

SOMA I AND II¹

By HARRY FALK

It was a common idea in the last century, and one which can be found even today,² that Soma/Haoma was a drink which led to ecstasy, and drugs which produce such an extraordinary state of mind have always been objects of curiosity. Therefore, the search for the plant which was used by the Indo-Iranian peoples in their solemn rituals was never abandoned, although the variety of candidates brought forward made the question look unsolvable. Some of the strong drugs suggested for the original Soma had to meet with statements from the R̥gveda or Avesta which ran contrary to their shape or properties. The effects of others on the human mind are so unspectacular that it was difficult to accept them as the plant so highly praised in antiquity.

In recent years, more attention was given to the position of Soma/Haoma in the systems of Indian³ and Iranian⁴ mythology. It was already known that some of the qualities of Soma/Haoma are of a decidedly philosophical nature, and whatever substance may have been used in rituals, it always had a very close connexion with the watery element. These facts could mean that almost any plant juice would suffice for the purposes of ritual. Therefore it has been repeatedly suggested that several plants may have been in use.⁵ The effects on the human mind, if there were any, may then have depended on the imagination of the consumers. Taken to the extreme, this would mean that mythology needed a plant and any plant conforming to certain conditions would do.

A comparison between the Iranian and Indian Soma/Haoma mythologies leads me to reject this idea. The most important descriptive terms are identical (*am̐su/asu*, *hari/zairi*), the pressing tools are comparable (cf. *Visp.* 10.2; 11.2), but the mythologies show marked distinctions. In India, Soma and Agni occasionally represent the dual forces of cosmic evolution. Nothing similar is known from the Avesta. Again, in India Soma as a drink helps Indra to become strong enough to fight Vṛtra. Here also we find nothing to compare in ancient Iran. The two aspects of Soma as a representative of the watery element inside the unopened 'primordial hill' on the one hand and as an invigorating drug on the other leads to 'the logical contradiction of a god (= Indra) who must drink Soma to acquire the power needed to deliver Soma'.⁶ This contradiction becomes explicable if one assumes that Soma is a secondary element in what formed Vedic mythology. Indra kills Vṛtra many times, either without Soma or with the help of other gods. And likewise, Soma as a complementary element to Agni is by no means indispensable. In the dualistic mythology too Soma can be

¹ A preliminary version of this article was read at the seventh World Sanskrit Conference in Leiden, August 1987. I wish to thank Professors St. Insler, J. F. B. Kuiper, and H.-P. Schmidt for their comments during the session and in written form thereafter. This exchange of ideas has led to a complete revision of the text, although the basic statements remain unaltered.

² Geo Widengren: *Die Religionen Irans* (Stuttgart, 1965), 29: 'ursprünglich ein wirklicher Rauschtrank'.

³ J. F. B. Kuiper: 'An Indian Prometheus?', *Asiatische Studien* 25, 1971, 85-98; idem: *Varuṇa and Vidūṣaka: on the origin of the Sanskrit drama* (Amsterdam, 1979), 19 ff., 103.

⁴ Mary Boyce: 'Haoma, priest of the sacrifice', in M. Boyce and I. Gershevitch (ed.), *W. Henning Memorial Volume* (London, 1970), 62-80; James W. Boyd and Firoze M. Kotwal, 'Worship in a Zoroastrian fire temple', *III*, 26, 1983, 306 f.

⁵ e.g. B. Mukhopadhyay, 'On the significance of Soma', *Vishveshvarananda Indological Journal*, 16, 1978, 7; Vassilij Ivanovitch Abaev, 'Contribution à l'histoire des mots. 1. Vieil-iranien hauma- et le nom eurasienn du houblon', in *Mélanges linguistiques offerts à Émile Benveniste* (Louvain, 1975), 2.

⁶ Kuiper, *Varuṇa*, 19.

replaced simply by water.⁷ In Iran, on the other hand, Haoma is not necessary for any particular god. It functions as a mythological priest and as an energizing offering to different gods. But already in Zoroastrianism it has much in common with Mithra, as Boyce (*Henning Memorial Volume*, 80) has shown. This tendency of Soma/Haoma to look for a suitable place in already existing mythologies proves to my mind that the mythological qualities of Soma/Haoma did not stand at the beginning of its career. If what we have is not mythology which needed a plant, but a plant which was given places in mythologies, then it is legitimate to expect one single plant Soma/Haoma. This plant should have some properties which explain why it was thought fit to join the gods.

The plants hitherto proposed as the original Soma may be classified in three groups, according to the pharmacological properties the plant is believed to possess.⁸

Most often Soma is thought to be hallucinogenic. Plants, the extracts of which, when drunk, affect the sense of reality are, e.g. hemp,⁹ *Cannabis sativa*, the mushroom,¹⁰ *Amanita muscaria*, or the wild rue, *Peganum harmala*.¹¹

The only half-serious reason to expect hallucination as an effect of Soma-drinking in an Indian context is the well-known Labasūkta, RV 10.119. There it is said that some winged creature,¹² after consumption of Soma, touches sky and earth with its wings (11) and extends bodily even beyond these borders (8: *abhi dyām mahinā bhuvam abhīmām prthivīm mahīm*). Usually it is Indra who grows until he extends beyond heaven and earth (e.g. RV 1.81, 5; 8.88, 5). His growing (*vr̥dh*, *vakṣ*) is promoted either by hymns (RV 6.24, 7) or by Soma (RV 10.94, 9; 9.73, 2; cf. 4.18, 5 + 3) or by both (RV 8.1, 17 + 18; 8.13, 6 + 7). But Indra has no wings! And nowhere is it said that human Soma-drinkers feel that they are growing. To fill the whole cosmos is a feature of several gods. Agni fills heaven and earth (e.g. RV 3.3, 10; 3.6, 2; 7.13, 2; 10.45, 6), and so do Soma, Uṣas, and Sūrya (RV 9.41, 5). The act of growing in the Labasūkta simply

⁷ cf. Jan Gonda, *Die Religionen Indiens I: Veda und älterer Hinduismus* (Stuttgart, 1978, 2nd ed.), 68 f. Cf. RV 1.161, 9.

⁸ Here, preference is given to the latest research. A full account of the earlier opinions is given by Wendy Doniger O'Flaherty, 'The post-Vedic history of the Soma-plant', in R. Gordon Wasson, *Soma, divine mushroom of immortality* (The Hague/New York, 1968), 95–147.

⁹ Joges-Chandra Ray, 'The Soma plant', *Indian Historical Quarterly*, 15, 1939, 197–207.

¹⁰ R. G. Wasson, cf. note 8, by the same: 'The Soma of the Rig Veda: what is it?', *JAOS*, 91, 1971, 169–87; cf. p. 177: 'the poets never mention the . . . branches . . . of Soma' with RV 10.94, 3! Refuted with ample arguments by John Brough, 'Soma and Amanita Muscaria', *BSOAS*, xxxiv, 2, 1971, 331–61; and in 'Problems of the "Soma-mushroom" theory', *Indologica taurinensis*, 1, 1973, 21–32; for another of Wasson's errors see R. E. Emmerick, 'Ein Männlein steht im Walde', *Acta Iranica*, 24, 1985, 179–84; rather diplomatic is F. B. J. Kuiper's review of Wasson's book in *IJJ*, 12, 1969/70, 279–85. Partial or total consent is found in Ilya Gershevitch, 'An Iranist's view of the Soma Controversy', in Ph. Gignoux et A. Tafazzoli (ed.), *Mémoires Jean de Menasce* (Louvain, 1974), 45–75; T. I. Elizarenkova et V. N. Toporov, 'Les représentations mythologiques touchant aux champignons dans leurs rapports avec l'hypothèse de l'origine du Soma', in Y. M. Lotman et B. A. Ouspenski (ed.), *Travaux sur les systèmes de signes. Ecole de Tartu* (Bruxelles, 1976), 62–8; Stella Kramrisch, 'The Mahāvira vessel and the plant Pūtika', *JAOS*, 95, 1975, 222–35, refuted by F. B. J. Kuiper, 'Was the Pūtika a mushroom?', in S. D. Joshi (ed.): *Amṛtadhārā: Professor R. N. Dandekar Felicitation Volume* (Delhi, 1984), 219–27.

¹¹ David Stophlet Flattery, 'Haoma', Ph.D. dissertation, Berkeley, 1978; updated and extended in D. St. Flattery and Martin Schwartz, *Haoma and Harmaline* (forthcoming University of California Press, 1989). The authors have conclusively shown that the rue, *Peganum harmala*, was used as a hallucinogenic drug in Zoroastrian circles some time before A.D. 900. The plant was given the same high respect and some of the epithets of the Haoma of old. But all the attempts to connect this plant with the one in vogue more than 2000 years earlier are not convincing. According to I. Steblin-Kamenskij (*BSOAS*, L, 2, 1987, 377a) *harmala* is burnt for fumigation, not pounded.

¹² Against the traditional quail good reasons have been brought forward by Rainer Stuhmann in favour of the lapwing: 'R̥veda X.119: Der Rausch des Kiebitz', *Studien zur Indologie und Iranistik*, 11/12, 1986, 299–309.

classifies the bird amongst the gods and gives no indication that it was due to the effects of any drug.

The traditional explanation of the Labasūkta is the only credible one: a bird, assumed to be Indra in disguise, has drunk from the Soma offered and is thought to feel the same as the god in his usual, non-material form. Because all the proponents of Soma as a hallucinogenic drug,¹³ make their claim on the basis of a wrong interpretation of the Labasūkta, their candidates must be regarded as unsuitable.

In addition, hallucinogenic drugs lead to visions; shamans use them to visit the realms of the ancestors or gods. But there is nothing shamanistic or visionary either in early Vedic or in old Iranian texts.

The second group of plants needs fermentation to become alcoholic. This group of intoxicants comprises rhubarb,¹⁴ common millet,¹⁵ or simply grapevine.¹⁶ The general dislike of the alcoholic drink called *surā* in all strata of Vedic literature, comparable to the distinction between *aśa*-related Haoma and all other drinks belonging to Aēšma (Yasna 10,8), prohibits reckoning Soma among such beverages.¹⁷ In addition, we know that neither in Vedic nor in Zoroastrian rituals did Soma/Haoma have the time to ferment. Therefore, the advocates of intoxicating liquors likewise did not find acclaim.

The third group is made up of stimulants. The oldest candidate brought forward is Ephedra, used by the Parsis to this day for their Haoma rituals. Recently Windfuhr¹⁸ has again stressed the point that Soma was neither hallucinogenic nor intoxicant. However, his own favourite stimulant, Ginseng, does not grow in the areas we are concerned with and, what is more important, it has no part that could be considered to represent the *aṃśu/asu* of the plant used by the Indo-Iranians.¹⁹

It seems amazing that Soma has been the object of considerable research for so many decades and that none the less one characteristic feature of the drug was wholly ignored, that is, the fact that Soma prevents sleep. In the Akṣasūkta RV 10.34.1 the poet compares the dice to an 'alerting drink of Soma from mount mūjavat' (*sōmasyeva maujavatāsyā bhakṣō vibhīdako jāgrvir māhyam*

¹³ Sadashiv A. Dange, 'Three stages in the advent of Soma', *Journal of the Oriental Institute* (Baroda), 14, 1964/65, 63; W. D. O'Flaherty in Wasson's *Soma*, 146, and in *The Rig Veda* (Harmondsworth, 1981), 119, 133; Jan Gonda, *Die Religionen Indiens*, 1 (Stuttgart, 1978, 2nd ed.), 362, Ergänzung 82; Frits Staal, *Agni—the Vedic ritual of the fire altar*, 1 (Berkeley, 1983), 105 ff.; Rainer Stuhlmann, 'Worum handelt es sich beim Soma?', *IJJ*, 28, 1985, 85–93; idem, 'Der Rausch des Kiebitz', cf. n. 12; Walter H. Maurer, *Pinnacles of India's past: selections from the Rgveda* (Amsterdam/Philadelphia, 1986), 75.

¹⁴ Aurel Stein, 'On the Ephedra, the Hūm plant, and the Soma', *BSOAS*, vi, 2, 1931, 501–14; G. Morgenstierne, 'A Vedic word in some modern Hindukush languages?', in *Sarūpa-Bhārati: Dr. Lakshman Sarup Memorial Volume* (Hoshiarpur, 1954), 30–3; Karl Hummel, 'Aus welcher Pflanze stellten die arischen Inder den Somatrank her?', *Mitteilungen der Deutschen Pharmazeutischen Gesellschaft und der Pharmazeutischen Gesellschaft der DDR*, 29, 1959, 57–61.

¹⁵ E. B. Havell, 'What is Soma?', *JRAS*, 1920, 349–51. For Soma and millet see *ŚB* 5.3.3.4.

¹⁶ Lennart Edelberg, 'Nuristanske Sølvpokaler', *Kuml*, 1965, 153–201.

¹⁷ Noteworthy is Strabo 15.1.53, relying on Megasthenes (the text in Felix Jacoby, *Die Fragmente der griechischen Historiker*, III C,2 (Leiden, 1969), 634, line 22): 'they (= the Indians) do not drink wine (oinón), except at sacrifices (thysiais), but drink a beverage which they make from rice instead of barley.' For liquor made from rice see Om Prakash, *Food and drinks in ancient India* (Delhi, 1961), 186. The use of rice and barley as a substitute for Soma in *ĀpŚS* 14.24.13 is an innovation and without parallel.

¹⁸ Gernot L. Windfuhr, 'Haoma/Soma: the plant', in *Acta Iranica* 25 (= *Papers in Honour of Professor Mary Boyce*, Hommages et Opera Minora, 11) (Leiden, 1985), 699–726, see pp. 703, 707.

¹⁹ Because of its shape as a anthropomorphical root mandrake may be connected with ginseng. Cf. Igor N. Khlopin, 'Mandragora turcomanica in der Geschichte der Orientalvölker', *Orientalia Lovaniensia Periodica*, 11, 1980, 223–31. The effect of mandrake is 'narkotisch und betäubend' (p. 227). It grows at low altitudes of 600 m. (p. 226). Khlopin's species was found near Karakala in Turkmenistan, fairly near to Tepe Hissar. So it may have an old history, but certainly not as Soma, as this author claims.

acchān). This effect of Soma-drinking is referred to many times. In RV 8.92,23 Indra is awake because he has drunk Soma (*vivyāktha mahinā vr̥ṣan bhakṣām sōmasya jāgr̥ve* . . .). Soma is *jāgr̥vi* in, e.g. RV 9.36,2; 9.44,3; 9.106,4.

It has often been observed that the so-called intoxication caused by the Soma drink enables the poet to compose a hymn. Therefore Soma is called *kavī*, poet.²⁰ Hillebrandt (pp. 371 f.) lists many instances showing that Soma helps to create lyrics: in RV 9.95,5, e.g. the drug is called 'procreator of thoughts' (*janitā matinām*), and in RV 9.107,18 'the poet Soma procreates the thought' (*janāyan matim kavīḥ sōmo*). There are several stanzas proving that the poet, feeling wide awake, associates his ability to formulate with the influence of Soma. RV 9.96,18 calls Soma a maker of seers, *ṛṣikṛt*; in RV 8.44,29 Agni is said to be awake like an inspired poet, *vipro nā jāgr̥viḥ sādā*. In RV 9.97,37 Soma is called *jāgr̥vi* and *vīpra* side by side, in RV 9.107,6 the *jāgr̥vi* Soma functions as the *vīpra* of the Aṅgiras. But the most convincing example may be found in RV 5.44,14 f., where it is said that to someone²¹ staying awake the ṛces will come and the sāmans, and Soma will declare him with his friend:

14 yó jāgāra tām ṛcaḥ kāmāyante yó jāgāra tām u sāmāni yanti,
yó jāgāra tām ayāṃ sōma āha tāvāhām asmi sakhyé nyòkāḥ.

This may be compared with RV 1.53,1:

ny ũ śu vācam prā mahē bharāmahe gīra indrāya sādane vivāsvataḥ,
nū cid dhī rātaṃ sasatām ivāvidan nā duṣṭutir draviṇodēṣu śasyate.

'Fine speech we bring forward for the great, (fine) words for Indra, at the seat of Vivasvat. He (Indra) did not find the gift of quasi sleeping (poets): a bad hymn is not praised by the wealth-giving (gods).'

It is in this light that RV 8.48,14 is to be read, where the poet expresses the wish that neither sleep nor idle talk should govern him after he has drunk Soma (*mā no nidrā īṣata mōtā jālpīḥ*).²² So it seems that at least some of the poetry of the RV was created at night. That *jāgr̥vi* does not just mean 'alert', but refers to the night, when ordinary people are asleep, is obvious from all these stanzas, which connect someone awake with the hope of seeing the sun rise. For instance, in RV 3.26,3 it is Agni Vaiśvānara, described as a finder of the sun (*svarvid*) in stanza 1, who stays awake waiting for the gods (*amṛteṣu jāgr̥viḥ*). And in RV 9.107,7 it is Soma, called *vīpra* and *jāgr̥vi* in stanza 6, who is expected to make the sun rise: *tvāṃ kāvir abhavo devavṛtama ā sūryaṃ rohaya divi*.

It fits the picture of the night that it is Agni who is the other deity most often described as 'awake'. RV 8.44,29, where he is called 'awake like a poet', has already been mentioned; in RV 5.11,1 he is born as the wakeful warden of the people (*janasya gopā ajaniṣṭa jāgr̥vir*); in 1.31,9 he is the 'waking' god par excellence (*devó devēṣv* . . . *jāgr̥viḥ*), he is awake also in RV 3.24,3 and 6.15,8, but the most important reference of all is RV 5.44,15, the direct answer to the preceding stanza quoted above:

agnir jāgāra tām ṛcaḥ kāmāyante 'gnir jāgāra tām u sāmāni yanti,
agnir jāgāra tām ayāṃ sōma āha tāvāhām asmi sakhyé nyòkāḥ.

²⁰ Discussed by Alfred Hillebrandt, *Vedische Mythologie* 1 (Breslau, 1927), 370 ff. and Brough, *BSOAS*, xxxiv, 2, 1971, 339.

²¹ The contexts show that there are two subjects intended. One is Agni, who receives the poems from the singers, and the other is the poet, spoken of in the preceding line (5.44,13d): *anubruvānō adhy eti nā svapān*, 'Wer lernt, versteht es, nicht wer verschläft' (Geldner).

²² Stuhlmann (*Soma*, 88) makes *nidrā* mean 'Bewußtlosigkeit' (unconsciousness) and 'Delirium', to adapt Soma to the effects of the mushroom.

Why are Agni and Soma 'awake'? Gods in general never sleep (RV 8.2,18). It must be the necessities of the ritual which made Agni and Soma so prominent with regard to wakefulness. A look at the younger literature is helpful.

In the śrauta ritual we find the highly esteemed Atirātra rite, consisting of a Jyotiṣtoma day of the ukthya-type followed by a nightly session. During the day many gods are invoked, but the night is dedicated solely to Indra (cf. AB 4.5,2). He destroys the Asuras at night, without any help from other gods who were 'afraid of the night, of darkness, of death' (AB 4.5,1 *abibhayū rātres tamaso mṛtyos*). The only help he got was from the metres, *chandas*: 'therefore Indra and the metres bear the night' (2 *tasmād indraś caiva chandāmsi ca rātrim vahanti*). The verses accompanying the offerings should contain the keywords *andhas*, *mad*, and *pīta* (AB 4.6,3; KB 17.7,11), clear references to the Soma which Indra is thought to consume. The priests have to stay awake, because 'wakefulness means light' (KB 17.7,13 f.: *jāgryū rātrim. jyotir vai jāgaritam*). The night on the other hand represents misery (15 *tamaḥ pāpmā rātriḥ*). The priests have to keep the fire ablaze and must never be silent.²³ Fire, Soma, and the wakefulness and speech of the priests guarantee the destruction of the demons of the night, i.e. they help Indra in his mythic struggle, and on the mundane level the priests overcome misery (14 *te pāpmānam apaghñate*).

The Atirātra is highly reputed. 'The theologians say, "The Atirātra is the highest of the forms of sacrifice"' (Keith, TS 7.4.10,1: *brahmavādino vadanty atirātrāḥ paramo yajñakratūnām*). It is one of the rites already mentioned in the RV, in the hymn to the frogs, 7.103,7 f.:

7 *brāhmaṇśaḥ atirātré nā sóme/sáro nā pūrṇām abhīto vādantaḥ,*
saṃvatsarāśya tād āhaḥ pári śṭha/yān maṇḍūkāḥ prāvṛṣṇam babhūva.
 8 *brāhmaṇśo somīno vācam akrata/brāhma kṛṇvāntaḥ parivatsarīnam,*

'Like Brahmans at an overnight Soma sacrifice, speaking as if around a full lake, you celebrate this day of the year, O frogs, which became the (first) day of the rainy season.

Brahmans offering Soma, they have raised their voice, creating a poem (dedicated) to a complete year.'

Here the nightly rite is associated with composing lyrics. And the Soma of the Atirātra is used as an offering to Indra, as was shown above. Now, whatever Soma as a plant may have been, the priests would certainly not offer an intoxicating or fatiguing drug to their god who was to stay awake just like them.

In the śrauta ritual the sacrificers partake of the Soma during daytime. The formulas to accompany the act of drinking are found, e.g. PB 1.5,4 ff. The drink is addressed as having been already consumed by Indra and in fact one keyword from the *atirātra* rite is repeated:

indav indrapītasya ta indriyāvato gāyatrachandasah sarvagaṇasya sarvagaṇa upahūta upahūtasya bhakṣayāmi (PB 1.5,4; cf. 13, 16, 1.6,1 ff.).

'Of thee, O Soma, that art drunk by Indra, of thee that containest vigour, that hast the Gāyatrī for metre, that art accompanied by thy whole troop, that art invited, I partake, being accompanied by my whole troop and having been invited' (Caland).

²³ KB, 17.7,21. ed. Lindner: *ārephantaḥ śayīran* is translated by Keith: 'they should lie snoring'. This would mean that the priests were sleeping. Sarma gives the better reading: *ālebhantaḥ*, which I connect with *ribh, rebhati* 'to sing'. The prefix *ā* is not attested in Vedic nor in classical Sanskrit but with a verb denoting 'singing' it is not surprising. A modern form of *jāgarāṇa* shows some striking similarities to the Vedic *atirātra*. For a description see Monika Thiel-Horstmann, *Nächtliches Wachen: eine Form indischen Gottesdienstes* (Bonn, 1985).

Whereas the stanzas recited at night have to contain the key-word *pīta*, the Soma is addressed in the morning as being *indrapīta*, 'drunk by Indra'.²⁴

RV 9.8,9 contains a very similar reference to the drinking of Soma:

nṛcākṣasaṃ tvā vayām indrapītaṃ svarvidam, bhakṣīmāhi prajāṃ iṣam.

'Dich mit dem Herrenaue, den von Indra Getrunkenen, der das Sonnenlicht findet, wollen wir genießen (und) Nachkommenschaft und Speise-segen (empfangen).' (Geldner)

So it seems beyond doubt that already in the times of the RV the sacrificing priests partook of the Soma drink which had been offered to Indra during the previous night. In RV 4.19,3 this god kills the sleeping *Vṛtra* while the primeval state of darkness has not yet ended. After killing *Vṛtra*, Indra places the sun in the sky in RV 1.32,4; 1.52,8. *Vṛtra* withholds the waters and the sky in RV 2.11,5. Indra kills the demon and gives light to the *aryas* (RV 2.11,18 *āpāvṛṇor jyótir āryāya*). Dozens of stanzas say the same. Also, the RV calls Soma 'finder of the sunlight' and therefore there seems to be no risk in saying that in the old ritual Indra was offered Soma at night, when he needed it most, during his fight against *Vṛtra*, killing the demon and thereby creating the unfolded world with its space, light, and water. Indra is the original drinker of Soma and no other god but Indra is praised in the night during the *Atirātra*. Therefore the *Atirātra* form of the *śrauta* Soma sacrifice seems to reflect much more of the Ṛgvedic customs concerning Soma than does the usual *Agniṣtoma*, which does not associate Soma with the night.

If Soma as a plant had any pharmacological properties then the drug made from it should be energizing, stimulating, and preventing sleep so as to fit the situations it was assigned to in ritual and mythology.

From the collected evidence we can thus say that Soma was expected to help Indra in his cosmic struggle against *Vṛtra*, a fight in which he received help from a nightly ritual on earth. By means of this ritual the priests offered an energizing drug, light, and speech. Apart from the nightly offering of Soma to the god it seems possible that the priests themselves took the drug to stay awake while chanting and composing their hymns.²⁵

Now, which of the candidates would meet the requirements of the ritual and the priests? There can be only one answer: Ephedra yields a drug 'ephedrine', dissolvable in water, which can be administered orally, and this drug 'has a potent stimulant effect on the cerebrum and the medullary centres', 'in general its actions are less intense but more prolonged than those of adrenaline',²⁶ and,

²⁴ Remarkable is the reference to 'retinue', *gaṇa*. Soma as a herb in the RV is not known to be accompanied by followers. On the other hand *indu* is a term used for Soma as well as the moon in the Brāhmaṇa literature, and the moon may be regarded as having the stars as its retinue. In any case a priest drinking Soma and describing himself as 'having a complete troop' (*sarvagaṇa*) equates himself with Indra or *Bṛhaspati*, who are both called *gaṇāpati* (RV 10.112,9; 2.23,1; for *Bṛhaspati* being *sarvagaṇa* see RV 5.51,12). And just like the god who is invoked to come to the drink the priest calls himself 'invited', *upahūta*. Whoever speaks the lines in question presents himself as someone comparable to Indra or *Bṛhaspati*.

²⁵ It is tempting to compare the habits of other Indo-European cultures. Poetry is connected with a beverage in Old Norse mythology, where it is Odin who steals the skalden met (Thule, 20, pp. 120–3; *Hávamál*, 104–10; *Skáldskaparmál*, 4–6,11), and thereby becomes God of lyrics. In more recent times the connexion is only vaguely remembered, but still Egil composes his long poems exclusively at night, cf. Kurt Schier (ed. and tr.), *Saga von Egil* (Düsseldorf, 1978), ch. 59, p. 179, and ch. 78, p. 238: 'Meint er vielleicht, ich werde die Nacht über wach bleiben und ein Gedicht über seinen Schild machen?' Material regarding the Celtic world is collected in Fergal McGrath, *Education in ancient and medieval Ireland* (Dublin, 1979) 56 f.

²⁶ Sir Arthur Salusbury MacNalty (ed.), *The British medical dictionary* (London, 1961), 505.

most important, it prevents sleeping!²⁷ There are about ten varieties of *Ephedra* known, of which *Ephedra pachycladae*, *maior*, *intermedia*, and *gerardiana* are native in the mountainous regions of northern India, Iran and the mountains in between.²⁸ They look like bushes of leafless twigs, some prostrate, but mostly standing erect, 1–6 ft. high. Some other sorts are pharmacologically insignificant.²⁹ Before partition *Ephedra* was brought from Baluchistan to the plains, to extract Ephedrine.³⁰ Only the plants in the mountains would yield the drug. Transport is not unproblematic: the plants have to be kept airtight, otherwise the content in ephedrine disappears when the plant is brought into a humid climate.³¹ So in former times, the full effect of *Ephedra* water could be experienced only up in the mountains.

There are five arguments brought forward against *Ephedra*. Sir Aurel Stein once took a bite of a twig and found it 'extremely bitter and far from palatable', which contradicts the Rgvedic attribute 'sweet', *mádhu*.³² Against this argument it must be said that contrary to the RV, the Avesta never calls Haoma 'sweet', and, more important, the taste of unmixed Soma is termed *tīvrá* in the RV, i.e. 'sharp',³³ and this well fits the astringent taste of *Ephedra* twigs. So the taste argument speaks not against but in favour of *Ephedra*.

The second argument says that *Ephedra* bushes do not contain a milky sap. Symptomatically, this argument is used mainly by non-Sanskritists,³⁴ unaware of the fact that no milky juice of the fresh plant is referred to in the RV.³⁵ In the RV the plant is milked, in the language of the text, but the liquid produced by 'milking' is the mixture of the water and the extract of the dry plant soaking in it. That younger substitutes, mainly of the *Sarcostemma* group, do possess milky sap, is of no import for earlier times.

A third argument is used by Windfuhr, who proposes Ginseng. Probably relying on Y 9,1 he maintains (art. cit., 704) that Soma as a plant has the shape of a man. But other anthropomorphic gods (e.g. *tīštrya* in Yašt 8,13) show that the god is spoken of and not the plant he uses as his manifestation. None of the Vedic references (RV 1.187,10; 9.4,5; 5.67,29) cited in favour of this view supports it, only the last of them (read: 9.67,29) speaks of 'a young man' (*yúvan*), without necessarily referring to his shape.³⁶

²⁷ Herbert Schaldach (ed.), *Zetkin-Schaldach—Wörterbuch der Medizin* (Stuttgart, 1978, 6th ed.), 391: 'schlafhemmender Effekt, lange Wirkungsdauer'. This source also states that urinating becomes difficult, 'Blasenentleerung durch erhöhten Sphinktertonus erschwert'. This makes one think of the strange fear that soma-drinking priests could die of retention of urine, *ámeha*, MS 3.8.7 (105:2); KS 25.8 (115:2), 33.7 (32:11 f.); TS 6.2.9,4, 10,7; PB 5.10,2.

²⁸ Otto Stapf, *Die Arten der Gattung Ephedra* (Denkschriften der Kaiserlichen Akademie der Wissenschaften; (Math.-Nat. Kl. 56; Wien, 1889), 59 ff.; H. Riedl, 'Ephedraceae'. = K. H. Rechinger (ed.), *Flora Iranica*, 3 (Graz, 1963).

²⁹ This appears from Tang Teng-Han, 'Beiträge zur Pharmakognosie der Ephedrin-Drogen', Dissertation, Berlin, 1929. Tang-Han checked dried specimens of kinds most of which do not grow in the region concerned.

³⁰ B. N. Sastri (ed.), *The wealth of India: raw materials*, 3 (New Delhi, 1952), 179. The author shows in a table, p. 178, that even a rather common kind, *Ephedra gerardiana*, can be rich in ephedrine.

³¹ *Wealth of India*, 178: 'The alkaloid content of the green twigs is considerably greater than that of the woody stems; . . . The twigs should be dried in the sun. . . . The dried twigs must be stored dry; complete elimination of alkaloids has been reported when the drug was exposed to humid conditions for one month.'

³² Stein, *Ephedra*, 505, with n. 2; repeated by Hummel (art. cit. in n. 14 above), 58.

³³ cf. Geldner on RV 1.23,1. The *tīvrāsoma* is the strongest kind in PB 18.5,2.

³⁴ Hummel, 58. A succulent plant is also expected by R. Roth, 'Ueber den Soma', ZDMG, 35, 1881, 684; Stein, *Ephedra*, 513.

³⁵ The *haoma gaoma* in Yasna, 10.12 is not 'milchreich' (Wolff), but 'mixed with milk', as Yasna, 10.13 shows.

³⁶ cf. BSS 17.45 (326:5), where Soma appears as a white person with reddish eyes. This is not referring to the shape of the plant.

Combining two prejudices Wasson (*JAOS*, 91, 1971, 183) rejects Ephedra together with *Sarcostemma* (which does not grow where Soma grows) and *Periploca aphylla* (which owes its status as a candidate to an early misidentification of an Ephedra plant, cf. Stein, *Ephedra*, 504) because it has 'a vile taste and no hallucinogenic properties'.

Khlopin (cf. n. 19) supplies the fifth argument. He says (p. 229) that Ephedra plants do not fit the 'appearance' (Aussehen) of Haoma in the Avesta. According to him Haoma has a stem ('giebiger [?] Stengel'), roots and branches.³⁷ This is based on Yasna 10.5. The 'root' (*varaša-gay-*) is rather uncertain. But even if one accepts this meaning, none of the parts would exclude Ephedra.

So we can say that none of the arguments brought forward speak against Ephedra.

Mahdihassan, a botanist, has argued in favour of Ephedra.³⁸ Much of what he says is useful, but his main evidence, a terracotta from Gandhara, does not withstand critical investigation. The picture³⁹ Mahdihassan discusses (pp. 99 f.) shows Buddha and Vajrapāṇi facing some person who has evidently cut grass. The Buddha stands erect, holding a bunch of the plant in his left hand, tips downwards. Beside him is a heap of similar plants. Mahdihassan now interprets this heap as a cut bush of ephedra. The similarity is great, but not striking. Therefore it would be wiser to stick to the old interpretation, which follows the textual tradition (e.g. J I, 70,30 f.; Mv 2.131,12; 264,6; Lv 286,4 ff.), declaring the crouching man to be Svastika, Pāli *soṭṭhiya*, a grass-cutter, who furnishes the Buddha with eight bundles of grass for a seat. The Buddha holds one bushel in his hand, the seven others are heaped together, thus appearing like an inverted bush of ephedra for someone eager to see it this way.

More down to earth is an article by Qazilbash,⁴⁰ likewise identifying Soma with Ephedra. Not satisfied with ephedrine alone, he concocts a peculiar drink (pp. 499 f.): 'The crushed juice of the fresh Soma plants when mixed with honey and allowed to ferment yielded a liquor which contained alcohol and ephedra alkaloids.' The argument against any alcoholic drink is also valid in this case.

So, from the literature on the topic we can say that neither the arguments for nor against Ephedra have hitherto been convincing. The only argument deserving the name is still the fact that the utterly conservative community of the Parsis in India still clings to Ephedra as Haoma, and that the peasants in the Hari Rud valley of Afghanistan still call it *hum*, *huma* or the like (Stein, *Ephedra*, 504), comparable to Brahui and Pastho *hom* and Baluchi *hum*, *humb*, according to Flattery and Schwartz (*Homa and Harmaline*, 68, table 3).

How old is Ephedra as a holy plant? This question immediately takes us back almost 2000 years. Sir Aurel Stein⁴¹ found burials in the Tarim basin, where Ephedra plants were deposited either by the side of the corpses, or, more

³⁷ According to Gershevitch (*Mémorial Jean de Menasce*, 47), all three terms have nothing to do with Haoma at all but refer to plants towards which Haoma grows.

³⁸ S. Mahdihassan, 'Soma, in the light of comparative pharmacology, etymology and archeology', *Janus*, 60, 1973, 91–102; *idem*, 'A Persian painting illustrating Ephedra, leading to its identity as Soma', *Journal of Central Asia*, 8, 1985, 171–5. This painting from the sixteenth century shows one plant growing on the top of hills. Since Soma too is said to grow on mountains, both are equated. This kind of logic devalues some other plain though justified statements.

³⁹ Reproduced also in J. Marshall, *The Buddhist art of Gandhara* (Cambridge, 1960), fig. 61, and Harald Ingholt, *Gandhāran art in Pakistan* (New Haven, 1957), fig. 59, and again in S. Mahdihassan, 'Soma of the Aryans and ash of the Romans', *ABORI*, 68, 1987, 639–44.

⁴⁰ N. A. Qazilbash, 'Ephedra of the Rigveda', *The Pharmaceutical Journal*, 26, Nov. 1960, 497–501.

⁴¹ Sir Aurel Stein, *Innermost Asia* (repr. New Delhi, 1981), 265, 736, 741, 743; one bundle reproduced on plate 26, numbered L.S. 6.03.

strikingly, where tightly tied bundles of Ephedra twigs were placed on the chest of the dead. What was the reason for this custom? The Parsis maintain that this plant does not decay. And an imperishable plant, representing or symbolizing continuity of life, is most appropriate to burial rites, so much so that the Parsis 'poured a few drops of the consecrated Haoma juice into the mouth of (a) dying person'.⁴² In addition we may consider the Rgvedic idea that Soma is awake, does not sleep, and sleep is another form of death.⁴³ A plant which prevents sleep may therefore also help to overcome real death. The burial custom in the Tarim basin seems to match the high value the plant receives as *amṛtam* 'imperishable', 'living', or 'life'⁴⁴ in the Rgveda. Lake Lop-nor in the Tarim basin is quite some distance from the Panjab or eastern Afghanistan, but contacts between both regions were good, at least in the period concerned, the third century A.D.⁴⁵

A further consideration takes us much further back into antiquity. As was said above, various Ephedra species are called *hum*, *hom* or the like in Baluchi, Brahui and Pashto.⁴⁶ Further east we find, e.g. the names *som* or *soma* for Ephedra in Gilgit, Chitral, and Nuristan. As Flattery and Schwartz (*Haoma and Harmaline*, 63) observe, this 'indicates that Ephedra was called **sauma* already in the common ancestral Indo-Iranian language'. *soma/haoma* is one of the few names which is given to one single plant in a vast area ranging from Herat to the Indian Himalayas. The origin of this name certainly goes back to at least the second millennium B.C.

For the Aryans in India the plant must then have already had a long history. This may explain why both RV, 9.98,11 (*pratnāsaḥ*) and KB 13.3,2 (*pratno'mśur*) call Soma an 'ancient' plant.

Therefore, if Ephedra is not just any plant, but possessed of pharmacological properties, having an old history in burial rites and coming by a name of great antiquity, it is tempting to test it with the well-known touchstones for Soma:

1. The ritually most important part of the plant is called *amśu/asu*, a term which lives on in Pali *amsu* 'thread', and in many New Indian languages denoting the 'fibre of a plant' (Turner, *CDIAL*, 4). The bushes of Ephedra have so many thin twigs densely grouped together that the single twigs may well be compared to filaments of fibrous plants.

2. The colour of the different Ephedra bushes is yellowish to bluish green when fresh. Dried plants may show a 'dull yellowish to greenish brown' (Stapf 64, Teng-Han 11). The colour of the Soma *amśus* is *hari/zairi*, 'yellowish green to green' or *aruṇā/aruṣā*, 'reddish'. Whether the latter colours refer to different

⁴² Jivanji Jamshedji Modi, *The religious ceremonies and customs of the Parsees* (Bombay, 1922, repr. New York/London, 1979), 54.

⁴³ From sleep, i.e. from one form of *nirṛti*, the sacrificer turns away, according to MS 3.6.3 (63,13): *yām prathamām dīkṣitō rātrūm jāgārti tāyā svāpnena vyāvartate* (cf. JB 1.98). Parallels from the AV are discussed by Kuiper, *Varuṇa*, 31 f.

⁴⁴ cf. *AltGr.*, II, 2 p. 578; P. Thieme, *Untersuchungen zur Wortkunde und Auslegung des Rigveda* (Halle, 1949), 64.

⁴⁵ A. Herrmann, *Lou-lan: China, Indien und Rom im Lichte der Ausgrabungen am Lobnor* (Leipzig, 1931). There are some hints in the later Vedic and epic literature, pointing beyond the Himalayas for the home of the Soma, e.g. *Rām*. 4.42 describes the regions of the North and, bypassing mount Kailāsa (v. 19), ends at the Somagiri (v. 53). In AV, 19.39,5c-8c it is said that the plant called *kūṣṭha* lives together with Soma (*sā kūṣṭho viśvābheṣajāḥ sākām sōmena tiṣṭhati*; cf. AV, 5.4,7b *sōmasyāsi sākāḥ hitāḥ*), whereas stanza 1 of the same hymn makes it come from the Himalayas (*āitu . . . kūṣṭho himāvatas pāri*, cf. AV, 5.4,8a *ūdan jātō himāvataḥ*). In AV 5.22,5,7 and 8 the people of the Mūjavats are closely connected with the Bahlikas and Mahāvṛṣas. Lake Somabhadra and river Bhadrāsomā are located in areas around the Pamir by S. M. Ali, *The geography of the Puranas* (New Delhi, 1966).

⁴⁶ Flattery and Schwartz, table 3; I. M. Steblin-Kamenskij, 'Flora iranskoj prarodiny (etimologičeskie zametki)', *Etimologija*, 1972, 138-9, summarized in *BSOAS* L, 2, 1987, 377b.

species or whether *aruṇā/aruṣā* means the reddish flowers is hard to say. *babhrú*, 'greyish brown', is used exclusively for the drink.⁴⁷ This colour makes one think of the chocolate coloured marrow of some sorts of Ephedra. Cf. Qazilbash 499: 'The central portion of dried mature twigs collected in autumn contains a powdery material of rusty red colour.'

3. The branches have many parallel twigs, each twig is subdivided by nodes. The internodes are about 4 cm. long and have a thickness of mostly 2 mm. In the Vedic literature the Soma twigs, *aṁśú*, are likewise characterized by nodes, *pārvan*, *pārus*. Hillebrandt⁴⁸ has collected the references. The parallelism is apparent.

4. The plant grows in the mountainous regions of Afghanistan, Pakistan, India and in the adjoining northern areas. The ephedrine-yielding sorts *E. gerardiana*, *E. procera* (= *E. maior* Host, *E. nebrodensis* Tin.), and *E. intermedia* grow at altitudes between 1200 and 4000 m.⁴⁹ The various Ephedra plants not infrequently grow on rocks, or in gravelly, unfertile soil along the valleys. The Soma is *giriṣṭhā*, as is well known, but it is also plucked from the rock by the falcon in RV, 1.93,6 (cf. RV, 5.85,2 *sómam ádrau*). Rocks as its habitat are also mentioned in the well-known dictum of Śvetaketu Auddālaki in ŚB 3.4.3,13 and 4.2.5,15: 'Vṛtra was Soma; its body is of (the same nature as) the mountains, as the stones. In this way is born the plant named *uśānā* . . . this they bring hither and press.'⁵⁰

5. The taste of the Ephedra twigs is astringent; the taste of Soma, when not yet mixed with milk, is called *tīvrā*, 'sharp'.

6. The Soma-plant is 'of good scent', hu-baoīdi (Yasna, 10,4), a fact which Gershevitch (*Mémorial Jean de Menasce*, 47) used against the fly-agaric. According to Stuhmann (III, 28, 1985, 87), the mushroom is without any smell at all. The younger Vedic tradition still connects Soma with smell (*PB* 1.3,9 *somo gandhāya*; *MB*, 2.4,11 *soma iva gandhena*; in the RV the pressed juice is *surabhintara* in 9.107,2). The respective Ephedra plants on the other hand have 'a heavy, pine-like aromatic odour' (Sastri, *Wealth of India*, 179).

7. Haoma is called 'tall', *bərəzant*, in Yasna, 10.21 and Videvdāt 19.19. Since it is explicitly said in the Dēnkard 7.2,22 that Haoma is 'high as a man', the realistic background behind the 'Allerweltswort' (Stuhmann, 87) *bərəzant* becomes more probable. *Ephedra procera*, the usual kind used by the Parsis, at home in the Harirud valley, grows 'up to 6 ft. high' (*Wealth of India*, 177, with table on 178).

8. Soma/Haoma seems to have been regarded as an aphrodisiac, at least by women-folk. In RV 8.91,1 Soma is found by the wayside by a girl, who devours the plant, clearly with the purpose of becoming attractive to men. In RV 1.28 a

⁴⁷ B. H. Kapadia, *A critical interpretation and investigation of epithets of Soma* (Vallabh Vidyanagar, 1959), 4.

⁴⁸ Hillebrandt *Vedische Mythologie*, I, 217 ff.: RV 1.9,1; VS 20,27; TB 3.7,13; VaitS 24,1.

⁴⁹ Riedl, Stapf, passim; *Wealth of India*, 178: 'They can be grown in northern India at altitudes of 8,000 ft. or more', Stein, *Ephedra*, 504: 'growing in stony gravelly soil'.

⁵⁰ ŚB 3.4.3,13 (= 4.2.5,15): *vṛtrō vāi sōma āsit tāsyaitāc chārīram yād girāyo yād āsmānas tād eṣōśānā nāmāuṣadhīr jāyata iti ha smāha śvetaketur āuddālakis tām etād āhṛtyābhiṣuṇvanti*. The term *uśānā* led to some confusion. R. S. Singh, 'Contribution of Unani Materia Medica to the identification of Vedic plants with special reference to Ushna', *Studies in History of Medicine*, 3, 1979, 42-8, connected the term with *ūśa*, 'salty ground' and expected to meet with a plant 'growing on alkaline earth'. This was rightly refuted by C. G. Kashikar, 'Identification of the Vedic plant Ushana', in the same journal, 4, 1980, 190-3. But the learned scholar takes *nāma* as an adverb, 'verily', and traces *uśāna* to the root *vas*, 'to shine', assuming a present participle meaning 'shining', because the colours of Soma, viz. tawny, ruddy and brown 'would mean, "shining"' (p. 191). Kashikar treats *uśānā* as if it were *uśāna*, in itself a supposed (?) irregular form of *vasāna*, with no attempt to explain the formal differences. RV, 10.30,9 *auśānā* shows that the term is older than the ŚB, but a convincing etymology is still outstanding. Read *uśānā nāmeyam oṣadhīr bhavati* in BSS 21.12 (90,1) instead of *uśasā* (Caland) and *upasthānā* (MSS)?

Soma plant is crushed by a couple at home in a mortar. There can be no doubt that this private affair (cf. RV 8.31,5) will be followed by sexual intercourse. In the Avesta, Haoma is 'in the captivity of women' (Yasna 10,17). Whoever maltreats Haoma will be without children (Yasna 10.15; 11,3). This may be compared with Qazilbash, 501: 'In Khyber and parts of Afghanistan crushed green twigs of *Ephedra pachyclada* Boiss are boiled in milk and used as an aphrodisiac. The light chocolate coloured powder contained in the central part is mixed with butter and administered as a remedy for sexual weakness.' I witnessed a Somayāga in Nagpur in 1979. After the Soma pressings were completed about ten Brahmin childless couples were invited into the holy compound to pound the *Sarcostemma* stalks with stones.

9. Ephedra as the original Soma would explain why old and modern substitutes⁵¹ for the original plant come as long, leafless sticks or hard grass.

10. There are many kinds of Ephedra which look alike to a non-botanist, but only the sorts from the mountains yield the stimulating drug. In the ritual handbooks we still meet the question asked of the Soma-seller, as to whether the plant comes from Mount Mūjavat (e.g. *BŚS* 6.14 [172:2]). Obviously it was not possible for a Soma-buyer to distinguish the different sorts by simply inspecting them.

11. Indra uses Soma to fight Vṛtra and this mythological trait could have a natural background. While the ritualistic use is absolutely peaceful, Ephedra extracts can be a mighty stimulant for warriors. Madaus reports a test made with soldiers during the First World War. They were given several drugs, but they retained their strength best after consumption of ephedrine, which also kept them from sleepiness.⁵²

12. Ephedrine 'reinforces heart action' (*Wealth*, 179), taken in excess it leads to 'vertigo, palpitation, sweating, nausea and vomiting, occasionally precordial pain' (*Wealth*, 179). Several times the RV locates the imbibed Soma in the heart (1.91,13 *sōma rārandhī no hrđi*; 1.168,3; 8.48,4); RV 8.79,7 begs Soma to be peaceful to the heart (*bhāvā naḥ sōma śaṃ hrđē*), the following stanza tries to ward off excessive agitation (*mā no hārdi tviṣā vadhiḥ*). Cf. *PB* 1.5,6. *ŚB* 12.7.2,2, after retelling the story of Indra's Soma abuse, speaks only about vomiting when referring to humans. Cf. *ŚB* 5.5.4,9 and especially *TS* 2.3,2,6.

To sum up: there is no need to look for a plant other than Ephedra for the original Soma, the one plant used to this day by the Parsis. Ephedra fits each and every detail of the texts. In addition, the effect of the watery extract explains why this plant was so highly reputed and used in the most solemn rituals: ephedrine was a reliable stimulant for warriors and a mighty aphrodisiac. These profane uses most likely stood at the beginning of its career. Since it was easily available it certainly enjoyed a wide popularity among the population of the mountains. Its *grhya* use as an aphrodisiac is attested in the RV, in the Avesta, in present-day Afghanistan, and even the priests in a modern Agniṣṭoma (see above) have preserved the idea. This popular use may be responsible for

⁵¹ For details see Kuiper, 'Was the Putfka a mushroom? (art. cit. n. 10 above). *JMS*, 6.3,31 ff. with Śabara's comments seems to imply that Soma was still very well known in the third century A.D. In Vedic texts, substitutes are called for only when the sacrifice has already started and Soma is not for sale—against all expectations—or is stolen.

⁵² Gerhard Madaus, *Lehrbuch der biologischen Heilmittel*, II (Leipzig, 1938), 1264: 'Einen großangelegten Versuch führte Vondráček durch, der an 12 Soldaten die Einwirkung von Chinin, Strychnin, Yohimbin, Harmin und Ephedrin auf den Muskel prüfte. Dabei ergab sich, daß am besten das Ephedrin zur therapeutischen Erhöhung der Leistung anzuwenden ist, weil es von allen genannten Substanzen am kräftigsten auf die Muskelstärke wie auch auf den Willen zur Überwindung der Müdigkeit einwirkte.'

the wide distribution of its name, attested as *hum* near Herat to *som* in Gilgit. The first result of drinking Haoma consists in receiving a son (Yasna 9,4 ff.). Soma/Haoma represents continuity of life in all its aspects. Its 'clearing' effects on the human mind distinguish it from other, alcoholic stimulants. Since it could be used by poets for their purposes, and since it is opposed to the fatiguing forces of the night-time, its way into rituals was almost a natural one. But it seems, as pointed out above, that Soma as a both popular and respected drug was incorporated into different mythologies. The fact that only the Indo-Iranian branch of the Indo-Europeans knows of Soma/Haoma may be due to the limited area where these pharmacologically effective plants can be found at high altitudes. On the other hand it seems as if the peoples who spoke Indo-Iranian idioms already had rather diversified mythologies when their priests decided to introduce Soma/Haoma into their respective theological systems.

I do not want to leave this topic without mentioning some Iranists who obviously never doubted the antiquity of present-day Haoma. The first to mention is Karl Friedrich Geldner (cf. his RV translation III,2), others include Boyce (*Henning Memorial Volume*, 62) and Steblin-Kamenskij (*BSOAS*, L, 2, 1987, 377b).

So much for the *hari* plant with its *amśus*, which is referred to in almost all of the stanzas dealing with Soma in the R̥gveda. But there are some stray references which do not fit the picture.

From later literature it is well known that parts of fig trees can replace Soma or are even regarded as equivalent. In the ŚGS 1.20,3 in the Pūṣsavāna section a *somāmśu* is needed or a stalk of kuśa-grass or the buds of the nyagrodha fig (*somāmśum peṣayitvā kuśakaṇṭakam vā nyagrodhasya vā skandhasyāntyām śuṅgām*). A toothbrush made from udumbara wood is addressed in PGS 2.6,17 as king Soma (*somo rājā'yam āgamat*). In the AB 7.29,2 it is said that Soma is the food of the brahmins, and in 7.30,2 the proper Soma for kṣatriyas is defined as the downward-growing parts of the nyagrodha, and the fruits of the āśvattha, udumbara and plakṣa fig trees (*athāsyaiṣa svo bhakṣo nyagrodhasyāvarodhās ca phalāni caudumbarāṇi āśvatthāni plākṣāny abhiṣunīyāt*), because the nyagrodha is a hidden form of Soma (2 *parokṣam iva ha vā eṣa somo rājā yan nyagrodhaḥ*). The āśvattha-figs are defined in AB 7.32,2 as representing the overlordship of the trees (*atha yad āśvatthāni . . . sāmrajyam vā etad vanaspatīnām*). If a vaiśya or rājanya intends as a sacrificer to drink from Soma he should be given pounded nyagrodha-buds mixed in curds according to KŚS 10.9,30 ff.⁵³ The ChU 8.5,3 knows of the Soma-yielding āśvattha (*tad āśvatthaḥ somasavanah*).

Now, it can be shown that at least the āśvattha seems to be associated with Soma already in the RV. Stanzas from two hymns of the late first and tenth books may be interpreted in this way. The clearest instance is found in RV 10.97, a poem praising healing plants, *ōṣadhi*. Of these plants it is said in stanza 5 that they dwell near the *āśvatthā*, near the *parṇā* (*āśvatthē vo niṣāda-naṃ parṇē vo vasatīṣ kṛtā*). In the following stanza 6 the plants living near the āśvattha are compared to kings having come to the *sāmiti*. In later times the *sāmiti* includes the nobles and their king.⁵⁴ In stanzas 18 and 19 the assembly of herbs is described as 'having Soma as their king' (*sōmarājñih*), and in 18 the highest, obviously this king Soma, is addressed as if present (*tāsām tvām asy uttamā*). This highest authority is spoken to exclusively in the concluding stanza 23 with the words: 'You, healing plant, you are the highest. The trees are your subordinates' (*tvām uttamāsy oṣadhe tāva vrkṣā upastayaḥ*). If the poet was consistent in his thinking then the lines cited have to be interpreted like this: the

⁵³ cf. C. G. Kashikar, 'Soma-drink vis-à-vis the ruling class', *ABORI*, 67, 1986, 247–50.

⁵⁴ Wilhelm Rau, *Staat und Gesellschaft im Alten Indien* (Wiesbaden, 1957), 82.

healing plants have Soma, i.e. the *āsvattha*, as their king, and this king rules especially over the trees.⁵⁵

The hymn RV 1.135 is addressed to Indra and Vāyu. Many stanzas (3, 5, 6) contrast in dual-forms the two gods with the human priests in the plural. In stanza 8 we read: 'Drive hither, you two, to this offering of the sweet (Soma). Those (many) who approached the *āsvattha* as winners, they shall be winners for us' (*ātrāha tād vahethe mādhuva āhutiṃ yām āsvatthām upatiṣṭhanta jāyāvo'smé té santu jāyāvaḥ*). Here Soma and *āsvattha* need not be identical, but they are at least in close contact.

Revealing is RV 1.164,20–22, the well-known riddle about the two birds in the tree. In stanza 20 one of the two eats the sweet fig, *pippalaṃ svādvāṭṭy*, therefore the tree must be some sort of fig. The following stanza has some more birds in the tree chirp for a portion of this *amṛta* (*yātrā suparnā amṛtasya bhāgām . . . abhisvārantī*). In the last of the three stanzas the many birds have eaten of the sweet substance, *mādhu*, they rest in the tree where they also rear their young (*yāsmiṃ vrkṣe mādhuvaḥ suparnā nivīśānte sūvate cādhi viśve*). The terms *amṛta* and *mādhu*, so typical of the divine substance, make it obvious that the poet associated the tree and its fig fruits with Soma. On the other hand it is clear that the increasing number of birds reflects some kind of development. I therefore take this riddle to refer to the usual pattern of evolution: The fasting bird represents the passive element (water, asuras, female, moon, night, etc.), the eating one the active element (fire, devas, male, sun, light, etc.); their coexistence results in cosmic evolution. The tree is the world-tree so well attested, not only in diverse Indo-European mythologies,⁵⁶ and it represents at the same time space and primeval food.

Here, in the RV, this tree yields figs and is connected with Soma by some key terms. Now, Thieme (*Untersuchungen*, 70) has pointed out that the same kind of tree with birds in it is also known from Iranian sources and can there also be connected with Haoma. In Afghanistan it certainly was easy to associate Haoma with the inherited notion of a world-tree. On the mythological level both items are closely related with water and both stand for evolution, creation, and life. Also, in the mountains concerned we find *Ephedra procera*, one of the best suppliers of ephedrine, and this plant grows to as much as 6 ft. It smells like a pine tree and may therefore be regarded as a real tree, and birds like its berries. It may have been natural to identify the plant which resembles a tree and which produces the 'generating' drug Haoma with the space-creating world tree. In India, quite some distance from the high-growing Ephedra, the idea of a world-tree has survived in different forms, mostly independent of the plant which produced the Soma drug. It was substituted by the *āsvattha*, *Ficus religiosa*, with its pippala-fruits. This tree already played a major role in the religious life

⁵⁵ There is only one 'highest' addressed and only one Soma spoken of. But there are two terms in stanza 5, viz. *āsvatthā* and *parṇā*. In middle-Vedic times *parṇa* denotes the *Butea frondosa*, also called *palāśa*. But it seems possible that originally *parṇa* was nothing but an epithet of the *Ficus religiosa*. Its leaf, Skt. *parṇa*, is of a particular shape and was already painted on pottery in Mundigak 3/4 and in the mature Harappa phase. The *Bhagavadgītā*, 16,1 equates the leaves of the *āsvattha* with the rhythmical poetry (*chandāmsi yasya parṇānti*), comparable to *AVP* 9.25,16, where it is said that its leaves never rest (*āsvatthasya parṇāni nelayanti*, for the reading cf. *III*, 10, 1967/68, 239). In both *TS*, 3.4.8,4 and 7.4.12,1 four kinds of trees are listed, and three of them are figs and identical, viz. *plakṣā*, *nyagródha* and *udumbāra*, but the fourth differs: in *TS* 3.4.8,4 the *āsvatthā* is mentioned and in the second instance the *parṇā*! In *TS* 3.5.7,2 the *Butea* and the fig are clearly separated: *rāṣṭrām vai parṇo vid āsvattho*. A split in meaning would also explain why the *Butea frondosa* appears as representative of Soma, e.g. in *KB*, 2.2,14 (*somo vai palāśaḥ*), *SB* 6.6.3,7 (ditto), *TB* 1.1.3,10, *JB* 1.355.

⁵⁶ Uno Holmberg, *Der Baum des Lebens* (Helsinki, 1922/23); Åke V. Ström, 'Indogermanisches in der Völuspá', *Numen*, 14, 1967, 186–8; Eugen Kagarow: Der umgekehrte Schamanenbaum. In: *Archiv für Religionswissenschaft* 27 (1929), 183–5, with further literature.

of the Indus culture in the third and second millennium B.C. The *aśvattha* is an important cult object even today, and it would be impossible to enumerate all the historical events, rites, and customs connected with this tree.⁵⁷ It can safely be said that the Vedic priests encountered a native cult of the *aśvattha* after they settled in the Indian plains. The sacredness of the fig tree made it the best candidate to replace any other species previously representing the primeval world-tree.

It seems as if an original Ephedra world-tree left its traces in India too. *ChU* 8.5,3 talks about the world of Brahman. There is a lake Ara and the *aśvattha* *somasavana* and the town called Aparājita. The same names are found also in *KauṣU* 1.3 ff. There first comes a lake Ara, then the river Vijaṛā, then the tree Ilya, finally the stronghold Aparājita. In the following (*KauṣU* 1.5) this tree Ilya is connected with a heavenly perfume (*sa āgacchatīlyam vrkṣam. tam brahma-gandhaḥ praviśati*). In these two versions we thus once have an *aśvattha*, yielding Soma, and once a fragrant tree Ilya. But the *aśvattha* is not fragrant at all! Yet, Soma as well as Haoma are known for their pleasant smell (above, p. 86). Thieme (*Untersuchungen*, 69 f., n. 8) mentions a tree of paradise different from the *aśvattha*, which is called *surabhi*, just like Soma in the RV. The different notions seem to be explicable when we accept the double role of Ephedra as supplier of a drug and as a temporary representative of the age-old world-tree.

Conclusion: The plant used for the Soma/Haoma drink of the Indo-Iranian peoples has again been identified with Ephedra. The evidence is manifold, being based on the outer shape, and on the holiness of the plant in antiquity and today. New are the arguments regarding the effects of ephedrine, which explain why Soma in the RV is used as an aphrodisiac, why it is offered to Indra in his nightly combat, and why priests take the drug to stimulate poetical inspiration.

Then it was shown that the *aśvattha* received some mention in the later books of the RV as the world-tree. Since the Ephedra plants most likely had been associated with this notion too, *aśvattha* as the new world-tree in India attracted some of the Soma aspects which formerly belonged exclusively to Ephedra. Though parts of the fig tree were used in *grhya* ceremonies in place of Ephedra it never replaced the old plant in *śrauta* rituals.

⁵⁷ cf. P. V. Kane, *History of Dharmaśāstra*, II (Poona, 1974), 546, 895; Odette Viennot, *Le culte de l'arbre dans l'Inde ancienne* (Paris, 1954), 34, 64, 87; B. Walker, *Hindu world*, I (London, 1968), 358.