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āmikṣā and *payasyā*: Processing of fermented milk in ancient India

NISHIMURA Naoko

0. Fermented Milk in Ancient India: *dādhi*- and *ātāñcana*-

We find various kinds of dairy product in Indian literature since the oldest religious texts known as Veda. Almost all products are processed based on *dādhi* which is produced by fermentation caused by lactic acid bacteria, *dādhi* is the old form of Hindi *dahi*. Fresh milk changes into *dādhi* through the activity of lactobacilli. Ancient Āryas knew how to ferment milk intentionally by means of a “starter,” which is called *ātāñcana*-¹⁾ ‘coagulant’ in the Veda.

1. *sāmnāyyā*-, *āmikṣā*-, *payasyā*-

dādhi is not only an offering in itself, but also a material for some further products such as *sāmnāyyā*-, *āmikṣā*-, and *payasyā*-. Some scholars²⁾ regard these words as synonyms, but this has not yet been verified.

1.1. *sāmnāyyā*-, Lit. ‘the putting together’

sāmnāyyā is a mixture of *dādhi* with boiled milk (*śṛta*) used as an offering in the New Moon Sacrifice.³⁾ *dādhi* is made of the milk milked in the evening of the preparatory day (*upavasatha*) and a coagulant added to it.⁴⁾ *śṛta* is milked and boiled in the early morning on the day of the main sacrifice.⁵⁾ They are mixed just before the oblation,⁶⁾ so any visible change does not seem to be brought about by the functioning of lactic acid bacteria.

1.2. *āmikṣā*- ‘the mixing into’

āmikṣā, also, is a mixture of *dādhi* with *śṛta* (boiled milk) which are prepared in the evening on the day of preparation, and the early morning on the day of the main sacrifice, respectively.⁷⁾ *dādhi* is, however, added into *śṛta* when it is boiling. Heat and acid have an influence on milk proteins and cause them to coagulate. Curd and a liquid separate out. The

former is *āmikṣā*, so that it seems to be something like a cottage cheese. The latter is called *vājina*, which could be whey.⁸⁾

1.3. *āmikṣā* and *payasyā* ‘belonging to milk’: A Legend of *Dirghajihvī*, Witch “long-tongued”

āmikṣā and *payasyā* could be the same products for some reasons: e.g. ① *payasyā* is made in the same way as *āmikṣā*; ② *payasyā* is associated with *vājina* (whey); ③ The milking for *āmikṣā* and that of *payasyā* are done via the same procedure.⁹⁾

Moreover, their identity will be shown in the legend of *Dirghajihvī*, Witch “long-tongued.” This legend describes the origin of *payasyā* and its outer appearance.¹⁰⁾ In the KS version of this story, the concluding sentence refers to *āmikṣā* in the same context as *payasyā*.¹¹⁾ On the other hand, ŚB IV 2,5,18–19 [Agniṣṭoma, Savaniyapuroḍāśa] shows an opposite pattern of the KS, that is, the word *payasyā* appears in the discussion about *āmikṣā*.¹²⁾ The KS and ŚB seem to regard the words as synonymous. Note that we can find the word “*apūpa*–” instead of *puroḍāśa*– in section 19. *apūpa* is no less a pancake made of unpolished rice or barley than *puroḍāśa* is. The latter appears just as an offering, whereas the former is an ordinary food. We could infer that there is the similar difference between *āmikṣā* and *payasyā* as that between *puroḍāśa* and *apūpa*.

2. Distribution of *āmikṣā*- and *payasyā*- in Veda

Furthermore, we find in the Cāturmāsya chapter that all the Black Yajurveda schools describe *āmikṣā* as an offering for All-Gods (Viśve Devāh) in the Vaiśvadeva sacrifice and that for *Maruts* (± Varuṇa) in the Varuṇapraghāsa, although the White YV and Kauṣītaki schools prescribe *payasyā* as the offering for the same deities in the same sacrifices (Table 1). Similar contrast could be found in the context of the Dākṣāyaṇa New-Moon sacrifice between the Taittirīya school of the Black YV and the Vājasaneyin school, i.e. the White YV. Among the YV schools, only the Taittirīyas and the Vājasaneyins transmit Dākṣāyaṇa sacrifice, which is a variation of the New- and Full-Moon Sacrifice. The former school seems to belong to a later layer in the conservative Black YV.¹³⁾ The latter has a wealth of innovation in ritualistic interpretation and theological discussion. In other words, a gap of generation or ritualistic development seems to be reflected in the occurrences of both the words in the YV schools.

Table 1 *āmikṣā* and *payasyā* in Cāturmāsya and Dākṣāyaṇa

	Cāturmāsya, Vāiśvadeva	Cāturmāsya, Varuṇapraghāsa	Dākṣāyaṇa (New Moon)
MS	<i>āmikṣā</i> (Viśve Devāḥ)	<i>āmikṣā</i> (Maruts)?	
KS	<i>āmikṣā</i> (Viśve Devāḥ)	<i>āmikṣā</i> (Maruts)?	
TS/TB	<i>āmikṣā</i> (Viśve Devāḥ)	<i>āmikṣā</i> (Maruts, Varuṇa)	<i>āmikṣā</i> (Mitra-Varuṇa)
ŚB	<i>payasyā</i> (Viśve Devāḥ)	<i>payasyā</i> (Maruts, Varuṇa)	<i>payasyā</i> (Mitra-Varuṇa)
KB	<i>payasyā</i> (Viśve Devāḥ)	<i>payasyā</i> (Maruts, Varuṇa)	<i>payasyā</i> (Mitra-Varuṇa)

We could also observe this tendency in the whole of Veda. Inquiring into a distribution of these two words, *āmikṣā* and *payasyā*, through all the Vedic literature, we may observe that the later period the text belongs to, the stronger the tendency for *payasyā* to appear more than *āmikṣā* (Table 2).

Table 2 *āmikṣā*: *payasyā* the ratio of their occurrences

		Samhitā	Brāhmaṇa	Śrautasūtra	Others
RV		—	Āitareya 0 : 3 Kauṣītaki 0 : 14	Āśvalāyana 0 : 1 Śāṅkhāyana 0 : 7	RV-Khila 0 : 1 (V 7,4,1)
Black YV	Maitrāyaṇī	12 : 7		Mānava 3 : 2	—
MS	Kāṭha (Kap)	6 : 15 (3 : 3)			KāṭhaśamkhKū 3 : 0 Lost Brāhmaṇa 1 : 0
MS	Taittirīya	9 : 5	7 : 2	Baudhāyana 51 : 2 Vādhūla 13 : 2 Āpastamba 19 : 11 Bhāradvāja 1 : 0 Hiranyakeśī 2 : 3 Vaikhānasa 3 : 1	BaudhPitṛSū 1 : 0
White YV	Mādhy	2 : 1	ŚBM 4 : 32	Kātyāyana 3 : 11	KātyŚrSūSam 1 : 0
	Kāṇva	2 : 1	ŚBK 3 : 25		
SV		—	Jaiminiya 6 : 2 Pañcaviṃśa —	— Drāhyāyana 0 : 2 Lātyāyana 0 : 2	Jaim-GṛSū 0 : 1 —
AV	Śaunaka	13 : 0	Gopatha 1 : 2	Vaitānasa 1 : 0	—
	Paippalāda	13 : 0			

(Shadowed: *payasyā* occurs more than *āmikṣā*; dash: no occurrence; diagonal: no transmitted text. Used e-text: VādhŚrSū by Prof. Y. IKARI, Baudh- and ĀpŚrSū by Dr. M. FUSHIMI, Āśv- and ŚāṅkhŚrSū by Prof. M. TOKUNAGA.)

3. Conclusion

On the basis of these considerations, *āmikṣā* and *payasyā* seem to be the same, i.e., a

curd made of fermented milk, whereas *sāmnāyā* is a pure mixture of fermented milk with boiled one. For the solution about difference between *āmikṣā* and *payasyā*, some clues are found: First, we might infer that a feminine action noun *āmikṣā* ('the mixing into' < *ā-mikṣ*) was qualified by addition of the adjective *payasyā-*, derived from *pāyas-* 'milk' and indicates that it deals with a dairy product, and that later, the adjective came alone to be used.¹⁴⁾

Second, I would like to point out a possibility that *āmikṣā* or *payasyā* has a relationship with Soma Sacrifice. As I have already mentioned, occurrences of *payasyā-* are rather rare in the Black YV texts. Those occurrences are found in the chapter of Soma Sacrifice and *Kāmyeṣṭi* (Sacrifice for Wish). In the former, *payasyā* appears in the context of *Prātaḥsavana* (cf. 1.3.) and a set of five kinds of offering (*Puroḍāśapankti* or *Savaniya-puroḍāśa*, cf. 1.3.). In the *Trīyasavana* (cf. n.12), they offer *āsir*, i.e., a mixture of milk with Soma juice. *āsir-* is a root noun from *ā-śray/śrī* 'mix into',¹⁵⁾ and originally to have a similar meaning to *āmikṣā-*. Further supposition brings us a hypothesis: *āmikṣā* and *āsir* form a pair, the former 'a mixture' of milk with milk, and the latter of *Soma* with milk. Moreover, it might be the word *payasyā-* that emphasises both milk elements in *āmikṣā*. However, we need to more examine about the relationship between *āmikṣā* and *āsir*. In any case, the above mentioned would correlate with the process of compiling a ritual literature and ritualistic development, and could be linked with the Āryas' expansion in the subcontinent with a shift of their nomadic lifestyle to the non-nomadic one.

1) The fermented remnant of the *Agnihotra* offering is usually employed as *ātāncana*. *Agnihotra* is a Vedic ritual held twice a day: in the evening and morning. Boiled milk is offered into the *Āhavanīya* fire. According to TS II 5,3,5-6^p and ĀpŚrSū I 14,1-2, several species of plants are employed as substitutes for *ātāncana*: *kūvala-/kvāla-* (*Zizyphus jujube*), *taṇḍulā-* 'unpolished rice or barley', *parṇavalkā-* (bark of *Butea frondosa*), and *pūṭīka-* (probably *Caesalpinia bonduc*. Roxb, cf. KUIPER "Was the *pūṭīka* a mushroom?" *Fs. Dandekar* (Delhi, 1984), 219-227). I have to omit the result of the investigation into *ātāncana-* for want of space.

2) E.g. BÖHLINGK-ROTH, *Sanskrit-Wörterbuch* (1852-1875), RENO, *Vocabulaire du rituel védique* (1954), MYLIUS, *Sanskritischer Index der jungvedischen Namen und Sachen* (1976-1977) ss.vv.

3) *sāmnāyā* is regarded as an offering for Indra in the special New-Moon Sacrifice in the systematised framework of later Śrauta ritual. In the ordinary New-Moon Sacrifice, the pancake (*puroḍāśa*) for Indra-Agni became usual. Cf. NISHIMURA, *Grazing cows and mowing the*

sacrificial grass—A study of the mantra collections of the Yajurveda-Saṃhitās and their brāhmaṇas— (Tohoku University Press, 2006, in Japanese), the parts cited in n.13.

- 4) MS IV 1,3:5,8–12^p: || <śāmpṛcyadhvam ṛtāvarir¹ ūrmiṇā mādhumattamāḥ | pṛñcatīḥ pāyasā pāyo¹ mandrā dhānasya sātāye (no parallel in the MS^m)> || iti, prātinayati, śṛtatvāya, śṛtākāmā hi devā. <indrāya tvā bhāgām sōmanātanac_r (I 1,3:2,10–11)> īti, sōmam evāinat karoti, tāsyā ha tvāi somapīthāḥ sāmtrato yā evām vidvānt sānnāyām pibati. “[The Adhvaryu priest recites:] <Mix yourselves (: waters) completely, O those who follow the cosmic law, with undulating [milk], [mix yourselves] as the ones having most honey, while mixing the [cows’] milk with the [grasses’] milk, as the pleasant ones for acquisition of property.> He adds [the water into the milk]. [It serves] for the state of having been boiled. For the gods are fond of what has been boiled. [He recites:] <For Indra, I coagulate you with *Soma*, as [his] portion.> [He] makes this one (: milk) into *Soma* (as a result of this recitation). His (: the sacrificer’s) effect of drinking *Soma*, on the other side, is verily continued, if he, knowing thus, drinks *sānnāyā*.” ~ KS XXXI 2^p, TB III 2,3^p; cf. BaudhŚrSū I 3:5,7–10; ĀpŚrSū I 13,10–11; 13–15; KātyŚrSū IV 2,33 etc.
- 5) E.g. ĀpŚrSū I 14,8: upadhāya kapālāni sāyaṃdohavat prātar_{do}ham dohayati. | ātañcanāpīdhāne nidhānam ca nivartate ... “After having set up the dishes (for the pancakes), [the Adhvaryu priest] makes [the milker] milk for the morning milking [in the same way] as the evening milking. Coagulating and covering up [of the milk pot], and putting down as well are omitted.”
- 6) ĀpŚrSū II 20,3–4: samavadāya dohābhyām |3| dadhno ‘vadāya śṛtasyāvadyaty. etad vā vīparītam. | sarvāṇi dravāṇī sruṃmukhena juhōti. |4| “After having divided [both] together, [Adhvaryu priest deals] with both the milked. After having dividing out [a prortion] of *dadhi*, he divides [a portion] of *śṛta*. This [happens] alternatively in the opposite order. He offers all the liquids through the ladle’s beak.” Following texts show that both kinds of milk are kept separated until the oblation: BaudhŚrSū I 14:22,3 madhyataḥ puroḍāśāv āsādāyati dakṣiṇataḥ śṛtam uttarato dadhi | “[Adhvaryu] places two *puroḍāśas* on the middle [of the *vedi*], the *śṛta* on the south, and the *dadhi* on the north”; cf. ĀpŚrSū II 11,8–9.
- 7) ĀpŚrSū VIII 1,9.16 agnin anvādhāya śākhām āhṛtya vaiśvadevyā āmikṣāyā vatsān apākaroti ... 16. pūrvavad vaiśvadevyāḥ sāyaṃdoham dohayati. “After having supplied [woods? in] the [three] fires [and] having brought the branch, [the Adhvaryu] separates the calves [from their mother cows for getting milk] for *āmikṣā* for All-Gods ... In the same manner as the former (i.e. *sānnāyā*), [he] makes [the milker] milk the evening milk for [*āmikṣā*] for All-Gods.” Cf. EINO, *Die Cāturmāsya oder die altindischen Terialopfer dargestellt nach den Vorschriften der Brāhmaṇas und der Śrautasūtras* (Tokyo 1988), pp.13f.
- 8) BaudhŚrSū V 1:129,2–3, 8–11: athottaratas tirāḥ pavitram paya ānīyāmikṣāyā adhiśrayati ... tirāḥ pavitram tapte payasi dadhy ānayati. sāmikṣā bhavati, tām ya eva kaś ca kuśalah parīndhena śrapayitvā vivājīnam kṛtvāpratāpe nidadhāti “Then, having poured the milk across [over] the purification [branch] northward, he puts [it] on [the sacred fire] for *āmikṣā* ... When the

milk is heated, he pours the *dadhi* into [it] across the purification [branch]. It becomes *āmikṣā*. Whoever even skillful, having boiled it with surrounding firewood and made *vājina* separate, settles on the place where it is not yet heated"; cf. ĀpŚrSū VIII 2,1,5–6.9. We find in MS I 10,6:146,6–11^p (~ KS XXXVI 1:68,7–11^p; TB I 6,2,4–5^p) that *dadhi* and *śṛta* form a pair (*mithunā-*) and *āmikṣā* comes from the pair. According to the MS and KS, what one can see through (*pari-dṛś-*, *-paś*) a liquid as something like an egg or *mastu* (sour cream?), is *āmikṣā* as an embryo.

- 9) E.g. ①: ĀpŚrSū XII 4,11; ②: ŚB II 4,4,21 = II 5,1,15; ③: ĀpŚrSū VIII 5,33.
- 10) MS III 10,6:138,6–7^p: *dirghajihvī vai devānām prātaḥsavanām āvālet, tād vyāmādyat, sā payasyābhavat, tasmāt payasyā vimādirūpeva*. “Dirghajihvī, verily, licked off the gods’ morning pressing (Soma juice pressed and offered in the morning). That she, intoxicated, vomited, It became *payasyā*. Therefore, *payasyā* has just a vomitus’ appearance.” Cf. AB II 22.
- 11) KS XXIX 1:166,8^p: *dirghajihvī vai devānām yajñam avāled prātassavanam, tad vyāmādyat, sā payasyābhavat, tasmād āmikṣā vimaditeva, yat payasyā prātassavane bhavati prātassavanasya samṛddhyai*. “Dirghajihvī, verily, licked off the gods’ sacrifice, [that is,] morning pressing. That she, intoxicated, vomited, It became *payasyā*. Therefore, *āmikṣā* is just like the vomited. That *payasyā* appears (is used) in the morning pressing, [it] is for perfect equipment of the morning pressing.”
- 12) *ātha yāt puroḍāśaḥ | dhānāḥ karambhō dādhy āmikṣēti bhāvati yā yajñasya devātās tāḥ sūprītā asann iti*. ||18|| *idam vā apūpam aśitvā kāmāyate, | dhānāḥ khādeyam, karambhām aśniyām, dādhy aśniyām, āmikṣām aśniyām iti, té sārve kāmā, yā yajñasya devātās tāḥ sūprītā asann ity, ātha yād eṣā prātaḥsavanā evā maitrāvaruṇī payasyāvaktā bhāvati nētarayoh sāvanayoh* ||19|| “Then, when *puroḍāśa* (pancake), *dhānās* (parched barley or rice), *karambha* (dough of barley), *dadhi*, and *āmikṣā*, such is applied, [one intends] that those who are deities of the sacrifice should be content sufficiently. 19. In this case, having eaten *apūpa* (pancake), one wants: “I want to chew (i.e. eat) *dhānās*, I want to eat *karambha*, I want to eat *dadhi*, I want to eat *āmikṣā*.” They are all desires, [It is intended] that those who are deities of sacrifice should be content sufficiently. Then, [the reason] why this *payasyā* for Mitra-Varuṇa is applied as [an offering] to be fit for the Prātaḥsavana, [and] not in both other Savanas (Mādhyandināsavana ‘the noon Savana’ and Tr̥tīyasavana ‘the third, i.e. the evening Savana’) [that] ... (the explanation of the reason follows in section 20)” Following sections 20–22 mention the five offerings: *puroḍāśa*, *dhānā*, *karambha*, *dadhi*, and *payasyā*. The texts which belong to the Black YV and the RV school have *payasyā* alike in the same context as the ŚB: MS III 10,5–6^p: *puroḍāśa/apūpa, parivāpa, dh., k., payasyā*; KS XXIX 1^p: *dh., k., par., apūpa, payasyā*; TS VI 5,11,4^p: *dh., k., par., puroḍāśa, payasyā*; AB II 23,7: *ājya, dh., k., par., puroḍāśa, payasyā*; KB XIII 2: *d., dh., saktu, puroḍāśa, payasyā*. On the offerings made of grain, cf. EINO, “Altindische Getreidespeisen” (*Münchener Studien zur Sprachwissenschaft* 44, 1985, pp.15–27).
- 13) NISHIMURA, *Grazing cows* (→ n.3), pp.43ff., 127–164, especially 145ff. etc.
- 14) *payasyā-* as adj. occurs, however, only two times in the Lāṭyāyaṇa- and DrāhyāyaṇaŚrSū. Cf.

Pāṇini IV 3,160 *gopayasor yat* 'as for *go-* and *payas-*, the suffix *ya-* [is applied]': *gavya-*, *payasya-*. Cf. e.g. *candrā-* for *candrā-mās-* 'bright moon (and not the month).'

- 15) Cf. MAYRHOFER, *Etymologisches Wörterbuch des Altindiarischen* (Heidelberg, 1992–1996) s.v. *ŚRAY'*, SCARLATA, *Die Wurzel Komposita im Ṛg-Veda* (Wiesbaden, 1999), p.532.

ABBREVIATION: AV: Atharvaveda (Śaunaka); AVP: Atharvaveda (Paippalāda); ĀpŚrSū: Āpastambha-Śrautasūtra; AB: Aitareya-Brāhmaṇa; KapS: Kapiṣṭhala-Kaṭha-Saṁhitā; KS: Kāṭhaka-Saṁhitā; KāṭhsaṁkhKū: Kāṭhakabrāhmaṇasamkharāṇa, Kūṣmāṇḍabrāhmaṇa; KātyŚrSū: Kātyāyana-Śrautasūtra; KB: Kauṣītaki-Brāhmaṇa; GB: Gopatha-Brāhmaṇa; JB: Jaiminiya-Brāhmaṇa; TĀ: Taittirīya-Āraṇyaka; TB: Taittirīya-Brāhmaṇa; TS: Taittirīya-Saṁhitā; BhārŚS: Bhāradvāja-Śrautasūtra; BaudhŚrSū: Baudhāyana-Śrautasūtra; MānŚS: Mānava-Śrautasūtra; RV: Ṛgveda; RV-kh: Ṛgveda (khila); VSK: Vājasaneyi-Saṁhitā (Kāṇva); VSM: Vajasaneyi-Saṁhitā (Mādhyandina); VādhŚrSū: Vādhūla-Śrautasūtra; VaikhŚS: Vaikhānasa-Śrautasūtra; ŚB/ŚBM: Śatapatha-Brāhmaṇa (Mādhyandina); ŚBK: Śatapatha-Brāhmaṇa (Kāṇva); HirŚrSū: Hiranyakeśi-Śrautasūtra

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⟨Key words⟩ *sāmnāyā*, *āmikṣā*, *payasyā*, *dadhi*, Vedic ritual, dairy product

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