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AN IRANIANIST'S VIEW OF THE SOMA CONTROVERSY

It is five years since Mr Wasson surprised the learned world with his identification of soma with *Amanita muscaria*, the fly-agaric. His principal arguments were three, each involving an interpretation of Vedic statements, to suit a fact about the fly-agaric ¹.

The first fact is that the fly-agaric is a mushroom; the relevant interpretation is of the total silence of the Rig Veda on soma's roots, leaves, blossoms, and seeds. These are not mentioned, Mr Wasson suggested, because soma did not have them : and soma did not have them because it was a mushroom.

The second fact is that the juice pressed from dried fly-agaric after it has been soaked is a powerful hallucinogen, inducing overwhelming reverential awe. Siberian tribes, among other the Voguls, still ingested it a few decades ago, and shamans used it for their hallucinatory journeys into the beyond. Such psychotropic power would admirably explain why the source of that power was raised by the Indo-Iranians to the status of an exalted god. The relevant interpretation is of the *ἐνθουσιασμός* which soma induced in the Vedic poets, as being typical of what one feels when under the influence of a hallucinogen.

The third fact is that the fly-agaric is the only known hallucinogen that passes through to urine with unchanged potency. Siberian tribesmen

¹ Apart from the footnotes and appendices, this article gives the exact text of a paper presented on 17 July 1973 to the XXIXth International Congress of Orientalists in Paris. The literature taken into account of the "controversy" was the following : R. Gordon Wasson, *Soma, Divine Mushroom of Immortality*, New York, 1968 (quoted below as "*Soma*"); Daniel H.H. Ingalls, *JAOS*, 91, 1971, 188-91 (R. Gordon Wasson, *ibid.* 169-86); F.B.J. Kuiper, *IJJ*, 12, 1970, 279-85 (R. Gordon Wasson, *ibid.* 286-98); John Brough, *BSOAS* XXXIV, 1971, 331-62; R. Gordon Wasson, *Soma and the Fly-agaric, Mr Wasson's Rejoinder to Professor Brough*, Botanical Museum of Harvard University, Cambridge, Mass., November 1972 (quoted below as "*Rejoinder*"); T.Y. Yelizarenkova and V.N. Toporov, "Mifologicheskiye predstavleniya o gribakh v svyazi s gipotezoi o pervonachal'nom kharaktere somy" in *Σημειωτική*, Tartu, 1970, 40-6; H.W. Bailey, *Memoirs of the Toyo Bunko*, 29, 1971, 8 and *JRAS*, 1972, 105. In addition, there has just appeared John Brough, "Problems of the 'soma-mushroom' theory", on pp. 21 to 32 of *Indologica Taurinensia*, I (Atti del convegno internazionale di studi indologici, Torino, 26-29 aprile 1971), published by Istituto di Indologia, Torino, 1973.

drinking the urine of persons who had ingested fly-agaric juice, experienced the same hallucinations as the juice itself induced. I shall call somatic, in the Greek sense, any soma that passes through the human body without losing its psychotropic properties. The relevant interpretation concerns Vedic verses in which the god Indra urinates after drinking soma. Mr Wasson infers from them that the poets knew that soma was somatic.

This third argument, if it held good, would be decisive, rendering the other two arguments superfluous. If the fly-agaric alone is somatic, and the Vedic priests drank urine for soma, then soma was necessarily the fly-agaric. It could be something else only if we discovered, through assiduous testing, that other candidates are also somatic. I doubt that many Indo-Iranianists will engage in such testing. Most will be content with accepting what the Siberian tribesmen, and the reindeer which cannot lie², have proved. But as Professor Ingalls and Professor Brough have shown, the Vedic poets do not describe Indra's urine as being identical with the soma which made the god urinate³. In this form, therefore, the argument remains inconclusive.

More hopeful may seem Zoroaster's reference to haoma as *mūθra* "urine", to which Professor Morgenstierne drew Mr Wasson's attention. Mr Wasson rejects Professor Brough's objection that Zoroaster may have used the word merely as a strong term of abuse⁴. But one can actually demonstrate the inconclusiveness of the term *mūθra*. For the term is only one of two Avestan words for urine, the other being *maēsman*. The Avestan language, as a language of dualists, had two words for most parts of the body, according as the body belonged to a being of Ahura's creation, or of the creation of the daēvas. *maēsman*, since it denotes urine as a means of ritual purification, was necessarily an ahuric term. Therefore *mūθra* was necessarily daēvic. It follows that if haoma were urine, Zoroaster who loathed haoma, would have had to call it *mūθra* even in a scientific treatise. But if he were looking for a strong term of abuse, *mūθra*, being daēvic, would readily occur to him even if haoma were raspberry juice. So one cannot win with *mūθra*, whichever game one is playing.

Nevertheless let me stress that if soma were the fly-agaric, its Indo-

² On the reindeer see Wasson's *Soma*, Index.

³ Wasson did not realize in *Rejoinder* 26, that the crucial word "it" in Ingalls' translation of RV VIII 4.10, was put in by the translator to help the reader. The Vedic text merely has "piss out".

⁴ *Rejoinder* 25.

Iranian consumers would know what the reindeer knows, that it is a substance somatic. Mr Wasson has not proved that the poets had somatic consciousness, but neither is there proof that the poets had none. By the end of this paper we shall see that they may have had some.

We must now consider Mr Wasson's first argument, that the non-mention of roots, leaves, etc. silently proclaims soma a mushroom⁵. What does the *speaking* evidence have to say to this? Mr Wasson was conscious that a threat looms in the Avesta. He had read in Darmesteter's English rendering of Yasna X, 5: "Oh Haoma, do thou grow in all thy trunks, in all thy branches, in all thy stems". This would exclude *Amanita muscaria*.

Mr Wasson proposed as remedy⁶ to interpret "trunks", "branches", "stems", *varəšaīš*, *frasparəγā*, *fravāxšā*, as three synonyms, all referring to the stipe of his mushroom. The verse would then in effect be saying: "grow thou in all thy stipes, in all thy stipes, in all thy stipes". This proposal is singularly unconvincing. But Mr Wasson did not realize that the word "thy" was put in by Darmesteter only to help the reader. The Avestan text simply says "grow thou in all trunks, in all shoots, in all offshoots", *vīspə paiti varəšaīš* etc. Moreover, with the preposition *paiti* and the accusative, the meaning need not be "in all trunks"; it could be: "grow thou towards all trunks". It will be remembered that the fly-agaric grows at the foot of birch-trees and conifers, and therefore also at the foot of shoots that spring from the ground next to the trees. Haoma's growing towards them, as if attracted by them, on the ground, would suit the identification of it with the fly-agaric.

Thus the Avestan passage which Mr Wasson thought threatened his mushroom could be held on the contrary to support it. But there is a threat, and no empty one, elsewhere in the Avesta. It comes from the adjective *bərəzant* "tall", which ill suits the fly-agaric. The same may be said of the epithet *hu-baoīdi* "of good scent". Most people I have asked consider the mushroom ill-scented. Moreover, the cap of the fly-agaric is red, while the colour of haoma is given as *zari*, which in Avestan firmly means "green" or "yellowish green"⁷.

With tallness, perfume, and greenness all militating against the fly-agaric, there is no point in departing from Darmesteter's understanding of Yasna X, 5, even though grammar would permit this. We are back at trunk, or stem, with branches and twigs, in other words, at a plant, tall

⁵ Cf. Brough, *art. cit.* 341 sq.

⁶ *Soma* 21.

⁷ See Appendix I, below, pp. 58 sq.

green and fragrant. The Avestan description is graphic, much more informative than the Vedic. It even informs us of haoma's taste, by the epithet *nāmy-qsu*. This has hitherto been taken to mean "whose fibre is tender", *nāmi* with long *ā* being considered the compound form of *nāmra* with short *a*, meaning "tender". But Sogdian shows that the quantity matters. *namre* means "tender" also in Sogdian, but *nāmre* means "sweet", said of sugar. We have here the base *nam-* of Persian *namak* "salt", Avestan *nāmaδka*, whose suffixation resembles that of Slavonic *sladko* "sweet", from *sol* "salt"⁸. *nāmy-qsu* therefore describes haoma as having tasty fibres.

Ancient noses and palates cannot of course settle for us whether haoma was a plant or a mushroom. But to the eye it is very much a plant which the Avesta describes. If therefore the original proto-Indo-Iranian growth **sauma*, continued as *hauma* in Iran and as *soma* in India, was the fly-agaric, then clearly in the Hindukush area where the Avestans had settled, it was no longer the true *hauma* that was used, but a substitute.

Having considered the somatic argument of Mr Wasson's, and his inference of a mushroom from the non-mention of *soma*'s roots, leaves and seeds, let us turn to Mr Wasson's view that only a hallucinogen can account for the rapturous *ἐνθουσιασμός* that moved the Vedic *kavis*. In arguing for hallucination one need not hesitate to adduce also the Rigvedic hymn X 119, in which the speaker swells up to fill the space between heaven and earth. It is true, as Professor Brough says⁹, that this need not presuppose the poet's personal experience of the effects of drinking *soma*. But neither need it be mere fiction. The hymn would suit *soma*-hallucinations experienced by ancestors of the poet, the memory of whose retelling had lingered on.

The Avestan tradition distinguishes between fury, which all other intoxicants induce, and gladdening Truth, which *haoma* is the only intoxicant to reveal¹⁰. This suggests, for fury, alcoholic inebriation, while for the sight of gladdening Truth one may well think that a hallu-

⁸ *sladko*, in view of Lith. *saldūs* etc., had the *k*-suffix secondarily added to the *d*-suffix, cf. Franz Specht, *Ursprung d. idg. Dekl.* 198. Whether or not an Indo-Iranian stem **namad-* for "salt" existed is anybody's guess; cf. Bailey, *BSOAS* XIX, 1957, 54. On Av. *nāmaδka-* and Sogd. *nm'δk-* see Henning, *Sogdica* 8 with Addenda, and *BSOAS* XII, 1947, 55. Differently Bailey, *art. cit.* 52, on whose view see Abayev, *Ist.-Et. Slov.*, II 203 sq. Chor. *nmθk* has *θ* from *d*, v. Henning, *Togan'a Armağan* 435. On the second part of the compound *nāmyqsu-* see below, p. 74, Appendix X.

⁹ *Art. cit.* 341.

¹⁰ *Yasna* 10.8.

cinogen was responsible¹¹. At all events the gladdening Truth was no *ueritas in uino*, as the preparation of haoma-juice involved no fermentation. The gladdening effect on the mind, it seems, was sufficiently intense to drown pain. This may be inferred from haoma's epithet *dūraoša*, which in the form *duroša* pertains also to the Rigvedic soma. It therefore already pertained to the prehistoric sauma. In respect of both *dur* and *aoša* several interpretations are on record, but of these the most promising combination has not yet been suggested. It is that *dur*, as a noun meaning "pain" like Baluchi *dōr*, is the object of a verbal *aoša* meaning "to destroy, kill". *dūraoša* will then mean "pain-killer", and the original sauma will have been praised as an analgesic¹².

Rapturous *ἐνθουσιασμός*, visions of gladdening Truth, increase in size, lifting of pain, these are the grounds on which one may hold that the ancient texts define haoma/soma as a hallucinogen. But as Professor Brough rightly remarked, the Vedic poets also believed soma to have acted as a powerful stimulant of warlike deeds, chiefly of the deeds of mythical Indra, but also of men going into battle, though of men this is seen only in verses invoking soma for stimulus¹³.

This is the objection which Mr Wasson in his Rejoinder to Professor Brough seems to resent more than any other, yet has not really effectively countered¹⁴. I am impressed by the fact that Mr Wasson has not even tried to mitigate the objection by referring to what in his book he had

¹¹ Cf. also, akin to the shaman's hallucinatory trip into the beyond, Yasna 9.16 : *urunaēča pāθmainyōtamō* "and for the soul's journey (haoma) is the best food". On *pāθmainya-* see Henning, *Mitteliranisch* 113 n. 7.

¹² The above interpretation of *dur-* is taken from Bailey, *BSOAS* XX, 1957, 55 sq., who, however, arrives at a different meaning of the compound. Note Bailey's discovery of *durausa* in Khotanese, *art. cit.* (in n. 1 above), 8. With Av. *dūraoša* as "analgesic" one may compare haoma's epithet *baēšazyā-* "healing", although admittedly other Avestan gods also bear it.

¹³ "Bring us warrior-might", "O Pavamāna, stimulate us in the battle" (Brough, *art. cit.* 340), not for example : "having drunk thee we feel pervaded with warrior-might, we are stimulated for battle". What precedes either verse-line does not suggest that the speakers uttered the crucial words with soma in their bodies. More positive evidence of a stimulating effect (which with a neutral substitute may have been imaginary) could be held to be offered by Yasna 10.8 *rənjaiti haomahe maδō*, according to Bartholomae "flink macht der Haumarausich", to which rendering Bailey, *Annali*, I, 1959, 142, preferred "the intoxicant of haoma exhilarates". "Flink machen" would go well with the purposeful effect of haoma in Yasna 10.14 : "Let not those who have ingested (thee) wander aimlessly! Let thy intoxicated ones proceed ahead! Let them come straight-purposefully (*vərazyaγuhāñhō*, cf. *GMS*, p. 21 n. 2)."

¹⁴ *Rejoinder* 21.

quoted from Krasheninnikov, namely that taken in moderation the fly-agaric acts as a stimulant, but if indulged in to excess it leads to macropsia ¹⁵. If an expert on the fly-agaric of Mr Wasson's excellence agrees with Professor Brough that the effects of the mushroom are totally unsuitable to stimulate Indra and human warriors for battle, then it would be presumptuous on my part to claim that the fly-agaric can be both, a powerful hallucinogen and a powerful stimulant. Yet the swelling in size, and the rapturous reverential awe, are not well accounted for by a stimulant.

The position therefore seems to be that the Vedic poets thought of soma as having both effects, hallucinogenic and stimulant, while the original sauma can have had only one. This in itself suggests that in Vedic times a substitute was used, incapable of contradicting either opinion. But then the problem is shifted to the original, prehistoric sauma. This must have been a very powerful drug indeed, as otherwise it would not have been raised to so exalted a divine status. But if its power lay in stimulation to warlike deeds, why was it later thought to have had also effects immobilizing the body in contemplative rapture? I can see no convincing reason. But I do see a plausible reason why the reverse could have happened. A powerful hallucinogen could have come to be thought of as having been a powerful stimulant as well, provided that the hallucinogen was a mushroom.

This proviso stems from Doctors Yelizarenkova and Toporov's insistence on the common popular belief that the sudden appearance of mushrooms is connected with thunder ¹⁶. The two scholars perceptively linked this with the Rigvedic statement that soma had as father Parjanya, the god of thunder. But now, although Parjanya is the god of thunder, the god of the *thunderbolt*, the vajra, is warlike Indra. This would readily explain, if the original sauma was a mushroom, why Indra became its most insatiable customer. Indra of course, could not help remaining pugnacious however much of a hallucinogen he drank, as otherwise he would cease to be Indra. What then would be more natural for worshippers of both gods, Indra and the mushroom, than to attribute to the mushroom a stimulant effect in addition to its real effect, the hallucinogenic? Note that in shape the fly-agaric provides a good handle and head for a thunderbolt. Soma is said, in the Rig Veda, to be Indra's vajra, and

¹⁵ *Soma* 158, 236.

¹⁶ *Art. cit.* (see above, n. 1).

only soma and the vajra bear the epithet *sahasra-bhṛṣṭi* "studded with thousand spikes"¹⁷.

My reasoning, therefore, is this. Of the two effects ascribed to soma by the Vedic priests, but not necessarily any longer experienced by them personally, the original sauma can have had only one : either the hallucinogenic effect, immobilizing the body, or the stimulating effect, which activates the body. If the effect was the immobilizing, then the secondary belief that it was also activating suggests, in view of Indra's connection with thunder, that the prehistoric sauma was a mushroom rather than a plant. But if the true effect of the original sauma was the activating, so that the immobilizing effect represents secondary belief, then we cannot hold Indra responsible for the secondary belief, and therefore cannot conclude that the original sauma was a mushroom. If the original sauma was a stimulant, it may just as well have been a plant. Accordingly, to decide whether there is a presumption in favour of sauma having been a mushroom in the prehistoric period, we need to find independent evidence as to whether in that period sauma immobilized men, or activated them.

Such a quest into prehistory is not as Utopian as may seem. A famous prehistoric legend, familiar alike to readers of the Avesta and the Šāh Nāme, embodies a vital clue. It is the story of the revenge which Xusrau, king of the Iranians, takes on Afrāsiyāb, king of the Turanians, for having instigated the murder of his father Siyāvuš. Afrāsiyāb, the Avestan Fraṅrasyan, evades Haosravah by taking refuge in an underground fortress. Haoma sides with Haosravah. But what is the form his assistance takes, a form so different from any assistance any other god lends men in the Avesta? The vegetable god *binds* Fraṅrasyan, and delivers him *bound* to Haosravah, who then kills him. In the days before Mr Wasson's book appeared I often wondered how Haoma had set about this binding operation. Was the god bindweed? It had not occurred to me to take the verb metaphorically, until I read about the Siberians spellbound in a trance induced by fly-agaric. The metaphor is lent piquancy by the wild reindeer who, as Mr Wasson reports in his book (p. 253) from Erman, are often found so stupefied after eating fly-agaric, that they can be tied with ropes and taken away alive.

The Fraṅrasyan story belonged to a legendary past already in Avestan times, but the reality of its gist cannot be doubted. There *was* a people called Tūra, anachronistically identified with the Turks by Firdausi, a people in conflict with, but genetically related to the Iranians. Their king

¹⁷ This uniqueness is well accounted for by Wasson's and Brough's (*art. cit.* 359 sq.) interpretations combined.

Fraņrasyan *did* give his daughter in marriage to Siyāvuš, the son born of that marriage *was* Haosravah, Fraņrasyan *did* murder Siyāvuš, and Haosravah, by killing in revenge Fraņrasyan, his maternal grandfather, *did* combine in his person the rulership of both Iran and Tūrān. It all happened before Zoroaster's time, as Haosravah is the last kavi king mentioned before Vištāspa and there appears to have been a gap between the two kings. But there is no good reason for going back beyond the 7th century B.C., or perhaps some time in the 8th. There is some reason, on the other hand, for locating the Fraņrasyan story beyond the usual geographical horizon of the Avesta. The toponyms of the story occur in no other connection : a lake, called Čaēčasta, a mountain-range called Kaṇha, and two forests, one called the Pan-Iranian, *Vispe.airya*, the other the Whitish, *Spaētita*, which name suggests that the forest consisted of birch-trees¹⁸. Lake, mountain and forests must have been in or near Tūra country.

But where was Tūra country? And who were the Tūras? Let us see if perchance we can elicit the answer from Haoma. Haoma's binding of Fraņrasyan, interpreted as Fraņrasyan's ingestion of haoma, constitutes the only mention in the Avesta of a non-Avestan citizen ingesting haoma. The Tūras were non-Avestan, but they were nevertheless Iranian, as their proper names show. And they were obviously Haoma-worshippers, as Fraņrasyan on the run from Haosravah would scarcely have swallowed the god of the man out to kill him, had he not been all his life in the habit of swallowing him, in other words, had there not been an established hauma-cult among the Tūras. If the Tūras worshipped Hauma in the days of Fraņrasyan, we may be sure that they still worshipped Hauma in the days of Zoroaster, and even one century later in the days of Darius and Xerxes.

But we are thus left, at the dawn of Iranian history, with only two Iranian nations who according to the Avesta worshipped Hauma : the Tūras, and the Avestans, as for short we may call the speakers of the Avestan language.

It may be said : but surely also the Persians worshipped Hauma. Don't we have a whole book of haoma-inscriptions which Professor Bowman published under the title "Aramaic ritual texts from Persepolis"? The answer is that, although Professor Bowman's book is a boon, he gave it the wrong title. There is no mention of haoma or of anything

¹⁸ On the forests see Appendix II, pp. 60 sqq. below.

religious in any of the texts, whose contents are no more ritual than what is printed on a bus-ticket.

Professor Bowman's misapprehension arose from the second word of the constant initial formula of each text: "in the *X* of the fortress". Professor Bowman believes that *X* designates haoma-pressing ceremonies. But in fact it is easy to show that *X* designates locales on the Persepolis terrace, sometimes a room, and sometimes a building.

This is because *X* is always expressed by one of three nouns, each of which is a well-known Iranian term for a structure. *X*-one is written *h-s-t*, to be read *hasta*, a word familiar from the Avestan compound *pasuš.hasta* "sheep-fold", literally "residence for sheep". Etymologically related to Old Persian *hadīš* "palace", *hasta* will have been the name of one particular building on the terrace. *X*-two is spelt *p-r-k-n*, to be read *frakana*, which again is a familiar Avestan word, meaning "dug-out"¹⁹. At Persepolis it will have been a basement room.

The most interesting of the three is *X*-three, spelt *s-r-k*, sometimes *s-r-w-k*. It is elementary to read the word **sāruka*, and recognize in it the direct ancestor of Arabo-Persian *sārūq*, the term for a labyrinthine castle of wonderful proportions. Here, then, we have something solid to go by. The Persepolis building in question must be castle-like and labyrinthine. I thought it prudent to try this out, at the Persepolis celebrations, on none less than Professor Krefter. Without hesitation he chose the Treasury. I accept this. It was the kind of building which long after its destruction by Alexander will have haunted memories, and inspired architects to design new and ever more fanciful *sārūk-s*.

Etymologically, of course, Old Persian **sāru-* will belong with Sanskrit *śālā* and ultimately with English *hall*. A tower of a **sāru* will have been called **sāru-pāka*, "that which guards the **sāru*". In Middle Western Iranian this would become *sārbāg*, which as a loanword became in Sogdian the general word for "tower". In Middle Persian and Parthian, which had as general word *burg*, the highly specialized *sārbāg* came to be used for the **sārūg* itself; hence the contaminated form *sārbūg*, attested in Sogdian toponymy and in Syriac²⁰. As if to close the circle, the Bundahišn actually locates *sarbāg*, as if it were a toponym, at Persepolis, by defining it as the place of Yama's Var in the middle of Fars under Mount Yam(a)gān. This not only explains why the site of Persepolis came to be called Taxt-e Jamšīd "the Throne of Yama", but above all neatly identifies the Sasanian *sarbāg* of Taxt-i Jamšēd with the Treasury, the **sārupāka*-equipped **sāruka* of Achaemenian Persepolis²⁰.

¹⁹ Cf. Duchesne-Guillemin, *JAs.* 1936, 251.

²⁰ See Appendix III, pp. 66 sqq. below.

In its turn the legendary identification of Yama's maze-like Var with a *sarbāg* that once was the Persepolis Treasury, lends colour to that Treasury's name, **sāruka*, having become a general term for "labyrinthine castle".

Thus the Persepolis mortar inscriptions are devoid of ritual purport. Their purport is that each mortar was a gift for the commandant of the fortress from one of his visitors. The commandant being a crown agent, the gifts were taken charge of by the treasurer ²¹. This is why they were all found in the Treasury, the **sāruka*. Visitors arriving unequipped with a present, would buy one in the bazar at the foot of the terrace. Hence the large number and uniform material and make of the mortars. They were bought not for usefulness, but for the skill which had gone into the exquisite carving of notoriously hard chert, as we might buy and give a shapely candlestick. There is not a speck of evidence that anything, least of all haoma, was ever crushed in them.

More important is the lack of reference to a Persian haoma-cult much earlier, in the Elamite tablets from Persepolis of the time of Darius. Still more important is Herodotus's silence on haoma, since it suggests that also the Medes, or at least the Median Magi, had no haoma-tradition. But most important of all is the absence of Haoma from the month-names and day-names of the so-called "Zoroastrian" calendar, which I have long maintained was not Zoroastrian but Perso-Magian. It is in fact inconceivable that if the calendar-names had emanated from Avestan priests, these would have left out the one god who really kept them busy with an elaborate ritual. This leaves as only possible introducer of the calendar-terminology a central, Persian, authority, as in any case the diffusion of the terminology from Cappadocia to Sogdiane suggests. That central, Persian authority was clearly not beholden to Hauma ²².

But there was an Iranian people, additional to the Avestan, whom the Persians knew to be devoted to Hauma. These were the Saka nomads whose name is given as Haumawarga in inscriptions of Darius and Xerxes. There is at present virtual agreement among scholars, as can be seen from Professor Litvinski's able survey ²³, that the territories of the Haumawarga Sakas extended from Tashkent to the Alai valley, including Ferghana as centre-piece.

Naturally a people called Haumawarga by Darius and Xerxes is not

²¹ See Appendix IV, pp. 69 sqq. below.

²² See Appendix V, p. 71 below.

²³ B.A. Litvinski, *Drevniye kochevniki "kryshi mira"*, 1972, 163-70.

likely to have called itself by that name. Nor would the Avestans have called them by that name, since they were themselves Haoma-worshippers.

The Avestans in fact, separated from the Haumawargas only by Sogdiane, are sure to have referred to them by their real name, the name by which the Haumawargas themselves called themselves. What was that name?

On the one hand the Old Persian inscriptions mention only one people worshipping Hauma, which cannot be the Avestan because the Avestans were not nomads. And on the other hand the Avesta mentions only two peoples worshipping Haoma, themselves and the Tūras. I conclude that Tūra was the indigenous name of the Haumawargas.

The Avesta provides topographical support. Before the heroic Tusa devastates the Tūryan countries, he defeats a Tūryan contingent at the highest pass of a mountain range (Yt 5.52-9). Clearly, therefore, immediately beyond that range lay Tūrān.

Now the name of the range is given as Kaṇḥa in the Avesta. We find the name later again as that of Kang-diz, the fortress into which according to the Bundahišn ²⁴ Haosravah withdrew after he had killed Fraṇrasyan. It is common knowledge that in the second century B.C. the population around Tashkent was known to the Chinese as the K'ang people ²⁵. So Tashkent suits both Tūras and Haumawargas.

The name of lake Čāēčasta may also be relevant, if Čāč, the Sogdian name of the Tashkent region, represents the vriddhi form of *Čāēča, from *Šaiča. The lake would then be Lake Aral ²⁶.

Thus various threads lead to the identification of the Tūras with the nomadic Haumawargas, whose territories, from the seventh century B.C. onwards, seem to have ranged from the Tashkent region, but possibly even from Lake Aral along the eastern bank of the Yaxartes ²⁷, down to the south-east across Ferghana to the Alai Range.

North of Tashkent the land flattens out. One more barrier, the Karatau Range, and the Tūras faced the immense depression flanked by Lakes Aral and Balkhash, wasteland and steppes. North of the Hunger Steppe, at some 500 miles north of Tashkent, there begins on Mr Wasson's map

²⁴ *GtBd*, TD₂ 213.14 = TD₁ 183.9.

²⁵ On Kaṇḥa, Kang, K'ang cf. Markwart, *A Catalogue of the Provincial Capitals*, 26 sq., Bailey, *Festschrift F. Weller* 20 n. 79, E.G. Pulleyblank, *Asia Major IX*, 1963, 247 sq.

²⁶ See Appendix VI, p. 72 below.

²⁷ Note that the Marathai ruled by king Omarges (= Haumawarga, cf. Litvinski, *op. cit.*, 169) lived according to Charax of Mytilene beyond the Tanais-Yaxartes, see Markwart, *Wehrot* 126, 130. More on the Marathai below, p. 65.

the immense birch and conifer area inside which, 800 miles further and therefore 1300 miles from Tashkent, modern travellers found the southernmost fly-agaric eaters, Voguls. Their ancestors in antiquity can safely be brought down the whole 800 miles of forest, to the edge of the Hunger Steppe. That steppe was a fair runway for nomads, and the Tūras, whom we have found to the south of it, could easily have learned along its northern border, the addiction to haoma which their nickname Hauma-hwarga proclaims, which nickname, translated etymologically, would be in English "Hauma-swiller", in German "Hauma-schwelger"²⁸.

By the time their hauma delivered Fraṅrasyan bound to his killer, in about the seventh century B.C., it was more than half a millenium since the Indo-Aryans had arrived in North-West Pakistan. If one of the two peoples no longer used the original sauma, this was much more likely the Indo-Aryans than the Tūras, as the latter still lived in touch with the steppes from which the Indo-Aryans had long departed. The seventh century Tūras, if they ever heard that the Vedic Indra was stimulating himself with gallons of soma, could only have said : he does not drink the hauma we swallow.

But centuries earlier the Tūras, being Iranians, had also worshipped Indra. This we may infer from the fact that the Avestans still had a faint recollection of Indra, demoted to a modest daēva of little more than nuisance value.

Why was Indra discarded by the Iranians, who once honoured him, while the Indo-Aryans continued to revere him as a bellicose soma-drinker? Was sauma perchance the reason why the Iranians gradually lost him? As a stupefier and binder, sauma could not have been drunk by Indra for very long without destroying the god's personality and invincibility. One can see that if Indo-Iranians in the steppes developed the notion that Indra drank sauma, this notion would have a far better chance to survive with an Indo-Iranian branch that had moved to regions where it changed over to a new soma, than among Indo-Iranians left behind in the steppes. The latter would soon find that their continuing experience of the stupefying effect of the real sauma, compelled them literally to put Indra to sleep.

But then why should the Indo-Iranians in the first place have put it into their heads that Indra drank sauma? Well, thunder would be a good reason, as we have seen, if sauma was a mushroom. And of a sauma different from the Vedic scma and the Avestan haoma, who would deny after Mr Wasson's book, that it could very well have been a mushroom?

²⁸ See Appendix VII, pp. 72 sq. below.

So it comes down to this : provided that the Vedic soma and the Avestan haoma were no longer the original sauma, the latter is well defined as *Amanita muscaria*. And clearly they were no longer the original sauma. A simple consideration will show this. Mr Wasson's book has set the standard of what we have a right to expect of the original sauma. We shall never again be content with less wonderful properties. We have learned to expect that whatever the growth was, the ingestion of its juice filled the ingestor with a rapturous happiness such as nothing else did.

But now, men do not give up an ingestion that induces such happiness. If in the Hindukush and in North-West Pakistan the Avestan haoma and the Vedic soma had been the real sauma, then real sauma would still be ingested today in those regions, inducing the same wonderful happiness, and we would long have been told its botanical definition. There are enough pockets of direct descendants of ancient drinkers of haoma or soma high up in those valleys. If they have no truly ecstasizing juice today, we may be sure that their ancestors did not have any either.

The ancestors of course, took for soma a growth which grew in those regions. Therefore either the original sauma did not grow there, or if it grew there, it was not recognized by the Indo-Iranian immigrants because it did not grow in intermediate regions where they had lingered before reaching the regions where they finally settled. This second assumption will be the one to make if ever *Amanita muscaria* should be found to grow in the Hindukush or in North-West Pakistan. So far the mushroom is not on record as growing there ²⁹.

And now for the promised return to somatic soma. If the original sauma was *Amanita muscaria*, its Indo-Iranian devotees would necessarily know of its effect on urine. We have seen that no such knowledge can be demonstrated from any Vedic or Avestan verse. But when it first became necessary, for lack of fly-agaric, to resort to a substitute in order to maintain the ritual, there must have been criteria by which one plant was chosen rather than another. One criterion which stood a good chance of being applied, would have been effect on urine. The original effect was beyond repeat, but one property looked for in the substitute could have been a capacity somehow to affect urine in an exceptional way.

I am saying this because in the Persian Pharmacology of Abū Mañšūr Muwaffaq, written in the tenth century A.D., a diuretic plant is mentioned, whose name is *haumu'l majūs*, "the haum of the Magi". The name

²⁹ See Appendix VIII, p. 73 below.

is Arabic. Later authorities, Arabic and Persian, give the Persian name of the plant, which is said to resemble the jasmin, as *marāniya*³⁰. It would seem that the plant was native to Iran and new to the Arab invaders, who in their own language called it after the fact which most intrigued them, that the Zoroastrian priests used it for haoma.

The plant was therefore the official haoma at the end of the Sasanian period, throughout which period Zoroastrianism had been the official state religion and the church, steeped in its own dignity, would not have been likely to jump from one plant to another. Almost certainly therefore, the same diuretic plant was haoma already at the beginning of the Sasanian period, in the early third century A.D. And as the plant was native to Iran, and Zoroastrianism had been thriving there by the third century uninterruptedly since Avestan times, there is no excluding that the same diuretic plant may have been the haoma already of the Avestans.

What then is the gist of this paper? It is that if one knew nothing of Mr Wasson's book and the controversy, one could still, by cool reasoning, have arrived at a hallucinogenic mushroom. The stepping stones of the reasoning would have been first, that true sauma was clearly never ingested in the Hindukush and North-West Pakistan; second, the pharmacological incompatibility of the binding of Fraṅrasyan with the stimulation of Indra; third, Indra's connection with thunder; fourth, the identity of Tūras and Haumawargas; fifth, the location of these nomads in the Tashkent region; and sixth, as a gratuity, the diuretic property of *haumu'l majūs*. We could have reached the mushroom by sheer cool reasoning. But would it have occurred to us to reason so coolly, had Mr Wasson not implanted in our brains a hallucinogenic mushroom³¹?

APPENDIX I : The colour (see p. 47, n. 7)

On the colour-definition Brough is absolutely right (*art. cit.* 349 sq.). If one falls back on "intensity" of colour, as Wasson does in *Rejoinder* 35, one merely exposes oneself to the charge of special pleading. One *could* argue, on account of derivatives of the root to which *zari/hari* belongs meaning "gold", that the word, via "golden" and "orange-colour", might have come to be used for "red" as well. Indeed, I am in no position to be dogmatic about Vedic *hari* when the epithet applies to things other than soma. But on the *hariness* of soma one *has* to be firm, as otherwise one loses the ground under one's feet, argues in a circle, and the

³⁰ See Appendix IX, pp. 73 sq. below.

³¹ See Appendix X, pp. 74 sq. below.

precious *hari* forfeits all probative value. For it is clear that, as soma is called *hari* and the Avestan haoma is called *zairi.gaona* (lit. “zari-coloured”), and *hari* and *zairi-* are etymologically the same word, the Vedic and the Avestan poets were repeating the colour definition, inherited from their common, Indo-Iranian ancestors, of the prehistoric *sauma itself. Therefore, seeing that the meaning of Av. *zairi.gaona* is incontrovertibly “green” or “yellowish green”, if one says that the same colour-word denotes a different colour in Vedic (as in theory it might, cf. Av. *auruša* “white” against Ved. *aruša* “reddish”), one cuts off either the Avestan or the Vedic word from its Indo-Iranian sauma-tradition.

This would be perverse not only because in later Indo-Aryan, when the evidence becomes clear, the descendants of *hari* denote the same yellow greens as Av. *zairi.gaona* (see R.L. Turner, *A Comparative Dictionary of the Indo-Aryan Languages*, 808 sq.), so that the innovators on the prehistoric colour-definition of *sauma would have to have been the speakers of the Vedic, not of the Avestan language, but also because it would actually damage the cause for which Mr Wasson wants the Vedic soma to be defined as red by *hari*. For if the *hari soma* was red, then it might be the fly-agaric, but the prehistoric sauma, being **žhari* “yellowish green”, would be something else. The mushroom would itself be merely a substitute for true *sauma.

Accordingly my underlying assumption in the above paper was that the prehistoric **žhariness* of *sauma referred exclusively to its juice, and perhaps to urine, and that the epithet was retained (in the form *zari/hari*) in the Hindukush and in NW Pakistan, and there applied to both the juice and the growth because the haoma/soma by then used was a phanerogam.

It should be noted that any Middle or New Iranian colour-words of the *zar-* family other than direct descendants of OIran. *zari-gaona*, could not reliably affect the definition of Ved. *hari* by any divergence they might show from greenness or yellowness. This is because only Av. *zairi-*, on account of its being an *i*-stem and an epithet of haoma, is sure to be the exact counterpart of Ved. *hari* which is an *i*-stem and an epithet of soma. Of any other Iranian *zar-* plus vowel, one could not be sure that its exact Vedic counterpart would not have been *hir-* (as it is, e.g., in *hiranya* “gold”, corresponding to Av. *zaranya-*). A *hir-* would be under no obligation to have the same meaning as *har-*.

APPENDIX II : Forests (see p. 52, n. 18)

The whitishness of the forests referred to on p. 52 above, is assured by the Avestan verse Yt 15.31 : *təm yazata l aurvasārō daij̄hupaitiš l avi spaētiniš razurā l upa spaētitəm razurəm l upa vimaiδəm razuraya* "Him (scil. Vayu) the Arva-chieftain, lord of the (Arva-) country worshipped in the Whitish Forests, (more precisely) in (that part of the Whitish Forests which is known as) the Whately Forest, in the middle of the (Whately) forest".

The next verse, 32, reads : *aom j̄aiδyaṭ l avaṭ āyaptəm dazdi.mē l vayuš yō uparō.kairyō l yaṭ nā nōiṭ nijanāt l arša airyanəm dah yunəm l xšaθrāi hankərəmō haosrava l yaθa azəm uzayeni l hača kavōiš haosravaṇ-hahe l janāt təm kava haosrava l višpe.aire razuraya l*

This verse is generally thought to mean that the Arva-chieftain was killed by Haosravah despite escape from Haosravah having been the boon for which he had asked. As this is followed in verse 33 by the statement that Vayu did grant him the boon, Fritz Wolff, *Avesta* 271 n. 9, rightly wrote "man beachte den Widerspruch"³². The contradiction disappears if one abides by the Avestan text strictly, taking *nā* and *uzayeni* at their face values : "He asked him : 'Give me the boon, superglorious³³ Vayu, that Haosravah shall not kill both-of-us (*nā*); that I may escape (*uzayeni*) from Kavi Haosrava; let Kavi Haosravah kill (only) *him*, in the Pan-Iranian forest'".

The fact that the boon was granted, shows that the Arva-chieftain was dear to the poet. But Haosravah was also dear to him. So one might expect the two to have been dear to each other. Why then should Haosravah have wanted to kill, along with an unidentified "him", the Arva-chieftain, and why should the poet approve of this intention having been frustrated by the chieftain's timely escape, seeing that the escape cannot exactly have pleased Haosravah? The most reasonable conjecture seems to me to be, that the Arva-chieftain and Haosravah belonged to

³² R. Hauschild, *Mitt. d. Inst. f. Orientforsch.*, Band VII, Heft 1, 1959, 59, calls it a "beissender Sarkasmus". The interpretation of the "Wagenwettfahrt" here submitted, differs from Hauschild's as much as it does from the earlier interpretations he partly rejects and partly accepts.

³³ *uparō.kairya-*, interpreted in the light of MP *čēr* "triumphant, victorious, brave, overpowering, tyrannical", see Henning, *Sogdica* 37. This may be from **čarya-*, its Sogd. equivalent *skrtyy* from **us-karata-*, corresponding in formation to Av. *vairya-* and *yazata-* respectively, hence "glorious" from "deserving, requiring, to be glorified". The base is **kar-* "rühmend gedenken".

opposite camps, but that the former was *due* to earn Haosravah's affection, subsequently to the event here narrated.

We happen to know of one Tūra who may suit this requirement: Aγraēraθa, brother of Fraṅrasyan, whom the latter killed because he had shown partiality for certain members of the Naotarian clan, to which Haosravah belonged. Haosravah's revenge on Fraṅrasyan is expressly said, in Yt 9.18, 22 and 19.77, to have been taken not only for the murder of his father Syāvaršan, but also for the murder of Aγraēraθa. Admittedly according to the Šāh Nāme Aγraēraθa's partiality had shown itself, and was paid for with his life at the hands of Afrāsiyāb, before Haosravah's time, as Darmesteter noted in *Zend-Avesta* II, 436 n. 23. But Firdausi attributes to Fraṅrasyan an inordinately long span of life, and may well have credited the philo-Naotarian Aγrēraθ with philo-Naotarish intrigues of which some had in reality been conducted by some philo-Naotarian ancestor of his.

That *aurvasāra-* is an epithet, and not the name, of Vayu's invoker, was suggested by Christensen, *Les Kayanides* 21, 89, to whom the compound meant "chef vaillant". My alternative interpretation "Arva-chieftain" is due to awareness, which I owe to Mr Ran Zadok (who is due to publish the evidence), that Arva ("the brave one(s)") was the name of an Iranian tribe in Achaemenian times.

The above elimination of the contradiction noticed by Wolff, excludes of course that the "valiant chief" or "chief of the Arvas" was Fraṅrasyan himself, as Christensen opined. The Arva-chieftain must have been a leader acting in concert with one other leader (in view of the dual *nā* "both of us"), whom he sufficiently disliked not to mind his being killed by Haosravah. This would suit two brothers at loggerheads over the Naotarish issue, as Aγraēraθa and Fraṅrasyan were. But if the invoker of Vayu in Yt 15.32 is Aγraēraθa, then the man killed by Haosravah in the same verse cannot be Fraṅrasyan, firstly because one reason why Haosravah killed Fraṅrasyan was that the latter had killed Aγraēraθa, and secondly because Haosravah killed Fraṅrasyan "in sight of lake Čaēčasta" (Yt 9.18, 22), and not "in the Pan-Iranian Forest".

It is a moot point to what extent, if at all, the four occurrences in Yt 15.31-2 of the term *razura-* "forest" overlap. I assume that a huge area of birch-forests, known by the collective name of "the Whitish (*spaētini-*) Forests", in the plural, consisted of forests that bore individual names, separated by lanes of wasteland which at certain points narrowed down to as little as, say, 20 yards. The name of one of the forests was "the Whitely (*spaētita-*)". Another was called "the Pan-Iranian (*vispe-arya-*)". We have seen above (p. 52) that the whitishness suggests birch-trees.

As to the name “Pan-Iranian”, this suggests that all the Iranian tribes of the region in which the Whitish Forests lay, used this particular forest as a rallying point. One would expect such a rallying point to have been the site of one or more artefacts that bore an ethno-religious significance in the eyes of each of the Iranian tribes concerned. As we are in a forest, the possibility that the artefacts were carved trees, i.e. totem-poles, deserves consideration. It is a possibility suggested in my opinion by two famous Avestan parallel verses.

The first is Yt 5.50 : (Haosravah asks the following boon of Anāhitā :)
1 a *yaṭ vispannaṃ yuxtannaṃ* | **b** *azəm fratəməm θanjanyeni* | **c** *ana čaratannaṃ*
yaṃ darannaṃ | **d** *nava.frāθwarəsāma razurəm* | **e** *yō mam mairyō nurəm*
manō | **f** *aspaēšu paiti parətata* |.

The second is Yt 19.77 : (The *x^varənah* attended Haosravah) | **A** *yaṭ*
 [*paiti.yataṭ*] | **B** *kava haosrava tam karəsəm* | **C** *upa tam čaratannaṃ yam*
darannaṃ | **D** *nava.frāθwarəsāma razurəm* | **E** *yaṭ dim mairyō nurəm* |
F *aspaēšu paiti parətata* | **G** *vispe bavaṭ aiwi.vanyā* | **H** *ahurō kava*
haosrava | **I** *mairim tuirim franrasyanəm* | **J** *bandayaṭ karəsavazdəm* |.

Before we translate, two considerations must engage us. The first is metrical. *E-F* and *e-f* taken together suggest that there is no difference in meaning between *nurəm manō* and *nurəm* : in *E* we have the neuter of an adjective used adverbially (“wilyly”). In *e* we have the same neuter adjective, this time qualifying the neuter noun *manō* “mind”; the phrase is as adverbial (“wily-mindedly”) as *nurəm* by itself. It follows that, as *nurəm* cannot metrically be assigned to line *F*, the *manō* which in *e* is qualified by *nurəm* cannot, on account of the sense-unit requirement of line *e*, be metrically assigned to line *f*. As to the verse-line division of *b* and *c*, this cannot be other than as printed above. We may therefore be sure that the words in *C* of Yt 19, also form a single verse-line. Consequently, sandwiched between *c* = *C* and *e* = *E*, *d* = *D* = *nava.frāθwarəsāma razurəm* necessarily also forms a single verse-line, and should constitute a sense-unit.

This brings us to the second consideration, the meaning of *d* = *D*. Four MSS offer the accusative *frāθwarəsām* (in various spellings), but the best MSS have a troublesome 1st plural *frāθwarəsāma*. Bartholomae’s trust in the latter has understandably been considered misplaced, especially as it compelled him to invent a new meaning “Fallgrube” for *razurəm*. Lommel’s “Wald mit frischem Durchhau” received the obvious criticism from Herzfeld, *Altpers. Inschr.* 169 sq., whose own “neun-Runden-Wald”, however, is no less objectionable. A noun *frāθwarəsā-* should not mean “a round” but “a carving”. How, though, is one to avoid a 1st plural “we carve”?

The fact that the three words constitute a verse-line supplies the answer. It is common for Younger Avestan verse-lines to consist of an initial epithet and the noun qualified by it, separated from each other by a preposition governing both³⁴. With this fact in mind one realizes that the original reading was most probably *nava.frāθwərəsām ā razurəm* 'up to the forest containing-nine-carvings'. Once a copyist had wrongly joined the preposition *ā* to *frāθwərəsām*, the next copyist was bound to write *frāθwərəsāma*, as the last vowel of Younger Avestan polysyllables is usually short.

We may now translate the Yt 5 verse: "that of all the teams, I may drive along the long course up to the Forest of the Nine Carvings the first (team), (of) the cad who³⁵ competed with me wily-mindedly by-means-of-horses".

"To compete (*lit.* fight) by-means-of (*paiti*, see *Air. Wb.* 825, line 27) horses" must mean, as Herzfeld saw, "to engage in a horse-race". In view of *yuxtanəm* the race was not of individual horses but of horse-teams, possibly harnessed to chariots. It would seem, in view of *nurəm manō*, that the "cad" had manoeuvred himself ahead in the race by some unfair means. As a result of the manoeuvre his team was now — i.e. at the moment when Haosravah was addressing the goddess Anāhitā — galloping as the "first". If Haosravah nevertheless wants to "drive", i.e. be the driver of, that very team right up to the forest, he must catch up with it, jump on it, disable the caddish driver, and take over the reins.

If we now turn to the Yt 19 verse, our first task must be to restore in line *A* the missing verb which governed *təm kərəsəm* (*təm* corrupted to *təm* by the *təm* of line *C*). The best MS, F1, has a gap of two fifths of an inch between *yaṭ* and *kava*, four MSS have *paiti*, two have nothing. Hence the missing verb consisted of the preverb *paiti* and a sequence resembling either *yaṭ* or *kava*. The candidate which at once presents itself is **paiti.yaṭ* "he reached", in view of the Sogdian present stem *ptyt-* discussed by Benveniste in *Mélanges Georg Morgenstierne* 24. Once a copyist had replaced this with *paiti Yataṭ* (*Y* = Avestan initial *y*), the next copyist, seeing *Yaṭ paiti Yataṭ*, would be apt to correct *Yataṭ* to *Yaṭ*. Thereafter it would be natural for the next scribe to think that one of the two *Yaṭ*'s had crept in by mistake; if he accordingly dropped one, we must assume that this was the second. The copyist of F1 (or of its

³⁴ Cf. in Yt 10 : *vīspāhu paiti barəzāhu* 45; *dašinəm upa karanəm* 99; stanza 88 has five such lines, stanza 91 three.

³⁵ Lit. "the first (team), (of him) who (as) a cad...". On the demonstrative antecedent of a relative pronoun being implied see *AHM* 161 n., 227 n., 294.

prototype), faced with *Yaṭ paiti kava*, noticed that *paiti*, too, was nonsensical. He therefore left the gap, meaning to inquire what the missing verb was. He never discovered the answer, and the next copyist, insensitive to the reason for the gap, closed it.

Our second task must be to ascertain why in a verse apparently concerned with a great achievement of Haosravah's, all that he is said to have achieved in respect of Fraŋrasyan's evil brother Kərəsavazdah, is to bind him (line *J*), when we know from the Shāh Nāme that he bound and *killed* him. Even of Fraŋrasyan himself (line *I*) this particular verse does not say that Haosravah killed him, as in our innocence we might expect to find here stated.

Translators assume that *bandayaṭ* governs both *fraŋrasyānəm* and *kərəsavazdəm*. But this is excluded by the fact that the "binding" of Fraŋrasyan was Haoma's, not Haosravah's doing. We must take as verb governing *fraŋrasyānəm* the verbal phrase *bavaṭ aiwi.vanyā*, the object of which is therefore not *vīspe* as again all translators assume. This is in full accord with the fact that also elsewhere *aiwi.vanyah-* precedes its object, except of course if the object is the pronoun *dim*. For *vīspe* I am therefore glad to accept a suggestion which I wrote down in 1954 from a student of mine, David Street of Christ's College, that it is here a locative adverb meaning "everywhere". "Everywhere" includes "here", at the race, but must refer also to previous encounters of Haosravah with Fraŋrasyan, of which the Avesta tells us nothing, but the Shāh Nāme a good deal.

From *vīspe* so understood we may infer that Fraŋrasyan also took part in the race, but that no worse fate befell him on that occasion than that he failed to win. Kərəsavazdah, by contrast, not only failed to win, but was bound by Haosravah, and this was a major achievement on Haosravah's part. Why was it a major achievement? Here the conjecture made above in respect of the Yt 5 verse comes into its own. If the "cad" driving the "first" team was Kərəsavazdah, it *would* be a major achievement to bind him while he stood astride a galloping team or on a chariot he was driving at full speed. Accordingly I assume that *kərəsəm* in line *B*, although its literal meaning is "bandit", was used punningly in this case, to refer to Kərəsavazdah (the *kərəsa-* of whose name means "lean", cf. Bailey, *TPS* 1960, 66). This was already Christensen's assumption, *Les Kayanides* 21.

Accordingly we may translate the Yt 19 verse : "when Kavi Haosravah reached the bandit on the long course up to the Forest of the Nine Carvings, on-the-occasion-when the cad competed with him wilyly by-

means-of-horses; everywhere the lord Kavi Haosravah turned-out-to-be victorious over the caddish Tūryan Fraṅrasyan; he bound Kərəsavazdah”.

The dénouement is in sight. The name “Forest of the Nine Carvings” suggests that nine totem-poles stood in that forest, one for each of the tribes that lived within reach of it. One such tribe was no doubt the Tūras. Another were the Dānus who receive the epithet “Tūryan” in Yt 5.73. A third tribe were the Marathai ruled by Omarges (see above, p. 55, n. 27). A fourth tribe may have been the *Arvas of whom we have met the chieftain (*aurvasāra*). This chieftain, we have seen, wanted a close associate of his to be killed by Haosravah in the Pan-Iranian Forest. If we now ask why that forest was called “Pan-Iranian”, would not the presence in it of the totem-poles of nine Iranian tribes, amply justify such a name?

Above we saw that the position of both friend and foe which the Arva-chieftain occupies in Yt 15, would suit his being *Αγρᾶραθα*, but that his close associate in the episode alluded to could not have been *Αγρᾶραθα*'s brother Fraṅrasyan. However, *Αγρᾶραθα* had another brother, Kərəsavazdah, the very “cad” we have just seen being driven captive at full speed in his own chariot to the Forest of the Nine Totem-poles by Haosravah. What better could Haosravah have done with him on arrival in the Pan-Iranian Forest, than to strike him dead?

Only one link is still missing. What was the business, no doubt shady, in which the Arva-chieftain *Αγρᾶραθα* and his brother Kərəsavazdah were jointly engaged, during the execution of which *Αγρᾶραθα* got cold feet and asked Vayu to help him to escape from Haosravah while Kərəsavazdah might as well perish? We shall not go far wrong in guessing that that business was the wilyly conceived fraud by which Kərəsavazdah's team or chariot got ahead of all the others. We may refine the guess, and thereby improve on the notion we briefly entertained four paragraphs above that Fraṅrasyan himself might have been one of the competitors in the race, by supposing that Kərəsavazdah ran as Fraṅrasyan's champion. This would explain why Haosravah's binding of Kərəsavazdah amounted to his inflicting yet another defeat on Fraṅrasyan himself, as the Yt 19 verse suggests.

But we now realize that at the crucial moment Kərəsavazdah's team or chariot bore not one man but two : Kərəsavazdah and *Αγρᾶραθα*; and that when Haosravah, pursuing them, threw his lasso, he caught only Kərəsavazdah, while *Αγρᾶραθα* jumped off. But the lasso, suggested by the verb *bandayaṭ* “he bound”, was hardly a piece of equipment which Haosravah had with him when he left home on that morning on his



way to the race-course. Neither is *Αγραιθα* likely to have shared *Καρσαβζδαχ*'s team or chariot from the start of the race. It is much more likely that, well before the race was due to start, *Αγραιθα* went ahead on foot along the long course, carrying a long rope. At a point where the two flanking forests drew close, he tied the rope to two trees facing each other across the course. *Χαορβαχ*'s horses, fourteen lengths ahead of *Καρσαβζδαχ*'s, rush at full speed into the rope which snaps as they fall over it. While *Χαορβαχ* tries to raise them, *Καρσαβζδαχ* slows down to enable *Αγραιθα* to climb up to where he himself is standing. In no time the wily brothers disappear ahead in a cloud of dust.

It was then that it occurred to *Χαορβαχ* to pick up the rope, before mounting the one horse of his team whose legs were not broken. The horse was a fast runner, and the rope was long.

APPENDIX III : *Kūh-e Raḥmat* and *Taxt-e Jamshīd* (see p. 53, n. 20)

For previous discussions of *sārūq*, *sārbāg*, *sārbūg* see Henning in *JRAS* 1944, 139 n. 6, and the note which he gave me in *JRAS* 1954, 124. Add Mugh Sogdian *srβγ* and *s'rβwγ*, Livshitz, *Dokumenty s gory Mug*, II 39. Henning expressed only qualified approval of Marquart's proposal (*UGE* 62 n.) to derive *sārūq* from *sārbūg*. This must have been for two reasons. Firstly because one would have to assume that an OIran. **sār(a)bū-* and **sār(a)bā-* coexisted, to the first of which a *ka-*suffix was added in Western Iranian, but to the second a *ga-*suffix in Sogdian not otherwise attested in that language; and secondly because even for this assumption to be tolerable one would have to grant Marquart his emendation of Pahl. *slwb'k* in *GtBd*, TD₁ 170.1 = TD₂ 199.1, to **slbwk*. I prefer to regard *slwb'k* as representing a pronunciation *sarbāg*. That MP *-b-* from OP *-p-* can be written *-b-* in Pahlavi, is shown by *klb'sš* (*GtBd*, TD₁ 36.10 = TD₂ 43.5), on whose *karb-* from *karp-* see Mary Boyce, *BSOAS* XIX, 1957, 315 with n. 1. Accordingly the spelling *slwb'k* need not have *-lwb-* standing for *-ruv-* or *-rv-*, but may be a contamination of the historical **slwp'k* with the phonetic **slb'g*.

As to semantics, although Sogd. *s'rβ'γ* means "tower", Uyghur *sarvay*, borrowed from Sogdian, means "palace". Conversely the meaning of Syr. *srbwg*, corresponding to Greek *λαβύρινθος* in the Hymn of the Soul, was evidently closer to Ar.-Pers. *sārūq* than to Sogd. *s'rβ'γ*. It is clear that the formal contamination mentioned above, p. 53, brought about semantic shifts in either direction. We are therefore free to interpret Pahl. *slwb'k* as meaning either "tower" or "palace", according as we think suits the Bundahishn context better.

One cannot quarrel with West's understanding of the passage, on which Marquart relied (I modernize somewhat) : "The Var built by Yam is in the middle of Pārs, in *slwb'k*; thus they say : the Yam-built (*scil.* Var) is under Mount Jamkān" ³⁶. And in connection with the "middle of Pārs" one can only approve of Herzfeld's linking the name of Mount Jamkān with the popular Persian name of Persepolis, *Taxt-e Jamšīd* "the throne of Yama" (*AMI*, II 64). But Herzfeld missed the essence of the matter because he identified Pahl. *cmk'n* with the name of the town and district *Šimkān*, which is situated to the south-east of Firuzabad. This is alternatively spelt *Šimkān* in Arabic sources, see Paul Schwarz, *Iran im Mittelalter*, II (1910), 71 sq., which spelling is seen even on Herzfeld's own map to which he refers. Evidently *Šim-* is a secondary shortening of *Šīm*, so that Pahl. *Jam-/Yam-* has nothing to do with either. Herzfeld appears to have been misled by Schwarz's throwing together *Šimkān* with *Jamkān*. The latter is the name of the district just east of Shiraz by Lake Māhalū, whose older name was likewise *Jamkān*, see Le Strange, *Lands of the Eastern Caliphate*, 252.

But we shall not seek the Mount Jamkān of the Bundahishn passage east of Shiraz either, now that we have some idea as to what *slwb'k* represents. For this was a **sārupāka* which was situated in the "middle of Pārs". And although Persepolis is not exactly the topographical centre of Pārs, it was the political centre of it, and had boasted among its fabulous buildings the prototype of all the later **sārūg*-s and **sārbāg*-s (Professor Krefter tells me that the Treasury building may actually have had towers). Moreover, the terrace on which the **sāru(pā)ka* had once stood as a mysterious marvel, is today and was in early Islamic times widely known under the name of "Yam's throne", while the Bundahishn states that Yam's Var, which was "in *slwb'k*", was "under Mount Yamkān". I conclude that **Yamakāna* (on the formation of which cf. *GMS*, § 1063-4) was the OP name of the Kūh-e Raḥmat, and that this, and no other, is the reason why the mound at its foot came to be called "Yam's throne".

After the destruction of Persepolis it was no doubt long remembered that the **sāru(pā)ka* had stood on the terrace-fortress. But as the centuries and the wind-swept deposits turned the terrace into a mound looking like a throne for Yam (the Yam, that is, of Mount Yamkān) to sit on, the remembrance would naturally take the form of a belief that the most wonderful and mysterious of all *sārūg*s and *sārbāg*s lay buried *beneath*

³⁶ *Ind. Bd.* 70.10 *ymk'n*; *Gt Bd TD*₁ 170.1 *cmk'n*; *TD*₂ 199.1 has telescoped **kwp y c|ymk'n* to *kwp'n*.

Yam's "throne". Moreover, as by then only tops of columns stuck out of the immense mound, the notion would inevitably take shape that the legendary sārūg, with whose name the term sār̄bāg had by then become synonymous, had occupied the *whole* area of Yam's "throne", and still occupied it, beneath the throne's surface.

It is at this stage, more likely than at any other, that contamination with the myth of Yam's Var occurred, which long before the Sāruka treasury was built had been celebrated in Iranian mythology as an immense *underground* castle. It would then be natural for popular belief to decide that the underground Var was built by Yam "in" (Pahl. *pad*) the prototypal sārūg/sār̄bāg; the Bundahishn phrase amounts to saying that Yam built his Var "in" the throne on which he sat, i.e. beneath the whole of the throne's sitting surface.

Thus, via the notion of "throne", Yam's Var came to be identified with the hugely magnified but invisible prototypal sārūg/sār̄bāg, the magnification of which in popular belief had been the outcome of only tops of columns having remained visible, without the foundations that would have shown that the columns belonged to a multiplicity of separate palaces. This identification of the Var with the sārūg/sār̄bāg, explains why any later-built sārūg of sufficiently imposing proportions could in its turn, some centuries after its erection, be believed to be actually Yam's Var inhabited by humans. This happened to the fortress of Hamadan, see Marquart, *loc. cit.* The identification of the invisible Var with another invisible structure, led to a visible version of the latter being identified with the Var which thus became visible.

It is worth insisting on the essence of the above reconstruction. The name *Taxt-e Jamšid* was not given to the terrace because of its former splendour, but merely because, once the splendour had gone, what was left was a "seat" which had as back a mountain whose name happened to be "the Jamšidian". The name **Yamakāna* was probably not uncommon in early Iranian toponymy. We have seen Lake Jamkān near Shiraz. And in Bashkardia, as my wife and I rode northwards up the Bāvek (No. 28) valley from Sardāšt (see *JRCAS* XLVI, 1959, 216), we were heading towards a mountain (*kam*) called *Jamkan*.

Sir Harold Bailey kindly draws my attention to the Pahlavi word which looks like *slwb'hyk* in *DkM* 639.3. I should interpret this as *slwb'dyyk*, standing for *sarbāyag* (see Henning, *Mitteliranisch* 67). The latter form would stand to *sarbāg* as NP *sārūye* stands to MP **sārūg* (cf. Ar.-Pers. *sārūq*). The Dēnkart allusion (cf. Jackson, *Zoroaster*, 62 sq.; M. Molé, *La Légende de Zoroastre*, 54) seems to mean: "Like the wonderfulness of

Vištāsp's horse's upper-storey apartment in the palace"³⁷. One may assume that the king's favourite horse, crippled, was taken for princely invalid treatment to a luxurious suite in the palace, adjoining the king's own bedroom.

APPENDIX IV : The mortar inscriptions (see p. 54, n. 21)

On the purport of the texts Cameron had essentially the right intuition, see Bowman, 38 sq. The formula *l-yd C N 'bd hwn znh l-yd T 'škr šnt x* means according to him : "into the hand of *C N* made this mortar. To *T* (it is) a gift. Year *x*". But it is the second *l-yd*, not the first, which goes with '*bd*' as a calque on the Iranian idiom (cf. Sogd. *pr dstw wn-*, Martin Schwartz, *STSC*, 64 (28)) for "to hand". The first *l-yd*, also a calque on Persian, corresponds to MP *pd dst* '*y*' = "for", on which see Henning, *BSOAS* XI, 1946, 736 sq. (see also Bailey, *Asia Major* XI, 1965, 110). Hence translate : "for the Commandant (i.e. as a gift to him) *N* handed this mortar to the Treasurer. Tribute (see Bowman, 54) of the year *x*". Inside the Treasury the tributes brought, regardless of whether the bearers were foreign delegates to the king or individual callers on the Commandant, were evidently stored and stacked on shelves or in chests according to a certain order, which now turns out to have been the chronological order of year of receipt. Hence any object that was due to be stored forthwith (as was the inevitable fate of gifts received multiply) was immediately inscribed or labelled with an inscription, for the main purpose of assigning the all-important date to it, and thereby the place and space it was to occupy in an overcrowded treasury where space went at a premium.

It is noteworthy that of the four persons mentioned in the full text, only the subtreasurer is preceded by the preposition *qdm* "before, in the presence of". This fact, together with the occasional statement that the treasurer himself was in some place other than Persepolis, shows that the phrase "handed to the Treasurer" was no more than a bureaucratic fiction. In practice, with the exception of No. 5 (see below) the objects were handed to the only official whose actual presence the text spells out by means of *qdm*, the subtreasurer.

On pestles, because of the limited writing space available, the formula could be severely curtailed. This did not matter as in the Treasury each

³⁷ *cə'ōn ān aβdēh-ē abar-šēhr-ē asp-ē vištāspān andar sarbāyag*. I interpret *abar-šēhr*, spelt *-šytr*, as if it represented an Avestan compound **uparō.šōiθra-*, cf. the Pahlavi spelling *štr* of *šahr* from *xšāθra-*.

pestle stood in its own, fully inscribed mortar. The scribe first wrote on the mortar the text as it was being dictated to him. He then inscribed the pestle on his own, with an eye or his mind on the mortar text, from which he felt free to select and omit, sometimes pretty carelessly. This can be gathered from No. 62, where he omitted *gll* after *'bšwn zy* (the corresponding mortar no doubt had *hwn zy gll*). The omission may be the reason why Bowman conceived his wrong notion of *'škr*, as in general the curtailed versions seem to have helped to mislead him.

Two further misapprehensions which confirmed Bowman in his "ritualistic" outlook, may be mentioned here. One concerns *b-prk rb I* in No. 5, which phrase Bowman translates "[[G]āṭāvahya³⁸ used this mortar of stone) in a great (ceremony of) crushing". But No. 5 stands out for two reasons: one is the unusually large size of the mortar; the other is the absence of any mention of the Treasurer, with consequent lack of the second *l-yd*. The two peculiarities go together. Because of the unusual size of the mortar Zātāvahya was allowed to take the gift right into the Frakana, and personally "hand it" (*l-yd...bd*) to the Commandant, who after inspecting it passed it on to the subtreasurer; when the latter, on returning to his rug by the entrance of the Frakana, dictated the text to his scribe, he justly conflated the fictional "handing" to the never-present Treasurer with the dedicational "for" of the formula, seeing that for once the gift had been really "handed", and to the very Commandant "for" whom it was intended; this is why the Treasurer remained unmentioned. The mortar being unusually large, we may be sure that with it went an unusually large *pestle*. As Aramaic *b-* means not only "in" but also "with", we are forced into the recognition that Aram. *prk* meant "pestle". Cf. the "modifier" *pyrk* (Bowman, 81 with n. 70) of the Aramaically written OP word for "pestle" *'bšwn = abišāwana-*.

The second misapprehension concerns No. 112, where Bowman prefers to read *b]yd I* "in a festival", instead of *z]yr* "small" as he reports having considered. It was the unit stroke which put him off. The stroke shows that No. 112 has one circumstance in common with No. 5 which also has a unit stroke, namely the circumstance that a gift is mentioned additional to the gift which bears the inscription. Hence in No. 112 restore and translate *shr znḥ z[y gll bz]yr I bzy* "this large plate of stone together with a small one, (both being) *bzy*".

As will have been gathered from the last but one paragraph, I visualize the scene as follows. In whichever locale the Commandant gives audi-

³⁸ Actually [*D*]āṭāvahya, see my "Amber" s.v. *Dadumanya*, pp. 238 sq.

ence, be it the Hasta, the Frakana, or the Treasury itself, a subtreasurer instals himself on a rug just inside the entrance, a scribe beside him. As each caller, usually military men, presents himself, he hands his gift for the Commandant to the subtreasurer, obsequiously identifying himself by name, The subtreasurer inspects the gift, hands it to the scribe, and dictates the text, which is stereotyped except for the caller's name and the description of the object. Occasionally, when pressed for time, the subtreasurer omits reference to himself as the least important official of the formula both factually and for dating purposes, as in Nos 8 and 9. The caller is then allowed to proceed, escorted by a page-boy, to the presence of the Commandant, empty-handed, as the Commandant knows that he would not be standing before him, bowing respectfully, had he not handed in a gift at the door. But if the gift is exceptional, as in No. 5, the subtreasurer himself escorts the caller to the Commandant's presence.

APPENDIX V : Haumonoma (see p. 54, n. 22)

It is not suggested that under Darius the Persians knew nothing of the god Hauma. One can only say that in the West there was no generally practised hauma-cult. In time the cult was of course introduced, as the seal on Bowman's plate I shows (see his pp. 6 sq.), but one must assume that this happened in the teeth of considerable opposition. The opposition is easily explained by Zoroaster's loathing of the very name of the analgesic god, which was sure to render the latter unpalatable to Darius, the most Zoroastrian and therefore least Zoroastrian ancient Iranian king after Kavi Vištāspa (cf. *JNES*, 1964, 16-20, and 32, App. I). The few Elamite-written proper names of the time of Darius which appear to be Haumaphoric, may have belonged to individuals of northeast-Iranian, non-Persic extraction. Cf. *Umi* and *Humakurda* in "Amber" and *Takšuma* in "Lion". To these one may add from Babylonian *Um-ma-da-a-tu* (G. Contenau, *Textes Cunéiformes du Louvre*, vol. 13, 193 : 25; period of Darius), given me by Mr Ran Zadok and interpreted by him as **Haumadāta-*, with just reference to Sogd. *γwmd't* (Livshitz, *Dok. s gory Mug*, II, 184, and Henning, *BSOAS* XXVIII, 1965, 252).

On Herodotus's and the calendar's innocence of Hauma see *JNES*, 1964, 26 n. Mary Boyce and Bickerman's aberrant view that the calendar is post-Achaemenian (cf. *BSOAS* XXXIII, 1970, 513 sqq., an article oddly dedicated to the memory of a scholar whose life-work it purports to be scrapping), derives from failure to understand Marquart (*UGE* 200 sq.) and Henning (*BSOAS* XXVIII, 1965, 251), and to appreciate the probative value of the *forms* of the Middle Iranian calendar terms.

APPENDIX VI : Čäič-kenθ (see p. 55, n. 26)

Čäēčasta is the lake in sight of which Haosravah killed Fraņrasyan (Yt 9.18, 22). To explain the formation of this curious name Bartholomae was prepared to resort to a type of intensive reduplication of which there is no other example in Iranian. I should prefer to operate with analogy and assimilation, relating *čäēčasta-*, as from **šaēčasta-*, to Khot. *āṣṣimgyā-* "pool", cf. Bailey, *Prolexis* 20 and 417. As can be seen from Bailey's second entry, the *š* which one expects instead of the *h* of the base *haik-* "to pour" when a preverb ending in *i* or *u* immediately precedes it, was analogically transferred, in Eastern Old Iranian, to preverbal forms with *ā* and *apa*. From Avestan one may add *frašaēkəm*. It would therefore not be surprising if even without preverb, **šaik-* had come to be used as an alternative to *haik-*; Bailey's "*haik-*, *šaik-*" (on his p. 20), though presumably brachylogic, illustrates the naturalness of the transfer. If the original form of the lake's name was **šaičasta-*, one would interpret this as a *ta*-abstract of a present participle **šaičant-*, cf. Ved *secate* and Av. *ašavasta-*. Lake Aral would suit such an interpretation insofar as it was fed by a great "pourer", whose Tūric name may have been **šaiča(t)*. My reason for thus Tūrifying the Yaxartes and Lake Aral, is that a vriddhied form **šaiča-* denoting a district bordering on a river named **šaiča-*, would account for the Sogdian name Čāč of the Tashkent region, on which cf. Livshitz, *Dok. s gory Mug*, II, 81 sq.

APPENDIX VII : Haumahwarga (see p. 56, n. 28)

Abandoning my proposal in *TPS* 1969, 168 sq., I now consider OP *-(h)warga* an IE *gh*-extension of OIran. *hwar-* "to eat, drink" (to Engl. *swill*). See Pokorny, *Indogerm. Wb.* 1045 where only OHG *swelhan*, MLG, MHG *swalch*, and NHG *Schwalch* should remain in the second paragraph, while the other forms, along with the nickname of the Tūras, should be moved to a third paragraph headed "von einer Erweiterung *swelgh-*:". In OP, of course, it was regular for the *h* before *w* not to be heard. But it is possible that the second *h* of *Haumahwarga* was lost already in the language of the neighbours of the Tūras who invented the nickname at a time preceding the change in their own language (if their language at all ever suffered that change) of *hw* to *xw*, by dissimilation from the nickname's initial *h*.

The above explanation differs not only from my own earlier given, but also from that which Bailey has since offered of *-warga*, see the references

given above in n. 1. On the other hand Bailey's division of **sauma-* into *saum-a-* instead of the traditional *sau-ma-*, is attractive to say the least, and lavishly fulfils the hope expressed (with hindsight) by Mr Wasson in his *Rejoinder*, p. 42. It is fair to predict that there will always be supporters of the traditional division *sau-ma-*, since this was the division in which the authors of both the Rig Veda and the Avesta believed. But because these authors, confronted with pressing-stones (not mortars and pestles) between which *hauma* was *hav*-ed and *soma* was *sav*-ed, had no defences against popular etymology, Bailey's ingenious shift of a hyphen will never be forgotten.

APPENDIX VIII : Birch and fly-agaric (see p. 57, n. 29)

There is birch today, according to Mr Wasson's map, from just south of Tashkent, in a broad area (which just includes Samarkand) reaching down to the Upper Oxus. There was birch in the Tashkent area also in antiquity, witness the Whitish and the Whitely Forests of the Avesta. But below the Upper Oxus, down to a line joining Kabul with Gilgit, Mr Wasson's map shows a blank belt which includes Chitral and stretches eastward as far as the Yellow River, inside which belt the birch either does not grow or has not been recorded. If really there is fly-agaric wherever Mr Wasson's map has birch, that blank belt will have to suffice for the area inside which the Indo-Iranian immigrants of Avestaland and Vedaland lingered sufficiently long to be forced to resort to a substitute. Two or three generations later the sight of *Amanita muscaria*, if and when they saw any on proceeding further south into new birchland, would be unlikely to set them thinking. But one must bear in mind that the presence of birch on a map does not necessarily vouchsafe a presence of *Amanita muscaria* as well. The only relevant work whose existence I have been able to ascertain (through the kindness of Professor E.J.H. Corner), *Fungi of West Pakistan* by Sultan Ahmad (Biological Society of Pakistan, Monograph No. 1, Lahore, 1956), does not mention *Amanita muscaria*. I owe to Mr Wasson's kindness a version of the map published in *Soma* as Map A facing p. 154 and again in *JAOS* 91, 1971, 187, in which a number of place-names have been entered for my benefit by his cartographer, including Tashkent, Samarkand, Kabul, Chitral, and Gilgit.

APPENDIX IX : Haumu'l majūs (see p. 58, n. 30)

It is Ibn al-Baiṭar (died 1248 at Damascus) in his *Jāmi' al-Mufridāt* who first states, quoting as authority Ibn Hazārdār al-Harawī, that the

Persian name of *haum al-majūs* is *marāniya*. See the translation and further details in L. Leclerc's "Traité des simples d'Ibn el-Beïthar", *Notices et Extraits des manuscrits...*, XXVI, 1883, 306, No. 2107. I owe this reference to the kindness of Professor C.E. Bosworth, who tells me that the plant is not mentioned in classical native Arabic dictionaries. For Muwaffaq's entry see Abdul-Chalig Achundow, *Die pharmakologischen Grundsätze des Abu Mansur Muwaffak bin Ali Harawi*, pp. 283, 334. It states that the plant "is hot and dry to the second degree, very dessicating, and beneficial in cases of rheumatism and mucous fever; it is a diuretic and promotes menstruation". The *Burhān-i qāṭi'* states s.v. *marāniya* : "In the language of the people of the West³⁹ it is a tree resembling the jasmin. The Arabs call it *haumu'l majūs* because the Magi at the time of *zamzame*, that is, when they are engaged in recitation and worship and eat something, take in hand branches of it. It removes bladderstone(s) and releases urine". There is here confusion with barsman twigs.

APPENDIX X : Sauma's flesh (see p. 58, n. 31)

The most recent discussion of the Vedic term *aṃśu*, *Av.ąsu*, which is used in both scriptures exclusively with reference to haoma/soma, is Brough's in *art. cit.* 336-8. My own inclination is to accept the view that in the Avesta and in the Rig Veda the word means "fibre", namely the fibre of whichever substitute plant the authors of either scripture believed to be haoma/soma. In later Indo-Aryan the word denotes the fibre also of other plants or of fruit. But one needs an explanation as to why the Vedic and Avestan ingestors of substitute sauma had inherited the term as one referring to soma/haoma only. There must have been something special about the "fibre" of the original sauma, which fibre, if sauma were the fly-agaric, might have been regarded as its "flesh".

A Siberian custom repeatedly noticed by travellers, but not among all fly-agaric eaters, is the chopping of the mushroom into pieces. Cf. Wasson, *Soma* 239 ("The fly-agaric are dried, then eaten in large pieces ..."), 254 ("... he swallowed three small pieces (one and one-half mushroom) ..."), 256 ("... a small box ... in which they carry small bits of chopped-up dried fly-agaric..."), 257 (similar), 273 ("When eaten, the mushrooms are torn to small shreds, and these are chewed piece by piece, ..."). These chops of mushroom-flesh bring to mind two facts.

³⁹ "People of the West" usually means North Africa. Via intermediate sources the author of the entry got back his ancestors' own Persian word from the Malagian Ibn al-Baiṭar.

One is that Av. *qsu-*, Ved. *amśu*, differ from Av. *qsa-* "party", Ved. *amśa* "share, portion, part, party", only in stem formation. The other is that the Sogdian and Latin words for "flesh", *yāte* and *caro*, are thought to have originally meant "share, portion", namely the hero's share at a communal meal or after the sacrificial slaughter of an animal, cf. A. Meillet, *BSL* 23, 1922, 107. It would make sense to conjecture that Indo-Iranian **amśu* denoted the flesh of sauma and of it alone, inasmuch as sauma alone in the vegetable world was "sacrificed" and shared out in portions in the manner of an animal, yet its vegetable constitution prevented its flesh from being described by a term denoting the flesh of animals.