of the ripening of that *kamma*, in rebirth after rebirth [the Bodhisatta] was afflicted by an illness accompanied by blood and diarrhoea (*lohitapakkhandikābādhenā*). Moreover, in this, his last individual existence, at the time of his *parinibbāna*, due to the meal of *sūkaramaddava* cooked by Cunda the smith's son, which had been infused with divine nutriments by deities from the entire world-system, at the moment of eating (*bhuttakkhaṇe*), there was a purging of blood and diarrhoea (*lohitapakkhandikā-virecanam*); the strength of a hundred thousand crores of horses was expended. The Blessed One, going to Kusinārā for his final *nibbāna* on the full moon of Visākḥā, sitting down in various places to drink water when he was thirsty,³⁷

³³ Ud-a 263, Ap 299 (vv. 3346, 3349, 3354).

³⁴ Ap 300, vv. 3356–58.

³⁵ This term in Pali is often translated as 'dysentery' (CPED; PED, *svv.*) which generally manifests with the symptoms of 'bloody diarrhoea' but with no apparent vomiting. The CPD's definition as 'dysentery', however, is based on a single passage (Dhp-a I 182), which refers only to 'enteric (typhoid) fever' (*kucchiḍāham*). In Sanskrit, *atisāra* literally denotes an excessive 'discharge' or 'purging' (SED, *sv.*), caused for instance by stomach or intestinal inflammation. It could then, depending on context, refer to either 'diarrhoea'—whereas the presence of blood is not necessarily involved—or '(bloody) vomiting'. The latter interpretation thus opens again the possibility that the Buddha died from a peptic ulcer provoking the vomiting of blood (on which see also figures *infra*), and not from a dysentery, or a mesenteric infarction, mainly causing bloody diarrhoea, as generally presented (e.g., Mettanando & von Hinüber 2000: 108–109).

³⁶ *vicchita*: perhaps from the causative of Skt. *vicch*, 'to press, bring into straits'.

³⁷ For depictions of this motif in modern Khmer murals, see Figures 7 and 9.

reached Kusinārā with great difficulty and then passed into final extinction just before dawn. Even the master of the triple world³⁸ could not forsake this type of 'kammic fluff' (*kammapiḷḷika*).³⁹

This passage makes several noticeable points. First, it supports Mettanando & von Hinüber's claim (2000: 106) that the 'disease started while eating'—but still, nevertheless, goes against the account of the *Mahāparinibbānasutta* in this regard. Apart from this, the account supports the notion that there was nothing intrinsically wrong with the food: the statement that 'the strength of a hundred thousand crores of horses was expended' emphasises the restorative effects of the meal, rather than its adverse results. Finally, and most importantly, the principle of kammic equivalence suggests that, since the Bodhisatta's negligence in a former life caused his patient to experience 'a purging with vomit', the transmitters of the story may have understood *lohitapakkhandikā* to involve vomiting blood.

Whether or not this is the case, this understanding of the story of the Buddha's death has been seemingly transmitted in some Pali and vernacular Buddhist traditions of mainland South East Asia. This can be clearly seen today in specific modern Khmer and Lao-Isan mural paintings from Cambodia and North East Thailand illustrating the final sickness of the Buddha (Roveda & Sothon 2009: 164, 259; Brereton & Somroay 2010: 28–29). In these regions, the murals invariably depict the Buddha vomiting, or about to vomit, blood (Figures 5–8, 10–11), and suggest an old and localised tradition in which *lohitapakkhandikā* was regarded essentially as the purging of blood through the mouth, rather than bloody diarrhoea expelled through the rectum.⁴⁰

³⁸ Reading *lokattayasāmī pi* for *lokattayasāmim pi*, assuming the character *ī* was misread as *anusvāra*, and converted into *-m* for the purpose of *sandhi* before *pi*.

³⁹ Ap-a 127: *atisāro ti lohitapakkhandikā-virecanaṃ || atīte kira bodhisatto gahapatikule nibbatto vejjakammena jīvikam kappesi || so ekaṃ seṭṭhiputtaṃ rogena vicchitaṃ tikicchanto bhesajjaṃ katvā tikicchitvā | tassa deyyadhammadāne pamādamāgamaṃ aparaṃ osadhaṃ datvā vamanavirecanaṃ akāsi | seṭṭhi bahudhanaṃ adāsi || so tena kammavipākena nibbattanibbattabhava lohitapakkhandikābādhena vicchito ahoṣi || imasmim pi pacchimattabhāve parinibbānasamaye cundena kammāraputtena pacitasūkaramaddavassa sakalacakkavāla-devatāhi pakkhitta-dibbojena āhārena saha bhuttakkhaṇe lohitapakkhandikā-virecanaṃ ahoṣi || koṭṭisatasahassānaṃ hatthīnaṃ balaṃ khayam agamāsi || bhagavā visākhapunnāyāya kusinārāyaṃ parinibbānatthāya gacchanto anekesu thānesu nisīdanto pipāsito pānīyaṃ pivitvā mahādukkhena kusināraṃ patvā paccūsasamaye parinibbāyi || kammapiḷḷikaṃ evarūpaṃ lokattayasāmim pi na vijahati ||*

⁴⁰ This tradition may have been pan-regional but, as far as we can ascertain, the visual and narrative sources for Myanmar are lacking, and its current status for Laos is unknown. However,

While the modern interpretation of the episode of the last meal in Central Thailand seems to remain ambiguous—the Thai *Paṭhamasambodhi* simply mentions that the Buddha suffered from ‘diarrhoea and bleeding’ after having partaken of the food offered by Cunda (trans. Paramanujitjinoros 2016: 547)—a Khmer vernacular narrative text is illuminating in this regard since it gives a textual basis to the visual evidence. The *braḥ nibbān sūtr*, only available in manuscript form mentions ‘vomiting’ directly in the Cunda episode. The crucial passage reads and translates as:

ព្រះអង្គកក្អកក្អួតព្រះលោហិតស្រសៗ ចេញមក

braḥ aṅg ka k'ak k'uat braḥ lohita sras 2 ceñ mak,

i.e., ‘The Lord then coughed and vomited out fresh blood’.⁴¹

In addition, the modern illustrations from Cambodia, often depicting Sakka, Lord of the *devas* (*devānaṃ inda*), catching the blood vomited by the Buddha after consuming Cunda’s alms (Figures 7–8, 10, 11a), might be compared with a similar episode, recorded in the *Dhammapada* Commentary. In this episode, Sakka is described as catching, and removing, on his head, the Buddha’s ‘blood and diarrhoea’ (*lohitapakkhādikā*), following the onset of his sickness at Beluva.⁴²

Sakka permitted no other so much as to touch with his hand the vessel which contained the excrement of the Teacher’s body,⁴³

a mural painting from Phitsanulok province (Upper Central Thailand) which depicts the scene is conveniently supplemented by the following caption: ลาก เลือด/*lak lueat* (to be understood as *ราก เลือด/*rak lueat* in the standard dialect of Central Thailand), i.e., ‘vomiting blood’ (Figure 6). Interestingly, the spelling of the first term substitutes the grapheme or letter < ๖ = r > for < ๓ = l > and thus betrays a likely ‘provincial’ origin, probably of Laos descent, of the scribe and/or artist of the murals. This may be explained historically by the fact that some Lao communities were deported from their homeland in the 19th century to re-populate Phitsanulok and surrounding cities. On the history of *r*’s disappearance from the modern Lao phonological system, see Davis 2015.

⁴¹ The passage is transliterated from MS FEMC 208-B.01.06.01.III.2, fascicle 1, folio *ma* 28 verso, line 2; it is held at Wat Phum Thmei, Kampong Cham province in Cambodia, and was copied in 1948. We are very grateful to Trent Walker for bringing this Khmer vernacular and unpublished reference to our attention, and for his translation of the cited passage.

⁴² Dhṛp-a III 269f: *so Satthu sarīravalāñjanabhājanam aññassa hatthenā pi phusitum adatvā sīse yeva ṭhapetvā nīharanto mukhasañkocanamattam pi na akāsi | gandhabhājanam pariharanto viya ahosi ||*

⁴³ The term *sarīravalāñjana* is of obscure derivation. PED has ‘that which is spent or secreted, i.e., outflow, faeces, excrement’, and ‘discharge from the body’ (*valāñja, sarīravalāñja, svv.*). In

but himself carried the vessel out on his own head. Moreover he carried it out without the slightest contraction of the muscles of his mouth,⁴⁴ acting as though he were bearing about a vessel filled with perfumes.⁴⁵

Finally, another source which contests somewhat the common understanding of the Buddha's death comes from a Pali text of 'Indo-Chinese' origin.⁴⁶ This text has been published with a French translation some time ago by Ginette Martini (1972).⁴⁷ It is an extra canonical Jātaka composed in the so-called *mul* script, possibly in the region now identified as contemporary Central Thailand,⁴⁸ and which reads as follows:

*evam me sutam || ekaṃ samayaṃ bhagavā bhoganagare viharanto
pāvācundassa piṇḍipātaṃ paribhuñjanto yathā hi amhākam
bhagavā cundassa gehe bhuñjitvā || taṃ divasaṃ yeva bhagavā
cundaṃ āmantesi | mam' eva sukaramaduvamamsaṃ āhāraṃ
sajjāhi taṃ āhāraṃ na aññesaṃ bhikkhūnaṃ dehi sesāhāraṃ
nikkhāhī ti || taṃ sutvā Cando tathā akāsi || paribhuñjitamte
tassa lohitaṃ paggharantaṃ || tasmim̐ khaṇe bhikkhūnaṃ taṃ*

other words, the meaning is ambiguous, and the interpretation of Burlingame is likely to be based here on the biased assumption that the Buddha had diarrhoea. However, just like with *atisāra* (see note 35), a purging with vomit is equally possible in this context, and indeed supported by the Khmer mural paintings.

⁴⁴ The term *mukhasaṅkocanamattam pi na akāsi* might, perhaps, be better rendered as 'without so much as grimacing'.

⁴⁵ BL III 79.

⁴⁶ The nature of 'Indo-Chinese' Pali, with all its idiosyncrasies, has yet to receive the attention it deserves from international Pali scholars. See, however, the preliminary grammatical surveys in Martini 1936 and Terral 1956; also Masefield 2008 and 2009.

⁴⁷ It may be worth pointing out that Ginette Terral, Ginette Terral-Martini, and Ginette Martini are all one and same person, and wife of François Martini.

⁴⁸ The *mul* script traditionally used for the notation of Pali is generally taken to indicate a text of Cambodian (Khmer) origin, the *khom* script one of Central Thai origin, but shifting borders over the centuries make it impossible to determine the provenance of any given text, especially when it contains no information as to the year of its composition. At any rate, this Jātaka is found in a manuscript once kept at the National Library of Bangkok, and is part of a longer text of the *ānisaṃsa* genre titled *Pamsukuladānānisaṃsakathā*. A cursory check in various Thai and Khmer manuscript collections did not prove to be successful to find others variants of this text, although much more research and editions (not to mention translations) is needed on this huge quantity of still unpublished local Pali manuscripts from Thailand and its neighbouring countries.

disvā maṃsasaṃsaññaṃ ahoṣi || bhikkhu na saṃsayamaṃ mama vipākaṃ taṃ maṃsaṃ sukarassa yaṃ veraṃ mayā kataṃ vipākaṃ patisevāmī ti || yadā 'haṃ bodhisattakāle daliddhakule nibbattivā || pitā tassa kālaṃ akāsi || mātā paṇ'assa vidhavā ahoṣi || tadā bodhisatto araṇṇaṃ pavāsitvā kaṭṭhaṃ tinṇaṃ ca āharitvā jivitaṃ kappesi || tadā ayam sukaro yakkhajāto vessavaṇṇamahārājena ānato || yakkho atikanto bārānasiyaṃ manusse piḷito ahoṣi || koci manusso yakkhapīlitaṃ samattho nama n'atthi || rājā nagare bheriṇ cāropetvā || tadā paṇ'assa mātā puttassa balabhāvaṃ ṇatvā | Nārāyanassa balavā hoti rājānaṃ mama puttassa balabhāvaṃ jānāpetvā rājā mama puttassa balam dhāressatī ti | saḥassakahāpaṇaṃ rājena dinnaṃ sabbam gahetvā bodhisattassa āgatakāle vadati || bodhisatto mātuvacanaṃ anatikkanto yakkhassa santikaṃ gantvā yakkhassa dubbalaṃ katvā māreti || yena kammavipākena pañcajātisate verā nāma avūpasamenti || (ed. Martini 1972: 254)

A new tentative⁴⁹ translation is as follows:

So did I hear on one occasion that, whilst the Lord was dwelling in the city of Bhoga, he would partake (of food gleaned) during his almsround from Cunda of Pāva, such that our Lord would eat in the household of Cunda.⁵⁰ That same day, the Lord addressed Cunda, saying: 'You should prepare food consisting of *sukaramaduva*[sic]-

⁴⁹ As Norman (2012: 38) once observed, 'I discover each year that I know less and less [about Pali philology], and increasingly find that I accept less and less of whatever I thought I understood years ago ... It is hard to be certain that anything is impossible in the field of Middle Indo-Aryan studies'. If this be so, then how much more so in the case of 'Indo-Chinese' Pali, whose studies are, at best, still in their infancy?

⁵⁰ This would seem to be a basic misunderstanding. Although monks were generally expected to gain their sustenance by walking on an uninterrupted almsround, when they would stand, motionless and speechless, at the gate to some household, merely indicating their need of alms, and without gesturing by altering the position of their bodies, nor breaking their silence in order to attract attention (Ja III 162–168, no. 354), subsequently consuming any alms received upon returning to their place of residence, the Buddha also allowed monks to accept an invitation for a meal on the following day, as he himself frequently did, in the home of some lay supporter. There is however, as far as can be determined, no record of a monk entering the home of a donor in order to consume food just gained at the gate of that same household. See also Mil 229ff for a long disquisition on the etiquette to be shown when on the almsround.

flesh for me alone;⁵¹ you should not give that food to the other monks, but instead bury any leftovers'. Upon hearing this, Cunda acted accordingly. No sooner had he consumed same than his blood began flowing. That same moment, it occurred to the monks, upon seeing this, that this must be due⁵² to the meat. (But the Buddha said this:) 'Monks, without doubt I am experiencing a kammic ripening, my own kammic ripening, (due to) the meat of a pig to whom I once showed enmity.⁵³ At such time as I had, during the time I was a Bodhisatta, come into being in a poor family, my father finished his time,⁵⁴ with my mother becoming his widow; I, as a Bodhisatta, made my living by entering the forest and fetching twigs and grass'. This pig had, at that time, been born a *yakkha*, under orders⁵⁵ of the Great King Vessavaṇṇa. That *yakkha*, in transgressing (such orders), became an oppressor of the people in Bārāṇasi. There was no man capable of restraining that *yakkha*. The king had the drum paraded in the city. At that time, moreover, his mother, aware of her son's power, thought that after she had apprised the king of her son's power, telling him that he possessed the power of Nārāyaṇa, he would reward her son's power; she then took the thousand *kahāpaṇas* the king had given her, informing the Bodhisatta when he returned. The Bodhisatta, unable to go against his mother's wishes, went into the presence of the *yakkha*, rendered him weak and then killed him. Through the ripening of that deed, enmities have not been appeased over five hundred births.

⁵¹ It is, of course, a Vinaya offence for a monk to specify to a potential donor what food he should be given (e.g., *Suddhapācittiya* 39 = Vin IV 88; *Sekhiyā* 37 = Vin IV 193).

⁵² *māṃsasamaññaṃ*, possibly in error for *māṃsasaññaṃ*?

⁵³ This is probably the best that can be done with what seems to be a rather clumsy sentence, viz., *bhikkhu na saṃsayam mama vipākaṃ taṃ māsaṃ sukarassa yaṃ veraṃ mayā kataṃ vipākaṃ patisevāmī ti*. No doubt, other interpretations are possible. G. Martini (1972: 255), for instance, refers here to the alleged noxiousness of the pig's meat caused by the hatred of the *yakkha* for the Bodhisatta arising in a former life as explained subsequently in the Jātaka.

⁵⁴ *pitā tassa kālaṃ akāsi*; meaning, of course, that he died. But the time he 'finished' was the kammic time that had given rise to that particular birth. Moreover, in the extended simile given at Cp-a 97f, Dhammapāla likens *samsāra* to a prison, such that it seems quite legitimate to take *kālaṃ karoti* as 'to do time'.

⁵⁵ Reading *āṇatto* for *ānato*.

Even if this local Jātaka does not use the term 'kammic fluff' (*kammapiḷḷitika*), it assumes the concept by attributing the Buddha's final illness to the ripening of his former *kamma*. Admittedly, the passage does not clearly specify through which channel the blood oozed after Cunda's meal—whether the rectum (bloody diarrhoea?) or the mouth (bloody vomiting?)—and is open to interpretation. However, its use of the verb *paggharati* to describe the flowing or dripping of blood, although not offering a decisive interpretation of the compound *lohitapakkhandikā*, at least allows for the possibility that blood flowed from the Buddha's mouth. Indeed, the verb *paggharati* is often employed in connection to the oozing or dripping of blood in canonical sources. The same verb is also used at times to describe the dripping of tears,⁵⁶ which again suggests the possibility that later Pali composers took it to describe the dripping or vomiting of blood from the mouth, as already confirmed by Khmer and Lao-Isan artists in mural paintings (see figures *infra*).

From the foregoing, and by way of concluding this paper, we are totally rejecting the notion that the Buddha ate poisoned food. Indeed, how could the Lord have deliberately accepted this meal consisting of *sūkaramaddava* should he truly have been Omniscient, and should it really have been harmful for his health as some authors claim? This would have been tantamount to committing suicide proper,⁵⁷ a negative act which should be avoided at all cost according to the Pali Buddhist tradition (Wiltshire 1983).

⁵⁶ E.g., S II 179: ... *yaṃ vā vo iminā dīghena addhunā sandhāvataṃ saṃsarataṃ amanāpasampayogā manāpavippayogā kandantānaṃ rodantānaṃ assu passannaṃ paggharitaṃ ...*

⁵⁷ It is a well-known fact that the Buddha deliberately decided at Vesāli, three months prior to this episode at Pāvā, to enter into final *parinibbāna*, thus accepting the request of Māra (D II 104ff). The impression given, therefore, is that the Buddha, at that particular point of time, was indeed determined to die and hence, more or less, committed suicide. It is doubtful, however, that he really, and voluntarily, decided to put an end to his own life. The fictional idea of the Buddha being able to stay on until the end of the aeon (*kappa*), not realised however—or so we are told—because of Ānanda's foolishness (D II 102–104), may possibly reflect a later anti-Ānanda faction among the early Buddhist lineage.

We, therefore, also contest the rendition of G. Martini's French translation of the pig's meat as being 'une chair nocive et vénéneuse' in the first occurrence of the above cited passage (1972: 253, 255; see also note 53 *supra*).⁵⁸ Upon reconsideration of all the above evidence related to the last meal, it thus appears clear that it was not so much the nature of *sūkaramaddava* (pig's meat?) that directly caused the final illness of the Buddha. At best, the meal helped the Buddha in his final hours to reach Kusinārā. At worst, the potentially fat and heavy meal offered by Cunda may have triggered a resurgence of a past chronic disorder (stomach or peptic ulcer?) leading to severe blood loss—apparently manifested by black or bloody vomiting—and ultimately provoking his death. This presumed chronic disease of the Buddha, which may have come and gone over a period of many years, was simply due to his 'kammic fluff' or *kammapilotika*, that is, the leftover consequences of his former deeds as illustrated in the above Pali commentaries and extra canonical Jātaka.

⁵⁸ G. Martini, however, later correctly understands *verā* as hatred ('haines') and no longer as noxiousness ('nocivité') as in the previous instance.

Plates



Figure 1. Sakka, Lord of the devas, sprinkling the divine nutriments on the Buddha's last meal consisting of pig's meat. Wat Arun Ratchawararam, Bangkok, Thailand, repainted in the late 19th century (Photo courtesy of Nithi Nuangjamnong, September 2017)



Figure 2. The Buddha's last meal, consisting of pig's meat, being prepared by Cunda, and infused with divine nutriments by Sakka. Wat Kasattrathirat Worawihan, Ayutthaya province, Thailand, c. 1879 (Photo courtesy of Nicolas Revire, June 2020)



Figure 3. Cunda and his attendants preparing the last meal, consisting of wild boar's meat (already dead?), for the Buddha and his retinue of monks. Wat Photharam, Mahasarakham province, Thailand, early 20th century (Photo courtesy of Nithi Nuangjamnong, March 2019)



Figure 4. The last illness showing the Buddha vomiting blood, and the grief expressed in the faces of his followers. Wat Photharam, Mahasarakham province, Thailand, early 20th century (Photo courtesy of Nithi Nuangjamnong, March 2019)



Figure 5a. The last meal offered by Cunda and the subsequent illness of the Buddha leading to his demise. Wat Ban Yang, Mahasarakham province, Thailand, early 20th century (Photo courtesy of Nicolas Revire, January 2011)



Figure 5b. Detail of the Buddha, showing his stomach distress and vomiting blood (Photo courtesy of Nicolas Revire, January 2011)



Figure 6. The Buddha 'vomiting blood' after the last meal (the Thai caption to the viewer's left clearly reads ลาก เลือด/lak lueat, 'vomiting blood', see n. 40), with Ananda (Th. อานนท์/Anon) below him, catching the purging. Wat Huai Kaeo, Phitsanulok province, Thailand, mid-20th century (Photo courtesy of Nithi Nuangjamnong, April 2021)



Figure 7. The Buddha sitting down to drink water being fetched by Ānanda, and Sakka getting ready to catch his vomit. Stung Treng province, Cambodia, early 20th century (Photo courtesy of Nicolas Revire, July 2014)



Figure 8. The Buddha sitting down with Sakka getting ready to catch his vomit. Wat Phnom Baset, Kandal province, Cambodia, mid-20th century (Photo courtesy of Nicolas Revire, July 2014)



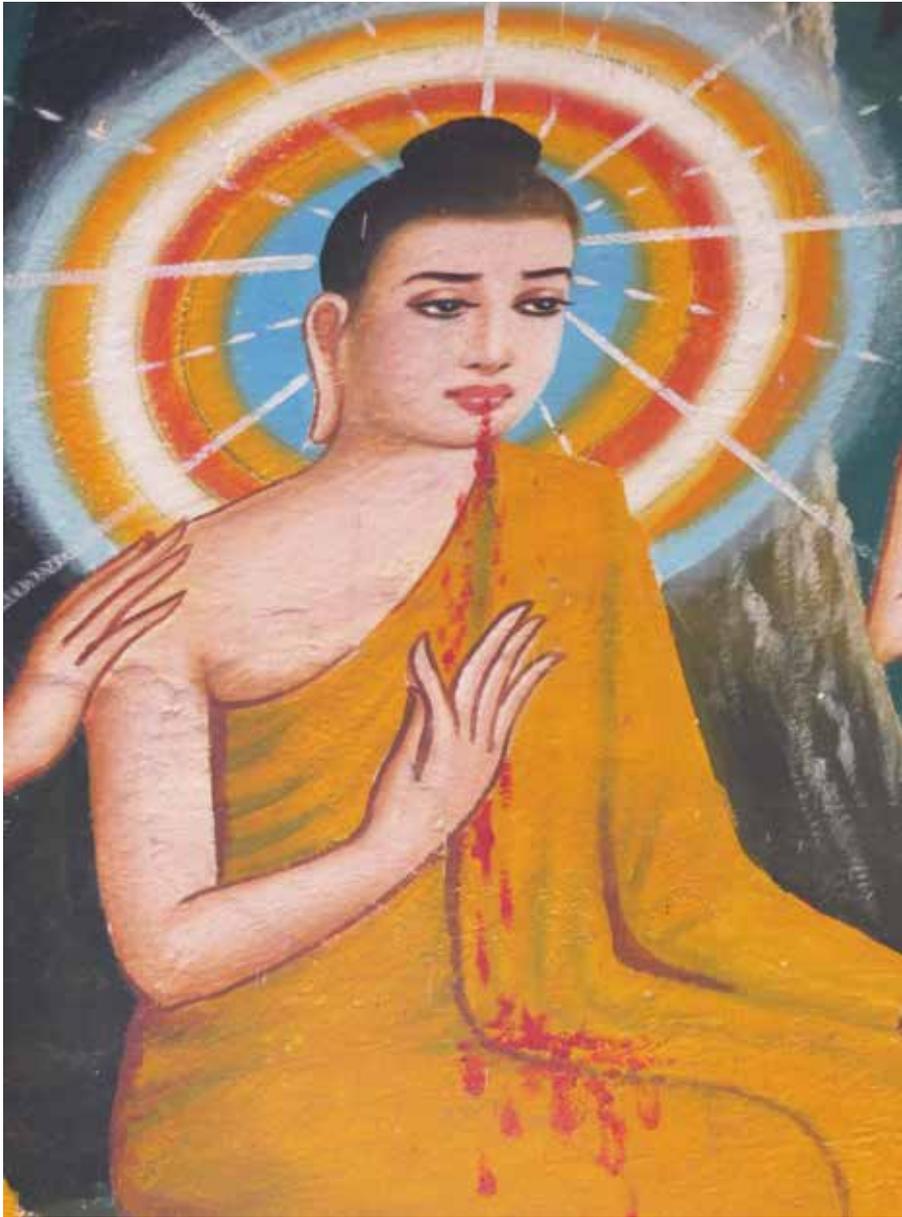
Figure 9. *The Buddha sitting down to drink water being brought by Ānanda, on his way to Kusinārā to reach final extinction. Wat Prasat Andet, Kompong Thom province, Cambodia, late 20th century (Photo courtesy of Nicolas Revire, July 2014)*



Figure 10. Two panels depicting the meritorious offering of the last meal by Cunda to the Buddha (left), and the Lord sitting down and about to vomit blood in Sakka's vessel (right). Wat Bakong, Siem Reap province, Cambodia, early 21st century (Photo courtesy of Nicolas Revire, August 2018)



Figure 11a. The Buddha vomiting blood and attended by his retinue of monks, with Sakka trying to catch the purging in his vessel. Angkor Wat (modern pagoda), Siem Reap province, Cambodia, early 21st century (Photo courtesy of Nicolas Revire, July 2018)



*Figure 11b. Detail of the blood dripping from the mouth of the Buddha
(Photo courtesy of Nicolas Revire, July 2018)*

Abbreviations

References to Pali texts follow the system adopted by the Critical Pali Dictionary. Page references are to PTS editions, where available, otherwise to the Burmese (Myanmar) editions on the Chaṭṭhasaṅgāyana CD-ROM (<http://www.tipitaka.org>), contained also in the Digital Pali Reader (<https://pali.sirimangalo.org>).⁵⁹

B Disc	<i>The Book of the Discipline</i> , PTS 1949 onwards.
BL III	<i>Buddhist Legends</i> , vol. III. Cambridge, Massachusetts 1921.
CD	<i>The Connected Discourses of the Buddha</i> , PTS 2000.
CPD	<i>A Critical Pali Dictionary</i> .
CPED	<i>Concise Pali-English Dictionary</i> .
KS	<i>The Book of the Kindred Sayings</i> , PTS 1917 onwards.
PED	<i>Pali-English Dictionary</i> .
PTS	Pali Text Society.
SED	<i>Sanskrit English Dictionary</i> .

References

- An, Yang-gyu. 2005. *The Buddha's Last Days: Buddhagosa's Commentary on the Mahāparinibbāna Sutta*. London.
- Anandajoti, Bhikkhu. 2012. *Pubbakammapiṭika-buddhāpadānaṃ. Apadāna 39.10 and their Commentary in Visuddhajanavilāsiṇī* [Accessible online: <https://www.ancient-buddhist-texts.net/Buddhist-Texts/K13-Apadana/Pubbakammapiṭikam.pdf>].
- Bureau, André. 1968. 'La nourriture offerte au Buddha lors de son dernier repas'. In *Mélange d'indianisme à la mémoire de Louis Renou*. Paris, 61–71.
- Brereton, Bonnie Pacala & Somroay Yencheuy. 2010. *Buddhist Murals of Northeast Thailand: Reflections of the Isan Heartland*. Chiang Mai.
- Davis, Garry W. 2015. 'The Story of Lao r: Filling in the Gaps'. *The Journal of Lao Studies* 2: 97–109.
- Deussen, Paul. 1980. *Sixty Upaniṣads of the Veda*. Delhi.

⁵⁹ There would appear to be a few discrepancies between the edition of the Chaṭṭhasaṅgāyana texts used in the Digital Pali Reader and their subsequent printed editions.

- Martini, François. 1936. 'Dasa-bodhisatta-uddesa'. *Bulletin de l'École française d'Extrême-Orient* 36: 287–413.
- [Terral-]Martini, Ginette. 1956. 'Samuddaghosajātaka'. *Bulletin de l'École française d'Extrême-Orient* 48(1): 249–351.
- . 1972. 'Un jātaka concernant le dernier repas de Buddha'. *Bulletin de l'École française d'Extrême-Orient* 59: 251–256.
- Masefield, Peter. 1979. 'The Nibbāna-parinibbāna Controversy'. *Religion* 9(2): 215–230.
- . 2008. 'Indochinese Pali'. *Mahachulalongkorn Journal of Buddhist Studies* 1: 1–9.
- . 2009. 'A Brief Note on Methodology in the Transliteration of Indo-Chinese and Other Pali Manuscripts'. *Mahachulalongkorn Journal of Buddhist Studies* 2: 11–14.
- . 2010. 'Kammapiṭṭika'. *Mahachulalongkorn Journal of Buddhist Studies* 3: 13–24.
- Mettanando, Bhikkhu & von Hinüber, Oskar. 2000. 'The Cause of the Buddha's Death'. *Journal of the Pali Text Society* 26: 105–117.
- Ñāṇamoli, Bhikkhu. 2001. *The Life of the Buddha*. Onalaska.
- Norman, K.R. 2012. 'Pāli Philology and the Study of Buddhism'. *The Buddhist Forum*. Vol. I, Seminar Papers 1987–1998. London.
- Olivelle, Patrick. 1999. *Dharmasūtras, the Law Codes of Ancient India*. Oxford.
- Paramanujitjinoros, Phra (trans.). 2016. *Pathamasambodhi: The Life of the Lord Buddha*. Bangkok.
- Revire, Nicolas. 2019. 'The Birth of the Buddha at Angkor'. *Journal of the Siam Society* 107(2): 63–90.
- Roveda, Vittorio & Sothon Yem. 2009. *Buddhist Painting in Cambodia*. Bangkok.
- Walshe, Maurice. 1987. *Thus Have I Heard, the Long Discourses of the Buddha*. London.
- Wasson, R. Gordon. 1982. 'The Last Meal of the Buddha'. *Journal of the American Oriental Society* 102(4): 591–603.
- Wiltshire, Martin G. 1983. 'The "Suicide" Problem in the Pali Canon'. *The Journal of the International Association of Buddhist Studies* 6(2): 124–140.