Chapter 5. ORIGIN AND SIGNIFICANCE OF THE AGNICAYANA

IN THIS CHAPTER I shall be concerned with what are regarded as indisputable facts on the one hand, and with speculative and sometimes controversial theories on the other. "And perhaps by looking at the two side by side, and rubbing them against each other, we may cause justice to blaze out as from the two kindling sticks" (*ἐκ πυρείων*: Plato, *Republic Δ* 435 a 1–6).

AGNI

In order to understand the Agnicayana it is first of all necessary to gain some insight into Agni.[1] About 200 of the 1,028 hymns of the Ṛgveda are addressed to Agni, who in this respect comes second only to Indra. Agni's name is clearly Indo-European: compare Latin *ignis*, Russian *ogon'*, Lithuanian *ugnis*, etc. Though considered a god, he is never disconnected from his element, fire, until later Hindu mythology, where he appears in more anthropomorphic terms. In the Ṛgveda, Agni is brilliant, golden, has flaming hair and beard, three or seven tongues, his face is light, his eyes shine, he has sharp teeth, he makes a cracking noise, and leaves a black trail behind. He is fond of clarified butter (*ghṛta*, or *ājya* when used as an oblation), but he also eats wood and devours the forest. In fact, he eats everything (*viśva-ad*). He is in particular a destroyer of demons and a slayer of enemies.

Though old, Agni is also ageless and permanently young. Himself fertile, he is the son and manifestation of victorious strength (*sahas*; Gonda 1957). He gives long life. He is born from the kindling blocks (*araṇī*), from heaven (where he is lightning and the sun), and from earth, where he resides in plants and woods. He is also born from water, celestial as well as terrestrial. This at first surprising origin is connected with clouds and with the firewood that comes from plants and trees, themselves born from water. It reflects the image of the sun rising out of the eastern ocean and setting in the western ocean; and it also indicates that Agni, as generative power, is the male principle, which enters the female waters as it enters the earth.

Agni is intimately connected with the home, the clan, the tribe, and with rituals. He is installed in the home as the domestic fire; he guards and lights the home; he is a guest, a friend, chief of the clan or tribe (e.g., of the Aṅgirases or the Bharatas). But he is also the domestic priest, the hotā or adhvaryu priest, and the sacrificer of the gods. He has a triple seat (the three altars).

[1] For this section I have made use of Geldner (1957) 3–34; Gonda (1959) 79–96, (1960) 67–73; Hillebrandt (1927) I. 71–193; Keith (1925) 154–162; Renou and Filliozat (1947) I. 325–326.

He is clever, in fact, wise and omniscient: he is a seer, inspired and inspiring. He takes the offerings to the gods, but he also brings the gods down to earth to partake of them. He is the messenger between gods and men. He is common to all men (*vaiśvānara*). This appellation is traditionally taken to refer to the sun, to the sacrificial fire, and—in later times—to the "fire of digestion" (but see below, pages I:161–162). There are also suggestions that Agni as Jātavedas is identified with the domestic fire, and as Naraśaṃsa or Tanūnapāt, with the southern fire (Findly, unpublished). Agni also has close relations with several other deities. His ritual function becomes increasingly important in the Yajurveda and in the Brāhmanas.

Here is a typical hymn addressed to Agni (Ṛgveda 5.11):

1. Guardian of the people, the vigilant, the clever; Agni was born for new prosperity. Face touched with butter, he shines bright with great sky-touching flame for all the Bharatas.
2. On the triple altar men have kindled Agni, banner of the sacrifice, first domestic priest. Let him ride the chariot with Indra and the gods; let him be seated on the sacred grass for the sacrifice as a skilful hotā.
3. Impure, you are born of your parents; bright, you came up as the joy-bringing seer of Vivasvant. With butter they made you strong, Agni, to whom the offering is made.
4. Agni . . . may he come at once to the sacrifice; Agni, whom men carry in every house; Agni became the messenger, the bringer of offerings; Agni they are choosing, choosing one with a seer's power.
5. For you, Agni, these sweetest words; for you may this prayer be a blessing to the heart. You are the one these songs fill with power, as the great rivers fill the Indus, you are the one they make strong.
6. The Aṅgirases found you in a secret place, Agni, resting in every wood. So are you born, when stirred up with great force; you are the one they call "Son of Strength," O Aṅgiras.

जनस्य गोपा अजनिष्ट जागृवि-
रग्निः सुदक्षः सुविताय नव्यसे ।
घृतप्रतीको बृहता दिविस्पृशा
द्युमद् वि भाति भरतेभ्यः शुचिः ॥
यज्ञस्य केतुं प्रथमं पुरोहित-
मग्निं नरस्त्रिषधस्थे समीधिरे ।
इन्द्रेण देवैः सरथं स बर्हिषि
सीदन्नि होता यजथाय सुक्रतुः ॥
असंमृष्टो जायसे मातरोः शुचि-
र्मन्द्रः कविरुदतिष्ठो विवस्वतः ।
घृतेन त्वावर्धयन्नग्न आहुत
धूमस्ते केतुरभवद् दिवि श्रितः ॥
अग्निर्नो यज्ञमुप वेतु साधुया-
ऽग्निं नरो वि भरन्ते गृहेगृहे ।
अग्निर्दूतो अभवद्धव्यवाहनो-
ऽग्निं वृणाना वृणते कविक्रतुम् ॥
तुभ्येदमग्ने मधुमत्तमं वच-
स्तुभ्यं मनीषा इयमस्तु शं हृदे ।
त्वां गिरः सिन्धुमिवावनीर्महीर्
रा पृणन्ति शवसा वर्धयन्ति च ॥
त्वामग्ने अङ्गिरसो गुहा हितम-
न्वविन्दञ्छिश्रियाणं वनेवने ।
स जायसे मथ्यमानः सहो महत्
त्वामाहुः सहसस्पुत्रमङ्गिरः ॥

It is not possible to understand Agni's role in the Ṛgveda except in relation to other gods, powers, and ideas. Let me merely mention that Agni is close to Indra, though Indra is a warrior god and hero, whereas Agni always stays close to fire. In other respects, Agni complements Soma who is a god, a plant, and the juice extracted from that plant, and is therefore simi-

larly devoid of anthropomorphic traits. Agni and Soma, though both gods, do not merely reside in heaven or in the sky, from where they have to be brought or called down to earth. They also are already here, concrete, visible, amenable to touch and taste, and present in the hands of men. According to Renou, following Bergaigne, the entire Vedic mythology was reshaped, or at any rate reorientated, as a setting for Agni and Soma, and all the other divinities became counterparts or reflections of them (Renou 1953, 14). Agni and Soma, the sacred fire and the sacred drink, are in any case the main deities of the Vedic ritual. While all the deities of the Vedic pantheon are addressed and invoked in the course of ritual performances, and heaven is mentioned as the fruit of rituals, the ritual itself creates a sacred world within the sacrificial enclosure by means of priestly activities that take place here and now. Here lies the most probable explanation for the fact, stressed by Renou (1953, 16), that the most important episodes of Vedic mythology, which reflect cosmogonic events, are not reflected or used in the ritual. All features of Vedic religion find expression in ritual, but generally through the mediation of Agni and Soma.

In later Hinduism, Agni's character changes. Though a few temples have been dedicated to his worship, Agni becomes a minor deity and a mythical figure. His change in position is already indicated in the *Kena Upaniṣad*, where the gods, puzzled by Brahman ("What sort of specter can this be?"), send Agni to find out. On Agni's arrival, Brahman asked him: "Who are you?" Agni replied: "I am Agni." "If that is what you are, what is your power?" "I can burn everything on earth." Then Brahman put a blade of grass before him: "Burn that." Agni came at it with all his force, but he could not burn it.

In the epic and the Purānas, "Agni is an unscrupulous seducer of women and an adulterer, qualities that cause him to be identified with Śiva" (O'Flaherty 1973, 91, in the chapter entitled *Agni, the Erotic Fire*). In later mythology, it is Śiva who gives the gods a blade of grass that they are unable to burn up. Apart from sexual fire, Agni is also the fire of *tapas*, "ascetic heat," another link with Śiva. In a legend that is found in many versions, Agni falls in love with the wives of the seven sages. The story offers also an explanation of Agni's association with the ritual call svāhā (above, page 47). As told in the *Mahābhārata* and summarized by O'Flaherty, the legend deserves to be quoted:

> Once when Agni saw the beautiful wives of the great sages sleeping in their hermitage, he was overcome by desire for them. But he reflected, "It is not proper for me to be full of lust for the chaste wives of the Brahmins, who are not in love with me." Then he entered the household fire so that he could touch them, as it were, with his flames, but after a long time his desire became still greater, and he went into the forest, resolved to abandon his corporeal form.

> Then Svāhā, the daughter of Dakṣa, fell in love with him and watched him for a long time, seeking some weak point, but in vain. When she knew that he had gone into the forest full of desire, the amorous goddess decided to take the forms of the wives of the Seven Sages and to seduce Agni; thus both of them would obtain their desire. Assuming the form of each of the wives in turn, she made love with Agni, but she could not take the form of Arundhatī, the wife of Vasiṣṭha, because Arundhatī had such great powers of chastity. Taking Agni's seed in her hand each time, she reflected, "Anyone who chances to see me in this form in the forest will falsely accuse the sages' wives of committing adultery with Agni," and so to avoid this she took the form of the Gāruḍī bird and left the forest. She threw the seed into a golden lake on the peak of the white mountain guarded by Rudra's hosts. The seed generated a son, Skanda, and some time later the six sages' wives came to Skanda and told him that their husbands, thinking that Skanda had been born of them, had abandoned them. They begged Skanda to let them dwell for ever in heaven, and by his grace they became the constellation of the Kṛttikās, considered the mothers of Skanda. Then Svāhā married Agni (O'Flaherty 1973, 94–5).

Agni's intermediary position is retained in another legend, which sheds light on the psychology of libations. Though Pārvatī is Śiva's spouse, she is unable to bear the fiery energy of Śiva's seed. Agni cooperates by drinking the seed, sprinkling the Ganges with it (or with his own seed), after which Pārvatī drinks it, receives the seed thus suitably diluted, and gives birth to Skanda (O'Flaherty 1973, 103–107; Plate 9; see also O'Flaherty 1975, 104).

The sexual symbolism of fire is also connected with the analogy between the action of the two kindling woods and the sexual act, an association which is found all over the world. Ṛgveda 3.29.1–3 compares *manthana*, "kindling of fire by friction," to procreation: Agni is hidden in the kindling blocks (araṇī) as the seed (*garbha*) is well kept inside pregnant women (*garbhin*). "Put it down into the supinely stretched, you attentive (priest). When impregnated she gave birth to the male (Agni)."

In Bṛhad Āraṇyaka Upaniṣad 6.4.21—a section sometimes left without translation, which incorporates verses from Ṛgveda 10.184 and Atharvaveda 5.25—the association is reversed:

> He spreads her thighs. Let heaven and earth be spread! Uniting with her, placing his mouth upon hers, stroking her three times in the direction in which the hair grows, he says:
>
> Let Viṣṇu prepare the womb,
> Let Tvaṣṭṛ shape the forms,
> Let Prajāpati discharge,

Let Dhātṛ place the seed in you.
Place the seed, Sinīvālī,
Place the seed, goddess with flowing hair!
Let the Aśvin twins place the seed in you,
The two lotus-garlanded gods.
Golden are the kindling woods
Which the Aśvins use to make fire.
We invoke that seed for you
To bring forth in the tenth month.
As earth is pregnant with Agni,
As heaven is expecting Indra,
As wind is the seed of the skies,
I place the seed in you.

In later Hinduism, Agni remains closely connected with the burning of forests. In the Māhābhārata, Kṛṣṇa and Arjuna have a picnic on the banks of the Yamunā river. Their girl friends dance, sing, quarrel, and drink wine. "The epic will present us with few if any moments more suitable for a scene of ease and pleasure" (Hiltebeitel 1976, 209). But now there appears "a strange looking brahmin of gold complexion, yellowish brown beard, radiant and splendid. . . . It is Agni in disguise. Thus begins one of the oddest and most grisly segments of the epic, the burning of the Khāṇḍava forest." In this story, Agni, for reasons that need not detain us, has come to consume the forest with all its creatures. He proceeds to do so. The noise is deafening, the water from Indra's clouds cannot reach the ground because of the heat, and only six people survive. Hiltebeitel ends his study of the mythological significance of this conflagration with the remark "that the story itself can begin to make sense as a story, whether or not it also makes sense as history" (ibid., 224). In what follows I shall be primarily concerned with the opposite: Agni, Soma, Indra, Viṣṇu, and many elements of the Vedic ritual have mythological and spiritual significance, but they also make sense as history and prehistory.

FIRE

IN ORDER TO gain a better understanding of Agni we have to go far beyond the Ṛgveda, in fact, back to the earliest history of man.[1] This early history accounts for many features of Agni and of fire rituals such as Agnihotra, Agniṣṭoma, and Agnicayana.

Though the use of fire has been attributed to a subhuman man-ape (*Australopithecus prometheus*), prevailing scholarly opinion ascribes it only

[1] For this section I have made use of Eiseley (1954); Fewkes (1920); Forbes (1958); Frazer (1958); Gilbert (1947); Harrison (1954); Heizer (1963); Hough (1926, 1928); Lippert (1931); MacLeod (1925); Oakley (1955, 1956, 1958, 1961); Peake (1933); Sauer (1961); and Wilbert (1967).

to men. With the exception of some insects, birds, and the Philippine tarsier (a nocturnal animal that picks up hot embers from campfire sites), most animals have a strong dislike of fire. Man took a long time to overcome his fear of fire, but he eventually tamed and then domesticated it. Four stages can be distinguished in this evolution: (1) a fireless age, evinced by an early man or hominid, Zinjanthropus, of the Olduwan culture in East Africa, some 1,750,000 years ago; (2) an age during which fire was used, i.e., collected, as exemplified by the hearths of Peking man, at least 250,000 years ago; (3) an age during which fire was produced and kindled, as exemplified by the Neanderthal about 50,000 years ago, and by Homo sapiens during the last 20,000 to 15,000 years; (4) an age during which fire was domesticated, roughly overlapping with the Neolithic age, beginning in different regions at different times within the last 10,000 years.

Several conclusions can be drawn from these time scales. For most of his history, man kept out of the way of fire and watched it from a distance. Finally he started to collect it carefully from fires that resulted from natural conflagrations. Sauer believes that the volcanically active lake country in the mountainous interior of East Africa may have provided man with his first fire, though fire could have been obtained from lightning as well as from spontaneous combustion, e.g., through contact between air and certain kinds of coal (such coals were located not far from the Choukoutien area where Peking man was found). Throughout the hundreds of thousands of years during which fire was collected but could not yet be made, man was continuously concerned with its safe and proper preservation, for it was not known how long it would take before fresh fire could be obtained again. It is not farfetched to suppose that man's sense of continuity was inspired by his experience with fire.

Fire was carried over long distances, enabling man to move into the colder regions of northern Europe and Asia, and therefore much ingeniuty must have been expended on the development of reliable methods for its preservation and transportation. And now we observe a remarkable fact. When man at last discovered how to make fire himself, he continued to take extreme precautions to preserve and transport it, and kindled fresh fire only rarely. This tendency can only partly be explained by the fact that it might save fuel and labor, be necessary in a wet climate, keep the carrier somewhat warm, or be useful during hunts when fire must be at hand. The universality of the practice of keeping fire suggests that it is largely a custom that survived from the earlier fire-collecting age. Since ritual activities are activities that are performed even though they are not, or are no longer, necessary or even functional, the custom of preserving and carrying fire became one of the earliest ritual activities that we know of. It led man to think of himself as inseparable from his fire, and vulnerable without it. It is not surprising that fire and life were connected at an early stage, and that the preservation of fire came to be regarded as the preservation of life. Thus arose the idea that a

long-lasting fire gives a long life. Its counterpart is the custom of extinguishing the fires when somebody has died. The fear of losing fire and the custom of preserving it prevail to the present day among a variety of people all over the world. Though most contemporary nomads and seminomads, for example, can produce fire in less than a minute, they take fire with them on most of their trips or hunts that cover long stretches of time.

Hearths developed during the period in which fire was collected. Originally they were shallow depressions lined with stones or clay. Burnt-clay fireplaces have been found in many different regions. Many are circular, possibly because of the placement of fuel around the fire. Hearths were also made from stone or sand. A later invention was to raise the fuel above the firebed, to promote combustion by increasing draught. This could be effected by piling the fuel on a few large stones, a method that eventually developed into stone altars and into the earliest stoves. Even among contemporary tribes there are some who do not use such methods. Among the Warao of former British Guiana, for example, the hearth is simply "a big lump of clay, about one meter in diameter and about 30 cm. thick, which is packed by women onto the manaca beams of the kitchen house" (Wilbert 1967, 9).

The earliest fuel was most probably wood, and the combustible qualities of different kinds of wood were learned early. Other early kinds of fuel are charcoal, dung, bones, and fat. The constant search for fuel, a very time-consuming activity, led to deforestation in many areas (and continues to do so), and has been related to various features of social organization, including slavery. Settlements and villages had to move when the supply of firewood was used up. The New England Indians assumed that the English appeared on their shores because the firewood supply in their own land had been exhausted. Ritual elements entered into the gathering of fuel. Among the northern Paiute, girls undergoing puberty rites had to collect five piles of firewood each day. The Vestal Virgins of Classical Antiquity were given similar tasks.

The transportation of fire over short distances could be effected with the help of a smoldering or flaming brand, or a few hot embers, carried on a flat or hollow stone. For long journeys use had to be made of the smoldering properties of substances when deprived of a free supply of air: e.g., decaying wood, bark, and fungus. Fire was transported (and is still transported by the Tierra del Fuegians) on clay spread on the floor of canoes. With the development of ceramics, clay pots became the preferred containers for the safe transportation of fire over long distances. A vivid description occurs in Xenophon's account of one of the expeditions of Agesilaos, king of Sparta (401–360 B.C.):

> It was then that Agesilaos won credit by a trifling but timely expedient. For since no one among those who carried provisions for the regiment had brought fire, and it was cold, not only because

> they were at a high altitude, but also because there had been rain and hail towards evening—and besides, they had gone up in light clothing suitable to the summer season—and they were shivering and, in the darkness, had no heart for their dinner, Agesilaos sent up not less than ten men carrying fire in earthen pots (*χύτραι*). And when these men had climbed up by one way and another, and many large fires had been made, since there was a great deal of fuel at hand, all the soldiers rubbed oil on themselves and many of them only then began their dinner (*Hellenica* IV.v.4; translation by C. L. Brownson, with one modification).

When fire is transported over long periods, it has to be installed on a temporary hearth for the night, or whenever a stop is made. Special precautions have to be taken that it will not go out. This is referred to, for example, by Homer who describes the falling of night after Odysseus had been washed on the shores of the island of Ogygia:

> Like a man who hides a brand in the black embers on a distant isolated farm, saving the seed of fire so that he will not have to seek elsewhere, so did Odysseus cover himself with leaves (*Odyssey* V. 488–91).

All over the world, when the fire goes out in a village house, it is borrowed from a neighbor, often by carrying a few embers on a potsherd. Later this responsibility was taken on by the state. Charlemagne ordered a fire to be kept burning in each inhabited house. Up to the eighteenth century in Europe, bells were rung when the evening fell. This was called *cur-few* ("cover-fire," French: *couvre-feu*, Italian: *copri-fuoco*). Originally the term curfew referred to a brass implement, like a candle extinguisher but larger, with a handle and perforations, which was put over the coals and embers in the fireplace to keep them alive throughout the night.

The tending of fire required careful planning, and it has been suggested that it developed man's sense of the future and of time in general—a suggestion that seems to underrate man's sensitivity to the passage of day and night and of the seasons. Whereas collecting firewood, and later kindling fire, were by and large male occupations, tending the fire was mostly done by women. Most archaeologists and anthropologists agree that the first homes developed around hearths, and that family life was greatly influenced by the tending of fire. Even at present, when large groups of people live together in communal huts or houses, each family keeps its own fire. The earlier sociologists described this domestic association in colorful terms, as, e.g., Lippert in 1887:

> Tending the fire is a woman's affair. It formed the center of the

> sphere of life which woman dominated. It made the woman's domestic establishment more stable and to some extent more onerous than it had formerly been, but it likewise made it much more permanently attractive to the men than when her intermittent sexual charm had been the sole allurement. Those who had previously sought the company of women only for limited periods were now bound permanently to her hearth, and soon no longer as mere guests but by ties of reciprocal duties and obligations. About the hearth there arose the home in every sense of the word (Lippert 1931, 131).

Several of the important uses of fire are touched upon in Xenophon's account: warmth, cooking, and light are among the most basic. Much older is the use of fire that made cave dwelling possible by keeping dangerous animals out. At a very early period, spear points were hardened in fire. After the Stone Age, the blacksmith became one of the earliest specialists. Fire drives were used to stampede game, and the resulting conflagrations expanded grasslands (e.g., in America). Fires led to new vegetation and a new fauna. Manmade fires for stampeding game may have contributed to the extinction of large animals such as the mammoth. In much later periods, such new pastures were used for grazing herds, and the ashes for fertilizer. Forest clearing by fire is an important step toward agriculture. In all these respects fire is like man: a ruthless force that disturbs and transforms the ecology.

Cooking may have originated relatively late, possibly not long before Neanderthal man. Eiseley has an eloqent, though specifically American, eulogy on meat:

> Meat, more precious than the gold for which men later struggled, supplied the energy that carried man across the world. Had it not been for fire, however, all that enormous source of life would have been denied to him: he would have gone on drinking the blood from small kills, chewing wearily at uncooked bone ends or masticating the crackling bodies of grasshoppers (Eiseley 1954, 55).

Another early use of fire was in connection with the dead: the counterpart, as we saw, of its connection with life. Fires were lit over the bodies of the dead Neanderthal. Excavations in the ancient Pueblo cemeteries still show masses of charcoal and ashes appearing as a layer in the earth above the skeletons. Cremation was common in the Bronze and Iron ages, and remained widespread throughout the world. The exceptions appear very much later, especially in Judaism and Christianity, and culminated in a decree of Charlemagne of 785, which made cremation a capital offense.

The invention of means for making fire remains shrouded in mystery. It may have taken place more than once. Among our contemporaries, only the Andaman islanders are presumably ignorant of the art. Even if this is true, it is more likely that they forgot it than that they had never known it in the past. The two oldest methods for fire making are percussion and friction; it is not known which one came first. Percussion or strike-a-light methods are mainly achieved with the help of pyrites and flint. The oldest use of pyrites has been documented for the Neolithic and Bronze ages, and is referred to in the old Testament. This method continues to be used in various parts of the world, especially in northern Asia. A unique method, confined to southeast Asia, is the production of sparks by striking bamboo with a piece of porcelain. The percussion methods of producing fire have led to at least one imaginative etymology:

> The Eskimo, who still in Greenland use the flint-and-pyrites method of kindling, call fire *ignek*. Among the Western Eskimo, who live in and near Alaska, the word is *knik, knok, knâkhk, k'núk, kanuk* or *ik'nuk*. This represents very clearly the sound of flint striking a lump of pyrites. . . . These words for fire among the Eskimo remind us of the series of Aryan words . . . *agni, ogni, ugnis* and *ignis*. Is it possible that these, too, indicate the sound of the flint and pyrites nodule (Peake 1933, 54–5; quoted approvingly by Oakley 1955, 44).

Even if this improbable etymology is to be taken seriously, the difficulty remains that the Indians did not use the percussion method.

The other ancient method for making fire is through friction of wood. There are several types, including the fire-saw, fire-drill, pump-drill, and fire-plow. The fire-drill is probably the most universal, Polynesia being the only region from which it is absent. In Europe, it probably dates from Neolithic times; in Asia, it is older and not yet obsolete. As in all methods that use friction, there are two pieces of wood, the lower of which rests on the ground, and is called the "hearth." In the fire-drill, a cylindrical or tapered drill held vertically is rotated between the two hands, which, at the same time, press the stick downwards into a shallow pit in the hearth. The fire is caught in a small heap of tinder, consisting, e.g., of fungus or dead leaves. The process takes generally less than a minute. The vertical and horizontal parts are often called active and passive, or male and female, respectively, as we have already seen in the previous section.

A special kind of fire-drill is the thong-drill, in which the vertical cylinder is rotated by a cord passed round in a loop. The thong is pulled in such a way that the rotation changes its orientation repeatedly. The pole is pressed down with the help of another piece of wood, bone, stone or a coconut shell. At present, this method is found among the Eskimos, in northern

Asia, India, and Indonesia. It has led to another colorful, if improbable, etymology:

> It has been suggested that the Greek word for fire, πῦρ, represents the sound of the whirring of the fire-drill (and similarly for English *fire*, German *Feuer*, French *feu*, etc.: Peake 1933, 54).

Whatever the merits of this etymology, it is a fact that English "pure" is related to Greek πῦρ.

The making of fire is often accompanied by rites and songs. In an Irish saga:

> Fionn took from his tunic the two sacred fire-sticks that he carried, and turned them one upon another while Usheen sang the fire-chant:
>
> Golden Bird
> Hawk of the Sun
> Shake loose a feather,
> A feather of flame.
>
> Fire leaped between the sticks, and soon the hearth was blazing. (Young 1929, 133).

It is likely that both methods, percussion and friction, were accidentally discovered when men worked with tools. Sawing and drilling are themselves not attested before the Upper Palaeolithic. Lucretius explained that kindling by friction originated when people observed the branches of a tree lashed against each other by the wind until they caught fire. Though this hypothesis was adopted by several historians, it refers to a rather uncommon event, and the hypothesis that the fire drill was discovered when drills were being used, and mutatis mutandis for the other techniques, is more plausible. Whatever their origin, these practices readily explain the belief that fire resides in wood, just as the actual collection of fire from lightning confirms the belief that fire comes from heaven. Underlying these notions is the general idea that fire is not made, but is rather extracted or released. Lucretius still expresses what must have puzzled man for thousands of years: "If in logs flame lurks hidden, and smoke and ash, it must need be that the logs are composed of things alien in kind, of alien things that rise up out of the logs" (*De Rerum Natura* I.871-872). The Warao Indians similarly deny that fire is made. It existed from time immemorial, and elaborate mythologies explain that some trees contain fire and others do not (Wilbert 1967, 21).

In the domain of religious speculation, the most basic ritual distinction is between two kinds of fire, "perpetual fire" and "new fire." These two kinds

represent the two main periods in the history of fire, the early age of fire collecting and the later age of fire production. As we have seen, the carrying around of fire became a ritual activity as soon as it was no longer necessary, viz., as soon as methods for kindling fire had been discovered. The permanent installation of fire on hearths and altars, in homes and temples, took on similarly ritualistic overtones at the same time and for the same reason. This ritualization also explains why the "perpetual fire" is generally considered more pure than the "new fire," which is nothing but an upstart in the evolution of man. Thus "pure" fire has often to be obtained from a sacred place where it has been kept since time immemorial.

The distinction between different kinds of fire is no longer sensed by modern man. We feel that fire is fire, and if we prefer a hearth fire to central heating, we attribute our preference to such things as the bright motion of flames or the smell of burnt wood. During most of the existence of our species, however, when the day was over and it began to be cold and dark, we were eager to welcome our own fire as a dear friend upon whom we could count. To ancient man, fires had the same individualities we reserve for some people and animals. We do not easily understand ritual fires made on different occasions and obtained from different places, kept separate or mixed carefully. We ourselves do not feel that if we expect our friend, anybody else would do just as well. The ancients and several contemporary tribes treat fires with the same kinds of consideration.

Fire, especially perpetual fire, was jealously guarded and surrounded with extreme concerns for its purity. In the Roman temples of Vesta, fire had to be tended by virgins (if it went out, the Vestal maidens were flogged by the Pontifex Maximus). The Jews prohibited "foreign fire," and Siberian tribes on the Amur river were reported unwilling to part with any of the fire in their huts. When new fire was made, the event was surrounded with awe. Generally, all existing fires had to be put out first. Ritual fire making was sometimes done by means of the strike-and-light method (the altar fires referred to in the Old Testament were installed in this way). The most common method for ritual fire making, however, is the method of kindling by friction. Sir J. G. Frazer has reported it for all of Europe, and W. H. Gilbert for the Americas.

Most myths about fire attribute its origin to heaven, which would seem to support the view that fire was originally obtained from lightning. Many ancient myths relate that fire was brought from heaven by a bird. This bird was often considered a thief, and the legend of a human fire thief is also widespread. Its prototype in Western culture is the myth of Prometheus, who stole fire from heaven and gave it to mankind. Zeus punished him by chaining him to the Caucasus mountains, where an eagle picked out his constantly growing liver. Prometheus is regarded as the inventor of human civilization, the emblem of rebellion against tyranny, and in the final resort the symbol of mankind itself. In Aeschylus' "Prometheus Bound" (436–471, 467–506) Prometheus boasts of his inventions:

> I found men witless and gave them the use of their wits and made them masters of their minds. . . . They did not know of building houses with bricks to face the sun; they did not know how to work in wood. They lived like swarming ants in holes in the ground, in the sunless caves of the earth. . . . It was I who first yoked beasts for them in the yokes and made of those beasts the slaves of trace chain and pack saddle that they might be man's substitute in the hardest tasks; and I harnessed to the carriage, so that they loved the rein, horses, the crowning pride of the rich man's luxury. It was I and none other who discovered ships, the sail-driven wagons that the sea buffets. . . . Beneath the earth, man's hidden blessing, copper, iron, silver, and gold—will anyone claim to have discovered these before I did? No one, I am very sure, who wants to speak truly and to the purpose. One brief word will tell the whole story: all arts that mortals have come from Prometheus (translation David Grene 1959, 327–329).

The Greek name *προμηθεύς* is generally interpreted as "prudent, with foresight," related to the verb *προμηθέομαι*, "foresee." Mayrhofer's Etymological Dictionary relates it to Sanskrit *pra-math* from *math*, "steal, rob, take away." In Ṛgveda 3.38.5, *vastra-mathi* is used in connection with a thief who steals clothes (*vastram*), and in 8.66.8 *urā-mathi* is applied to a wolf who takes away sheep (*urā*). The last term occurs once more, in Vādhula Śrauta Sūtra 28a, where it is applied to the seasons who take away ritual.

Since ancient times the verb *math* has been confounded with *manth*, "stir, churn," to which it may not be etymologically related. This term is used in the Hindu myth of the churning of the world ocean. The churning activities of gods and demons resulted in the salty water yielding milk, butter, wine, poison, and finally Soma, elixir of immortality (see, e.g., Gonda 1954, 128–129; O'Flaherty 1975, 273–280; etc.). The noun *manthana* is used not only to refer to churning, but is also the general term for kindling fire by friction. In a commentary on the *Kātyayāna Śaruta Sūtra*, its derivative *pramanthana* is defined as "the piece of wood that comes forth from the upper kindling block (*uttarāraṇi*), with which the fire is churned." In his book on the descent of fire and the divine beverage (*Die Herabkunft des Feuers und des Göttertranks:* 1859, 15–18), Adalbert Kuhn has connected pramanthana with the name Prometheus, thus regarding Prometheus not only as representing the theft of fire from heaven (which corresponds to the age of collection), but also the kindling of fire by friction (the age of production). Unfortunately, this etymology is hard to maintain. The proper connection is with *mathnāti*, "steals," as Johanna Narten (1960) has shown.

While fire marks the origin of civilization, and ritual fire the beginnings of religion, ritual fire is also connected with athletics. After the battle of Plataea (479 B.C.), when the Greeks defeated the Persians, Apollo ordered the consecration of a fire altar for Zeus, the Deliverer. As Plutarch tells us

in his *Life of Aristides* (ch. xx), all existing fires had been polluted by the Persian barbarians and had therefore to be extinguished. A fresh and pure fire had to be obtained from the sanctuary of Apollo at Delphi, at a distance of more than 60 miles. A young athlete, Euchidas, volunteered to go. He left at dawn, ran, naked, to the altar of Apollo at Delphi, where he "purified himself by sprinkling himself with holy water and crowned himself with laurel." He took the sacred fire on a torch, ran back and arrived at Plataea before sunset. There he handed the sacred fire to his countrymen, collapsed from exhaustion, and died (cf. Séchan 1951, 2–3).

While the torch race (*λαμπαδηδρομία*), often run in relays, became a prominent feature of the Greek games, it also acquired symbolic significance. Plato (*Laws* 776 b) says that parents procreate and feed children, "handing over life like a torch" (*καθάπερ λαμπάδα τὸν βίον παραδιδόντας*). In ancient India, similar practice must be assumed to account for similar metaphors. At the core of Buddhism is the doctrine that there is rebirth and transmigration without anything transmigrating. In the second century B.C., the Greek king Menander (Pāli: Milinda) carried on the Greek dominion in Bactria founded by Alexander the Great. Puzzled by the Buddhist doctrine, he posed the question to the sage-monk Nāgasena, and asked him to give some illustrations. Nāgasena began his answer by saying that rebirth takes place without anything transmigrating in exactly the same way in which a flame is lit from another flame without any fire being transmitted (Milindapañha 71.16).

As we shall see in the section on Soma (page 111), the Vedic Indians believed that fire was brought from heaven by a bird of prey (*śyena*), who also brought Soma, the elixir of immortality, down to earth. Connections between fire, a bird, and immortality are found all over the world, but they take very different forms. The Egyptian sun bird *benu* and the phoenix of western classical antiquity, subsequently adopted in Christianity, represent a distinct type, in which death and rebirth are at the core of the myth. Both birds are connected with life after death. In classical sources, emphasis was laid on the spontaneous generation of the bird. In Christianity, the phoenix became a symbol of resurrection. The connection with fire is not known from Egypt, but developed in the west. According to this tradition, the phoenix bird, knowing that the time of its death is approaching, burns together with its nest, ignited by the heat of the sun. From its ashes a new phoenix arises (Van den Broek 1972, chapter VI).

The Chinese *feng* 鳳 or *feng huang* 鳳凰 has been called a phoenix, but has almost nothing in common with its western counterpart. It does not cremate itself, and no new bird arises out of the ashes of the old. In very early times, *feng* was a wind bird, and its name is related to the Chinese word for "wind," *feng* 風. Later it became a bird of good omen, subsequently identified with the symbolic "red bird" of the south. Finally, it turned into the fantastic bird of art and decoration (Edward Schafer, personal communi-

cation; cf. Sowerby 1940, 21, 101).

None of these birds seems closely connected with the Sanskrit śyena, Avestan *saēna*, or other Indo-European relatives. It is possible, however, that there are historical connections with the shamanistic cult of the eagle, which is quite common in central and northern Asia. Among several Siberian peoples, the eagle is regarded as the master of fire, who gave fire to man. The eagle is also the founder of civilization (*er ist vorherrschend Kulturbringer*: Findeisen 1956, 79). The eagle is a totemistic bird, from which several tribes derive their origin (e.g., the Yakuts). It is regarded as the first shaman by the Buriats and the Yenisei Ostyaks. Only a person who is a descendant of an eagle may perform certain fire rituals. Similar ideas are found in the Americas, e.g., in Peru (Sternberg 1930, 192, 132–133, 142–143; Findeisen 1956, 74–80; Anisimov 1963, 191).

As totem, the eagle is inviolable. To kill an eagle is a capital sin (Sternberg 1930, 132). This is reminiscent of the vow (*vrata*) that has to be observed by any performer of the Agnicayana, Taittirīya Saṃhitā 5.7.6.1 states: "If the piler of the fire (*agnicit*) were to eat of a bird, he would be eating fire and go to ruin. He should observe this vow for a year, for no vow goes beyond a year." Śatapatha Brāhmaṇa 10.1.4.13 is more lenient:

> They say: "He who has built the fire altar must not eat of any bird, for he who builds the altar of fire assumes a bird's form. He might become ill. Therefore the agnicit should not eat of any bird." Nevertheless, one who knows this may safely eat. For he who builds an altar assumes Agni's form, and all food here belongs to Agni. One who knows this will know that all food belongs to him.

Some mention should be made of early imitations of birds, which have a technical as well as a religious aspect. I am not referring to aeroplanes, but to the art of kite flying. It has often been stated that the kite was invented by the Greek philosopher Archytas of Tarentum, but this is an old error (see Chadwick 1931, 487, note 4). Kites were probably invented in China. Though there may be earlier references there, the first unambiguous mention of kite flying is of the second century B.C. In China, kites were used for signalling and to test the behavior of winds (Needham 1959 III, 477; IV. 2, 576–579). At an early period, kite flying became a sport. Often tabooed to women, it continues to be practised not only by children but also by adults, e.g., in Central Asia: "The shopkeepers of Yarkand are said to be fond of flying kites as they sit outside their shops" (Chadwick 1931, 483, after E. Breck). Kite flying is common in China, Korea, Japan, Southeast Asia, Melanesia, and Polynesia. In Polynesia, the religious functions of the kite are combined with its uses in meteorology and navigation. The kite represents the soul of the kite flier. Kites were sent to heaven as a religious rite, to the accompaniment of kite songs. In New Zealand, members of the

important Tawhaki family are described as ascending heaven on kites. Rehua, god of the highest heaven, is referred to as a sacred bird and ancestor of the kite. Throughout the Pacific, birds are regarded as means of communication between gods and men. Kite flying is a form of religion that enables man to gain access to heaven (Chadwick 1931).

In India, kite flying is still practised by people of all ages. The season begins in the latter half of November and continues up to the middle of January. Many kinds of kites are mentioned by Mujumdar (1950, 71–77).

Against such a varied, worldwide background, it is not surprising that the Agnicayana altar was constructed in the shape of a bird of prey (śyena). Yet, as we shall see (page 124), the altar represents a cosmic man, and might therefore be expected to be built in the shape of a man. There are traces of this in descriptions of the altar that mix features of a bird with those of a man (cf. Śatapatha Brāhmaṇa 10.4.5.2; Van Buitenen 1962, 30; Dumont 1951).

The dictionaries give a variety of translations for Sanskrit śyena and the related Avestan saēna. Mayrhofer, for example, lists: "bird of prey, eagle, falcon, hawk." In most of this book I have retained the translation "eagle" or "bird of prey." It seems likely that the Vedic Indians had a more specific bird in mind. The one scholar who has given serious attention to the identification of śyena is Schneider (1971, 31–37). Basing himself upon the Ṛgveda, especially 4.26–27 (see below pages 111–113), he feels that the bird was characterized in the first place by speed, because it came toward the Soma in a rapid descent. It also knew fear (4.26.5; cf. 1.32.14), and it probably drank the blood of its prey, since it nibbled at the Soma stalk and drank some of its juice. In the Ṛgveda, moreover, it is never called strong or large, and so could not have been either of these ("Sicher kann man daraus den Schluss ex silentio ziehen": page 33). Schneider has concluded from these observations that śyena could not have been a "miraculous bird" (Wundervogel) or eagle, but was probably a falcon. He ends his analysis with a reference to falconry, which was very probably known in India at a very early period. The expressions *iṣitaḥ* "discharged" (Ṛgveda 9.77.2 and 10.11.4) and *asarji* "shot forth" (4.26.5) are reminiscent of a falcon let loose.

I think these observations are excellent, yet the conclusion need not follow, and other evidence points in another direction. Why not make the assumption that the shape of the bird-shaped altar of the Agnicayana preserves some features of the shape of the original bird? It at least provides a picture, which is more than can be said of any text. Looked upon as a schematized representation of a real bird, the diagram of the altar (Figure 7, page 66) has three characteristics: the tail is small, the wings are large, and the wings are as broad at the tip as they are at the base.

Now let us take a look at birds of prey, or *Falconiformes* (if we exclude owls). These include buzzards, eagles, falcons, harriers, hawks, and vultures (Lloyd 1971, 4). Confining attention to wings and tails, we find that eagles and falcons have long tails and either narrow wings or tapered, narrow-tip-

ped wings. Long, narrow-tipped wings enable them to fly very quickly in pursuit of prey; long tails enable them to turn quickly. The only birds characterized as a group by short tails and long, broad, untapered wings are vultures. They cannot turn quickly, but "soar easily and then glide for great distances with very little flapping" (Lloyd, 23). The reason is that they may fly more than two hundred miles a day in search of dead animals, and they need not pursue fast-moving prey. They are equipped for long-distance flights, not for short-distance pursuits.

In Ṛgveda 4.26–27, the Soma had to be captured quickly, but, being a plant, it did not have to be followed in rapid pursuit. A vulture is eminently equipped for such a task. It has the properties that Schneider has enumerated, which are in fact common among *Falconiformes*: speed, and the capacity for fear and for drinking the blood of its prey. Finally, some are large and some are small. But unlike Schneider, I don't think the *argumentum ex silentio* proves anything. Moreover, the Iranian saēna was definitely large (Martin Schwartz, personal communication).

To narrow down the possibilities, we have to take geography into account. The Department of Ornithology at Berkeley has provided me with a list of fifty-five species of *Falconiformes*, now living in or near northwest India or Central Asia. According to Mercedes S. Foster and Steve Bailey, members of the staff of the Berkeley Museum of Vertebrate Zoology, it is impossible to make an accurate determination of the species involved from the diagram of the Agnicayana altar of Figure 7. There are six species, however, that they consider the most likely candidates:

Gyps bengalensis	Indian White-backed Vulture
Gyps indicus	Indian Griffon
Gyps himalayensis	Himalayan Griffon
Gyps fulvus	Griffon Vulture
Sarcogyps calvus	Indian Black Vulture
Aegypius monachus	European Black Vulture.

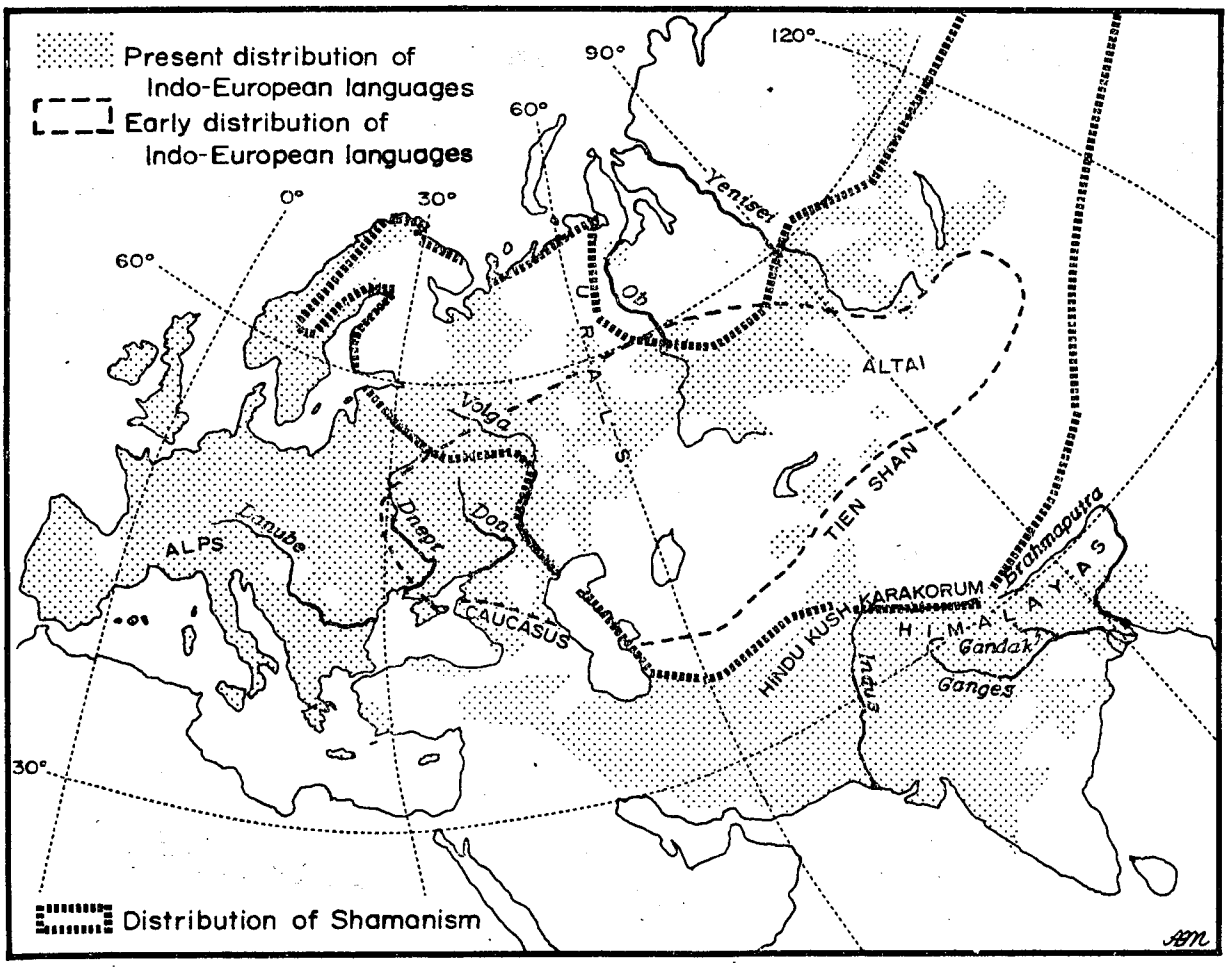
Though we are dealing only with probabilities, it is possible to reduce this list further. The śyena brought fire and Soma down from heaven, and should therefore be expected to move long distances and live at high altitudes. These requirements are met by griffons, which are "large vultures that live in colonies in mountainous country." Among the four griffons on the above list, the *fulvus* occurs from Spain to northern India, while *bengalensis* and *indicus* live mostly in India, Burma, and Malaysia. The visually outstanding species is the *himalayensis*. It is native to Asia and is the second-largest bird of prey in the Old World. Like other large vultures, its life span may extend to sixty years. These birds outdo human nomads by far in the distances over which they migrate. Many birds of prey migrate yearly from northern Asia to India and Southeast Asia. They cross the Himalayas in autumn and return in spring (Lloyd 1971, 8, 18, 87–88).

The Himalayan Griffon is "a huge brownish-white bird with a wing span of about nine feet" (Lloyd 1971, 22, 87). To see such a bird fly across Himalayan skies must be an awe-inspiring sight. It is likely that the Harappans saw it, and possible that their sign  , with its broad wings and short tail, refers to it (cf. Parpola, c.s., 1970, 29). It is even more likely that the Vedic nomads saw it, when they crossed the western Himalayas. Until better evidence is forthcoming, I would be inclined to believe that the Vedic śyena was originally *Gyps himalayensis.*

VEDIC NOMADS

THE DISCOVERY THAT many of the languages of India (including Vedic and Sanskrit) are related to most of the languages of Europe (including Greek, Latin and its Romance derivatives, Germanic, and Slavic) has led to the establishment of a family of languages, the Indo-European family. The languages of this group have become more widely diffused than those of any other linguistic family. Before 2,000 B.C., Indo-European languages were spoken by seminomadic people who wandered the steppes that stretch from Poland to Central Asia. These nomads had tamed the horse, which they harnessed to light chariots with spoked wheels. Around the end of the third millenium, they began to move west, south, and east, and entered parts of Asia and Europe closer to the river deltas and oceans. Some of these areas, in particular in the Middle East, were inhabited by sedentary people who had evolved a much more advanced level of civilization. The Indo-European languages were established and came to flourish in Europe, Iran, and India. An Indo-European language, Tocharian, was preserved in Chinese Turkestan until the eighth century A.D., when it was finally replaced by Turkic languages. (See map A.)

I shall use the term "Vedic nomads" to refer to people who spoke an Indo-European language, who came from Inner Asia, and who entered the Indian subcontinent around 1,500 B.C. We have no unambiguous material evidence that such an invasion actually occurred, and there may have been more than one wave. But the Vedic language of the Ṛgveda, which was composed around 1,200 B.C. in the northwest of the Indian subcontinent (possibly as far west as what is now Afghanistan), is clearly Indo-European, and this fact by itself constitutes sufficient proof for the view that such a migration took place. Though Vedic is related to the other languages of the Indo-European family, it is sepecially close to Avestan, which was spoken in Eastern Iran during the period between 1,000 and 500 B.C., and to Old Persian, the language of the cuneiform inscriptions of the Achaemenid kings (ca. 500–330 B.C.). Apart from these linguistic facts, we know little about the anthropology and identity of the people who spoke Vedic. We don't know exactly where they came from, nor whether they came in loosely related



Map A

groups during a relatively short period, or separately and repeatedly during different periods. Correlations between linguistic and archaeological data are only beginning to be traced (see Parpola and Thapar in the beginning sections of Part III).

The culture of the Ṛgveda shares features with other Indo-European cultures, but it also possesses features in common only with the Iranians, and other features not found elsewhere in the Indo-European family. It has been customary to refer to these last features as "Indian," and there is no harm in doing so, provided this does not evoke the wrong associations (as it often does). The vision of tall, blond, blue-eyed Aryans, importing their culture into a backward area inhabited by dark and snub-nosed natives, comforting as it has been to some Western scholars, has been largely reversed. We now know, especially after the excavation of Harappā, Mohenjo-daro, and numerous other sites, that long before 1,500 B.C. a highly evolved city culture flourished in the northwestern part of the subcontinent, as it did in

the Middle East. Although the larger cities and towns of this Indus civilization may have disappeared before the advent of the Vedic nomads—probably as a result of natural calamities—it is therefore more accurate to say that the Indo-Europeans, though they imported their language, met with remnants of a civilization in many respects superior to their own.

That the semibarbaric nomads imported their language is not surprising, but the impact of this importation is nothing if not astounding. While Vedic was spoken only in the northwest for a few centuries, Sanskrit was adopted all over the subcontinent. Codified by the grammarian Pāṇini around 500 B.C., it established itself as the language of civilization for the next 2,500 years. The languages that subsequently arose in northern India (Middle-Indic Prakrits as well as modern Hindi, Panjabi, Gujarati, Marathi, Bengali, Oriya, etc.) are all Indo-European. It is not easy to explain this extraordinary development. No doubt, the nomadic invaders were good fighters. The strength of the Indus civilization was already broken, and "the peaceful and conservative cities of the Indus Valley could neither withstand nor absorb the invaders" (Basham 1954, 29). It is equally relevant to take into account that the Vedic nomads, in spite of the relatively low level of their material culture, possessed very advanced poetic techniques and had an extraordinary devotion to language and the power of language, which they called bráhman. Their superiority was accepted at least in part because it was believed that they were influential with the gods, which in turn was attributed to the power of their Vedic mantras. This belief in language is found among other people who speak an Indo-European language. In fact, all the higher civilizations of mankind are characterized by an exaggerated faith in the power of language. In Vedic culture, there seems to have been no limit to this faith. It is possible that the cult of language comes from Central Asia. The magical power of songs is still very pronounced in Shamanism (see, e.g., Eliade 1964, 201). Whatever its origin, subsequent developments strengthened the belief in the supernatural qualities of Vedic and Sanskrit and in their superiority over other languages. This conviction is retained in Hinduism, which is pervaded by the belief in the efficacy of mantras, often allegedly Vedic. It also played a role in the spread of Hinduism throughout the Indian subcontinent. This has been noted not only by scholars, who are already professionally obsessed by language, but also by British civil servants. Logan, Collector of Malabar, for example, speculated in his *Malabar Manual* of 1887 about the advent of the Nambudiri brahmins in the following terms:

> They posed before the rude chieftains with whom they came in contact as "God-compellers." Their sonorous mantrams and spells could compel the gods to take the wandering ghosts of even the worst of men directly to heaven (quoted in Padmanabha Menon 1924, I, 51–52).

5. Origin and Significance

The close connections between the Vedic Indians and their contemporaries in Iran provides justification for setting up an Indo-Iranian subgroup within Indo-European. The existence of this group is primarily demonstrated by close linguistic similarities (in phonology, syntax, vocabulary, and style) between Vedic, Sanskrit, Avestan, Old Persian, and several later languages, without there being counterparts in other Indo-European languages. The existence of Indo-Iranian also rests on shared features of religion and civilization. In the area of vocabulary, we have, for example, Avestan *airya*, *haoma*, and *zaota* corresponding to Vedic *ārya*, *soma*, and *hotā*, respectively. Going beyond the correspondence of words, we find the Iranians refer to themselves as airya, "of noble birth" (from which "Iran" is derived), in the same manner in which the Vedic Indians refer to themselves as ārya (whence "Aryan"). The haoma belief and cult in the Avesta are in most respects similar to the corresponding Vedic concepts and ritual. The zaota is the chief priest at the haoma ritual. Though the hotā, in the classical śrauta ritual, is almost entirely concerned with recitation, and not with the performance of ritual acts, which is the province of the adhvaryu, this may have been different originally. The term hotā is derived from a verb *hu-*, "to make an oblation," not from *hū-*, "to invoke" (Renou 1947, 8–9; 1958, 59–60; cf. Minard 1949, 123, n. 346a). The same is true of zaota. It is possible that, at an early stage of development of the fire ritual, the hotā made the oblation into the fire that Agni transmitted to the gods. At a later stage of development, Agni became the messenger who brought the gods down to earth. The hotā therefore acted as invoker (Schneider 1971, 73).

The Iranian fire ritual is in many respects similar to the Vedic. Fires are installed on three altars. The domestic altar is circular, the offering altar, square. On the Iranian side there seems to be better evidence than in the Vedas for Dumézil's view that the three fires are connected with the three main subdivisions of society: farmers being represented by the domestic fire, priests by the offering fire, and soldiers by the third, which wards off evil influences. We are not surprised at this statement, for Dumézil often overshoots the mark (for a recent critique, see Gonda 1974). In Iran, fires were also transported. For example, in front of the army of the last Darius, in 331 B.C., embers were carried from a *Vərəthragna* fire (Boyce 1975, 459; Vərəthragna corresponds to Vedic *vṛtrahan*, "slayer of the demon Vṛtra," i.e., Indra).

Some of these structures are not only Indo-Iranian, but Indo-European. The Romans had a circular domestic altar for Vesta (*aedes rotunda*), and also *templa quadrata*. In Latin, *focus* or *foculus* (unlike *āra*) refers to an optionally movable fireplace. In Umbrian, the word for "movable fireplace" is *ahti* (Nagy 1974, 89–92).

In Iran, many features of the fire cult survived in later times, which is largely due to the fact that Zarathustra (around 600 B.C.?) retained and developed them. This contrasts to some extent with the Indian development,

for remnants of the Vedic fire cult are confined to the homes of Brahmin āhitāgnis in relative isolation from the development of Hinduism. Even outside the brahminical tradition, however, oblations into the fire (*homa*) have remained common in India. In Iran there has been a tendency to identify each pre-Islamic temple as a fire temple. In point of fact, fire temples do not seem to be earlier than the fourth century B.C., and may have been built as a reaction against the temple worship of other deities represented by icons (Boyce 1975). Only much later, in the Sassanid period (226–650 A.D.), did fire temples become the main religious centers. They were square, with a dome-shaped roof, and made of stone. There were also movable altars. The king took his personal fire with him on such an altar when he went on a campaign (Widengren 1965, 273).

Throughout the development of the fire cult in Iran, fire was referred to as *ātur*. The āgnīdhra, kindling priest of the Vedic ritual, has for his Iranian counterpart the *ātravaxš* priest. The term agni may be present in Old Iranian in the personal name Ag-nu-par-nu (found in a letter addressed to Assurbanipal between 650 and 640 B.C.), and once again in Avestan *dāštayni*, of uncertain meaning, and therefore uncertain as a testimony (Wikander 1946, 35, 102–103).

The Iranian and Vedic fire rituals reflect the nomadic character of the Indo-Iranians. In contrast with the temples of later Hinduism and of the earlier Indus civilization (Wheeler 1968, 52–53; cf. Parpola, c.s., 1969, 5), there are no temples in the Vedic ritual. Vedic rites are performed inside temporary structures, constructed and consecrated at the beginning of the ritual, and burnt at its completion. Ritual implements are made of perishable materials such as wood and clay. These implements are also afterwards burnt, or else submerged in water. Caland observed that "the ritual was often metaphorically assimilated to a march, a voyage, an expedition, and involved in fact a large number of procession-like movements" (Caland and Henry 1906, 450; quoted by Wasson 1972, 14, who compares it to a "trip"). The name of the chief priest of the ritual, the adhvaryu, is also reminiscent of this nomadic background: it is related to *adhvan*, "way, road, course." The related word *adhvara*, "ritual," may originally have meant "ceremonial trip" (Mayrhofer: *feierlicher Gang*). These survivals of the nomadic way in India parallel the way of Taoism in China, which similarly incorporates remnants of the nomadic culture of Inner Asia (cf. Staal 1975, 204).

Like the nomadic invaders of Europe and the Near East, the Vedic nomads imported their horses and chariots as well as tools and weapons that were superior to those used in the sedentary civilizations they encountered. Whether they carried fire across the mountains of the Hindukush and the Western Himalayas is an open question to which archaeology has yet to provide an answer. Basham (1954, 27) has observed that:

> At Chanhu Daro, on the lower Indus, the Harappā people were

replaced by squatters, living in small huts with fireplaces, an innovation which suggests that they came from a colder climate.

While the indebtedness of the Vedic nomads to the culture of their Indo-European ancestors is well-known, their links with cultural trends in Central Asia remain relatively unexplored. In the area of language there is evidence of contact between Indo-European and Finno-Ugrian, but its interpretation is controversial. In later times, Finno-Ugrian has borrowed a considerable number of words from Indo-Iranian (Burrow 1973, 24). As a glance at Map A shows, the present distribution of Shamanism (after Findeisen 1957) covers much of the same area where once Indo-European languages were spoken. It is not surprising to find links between Shamanism and the culture of the Vedic nomads. In the area of religion, several features of Vedic ritual have been characterized as shamanistic. Eliade (1964, 403ff.) has pointed out similarities in what he has called "ascensional rites." To reach heaven and the gods, the yajamāna climbs a ladder set against the yūpa, or sacrificial pole cut from a tree. When he reaches the top of the ladder, he spreads his arms as a bird spreads its wings. The Siberian shamans also climb trees and dispatch sacrifices by putting a tree or pole through the spoke hole of their huts. They are also compared to birds, in particular eagles. In either case, the pole represents the *axis mundi*. Though Eliade regards these rites as characteristic of Vedic ritual in general, they occur only in the Vājapeya ritual (and can be seen on van Buitenen's film of its 1955 performance), which does not, however, diminish the significance of the parellelism. The ecstatic flight occurs, furthermore, in Ṛgveda 10.136 (see Staal 1975, 197–198, 204–208), which has other shamanistic overtones.

Apart from the importance of the bird of prey for shamanistic and Vedic culture, the shamans also performed a horse sacrifice that may be related to the Aśvamedha or Vedic horse sacrifice (Eliade 1964, 199). Finally, there is an analogy in the function of some shamans and of one of the Vedic priests. The Ugrian shaman takes part in sacrifices only indirectly: "He confines himself to praying and guiding the victims' souls to the respective divinities. . . . Even when he takes part in sacrifices, the shaman plays more of a 'spiritual' role" (Eliade 183). This is reminiscent, as Eliade has observed, of the role of the Brahman priest in Vedic rituals (see above, page 46).

The similarities between Shamanism and Buddhism are more striking. I shall revert to them in the next section. The word shaman itself has been derived from a Prakrit derivative of Sanskrit *śramaṇa*, a term that denotes (non-Vedic) ascetics and monks, in particular Buddhist monks. This etymology remains controversial. There are also similarities between Shamanism and Yoga (see, e.g., Ruben 1940; cf. also Nölle 1953). It seems likely that many of these similarities can be explained in historical terms. However, for the time being, details of historical connections are lacking because most of the data on Shamanism are relatively recent.

Let us return to the Vedic nomads and their adventures in South Asia. On Indian soil, the invaders continued their course in an eastern direction. During the later Vedic period, the predominant migration is from west to east: "From the west people go to the east, conquering lands" (*Kāṭhaka Saṃhitā* 26.2, quoted in Rau 1957, 13). This eastward move remained confined to the plains north of the Ganges, which was crossed only much later. To the present day, only the left bank of the Ganges is considered pure and holy. Every visitor to Varanasi (Banaras) will recall that across from the city, on the opposite shore of the river, there is an uninhabited wasteland. Not every tourist knows that, in the early morning, the orthodox cross the river in small boats to empty their bowels on this inauspicious side. Thus a gigantic public toilet commemorates the non-Aryanized lands of the past.

That the southward movement started only much later is consistent with the general inauspiciousness of the south, referred to in many Vedic sources. The south is the region of death and of the ancestors. The head of a corpse should generally point to the south (Caland 1896, 16, 39). Nirṛti, Goddess of Disaster, is propitiated to the south of the Old Hall (below, page 343). The *havis* offering may not be moved to the south (Taittirīya Brāhmaṇa 2.1.3.4, quoted in Mylius 1972, 370). This orientation remains a characteristic of Hinduism and survives to the present day. Śiva as the divine preceptor (*dakṣiṇāmūrti*) faces south because the traditional teachings come from the north (Staal 1975, 145). In some nonbrahmin temples in south India, vegetarian deities and rites, which come from the north, are on the northern side, while nonvegetarian deities and rites are on the southern side (Dumont 1953, 264).

Moving to the east and then to the south is also moving with the sun. This is widely believed to lead to victory and all things auspicious. It is reflected in the clockwise circumambulation (*pradakṣiṇa*) of a sacred area or object, which is kept to the right (*dakṣiṇa*) side of the wanderer. The term pradakṣiṇa occurs for the first time in the sūtra literature, and remains the predominant auspicious movement of Indian religion, Hindu, Buddhist, and Jaina (in contradistinction to the Tibetan Bön religion, where the auspicious circumambulation is counterclockwise). This clockwise movement has spread all over Asia and is also found elsewhere (see, e.g., Seidenberg forthcoming).

Ideally, man faces east. Hence Sanskrit dakṣiṇa, "south," means also "right"; *uttara*, "north," means also "left"; and *pratyañc*, "west," means also "behind." Ruben (1939, 288) has drawn attention to parallels from Central Asia. According to Thomsen (1924, 134), among the Turkic peoples, the principal direction is the east. Hence east is called "in front"; west, "behind"; south, "right"; and north, "left." This testimony from Turkic inscriptions in stone, found in Mongolia, is relatively late (8th century A.D.), and it is possible that it is a borrowing from the Indo-Iranians, like other vo-

cabulary borrowings (see e.g., Burrow 1973, 24). Whether its origin is Turkic or Indo-Iranian, the Vedic nomads must have found that this orientation was in accordance with the direction of their migrations in the Indian subcontinent.

The eastward marches of the Vedic nomads were accompanied by battles, cattle raids, and the burning of forests. According to Kosambi, it would not have been possible to clear the land near the Ganges by burning: the riparian jungle was still too thick for agrarian settlement. "The main Aryan settlements therefore extended eastwards in a chain, a thin line along the Himalayan foothills to southern Nepal." The original expansion was limited to the foothills west of the Gandak river (Kosambi 1972, 90).

In the northern plain of the Ganges, the rivers flow roughly from north to south. This interrupted the burning of the forests by Agni. These events are referred to in a famous passage of the Śatapatha Brāhmaṇa (1.4.1.14–17), in which the Sadānīrā is probably the same as the modern river Gandak:

> 14. Videgha Māthava was at that time on the river Sarasvatī. From there, he (Agni) went burning along this land, towards the east. Gotama Rāhūgaṇa and Videgha Māthava followed him as he burned. He scorched all these rivers. The Sadānīrā, which flows from the northern mountain, that one he never burned. Of old, Brahmins never crossed it, thinking, "It was not burned by Agni Vaiśvānara."
> 15. But now, there are many Brahmins to the east of it. Then the (land) was wild, and swampy, untasted by Agni Vaiśvānara.
> 16. Now, it is cultivated, for Brahmins made Agni taste it through the rituals. But even in late summer, the river nearly rages, so cold it is, never burned by Agni Vaiśvānara.
> 17. Videgha Māthava then said (to Agni), "Where am I to live?" "Your home is to the east," he answered. Even now this river is the boundary of the Kosalas and the Videghas, for these are the descendents of Māthava.

Weber, who was the first to draw attention to this passage (1850, 170–172), has also argued that Śāṇḍilya, author of the Agnirahasya, "Secret of the Fire Altar" (Śatapatha Brāhmaṇa book, X), belonged to the northwest. One reason he adduced is that books VI-X refer only as to the peoples of the northwest. Mylius (1972, 373) has confirmed this by drawing attention to Śatapatha Brāhmaṇa 9.1.2.26, which describes the climate as "freezing cold" (*praśīta*), a condition more easily applicable to the Panjab than to what is now called Uttar Pradesh. According to Weber, preoccupation with a fire cult is also more intelligible in the northwest, because of the relative proximity of the Iranians. In support of this view he referred to a term for

measurement, *vitasti*, which is found in the Avesta and in book X of the Śatapatha Brāhmaṇa (Weber 1873, 266–267). This view may need qualification because of the subsequent excavations. The northwest was also the stronghold of the Indus civilization, and it is very likely that there was an indigenous fire cult there. Books VI to X of the Śatapatha Brāhmaṇa are later than the other books (as shown by Minard 1936, 96, 104, extending earlier investigations by Brunnhofer). It would seem likely that this interpretation of the Agnicayana, composed in the northwest, was a response to an indigenous fire cult, with which it was partly integrated. We shall find detailed evidence in support of such a view (below pages 154–162). There is a further characteristic of the northwesterners to which Weber has drawn attention. When the nomadic tribes went further east, the caste system began to become more ramified. Later, the northwesterners were looked down upon precisely because they lacked the niceties of a sophisticated caste system (Weber 1850, 220).

One should not visualize these movements exclusively in terms of a large-scale invasion. There were frequent raids, which are reflected in the rituals, as Heesterman has shown. The rites of the "yoking offerings" (*prayujāṃ haviṃṣi*), for example, refer to the Kuru-Pañcāla people, known for their ritualistic zeal. They marched east during the cold season, seized the barley crop, fed their men and animals, and returned before the rains (cf. Rau 1957, 15; Heesterman 1957, 211; 1962, 15). It may be noted here that there is no reason to assume that the climate was very different from what it is nowadays (cf. Raikes and Dyson 1962 for the western region; Mylius 1972, 373–374 for the upper and middle Ganges plain).

Similar expeditions are reflected in the *Yātsattras*, Soma rituals that require the participants to move each day a *śamyā* throw (the śamyā is a wooden peg, used to fasten a yoke). Thus the invaders moved along the rivers Sarasvatī and Dṛṣadvatī, each time performing a ritual (Heesterman 1962, 34–35). They moved in a northeastern direction (Jaiminīya Brāhmaṇa 2.297) and therefore upstream (*Pañcaviṃśa Brāhmaṇa* 25.10.12), since the Sarasvatī flows to the southwest. The havirdhāna and sadas sheds were moved on wheels. Since the term havirdhāna refers primarily to the Soma cart, and secondarily to the shed in which two Soma carts are installed (later more explicitly called: havirdhāna-maṇḍapa), this suggests that during these expeditions, Soma was generally transported on a cart. The Soma cart of the ritual is not a chariot with spoked wheels, but has solid wheels. Though the Vedic nomads knew spoked wheels, they adopted the best means of
PLATE 3 transport of the Indus civilization and of contemporary Sumer: a cart with solid wheels (Basham 1954, 29).

All nomads engage in raids, especially cattle raids. There is evidence for neolithic cattle raids in South India, and the stealing of cattle remained one of the great themes of the earliest Tamil literature (Allchin 1963, 172). That

the Vedic nomads engaged in such raids is not surprising. What is interesting is that these raids, like the eastward movement of Agni, were reflected and preserved in the Vedic ritual.

A passage of the Jaiminīya Brāhmaṇa (2.299) shows that the nomads were not always victorious: during a Yātsattra, the leader was killed by huntresses (*vyādhinī*) of the Trikartas or the Salvas (tribes which lived in the region around what is now Lucknow). When members of the expedition lost heart, one of the priests admonished them: "Those who were killed went to heaven (for it was a sacrifice), and those who survived are now the most praiseworthy, for they had all been a wretched lot to begin with." As in later times and other lands, religion was at hand where worldly objectives failed.

The burning of forests creates pastures and paves the way for agriculture. The Vedas swarm with cattle and often mention agriculture (*kṛṣi*; for details, see Rau 1957, 25–26). The ritual also abounds in references to cattle: they constitute the best *dakṣiṇā*, and the bricks of the fire altar are expected to turn into cows. Agriculture is reflected in numerous rites, e.g., those which involve a plough (*sīra*). The field for Agni is ploughed before the altar is constructed. The ploughing rites are rich in symbolism that relates to agriculture, fertility, and sexuality (see e.g., Dange 1970, 73–74; 1971, ch.V, dealing with Ṛgveda 10.101). Just as fire can be installed after ploughing is over, there are many festivals where a bonfire is made after ploughing (for south India, see Allchin 1963, 133–135). Since the burning of forests leads to new pastures and agriculture, fire festivals are generally connected with cattle and fertility (for Europe and Iran, see Allchin 1963, 136–142; for Greece, Nilsson 1923).

Throughout the ritual we find expressions of the desire for space and the concern with lebensraum. In the Soma rituals, when Agni and Soma are carried forth in an easterly direction to the new offering altar, the adhvaryu recites: "This Agni must create space for me, he must go in front destroying the enemies; hotly roused he should conquer the enemies, at the booty winning he should conquer booty "(Taittirīya Saṃhitā 1.3.4.1 c, quoted by Heesterman 1962, 35). During this fire transportation (*agnipraṇayana*) other deities are also invoked. When the adhvaryu arrives at the offering fire, he offers a spoonful of clarified butter and recites: "Viṣṇu, make a wide step. Make wide space for us to live" (Taittirīya Saṃhitā 1.3.4.1 d). The same mantra is recited during the animal sacrifice when an offering is made for the sacrificial pole. The animal sacrifice itself is characterized in the following terms: "Those who perform the animal sacrifice, conquer all the worlds" (*Āpastamba Śrauta Sūtra* 7.1.1.). The terms for "wide" (*uru*) and "world" (*loka*) are often combined, from the Ṛgveda onward. The expression *uruṃ lokaṃ kṛ-* means: "to make wide space, room" (Gonda 1966, 23).

The term loka is Indo-European, the reconstructed original **louko* referring to a "more or less open space to which the light of day has access"

PLATE 3

The Soma Cart

Soma is transported on a cart after it has been purchased and before it is installed on a throne and worshipped as King Soma. Though the Vedic nomads knew chariots with spoked wheels, the Soma cart has solid wheels.

(Gonda 1966, 9). In Latin, such a clearing was called *lucus*, which later came to mean "grove." The Romans and Umbrians placed fire in such a grove (Nagy 1974, 91). These terms are related to Latin *lux*, English "light," etc. According to Gonda, an intermediary in meaning may be Vedic *roka*, which means "light, lustre, brightness," and is also an attribute of Agni. May we go a step further and assume that it is Agni who was responsible for these clearings in the forest? Gonda does refer, in an accompanying footnote, to the making of clearings in the forest by burning, but this should presumably be read in conjunction with the solemn warning he had sounded a few pages earlier:

> At this point the question arises as to how far the importance of the Vedic *loka*-concept can be seen as a universalization of concrete social, economic, political and psychological situations in which either peaceful pastoral and cattle-breeding populations were threatened by inroads of nomadic tribes and deprived of their dwelling places, or nomads did not in endless jungles, forests and mountains succeed in finding sufficient Lebensraum for their increasing numbers. Although it may be readily conceded that the incessant struggle for means of subsistence, and especially for a sufficiency of fields and pastures can hardly fail to leave its imprint on the view of life of a community, one should guard against any exaggeration.

So far much of what I have said is summed up in the words of the Ṛgveda (1.93.6): "Agni and Soma! Strengthened by brahman, you have made ample space for the ritual." Geldner comments on this passage by saying that it reflects the spread of the Aryan cult (*das heisst sie haben den arischen Kult ausgebreitet*). Similar words are addressed to Indra and Viṣṇu (Ṛgveda 7.99.4). Gonda interprets these passages in a wider sense, stressing the general implication that the ritual should be successful (Gonda 1966, 21). This is no doubt the sense they acquired in the context of the ritual, which could not possibly have survived if it had only been a celebration of battles and raids. What we witness here, however, is a significant transition that is characteristic of ritual in general. We met with this transition in this book for the first time when we observed that the transportation of fire became ritual when it was no longer functional, because the art of making fire had been discovered. Similarly, there certainly was a time when the Vedic nomads went on expeditions that were accompanied by battles, cattle raids, forest burning, songs and recitations, ritual transportation of fire, and ritual celebrations of Soma. But when the nomads began to settle in the subcontinent and established lasting relationships with the indigenous inhabitants, the expeditions receded to the background and the accompanying activities lost their accompanying function. When the Soma also became increasingly rare (see

next section), the ritual character of all these activities became predominant, and the success of the ritual itself became the primary concern of the participants. Thus ritual was the sole survivor and all other activities were ritualized.

Rituals tend to absorb everything that has gone before and has lost its original function. Earlier gods are also incorporated. The term uru, "wide," is found in frequent association with the all-pervading activities of Viṣṇu (Gonda 1954, 68–71). Viṣṇu has also been connected with a surveyor, and his three steps can be read into a Harappan inscription (Parpola 1976, 147–148). In the Ṛgveda, Viṣṇu is described as taking three steps, which may indicate that he was originally an independent third, and the connecting link between gods and demons and between heaven and earth (Kuiper 1962). Though he lost this function, the three steps survived in the ritual, where the yajamāna takes three steps at the end of his consecration. During the Vedic marriage ceremonies, the number is increased: bride and bridegroom take seven steps toward the northeast. The Buddha also took seven steps (immediately after he was born), and so do the shamans of Inner Asia (Eliade 1964, 405–406).

Soma is called *urugavyūti*, "with wide pasture" (Ṛgveda 9.90.4). But the god who is most closely connected with battle is Indra, the leading divinity of the Ṛgveda. With Viṣṇu, Indra shares the characteristic of "making room" (Gonda 1966, 21). Like Agni, he is aggressive and victorious. In the Soma ritual, before Agni and Soma are jointly carried forth (agnīṣomapraṇayana), Agni is carried forth by himself (agnipraṇayana), as in the animal sacrifice. During this procession the adhvaryu recites mantras for Agni, Indra, and other deities, asking strength and wealth for the yajamāna and expressing the hope that his enemies will be slain (Taittirīya Saṃhitā 4.6.3). If the Soma ritual includes an Agnicayana, another recitation is added during the carrying forth of Agni: the "second hotā" (one of the other priests: see Caland's note to Āpastamba Śrauta Sūtra 17.14.7) recites a long hymn to Indra, the *Apratiratha* or "Song to the irresistible warrior" (Taittirīya Saṃhitā 4.6.4). The verses of this Taittirīya recitation correspond to a large extent to a late hymn of the Ṛgveda (10.103), attributed to "Indra's son Apratiratha," which is, in Geldner's words, "a vigorous battle song addressed to soldiers leaving on a campaign" (*ein urwüchsiges . . . Schlachtlied, das den ausziehenden Soldaten nachgesungen wird*). The remainder of Taittirīya Saṃhitā 4.6.4 is made up of verse from another Ṛgvedic hymn (6.75) that glorifies battle. In the Apratiratha recitation, the background of the agnipraṇayana ceremony becomes explicit. Indra is invoked as a victorious warrior or hero, "fond of slaughter, disturber of people," who—with the help of his arrows, chariots, and troups—destroys the enemies. When the second hotā recites: "Comrades, follow in Indra's footsteps!" he sounds less like an officiating priest than like a gang leader or commander-in-chief. This hymn of battle refers in passing to dakṣiṇā, sacrifice, and Soma,

which were clearly associated with the expedition, side by side with cattle raids, the killing of enemies, and the provision of lebensraum ("Yours will be space wider than wide!").

If it is true that there was an earlier stage of development, during which battles and victories were real, and a later stage, by which time they had become ritual, it should be possible to determine—if not in absolute terms, at least with reference to our texts—when the first stage was completed and the second began. It would seem probable, for example, that the earlier Saṃhitā literature reflected real battles, which, by the time of the ritual sūtras, had become fully ritualized. However, this is not the case. What we find instead is an inextricable mixture. In the Saṃhitā we meet with phrases that in spite of their military bearing, are already ritualized. In the śrauta sūtras there are, side by side with ritual descriptions, passages that can only make sense in a warlike context.

An example of the former is the mantra of Taittirīya Saṃhitā 1.3.1.1 c: "He who hates us and whom we hate, here I cut off his neck." This is commented upon in several brāhmaṇas (Taittirīya Saṃhitā 6.1.8.4; cf. 6.2.10.2; 6.3.9.2), e.g.: "There are two persons: one whom he hates, and one who hates him. Surely, he should cut off the necks of both, successively." This mantra, which is frequently recited, has a purely ritual use: it is recited when the soil is prepared for sacrificial use with the help of a ritual implement, the wooden knife (*sphya*). This rite is put in perspective by another brāhmaṇa (Taittirīya Saṃhitā 2.6.4.3), which explains that the enemy has to be excluded from the altar, adding that the making of an altar is a cruel act.

Though the description of the śrauta sūtras is concerned with ritual, there are occasional references to enemies of flesh and blood. When the clay for the ukhā pot is being collected, the adhvaryu should recite, among others, a very innocent sounding mantra: "In the way of the Aṅgirases, we are going to fetch Agni hidden in the mud" (Taittirīya Saṃhitā 4.1.2.2 g). When should this mantra be recited? When an enemy (*dveṣya*) is met on the way (Āpastamba Śrauta Sūtra 16.2.6, with Caland's note; cf. Heesterman 1967, 37; Keith 1914, 290, note 5). Similarly, when the ground for the fire altar is being prepared, the adhvaryu casts lumps of clay around, turning clockwise, and taking the last lump from the direction of his enemy (Āpastamba Śrauta Sūtra 16.20.6; cf. Keith 1914, 318 note 9). Here the corresponding brāhmaṇa (Taittirīya Saṃhitā 5.2.5.6) merely states that the person who is in that quarter is hungry. Such references to enemies in the śrauta sūtras are not to ritual enemies or demons, as students of religion may be predisposed to expect. These enemies are real people, belonging to the original population. Heesterman has established the significance of several such passages, to which I shall return in a later section.

Rau (1957, 31) has some worthwhile things to say about many widespread prejudices with regard to the Vedic Indians. Life in those days was not

easy, neither for the Vedic nomads nor for the people they encountered. The Vedic texts repeatedly assert that the greatest enemy of man is hunger. The struggle for land and lebensraum was a struggle for survival. Rau concluded that there is no evidence in support of the view that the Vedic Indians "lived in a land of plenty, and had nothing better to do than lie under trees in lovely natural settings, meditate on questions of metaphysics and kneel before lotus flowers as gentle and beautiful people" (*lebten . . . in einem Schlaraffenland and hatten nichts anders zu tun, als in landschaftlich lieblichen Gegenden, unter Baumen gelagert, den Problemen der Metaphysik nachzusinnen oder als schöne, stille Menschen vor Lotusblumen zu knien*).

It is not surprising that the ritual is not merely compared to a chariot, but that the ritual implements are considered weapons (Heesterman 1962, 35). As we have already seen, the ritual recitations from the Ṛgveda were called śastra, a term derived from the verbal śaṃs-, "recite," which is homonymous with śastra, "sword," from śas-, "cut down." The Vedic nomads fought battles on many levels.

SOMA

SO FAR WE have met with Soma in a variety of contexts. We have seen that the Vedic Indians evolved a hierarchy of Soma rituals. In each of these, Agni and Soma are the chief dramatis personae. They also occur among the ancient Iranians. In India, an Agnicayana may be optionally built in the place of the offering altar for the āhavanīya fire of a Soma ritual. In this book, the Agnicayana will receive more attention than the Soma rituals, partly because of limitations of space, and partly because the prototype of the Soma rituals, the Agniṣṭoma, has been fully described by Caland and Henry. However, one cannot but agree with Wasson that "it cannot be gainsaid that Vedic culture with Soma unidentified is the play of Hamlet with Hamlet left out" (Wasson 1968, 7).

We have seen that Soma is a god, a plant, and the liquid extracted from that plant. From the Brāhmaṇas onwards, the ritualists made use of substitutes for the original Soma. These include Ephedra, Sarcostemma, and other creepers and plants without particularly remarkable properties. There are now two serious theories regarding the identity of the original Soma: Wasson's theory that it was the hallucinogenic mushroom *Amanita muscaria*, or fly agaric (Wasson 1968), and Flattery's theory that it was the hallucinogenic plant *Peganum harmala*, or wild rue (Flattery, forthcoming). Wasson's book is widely available, and Mr. Flattery has given me access to the manuscript of his book prior to its publication. This is not the place to adjudicate between the two theories, which are both presented and argued with great skill and with considerable amounts of evidence (mostly Indian in the case

of Wasson, and Iranian in the case of Flattery). Although Flattery's work may not be published before the present work appears, Wasson's has already been widely discussed. Wasson's identification has been accepted or regarded as probable by some Sanskrit scholars (Kuiper 1970, Ingalls 1971), and rejected by at least one other (Brough 1971), and he has replied to his critics (Wasson 1970, 1972). Wasson's thesis implies, but is not implied by, a weaker thesis, namely that the original Vedic Soma was a hallucinogenic plant. I regard this as the most important part of Wasson's hypothesis, the part, moreover, that has not to my knowledge been seriously challenged. It is certainly accepted by Flattery. I think, in fact, that the validity of this weaker thesis can be taken as established.

One of Wasson's arguments in support of the view that Soma was the fly agaric is the shamanistic use of the fly agaric as a hallucinogen in different parts of Siberia. Though Brough has ruled out the probative value of such parallels (Brough 1971, 332), it cannot be denied that circumstantial evidence of this type is obviously evidence too (as Brough accepts at least in practice). Moreover, in the domain of a historical hypothesis, we cannot expect anything like a final proof; we are dealing with degrees of probability. Flattery, too, has referred to parallels, without even ascribing possible historical connections. The chief active drug in *Peganum harmala* is harmine, which is also the main active ingredient in *Banisteriopsis*, the *yajé* of the upper Amazon (Flattery, §§ 36–38). The connections between the beliefs of the Vedic nomads and shamanistic beliefs, to which I have referred several times, add to the plausibility of Wasson's hypothesis, but they also support Flattery's theory: *Peganum harmala* is available, in fact conspicuous, throughout the "Greater Iranian area," viz., "west of China, north of India, east of the civilizations of Mesopotamia . . . , and south of the subarctic forests of Siberia" (Flattery, §§ 28, 42–45).

Like the use and worship of fire, the use and worship of hallucinogens takes us back to the prehistory and early history of mankind. Though archaelogical evidence for the use of hallucinogens is scarce, historical evidence from various areas is available, and anthropological evidence is plentiful. The sum of evidence points to a human experience almost as ancient and widespread as the experience of fire. That this has been discovered only recently is due to recent fashions, but also to the scarcity of material evidence in combination with the bias of our own culture, which regards material evidence as more patently obvious than psychological evidence.

The use of mushrooms is attested for the Neolithic (Boletes in the Swiss lake-dwelling cultures). We have already noted the ancient uses of fungi as tinder in the process of fire making. "Mushroom stones" from the Mayas, in what are now Mexico and Guatemala, constitute the oldest evidence for the cult of a hallucinogenic mushroom. The earliest of these stones date from the thirteenth to the tenth century B.C., the latest from 800–900 A.D.

The Mayan mushroom stones generally represent a mushroom on top of an animal and are 20 to 35 centimeters high (Heim 1963, 206).

The idea of a herb of immortality, most probably a hallucinogen, is at least as old as the Sumerian Gilgamesh epic, which takes us back to about 2,000 B.C. Wasson has suggested that the Taoist belief in "magic mushrooms" constitutes evidence of systematic ritual use of hallucinogenic substances, and Needham has endorsed this view (Needham 1974, V, 121). Needham also suggests that the Taoists generated hallucinogenic smokes in their incense burners (ibid., 150–154). In recent times, the use of hallucinogens of plant origin has been found in all parts of the world, especially in the Americas (for a survey see Schultes 1969). Apart from mushrooms (see especially Heim 1963), these include cacti, shrubs, various leguminous trees, and seeds that are eaten, drunk, smoked, or sniffed. Many of these plants are considered sacred. The Mexican Indians regarded them as mediators with the gods. The Chontal Indians of Oaxaca call their hallucinogenic shrub "leaf of god," and the Aztecs refer to the sacred mushroom as "god's flesh" (Schultes 1969, 254; Wasson 1972, 47). In a characteristic reversal, the Christian invaders of Mexico called the Aztec *ololiuqui* (Morning Glory) a "diabolic seed" (Schultes 252).

One of the best arguments for the hallucinogenic character of Soma is the Vedic distinction between the effects of Soma and the effects of *surā*, a fermented drink. While Soma leads to "ecstasy," "happiness," or "rapture" (*mada*, *sumada*), surā produces "evil intoxication" (*durmada*). O'Flaherty refers in this connection to Śatapatha Brāhmaṇa 5.1.2.10: "Soma is truth, prosperity, light; and surā untruth, misery, darkness" (Wasson 1968, 95, 137, etc.). The surā beverage is used in some of the classical Vedic rituals, e.g., in the Vājapeya and in the Sautrāmaṇī.

In the Vedic rituals, Soma is introduced into the sacrificial enclosure at the ceremony of *somakraya*, "purchase of Soma." The Soma merchant and the adhvaryu (on behalf of the yajamāna) engage in ritual haggling about the price, but in the end the Soma stalks are taken away by force and the merchant is beaten with a stick and driven away. According to Renou, these ceremonies show that the traffic in Soma may at one time have been illegal. At the same time we are reminded of the fact that Soma, like Agni, was considered stolen from heaven, and again stolen back from the demons (O'Flaherty 1976, 99–104).

According to the Ṛgveda, Soma is the elixir of life, indispensable for both men and gods. It is *amṛtam*, the draught of immortality. This term is Indo-European: amṛtam (English "immortality") corresponds, for example, to the Greek *ἀμβροσία* (for the development of these and related words in Sanskrit and Greek, see Thieme 1952, 15–34). Indra is especially fond of Soma. Soma and Agni are in many ways connected, as we have seen. Soma has various properties in common with other Vedic gods. He is treated as a king and invoked as a fighting god, a valiant commander, a hero, and a

destroyer of enemies (Gonda 1965, 52). Soma, in this respect again similar to Agni, was brought down from heaven by a bird of prey (śyena).

The Iranian evidence seems to suggest that the haoma was fairly common. According to the Ṛgveda, the Soma plant grew in the mountains, and the best Soma came from Mount Mūjavant (which probably corresponds to the Muñjavant of the later epic). The mountains referred to are presumably those of the Western Himalayas and the Hindukush. That Soma, according to the Ṛgveda, grew in the mountains is consistent with Wasson's hypothesis. Though the fly agaric grows at sea level in northern Eurasia, it is found south of the Oxus and in India only at a great height, around 8,000 to 16,000 feet (Wasson 1968, 23, referring to birches and conifers, with which the fly agaric grows in mycorrhizal relation). If we had some means of identifying the routes that the Indo-Iranians travelled, it would be worthwhile to look there, even at present, for *Amanita muscaria* and other hallucinogenic plants. Actually, we do have some evidence, provided we assume that the Indo-Europeans followed some of the same ancient trade routes that Buddhism travelled two millenia later in the opposite direction.

The relative ease with which Buddhism entered Central Asia and was accepted there may make us pause and reflect on the significance of these mountainous areas where the Soma grew. Vedic culture is generally approached from two perspectives: a linguistic perspective that stresses the Indo-European background, and a religious perspective that stresses the Hindu sequel. The history of India and Central Asia taken together shows that such labels are misleading and that the Buddhist migrations are part of the story. Not only Central-Asian Buddhism, but Buddhism in general, contains many elements that are shamanistic. It is becoming increasingly clear that the Vedic nomads introduced shamanistic elements into India. Though Buddhism is generally characterized as a reaction against the Vedic religion, this is a rather sweeping generalization. Closer inspection of the facts would show that there has been at least as much continuity as there has been opposition. The myths of Indra and the legends of the Buddha, for example, have many features in common. The techniques of immortality, which evolved in the Upaniṣads from a ritual background, are similar to Yoga and to Buddhist techniques. Many of these notions contain shamanistic elements that the Vedic nomads took from Central Asia to India, and that the Buddhists took back 2,000 years later. From the perspective of Central Asia, these shamanistic ideas and practices, which continued to exist in their original homeland, merely returned after a long holiday in India. The labels we attach to the major civilizations and religions of the area obscure the fact that the underlying reality is probably better described as a continuous exchange of people, goods, and ideas between India and Central Asia.

India is often pictured as an isolated country, separated from the rest of the world by a formidable barrier of mountains. Though this often leads

to the unnecessary assumption that India is a land of mystery, there is some truth in the geographical observation. At the same time, it should not be exaggerated. The western route linking the Indus and the Oxus, passing through northeast Afghanistan, though long, is not very arduous. Further east, the valley of the upper Indus in what is now Ladakh (northwest India) and the Tarim basin in what is now Sinkiang (western China) are separated by about 250 miles of mountainous tracks. Even with a pass of 18,000 feet on the way, such a distance can be covered on foot in less than a month, at least during the summer.

Now let us follow the story of Soma after it entered the Indian subcontinent. The original Soma was soon lost. From the period of the Brāhmaṇas, it was replaced by substitutes, because the Vedic nomads had left the mountains (Wasson), or at any rate the "Greater Iranian area" (Flattery), and Soma did not grow in the Indian plains. It is significant that with the gradual disappearance of the original Soma the rituals became increasingly complex. Similar circumstances prevail elsewhere. The best Peyote comes from the Rio Grande Valley, where it also grows most abundantly. The Indians of the southern tribes go on ceremonial collection trips to get it. But the Indians of the northern tribes are further away, have to secure their supply through the mail, and incorporate less Peyote in their ceremonies. At the same time, they begin their ceremonies with purification by means of purges, sweat baths, and fasting. Fischer (1958, 401) has suggested that these additional ceremonies, together with the more limited quantities of Peyote, serve the purpose of producing an experience of similar intensity as that evoked solely by larger doses of Peyote. Heim (1963, 211) reports that the Mexicans perform two kinds of rituals in connection with their hallucinogenic mushrooms: in one, only mushrooms are consumed; in the other, mushrooms are consumed, but there is also a distribution of grains of maize. This second variety is *imprégné de processus magique*. Closer to home, announcements of rock concerts boast that the audience will get high without the use of drugs. In all these cases, ritual takes over where the hallucinogen itself is in limited supply or is altogether absent. Ṛgveda 7.26.1 asserts that the effects of Soma do not depend on mere ingestion: "Soma unpressed has never inebriated Indra, nor the pressed juice unaccompanied by sacred hymns." It seems likely, therefore, that the increasing complexity of the Soma rituals is a direct consequence of the decreasing availability of the original Soma (cf. Staal 1975, 182–183). Again we witness a development similar to what we found before. This time a substance that is no longer available is preserved, but only ritually.

A simple example of such ritualization is the *Āpyāyana* rite. From the time Soma is purchased and enthroned south of the (old) offering altar until the Soma-pressing day, this rite is performed twice daily, in the morning and in the evening preceding the Pravargya. First the agnīdh boils water. All the priests, except the Sāmavedins, wash their hands in that water. Then,

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one by one, standing to the west of the Soma bundle, they touch King Soma and recite: "Stem for stem, O god Soma, swell for Indra who gains his share of wealth. Let Indra swell for you, and you swell for Indra" (Taittirīya Saṃhitā 1.2.11.1 a). The yajamāna adds: "Make your friends swell with booty and skill; may I successfully accomplish your pressing, O god Soma" (ibid. b). From the first time this rite is performed until the time when Soma and Agni are carried forth to the new offering altar, the priests should wash their hands only in boiled water.

The texts mention an alternative to the mere recitation of these mantras: the recitations may be accompanied by sprinkling the Soma bundle with the same warm water that had been boiled. Here lies the origin of the rite. The Soma plants were dried at the time they were acquired and had to swell by gradually absorbing water. In the course of the process of ritualization, Soma is no longer sprinkled with water but it is sprinkled with mantras. This is characteristic of Vedic ritual and reflects the Vedic belief in the power of language. For most ritual purposes, performing an act in words is as good as acting. In later times, rites are entirely replaced by recitations and, in the final resort, by inaudible meditations.

The Āpyāyana rite supports Wasson's hypothesis in a direct way. Two of the psychotropically active ingredients of *Amanita muscaria* are ibotenic acid and muscimol:

> When the fly agaric dries, the ibotenic acid steadily disintegrates and disappears. It is replaced by muscimol, *which is at least five times more powerful.* Thus we have the unique situation where a psychotomimetic agent converts itself through simple drying into another active agent that is more potent by far and more stable (Wasson 1972, 12).

The quantity of muscimol which has thus been reached remains constant when the substance is again mixed with water, milk, curds, or other liquids.

It is likely that the precise treatment that the Soma substitutes receive in the ritual process leading up to the extraction of the juice will throw additional light on the identity of the original Soma. Such manipulations would have been preserved in ritual even if they were no longer functional, for as we have seen many times, preservation of features that have ceased to be functional is one of the chief characteristics of ritual. The exact quantities and proportions used in mixtures are, moreover, important in determining the psychotropic properties of hallucinogens (Waser 1967, 435, for example, reports considerable differences when the effects of 10 mg. muscimol are compared with those of 15 mg.). It is therefore relevant to determine how the Soma was measured and mixed with other substances.

While the geographical origin of Soma lies in the high mountains of the western Himalayas, its mythical origin lies in heaven. This belief expresses

the divine character of Soma and links it directly to Agni. Here the background is not only shamanistic (as Wasson has shown) but also Indo-European, the two probably being related (cf. Map A). In his famous book on the descent of fire and the divine beverage (1859, already, quoted), Adalbert Kuhn has shown that in all the major Indo-European languages—among the Indians, Greeks, Romans, and Germans—similar ideas are found about the celestial origin of fire and of the draught of immortality. Both originate primarily in clouds, from which lightning and rain come down. The celestial fire is also related to the sun and is conceived in terms of kindling by friction. The kindling stick is the thunderbolt, which is known by various names: *vajra* among the Indians, *κεραυνός* among the Greeks, *cuneus* among the Romans, and *Donnerkeil* among the Germans. The phallic character of these objects, though not emphasized by Kuhn, springs to mind.

The drink of immortality (amṛta, *ἀμβροσία*) descends from heaven in a similar manner. The Indian myths of the churning of the ocean show that the production of this elixir is thought of in terms similar to the production of fire by friction. The bird of prey—an eagle, vulture, or falcon—which brings the draught and fire down to earth, is associated with a celestial tree in which he has his nest and whose branches provide the torch in which fire is transported. In Europe the celestial tree is often an ash. As we have seen, the theft of fire and Soma is generally attributed to a bird, but may also be attributed to a personage such as Prometheus, whose name Kuhn related to the kindling stick (pramanthana).

The Ṛgveda relates how the bird brought Soma down to earth from a mountain. Since Soma is a person, this act has the character of an abduction, as Schneider (1971) has stressed. The bird helped Indra to obtain Soma, and both boasted of their prowess, as did Prometheus (above pages 84–85). In general, such legends are interwoven with references to numerous other stories. Some of these are no longer understood, and I shall not try to make them intelligible. In the following two hymns from the Ṛgveda, a demon, Śambara, is mentioned, who was also interested in Soma and tried to keep the bird from getting it. The chief enemy of Śambara was Divodāsa Atithigva. Puraṃdhi, possibly "giving fullness," refers to the bird.

Ṛgveda 4.26 is spoken by Indra (the translation mostly follows Schneider 1971):

1. I became Manu and Sūrya; I am Kakṣivat, the wise seer; I invited Kutsa, the son of Arjuna; I am the inspired Uśanas—look at me!
2. I gave the earth to the Āryas; I gave rain to the mortal who offers sacrifice. I brought the thundering waters; the gods follow my purpose.

अहं मनुरभवं सूर्यश्चा-
ऽहं कक्षीवाँ ऋषिरस्मि विप्रः ।
अहं कुत्समार्जुनेयं न्यृञ्जे-
ऽहं कविरुशना पश्यता मा ॥
अहं भूमिमददामार्यायाऽ-
हं वृष्टिं दाशुषे मर्त्याय ।
अहमपो अनयं वावशाना
मम देवासो अनु केतमायन् ॥

3. Ecstatic with Soma, I shattered the ninety-nine fortresses of Śambara all at once, and finally his citadel as the hundredth, helping Divodāsa Atithigva.
4. O Maruts, let the bird with lovely wings be above all birds, the swift-flying griffon above all griffons, since—by his own driving power that needs no chariot wheels—he brought Manu the oblation offered to the gods.
5. Trembling, whether he could bring it down, the bird swift as thought shot forth on the wide path; swiftly the griffon came with the Soma honey and won fame for that.
6. Stretching out in flight, holding the sprout, the griffon brought the inebriating and gladdening drink; the bird, companion of the gods, held the Soma tight as he took it from that higher heaven.
7. When the griffon had taken the Soma, he brought it, a thousand and ten thousand sacrificial draughts at once; Puramdhi left the enemies behind; ecstatic with Soma, the wise one left the fools.

अहं पुरो मन्दसानो व्यैरं
नवं साकं नवतीः शम्बरस्य ।
शततमं वेश्यं सर्वताता
दिवोदासमतिथिग्वं यदावम् ॥
प्र सु ष विभ्यो मरुतो विरस्तु
प्र श्येनः श्येनेभ्य आशुपत्वा ।
अचक्रया यत् स्वधया सुपर्णो
हव्यं भरन्मनवे देवजुष्टम् ॥

भरद् यदि विरतो वेविजानः
पथोरणा मनोजवा असर्जि ।
तूयं ययौ मधुना सोम्येनो-
त श्रवो विविदे श्येनो अत्र ॥
ऋजीपी श्येनो ददमानो अंशुं
परावतः शकुनो मन्द्रं मदम् ।
सोमं भरद् दाद्हाणो देवावान्
दिवो अमुष्मादुत्तरादादाय ॥

आदाय श्येनो अभरत् सोमं
सहस्रं सवाँ अयुतं च साकम् ।
अत्रा पुरंधिरजहादरातीं-
र्मदे सोमस्य मूरा अमूरः ॥

The next hymn, Ṛgveda 4.27, is spoken by Soma:

1. While still in the womb of my mother, I knew all the successive generations of the gods. A hundred iron fortresses guarded me, but the griffon and I swiftly flew away.
2. He did not drag me out against my will, for I surpassed him in energy and strength. In a flash, Puramdhi left the enemies behind, as he outran the winds, swollen (with Soma).
3. As the griffon came shrieking down from heaven, or from here, they carried Puramdhi. As the archer Kṛśanu, with swift thought, slackened his bowstring and shot at him.
4. The griffon, stretching out in swift flight, brought Soma down from the great heights to Indra's camp, as the Aśvins brought

गर्भे नु सन्नन्वेषामवेद-
महं देवानां जनिमानि विश्वा ।
शतं मा पुर आयसीररक्ष-
न्नधं श्येनो जवसा निरदीयम् ॥
न घा स मामप जोषं जभारा-
ऽभीमासु त्वक्षसा वीर्येण ।
ईर्मा पुरंधिरजहादरातीं-
रुत वाताँ अतरच्छूशुवानः ॥

अव यच्छ्येनो अस्वनीदध द्यो-
वि यद् यदि वात ऊहुः पुरंधिम् ।
सृजद् यदस्मा अव ह क्षिपज्ज्यां
कृशानुरस्ता मनसा भुरण्यन् ॥

ऋजिप्य ईमिन्द्रावतो न भुज्युं
श्येनो जभार बृहतो अधि ष्णोः ।

Bhujyu out of the sea; inside fell a wing feather from the bird as he kept the course of his flight.

अन्तः पतत् पतत्र्यस्य पर्ण-
मध्व यामनि प्रसितस्य तद् वेः ॥

5. The white goblet overflowing with Soma mixed with cow's milk, the clear juice offered by the adhvaryus, the finest honey—now let the generous Indra raise it to drink until ecstatic with Soma; let the hero raise it to drink until ecstatic with Soma.

अधं श्वेतं कलशं गोभिरक्त-
मापिप्यानं मघवा शुक्रमन्धः ।
अध्वर्युभिः प्रयतं मध्वो अग्र-
मिन्द्रो मदाय प्रति धत् पिबध्यै
शूरो मदाय प्रति धत् पिबध्यै ॥

The basic conviction underlying the Soma rituals is the belief that drinking Soma yields immortality. This belief is still alive. In the course of an interview on the significance of the ritual, Cherumukku Vaidikan, chief organizer of the 1975 performance, recited the relevant verse from the Ṛgveda (8.48.3; cf. below, page 617):

> We have drunk Soma, we have become immortal,
> We have come to the light, we have found the gods.
> What can the enmity, what can the intrigue
> of any mortal do to us now, o immortal one?

THE COSMIC MAN

EGGELING (1897, IV, xiv-xv) WAS PROBABLY the first to suggest that the Agnicayana is connected with a late hymn of the Ṛgveda, the *Puruṣa-sūkta* or "Hymn of the Cosmic Man" (Ṛgveda 10.90). This hymn is relatively recent because it occurs in the tenth and most recent book of the Ṛgveda, and because it refers by name to the three Vedas (ṛk, sāman, and yajus) and (for the first and only time in the Ṛgveda) to the four classes (*brāhmaṇa, rājanya, vaiśya*, and *śūdra*). The Puruṣasūkta is attributed to a seer called Nārāyaṇa, and consists of sixteen verses:

1. Puruṣa has a thousand heads, a thousand eyes, a thousand feet. He pervades the earth everywhere and extends beyond for ten fingers' breadth.

सहस्रशीर्षा पुरुषः सहस्राक्षः सहस्रपात् ।
स भूमिं विश्वतो वृत्वाऽत्यतिष्ठद्दशाङ्गुलम् ॥

2. Puruṣa himself is all this, whatever has been, and whatever is to be. He is the lord of immortality and also lord of that which grows on food.

पुरुष एवेदं सर्वं यद्भूतं यच्च भव्यम् ।
उतामृतत्वस्येशानो यदन्नेनातिरोहति ॥

3. Such is his greatness, and Puruṣa is yet greater than this. All creatures make up a quarter of him; three quarters are the immortal in heaven.

एतावानस्य महिमाऽतो ज्यायाँश्च पूरुषः ।
पादोऽस्य विश्वा भूतानि त्रिपादस्यामृतं दिवि ॥

4. With three quarters Puruṣa has risen above, and one quarter of him still remains here, whence he spread out everywhere, pervading that which eats and that which does not eat.

त्रिपादूर्ध्व उदैत् पुरुषः पादोऽस्येहाभवत् पुनः ।
ततो विष्वङ् व्यक्रामत् साशनानशने अभि ॥

5. From him Virāj was born, and from Virāj came Puruṣa, who, having been born, ranged beyond the earth in the west and in the east.

तस्माद्विराळजायत विराजो अधि पूरुषः ।
स जातो अत्यरिच्यत पश्चाद्भूमिमथो पुरः ॥

6. When the gods performed the sacrifice, using Puruṣa as the offering, spring was the clarified butter, summer the fuel, autumn the oblation.

यत् पुरुषेण हविषा देवा यज्ञमतन्वत ।
वसन्तो अस्यासीदाज्यं ग्रीष्म इध्मः शरद्धविः ॥

7. They sprinkled Puruṣa, the sacrifice, born at the beginning, upon the sacred grass. With him the gods, Sādhyas, and sages sacrificed.

तं यज्ञं बर्हिषि प्रौक्षन् पुरुषं जातमग्रतः ।
तेन देवा अयजन्त साध्या ऋषयश्च ये ॥

8. From that sacrifice in which everything was offered the clarified butter was obtained, and they made it into those beasts who live in the air, in the forest, and in villages.

तस्माद्यज्ञात् सर्वहुतः संभृतं पृषदाज्यम् ।
पशून् ताँश्चक्रे वायव्यानारण्यान् ग्राम्याश्च ये ॥

9. From that sacrifice in which everything was offered the verses and chants were born, the meters were born, and the formulas were born.

तस्माद्यज्ञात् सर्वहुत ऋचः सामानि जज्ञिरे ।
छन्दांसि जज्ञिरे तस्माद्यजुस्तस्मादजायत ॥

10. From it horses were born, and those other animals that have a double set of incisors; cows were born from it, and goats and sheep were born from it.

तस्मादश्वा अजायन्त ये के चोभयादतः ।
गावो ह जज्ञिरे तस्मात् तस्माज्जाता अजावयः ॥

11. When they divided Puruṣa, into how many parts did they disperse him? What became of his mouth, what of his arms, what were his two thighs and his two feet called?

यत् पुरुषं व्यदधुः कतिधा व्यकल्पयन् ।
मुखं किमस्य कौ बाहू का ऊरू पादा उच्येते ॥

12. His mouth was the brahmin, his arms were made into the chieftains, his two thighs were the tribesmen, and from his feet the servants were born.

ब्राह्मणोऽस्य मुखमासीद्बाहू राजन्यः कृतः ।
ऊरू तदस्य यद्वैश्यः पद्भ्यां शूद्रो अजायत ॥

13. The moon was born from his mind; the sun was born from his eye. From his mouth came Indra and Agni, and from his breath the Wind was born.

चन्द्रमा मनसो जातश्चक्षोः सूर्यो अजायत ।
मुखादिन्द्रश्चाग्निश्च प्राणाद्वायुरजायत ॥

14. From his navel the atmosphere was born; from his head the heaven appeared. From

नाभ्या आसीदन्तरिक्षं शीर्ष्णो द्यौः समवर्तत ।

his two feet came the earth, and the regions of the sky from his ear. Thus they fashioned the worlds.

पद्भ्यां भूमिर्दिशः श्रोत्रात् तथा लोकाँ अकल्पयन्॥

15. There were seven enclosing fire sticks for him, and thrice seven fire sticks when the gods, performing the sacrifice, bound down Puruṣa as the sacrificial victim.

सप्तास्यासन् परिधयस्त्रिः सप्त समिधः कृताः।
देवा यद्यज्ञं तन्वाना अबध्नन् पुरुषं पशुम्॥

16. With this sacrifice the gods sacrificed; these were the first dharmas. And these powers reached the dome of heaven where dwell the ancient Sādhyas and gods.

यज्ञेन यज्ञमयजन्त देवा-
स्तानि धर्माणि प्रथमान्यासन्।
ते ह नाकं महिमानः सचन्त
यत्र पूर्वे साध्याः सन्ति देवाः॥

In other cultures, similar primeval giants are regarded as the origin and material cause of the universe. Within the Indo-European family, such a giant occurs in Norse mythology, where he is called Ymir, and in Iran, where he is called Gayōmart. Gayōmart was the first man, and in some respects quite different from Puruṣa. As for the mythical similarities between Gayōmart and Puruṣa, "there seems to be every reason to believe that this is a case of Indian influence on Iranian thought" (Zaehner 1955, 137). According to Norman Brown (1931), the Puruṣa of Ṛgveda 10.90 does not draw his importance, either genetically or ideologically, from any connection with such Indo-European relatives. Brown (1931, 114) has argued that Puruṣa is "most significantly a secondary derivation from notions established antecedently in the Ṛgveda." In particular, Puruṣa is a combination of characteristics derived from Agni, Sūrya (the Sun), and Viṣṇu. For a detailed demonstration of this view, as well as detailed comments on individual verses of the Puruṣa hymn, the reader is referred to Brown's study.

The idea of a cosmic sacrifice, in which a primeval person creates the world through his own sacrifice and dismemberment, is the basic theory of ritual adopted in the Brāhmaṇas. Here Prajāpati takes the place of Puruṣa. We have already seen how Śāṇḍilya expressed these ideas with special reference to the Agnicayana (above pages 65, 67). Several specific features of the Agnicayana refer to Puruṣa. The most important is the golden Puruṣa (hiraṇmayapuruṣa), who is buried under the first layer. When he is laid down, the Puruṣa-sāman is sung. Though this sāman comes from the Araṇyageyagāna section of the Sāmaveda (consisting of "songs to be sung in the forest"), and consists almost entirely of stobhas (meaningless syllables), the word *sahasra*, "thousand," occurs in it and reminds us of the Puruṣa hymn. When the altar is completed and the yajamāna is about to wish that the bricks turn into cows, the adhvaryu puts a thousand pieces of gold on the altar with the recitation of Taittirīya Saṃhitā 4.4.11.3o: "You are the measure of a thousand, you are the image of a thousand, you are the size of a thousand, you are the replica of a thousand, you are of a thousand, you for a thousand!" This is also reminiscent of Ṛgveda 10.90. Furthermore,

at the sacrifice of the he-goat for Prajāpati in the Agnicayana, the number of firewood sticks prescribed is twenty-one or twenty-four, which is in accordance with verse 15 of the Puruṣa hymn (see Taittirīya Saṃhitā 5.1.8.5; the number of beans put in the openings of the human head is also twenty-one).

The term Puruṣa occurs in four other hymns of the Ṛgveda, once in a general sense and three times in an Agni context (Brown 1931, 108–109). Prajāpati, "lord of creatures" (originally "lord of offspring"? Oldenberg 1919, 27) also appears four times in the Ṛgveda, all occurrences in the tenth book. One passage may have been added later as an answer to the preceding part of the hymn with its repeated refrain: "Who is the god we shall worship with oblations?" The answer is: Prajāpati (Ṛgveda 10.121.10). The Puruṣa hymn occurs in the Atharvaveda (Renou 1955a, 436–438) and elsewhere in Vedic literature. Puruṣa is later identified with Viṣṇu and Nārāyaṇa (Shende 1965).

Prajāpati as the creator god incorporates earlier ideas of creation in the Ṛgveda. The mythology of Yama, "Death," is replete with notions of creation and self-immolation (Dandekar 1945). The complex of Ṛgvedic myths that describe the fight between Indra and the demon Vṛtra, can be interpreted in terms of (Indo-European) creation myths (e.g., Brown 1942). But this mythology also admits a more specific interpretation. In a note to a passage where Indra is described as freeing rivers for man (Ṛgveda 1.165.8), Geldner referred to the Aryan invasion. Kosambi (1956, 70–71), following Renou and Benveniste's analysis of the meaning of *vṛtra* as "obstacle," "barrage," or "bloquage," interpreted the slaying of Vṛtra as the breaking up of dams. According to Kosambi, the fight is not with demons, but shows that the Aryans destroyed the system of dams upon which the indigenous irrigation and agriculture depended. Indra, in that case, is not creator of the universe but creator of lebensraum for the Vedic nomads.

In the Yajurveda, Atharvaveda (cf. Renou 1955, 31–48), and in many Brāhmaṇas, Prajāpati has become creator god, god of sacrifice, and sacrifice itself. After procreating the beings that make up this world, he is spent and empty, and has to be strengthened again through ritual. This is elaborated in various myths, on which Keith comments with characteristic charity: "the details of these stupid myths are wholly unimportant" (Keith 1925, 442).

Sylvain Lévi noted that Prajāpati's creative activity is generally expressed by the verb *sṛj/sarj*, "emit, discharge," and often by *nir-mā*, "mete out, measure, build" (1898 = 1966, 18; for the following see Lévi 1898, 13–35, and Oldenberg 1919, 26–32). We have already seen that there may be a reference to the surveying of land. The same terms are used in any case when the adhvaryu measures the mahāvedi. There are other accounts of Prajāpati's dismemberment and of his parts becoming parts of the universe. Elsewhere, his creative activity is described in sexual terms. As he is the father, this

involves incest, in particular with his daughter. He also unites with Vāc, "speech, language," for the act of creation is as inseparable from creative language as ritual act is from mantra.

Prajāpati created the gods, who subsequently put him together again through sacrifice. Agni is born first, from Prajāpati's mouth. But since Agni is the eater of food, viz., the devourer of everything, Prajāpati reflected: "there is no other food here but myself—but surely he would never eat me." But Agni, the ungrateful child, turned to him with wide open mouth and Prajāpati, terrified, could only save himself by reproducing himself. Śatapatha Brāhmaṇa 2.2.4 relates this when commenting upon the Agnihotra ritual: whoever performs the Agnihotra, knowing this, "reproduces himself by offspring just as Prajāpati reproduced himself; and saves himself from Agni, Death, about to devour him" (Śatapatha Brāhmaṇa 2.2.4.7). Because of this, rebirth and regeneration are cyclical, and Prajāpati is identified with the year, or with time. He is also "definite and indefinite," or only "indefinite"; and "limited and unlimited," or only "unlimited."

Despite vague similarities with the Greek Kronos and the Iranian Zurvan, both connected with time, it seems fair to say that Prajāpati, even if consistent with other Ṛgvedic notions, has no clear Indo-European or even Indo-Iranian counterparts. He is rather loosely connected with the Soma ritual: "He plays only a very unimportant role in the sequence of Soma rituals, which have been relatively well fixed from early times on. Undoubtedly, the references to him have superficially been inserted afterwards" (*In dem von altersher vergleichweise fest geordneten Somaopfer spielt er nur eine ganz nebensächliche Rolle. Unzweifelhaft sind die Beziehungen auf ihn da nur nachträglich und oberflächlich eingefügt*: Oldenberg 1919, 31).

The idea of a god sacrificing himself is preserved in the ritual: the sacrificer, or yajamāna, is sometimes identified with the sacrificial victim. Coomaraswamy (1942) has collected some of the relevant passages (providing them with interpretations which Gonda (1960, 193 note 24), calls "confused and debatable in their details": *verworren und in Einzelheiten anfechtbar*). The idea of self-sacrifice is basic to the Prajāpati cosmology and to the cyclical conquest of death through rebirth, which characterize the śrauta ritual in general and the Agnicayana in particular.

When humans talk of self-sacrifice, there is an implied reference to human sacrifice. According to Eggeling (commenting upon Śatapatha Brāhmaṇa 1.2.3.5), animal sacrifices replaced human sacrifices, just as vegetable oblations (in particular *puroḍāśa* cakes) replace or stand for animal sacrifices. Earlier, Weber had devoted a special study to human sacrifices in the Vedic period (Weber 1864, 262–287 = 1868, 54–89), in which he showed that there are unmistakable echoes of human sacrifice in the ritual literature, but that the classical ritualists often obliterated them. Weber's observations were developed and modified in several later publications, e.g., Rönnow (1929), Mus (1935), and Heesterman (1967). I shall survey some of these

observations with special reference to the Agnicayana. It will be useful, though, to keep in mind a just remark of Macdonald (1952, 337 = 1975, 8):

> It is because of preconceived ideas about the practice and development of the idea of the substitute-sacrifice that researchers have a tendency to trace every sacrifice back to a human sacrifice.

Weber began his study with a quote from the Śatapatha Brāhmaṇa, following the passage that led to Eggeling's remark quoted above:

> At first the gods offered a man as victim. When he was offered, the sacrificial juice went out of him. It entered the horse. They offered the horse. When it was offered, the sacrificial juice went out of it. It entered the ox. They offered the ox. When it was offered, the sacrificial juice went out of it. It entered the sheep. They offered the sheep. When it was offered, the sacrificial juice went out of it. It entered the goat. They offered the goat. When it was offered, the sacrificial juice went out of it (Śatapatha Brāhmaṇa 1.2.3.6).

The five heads buried under the Agnicayana altar are of a man, a horse, a bull, a ram, and a he-goat. The human head, which can be obtained in various ways, must be of a vaiśya ("tribesman"), or rājanya ("chieftain"). Weber concluded that a human sacrifice was part of the Agnicayana. He arrived at similar conclusions with regard to the Rājasūya ("royal consecration") and the Aśvamedha ("horse sacrifice"), and lastly described the one śrauta ritual which is explicitly called *Puruṣamedha*, "human sacrifice." In this ritual, the human victim, a brāhmaṇa or kṣatriya, is treated well for the duration of one full year, like the horse of the Aśvamedha. When this is over, he is adorned, decorated, and killed. The principal wife of the yajamāna lies down under the corpse. This is followed by obscene exchanges and riddles, as in the Aśvamedha. When the victim is killed, the udgātā priest chants a sāman for Yama, and the hotā recites the Puruṣa hymn from the Ṛgveda.

The fact that this Puruṣamedha is described in only a few of the ritual sūtras has led to the view that it is a late and purely theoretical extension of the horse sacrifice. Keith (1925, 347–348) denied the existence of human sacrifice in Vedic India. Gonda (1960, 187, note 25) is "unconvinced" by Karmarkar (1942, 91–93), according to whom the Puruṣa hymn itself referred to human sacrifice. In Thite's view, the Brāhmaṇas know the rites that accompanied the killing of human victims, but do not prescribe the actual killing (Thite 1975, 27). There is no scholarly consensus whether the Puruṣamedha is an imitation ("upgrading": Puhvel 1970, 163) of the horse sacrifice, or vice versa, in which case it might be an ancient survival (a view de-

fended in Kirfel 1951), or whether both sacrifices existed together from the beginning.

Rönnow (1929) has tried to show that human sacrifice prevailed in a pre-Vedic, "Asuric" religion, of which traces survive in the Pravargya, Agnicayana, and Sautrāmaṇī rituals. The human victim is represented by the demon Makha, who is subsequently identified with the sacrifice itself. The Pravargya is called the head of the sacrifice, without which it is incomplete, just as the *mahāvīra* vessel is regarded as the head of Makha. The same holds, mutatis mutandis, for the ukhā pot of the Agnicayana. While the ukhā pot, with the human head inside, is buried under the Agnicayana altar, the Pravargya implements, including the mahāvīra pots, are placed on the altar in a special configuration resembling the shape of a man. That the puroḍāśa cakes, which are substitutes for animal victims, are in fact connected with human sacrifice, is according to Rönnow shown by the fact that they are offered on "potsherds" (*kapāla*). The term kapāla means also (according to Rönnow, originally) "skull bones." The later Kāpālika ascetics, who carry a skull, are named after it (cf. Lorenzen 1972). The connection is made in the Śatapatha Brāhmaṇa (1.2.1.2): "The puroḍāśa cake is the head of the sacrifice: for those potsherds (kapālāni) are what the skull bones (*śīrṣṇaḥ* kapālāni) are, and the ground rice is nothing but the brain" (cf. Eggeling, 1885, xxviii). When the human victim is killed, its juice (rasa) flows into the earth, which grows the rice out of which the puroḍāśa cakes are prepared. In the White Yajurveda, the heads of the five victims of the Agnicayana are kept in the sacrifice, but the bodies are thrown into water that is mixed with the clay from which some of the bricks for the altar are made.

Rönnow's thesis, that these sacrifices reflect an "Asuric" religion, derives mainly from texts of the Brāhmaṇa period. In the classical śrauta ritual, there is a prohibition against using certain parts of the animal victim, such as the head. This is explained by Śatapatha Brāhmaṇa 3.8.3.29: "The Asuras made portions of the head, the shoulders, the neck, and the hind legs; therefore let him not make portions of these." According to Rönnow, beheading the victim was the typical form of sacrifice among the pre-Vedic, "Asuric" natives. These practices were brought in line with Brahmanic custom when they were incorporated into the classical ritual. In the Pravargya and in the Agnicayana there survives a tendency to preserve the body of the victim, so that the sacrificer can absorb its powerful rasa juice. This liquid is subsequently related to and identified with sacrificial beverages such as Soma and *gharma*, the boiled milk of the Pravargya.

Extending these ideas to the Sautrāmaṇī ritual, Rönnow arrived at the conclusion that three stages can be distinguished in the development of early Indian ritual. The first two of these are pre-Vedic: (1) a ritual relating to Namuci (according to the Ṛgveda, a demon slain by Indra and the Aśvins), characterized by a human sacrifice at which blood is drunk together with

with the alcoholic surā; (2) a ritual in which the new gods Sarasvatī and the Aśvins make their appearance, and during which milk and honey are consumed; and finally (3) a Vedic-brahmanic ritual, in which Soma is the ritual beverage.

Rönnow's thesis, that the Asuras represent a pre-Vedic Indian religion, has not been generally accepted. The reason for such scepticism is simple: in origin, the Asuras were clearly Indo-Iranian beings, called *ahura* in Iran. In Indo-Iranian, as in the older Ṛgveda, gods (*deva*, Iranian: *daêva*) and the asura/ahura are more or less on a par. In Iran, the Asuras prevailed. In the Vedas, the Devas prevailed, and the Asuras became their enemies. In spite of the Indo-Iranian origin of the word asura, it is therefore quite possible that Rönnow is right and that references in later Vedic literature to Asuras indicate indigenous, pre-Vedic practices and beliefs. I shall accept this as a working hypothesis, for it makes good sense as we shall see.

Mus (1935) dealt with the Agnicayana in the earlier parts of a monograph leading up to an interpretation of Borobudur, the Buddhist monument on Java. According to Mus, the myth of the dismemberment of Puruṣa/Prajāpati is not of Aryan origin. There are no references to it in the earlier Veda, but it is common "in the religious ethnography of South East Asia and its Pacific dependencies." Mus also observed that there is "attested, parallel to the myth, the practice of putting to death a human being for the collective profit of those who offered him, a sacrifice which is followed by a dismemberment, or even the dismemberment of the victim while he is still alive." He adds:

> The cruel form which the sacrifice of *meriah* used to take, hardly more than a century ago among certain primitive tribes of India, is well known. The man was bound to the stake and each person tore off a piece of his flesh until there was nothing left of him. Then the participants would each go and bury his own portion in his best field (Mus 1935, *116).

Thus the sacrifice, by impregnating earth with parts of the human victim, contributed to the fertility of the soil.

Mus sees traces of such ideas and practices in a great variety of contexts. One of them is the belief in relics. In Buddhism, much importance is attached to the distribution of the relics of the Buddha, and their deposition within a stūpa. The Buddha is identified with these relics and with the stūpa just as in the Agnicayana the yajamāna is identified with the golden man and with the altar itself. The Sinhalese chronicles refer to relics as the life (*jīvita*) of the stūpa (Mus 1935, *75–*77). The casting of images of the Buddha, and indeed the origin of idol worship itself, may originate in this context.

In the Agnicayana, a live tortoise (*kūrma*) is buried under the altar. Dumont (1957, 16–18) has shown that the tortoise was chosen as a symbol

of the three worlds (earth, sky, and atmosphere) because of its domelike shape. The tortoise was, moreover, regarded as the juice or life sap (*medha* in Taittirīya Saṃhitā 5.2.8.5, erroneously translated by Keith as if it said *medhā*, "intelligence") of the earth: when Prajāpati created the earth and threw it into the waters, the juice that flowed from it became a tortoise.

Biardeau (1976, 18) has recalled that the importance of the tortoise (kūrma) lies also in its alleged etymological connection with the verb *kṛ-* "to do, to make" (cf. Śatapatha Brāhmaṇa 7.5.1.5–6). Another term for tortoise, *kaśyapa*, is a name of Prajāpati. Ruben (1939, 241–243) has referred to numerous legends among Indian tribes, and also in Central Asia and China, where the tortoise is described as support for the world, and is connected with its origin. In later times, the tortoise became an *avatāra* of Viṣṇu, and in the myth of the churning of the world ocean, the churning staff or axis of the world rests on a tortoise (see, e.g., Gonda 1954, 126–129). In the Bhagavad Gītā (2.58), the sage is described as withdrawing his senses from external objects as the tortoise withdraws its limbs. It seems likely, from what we have seen before, that the lifesap of the tortoise is a remnant of the life sap or blood of the sacrificial victim that fertilizes the soil.

The investigations of Ruben (1939) are in several respects similar to those of Rönnow (1929), to whom he does not refer. Ruben has gone a step further and suggested that the Asûr, a tribe now living in Central India, may be traced back to older tribes with similar names that the Vedic Indians interpreted as referring to the Asuras. This might have resulted in the development from the Indo-Iranian Asuras into the demonic Asuras of later times. Unlikely, no doubt, but not impossible.

Macdonald (1952 = 1975) has placed Mus' ideas in a wider perspective by providing more ethnographic evidence from South, Southeast, East, and Central Asia. He has also emphasized that the male victim is symbolically coupled with the female earth. This is supported by early Vedic references to a sacrificial boar mating with the earth, which is consistent with the fact that Puruṣa/Prajāpati is male, like most animal victims (it is not supported by the romantic frontispiece of a girl victim in Campbell 1864). Referring to the work of Verrier Elwin, Macdonald has drawn attention to the fact that the stake to which the meriah victim was tied was forked, and that "the victim's head was sometimes pulled back across the fork" (cf. Campbell 1864, 113). According to Maconald this form represents the female sex. He is supported, for example, by the practice of the Angami Nagas, as reported by Hutton (1921, 231–232), who "spread prosperity" by means of two stakes, one forked and one straight, "the former representing 'the reproductive organs of the woman and the other the male organ'" (Macdonald 1952, 333 = 1975, 6). It may be noted that the Vedic animal sacrifice requires single-pronged (*eka-śūla*) as well as two-pronged (*dvi-śūla*) forks.

Macdonald believes that the dismemberment myth is not, or is not merely, an agrarian rite, as Mus had suggested, but that it goes back to a

period before the beginning of agriculture. He describes or refers to various rituals in which the animal victim is shared out among members of the community in such a way that it establishes or reestablishes the position of each member in the social hierarchy:

> The animal sacrificed was doubtless originally the animal caught in the hunt. Meat, the product par excellence of the hunt, was a rare commodity for many of the members of the primitive community; that the sharing out of this asset was done unequally is not at all surprising. The strong man, the accomplished hunter, the priest on whose activities the smooth succession of the seasons depends, the maker of arms or of instruments, these will not receive the same portion as the unskilled adolescent. . . . Prajāpati is the male; the hunt is essentially the occupation, the business of the males of the community. It is the males whose ranks are fixed in these moments of coming together which are marked by communal banquets (Macdonald 1952, 335, 338 = 1975, 7,8).

If Macdonald is right this would not merely provide background for Ṛgveda 10.90.12, in which the castes are derived from parts of the primeval Puruṣa, but it would throw light on many patterns of hierarchical distribution, among the yajamāna and his priests, of offerings and oblations of parts of the animal victim, sacrificial cakes, and sacrificial beverages such as Soma. The dakṣiṇā or "sacrificial gift" is also distributed hierarchically: the four main priests (hotā, adhvaryu, brahman, udgātā) receive twice as much as the next four (maitrāvaruṇa, pratiprasthātā, brāhmaṇācchaṃsin, prastotā), who in turn receive twice as much as the next four (acchāvāka, neṣṭā, āgnīdhra, pratihartā), who receive twice as much as the remaining four (grāvastut, unnetā, potā, subrahmaṇya). The yajamāna defrays the cost of the ritual, which the priests perform on his behalf. In the *sattra* rituals the yajamāna has been eliminated and the priests perform the rites among themselves. In recent times, when a Soma ritual is performed, the relationship between the yajamāna and his priests is like that found in a sattra ritual: all are chosen from the same group of vaidikas, and the roles may be distributed differently at a subsequent performance. This is an institutionalization of the cyclical distribution of wealth, which Heesterman (1959) regarded as characteristic of the dakṣiṇā.

Malamoud (1976, 197–198) has drawn attention to another feature of dakṣiṇā: the analogy between a ritual performance and medical treatment, specifically psychoanalysis. The relationship between the yajamāna and his priests is analogous to that between a patient and his analyst. In either case, payment of dues is necessary, and without it the performance might not come to an end. As Freud emphasized, free treatment produces an increase in resistance. Similarly, without dakṣiṇā the ritual would be incomplete.

5. Origin and Significance

Heesterman (1967) does not reject Rönnow's conclusions with regard to the Agnicayana and the human sacrifice that underlies it, but he places them in a different perspective. According to him there are several contradictions inherent in the śrauta rituals, to which the manuals have given various solutions. By seeking the origins of these contradictions we can partially reconstruct a "preclassical" ritual. At the beginning of the Agnicayana, for example, there is mention of the preparation of the five heads, but there are also the alternatives of the sacrifice of a he-goat for Prajāpati or for Vāyu. In the preclassical ritual, animals (including the human victim) were beheaded, but in the classical ritual, victims have to be killed by strangulation outside the sacrificial enclosure. That the animals were originally slaughtered at the time they were tied to the sacrificial post follows from expiation rites prescribed in the event blood has mistakenly been spilled on the post. Ṛgveda 1.162.9, moreover, refers to portions of flesh sticking to the post.

> Possibly the peculiar way in which the animal is bound to the stake points in the same direction: the cord is fastened to the right foot, goes round the left side of the neck and is then wound round the right horn and finally fastened to the stake. Thus room is left for the slaughterer's knife (Heesterman 1962, 18).

According to Heesterman, in such cases the concern is to remove what is impure and inauspicious from the place of sacrifice (ibid., 19), and to create an ideally ordered world of rationalized sacrifice (1967, 43), impervious to death.

More specific conclusions can be drawn from the introductory rites of the Agnicayana. According to the Śrauta Sūtra of Baudhāyana, the head of the vaiśya has to be obtained in battle, in other words, it is the head of an enemy conquered in battle. When the clay for the preparation of the ukhā pot has to be obtained, a procession starts out towards the loam pit. On the way they come across an anthill with a vaiśya posted to its south to guard it. The clay they seek, in which Agni is supposed to be hidden, is referred to as *purīṣa*, a term connected with cattle (see also Gonda 1965a, 224–225). According to Heesterman, it is here that we hit "the rock bottom of reality. The vaiśya or rival does not so much guard an anthill or a loam pit, however weighty their symbolic value, but his own head, his cattle, and his fields" (1967, 40). Actually, Baudhāyana's phrase "he guards it (i.e., the anthill) from the south" (*tāṃ dakṣiṇato gopāyann āste*) could be interpreted as: "he keeps himself south of it acting as a cowherd" (ibid. note 52a). In other words, we are back at the cattle raids and similar raiding expeditions of the Vedic nomads, referred to before (above, pages 97–105; cf. Vol. II, page 485).

The vaiśya group, whose domain is called *viś*, consists mainly of farmers and cattle breeders. In contradistinction, the kṣatriyas or rājanyas, whose domain is kṣatra, represent the military, the nobility, and the secular power.

Mylius (1974) has drawn attention to a large number of passages in the Brāhmaṇa and ritual literature in which vaiśyas are described as the main object of exploitation: they are *ādya*, "to be eaten." Their chief exploiters (*attṛ*) are kṣatriyas, assisted by brahmins. For example: "viś is food for the kṣatriyas" (Śatapatha Brāhmaṇa 3.3.2.8); "the state (rāṣṭra) eats the viś" (13.2.9.8); "he places the juhū ladle on top, and the other sruc ladle below, because juhū is the kṣatra and the other sruc ladles are the viś. Thus he makes kṣatra superior to viś" (1.3.4.15); "he places the Soma on the pressing stones; Soma is kṣatra and the pressing stones are viś. Thus he makes kṣatra rise above viś" (3.9.3.3.); etc.

There are also passages stating explicitly that brahmins tried to play kṣatra and viś off against each other, e.g.: "An offering on eleven potsherds for Indra and on seven potsherds for the Maruts should be made by someone who wants to create strife between viś and kṣatra" (Maitrāyaṇī Saṃhitā 2.1.9).

Starting from the Cosmic Man, we have found notions of human sacrifice connected with the Agnicayana. In the case of the head of the vaiśya, the killing is not sacrificial; it merely reflects the customary raids and expeditions of the Vedic nomads. It is possible that the notion of human sacrifice is inherently connected with the dismemberment of a primeval giant. Sauvé (1970) has shown that both occur together in Indian and Scandinavian mythology. But human sacrifice in Scandinavia, as described by Sauvé, is almost totally different from Vedic sacrifice. There is no compelling reason, therefore, to derive both from an Indo-European prototype. It is not surprising that Vedic scholars have been able to put Puruṣa and Prajāpati together from earlier Vedic material. This is an exercise in ingenuity, at least in part. The Vedas themselves are not isolated; it is we who happen to be ignorant of most of their context and surroundings. The relatively late appearance of the Puruṣasūkta in the Ṛgveda, and the widespread occurrence of notions of human sacrifice in South and Southeast Asia, would equally support the hypothesis that the Cosmic Man is a pre-Vedic phenomenon. More likely than either of these two theories is the hypothesis that the Vedic nomads and the pre-Vedic Indians each had a notion of a Cosmic Man whose features may have been combined in the Agnicayana. At the present state of our knowledge it would be hazardous to try to derive a more definite conclusion.

The connections between the Puruṣasūkta and the Agnicayana explain the importance of the number 1,000 in the construction of the fire altar. According to the śūlba sūtras, which deal specifically with altar construction, 1,000 bricks should be used for the construction of the altar at the first performance of an Agnicayana. This altar is then piled in five layers of 200 bricks each. The number five was already an important number, and the Agnicayana seems to have made it even more important. Groups of fives are widespread in the Vedas and in classical Hinduism (see, e.g., Knipe

1972, 28–32; 1975, 1–7). The construction of the altar, however, is a topic in its own right and deserves a separate section.

THE ALTAR

BEFORE TAKING UP the construction of the large bird-shaped brick altar that is the distinguishing mark of the Agnicayana ritual, let us revert once more to the culture of the Indo-Iranian nomads before they entered the Indian subcontinent. Mary Boyce's description is suggestive:

> The Indo-Iranian religion was shaped, it seems, during millenia of wandering on the steppes of Inner Asia, and materially it was accordingly of extreme simplicity. Worship was offered the divine beings without aid of temples or altars or statues, and all that was needed for solemnizing the high rituals was a clean, flat piece of ground, which could be marked off by a ritually-drawn furrow. The offerings consecrated there were made not only to the invisible gods, but also to fire and water, which could properly be represented by the nearest domestic fire and household spring, although a ritual fire was always present within the precinct itself, burning in a low brazier. (The fire was placed in a low container within the ritual precinct because the celebrating priest himself sat cross-legged upon the ground.) To judge from later practice, this ritual fire was either kindled for the occasion, or made of embers brought from the nearest hearth. The only continually-burning fire known to the Indo-Iranians was evidently the hearth fire, lit when a man set up his home and kept alight as long as he himself lived, a divinity within the house. This was tended with care and received regularly a threefold offering of dry wood, incense, and fat from the sacrificial animal. Such domestic fire could readily be carried in a pot during nomadic wanderings, to continue burning wherever the family pitched its tent (Boyce 1975, 455).

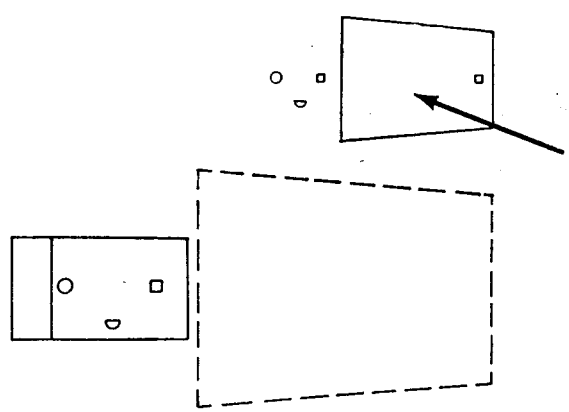
Many features of this description are still applicable to the Vedic ritual. Apart from its elaborate altars, the Agnicayana includes simple rites that require oblations made into a fire installed on a simple, ritually demarcated piece of ground. An interesting question concerns the shape of these Indo-Iranian ground altars, and in particular whether they were square or round. As we have seen, the contrast between a round domestic altar and a square offering altar is found among the Vedic Indians, the Iranians, and also the Romans (above page 93). The Greeks had a round domestic altar that was generally small and on which offerings of honey and milk were

PLATE 4

PLATE 4

The Indo-Iranian Fire Offering

Before they built alters, the Indo-Iranian nomads installed fire on a flat piece of ground, after loosening the soil and demarcating it ritually. The Agnicayana includes oblations into fires installed in this simple manner. Here the yajamāna pours butter into the fire from his juhū ladle during the animal sacrifice for Vāyu on the first day (Episode 2). The fire is the "new offering fire," installed at the eastern end of the Great Altar Space (mahāvedi). Parts of the trapezium-shaped outline of the mahāvedi are visible. The "old offering fire," burning on a clay altar, is in the background (see also Figures 3 and 22).



made, and a square altar that was generally large and used for animal sacrifices. The roundness of the domestic altar has been related to the womb. The circular altar represented permanence, immutability, and the home. Itself unmoving, it was considered the principle of movement (Vernant 1965, 99, 122, 142–143), like Aristole's god, "the first unmoved mover" (*τὸ πρώτον κινοῦν ἀκίνητον*).

The Greek domestic altar was often tended by women, and was sacred to a goddess, Hestia (*ἑστία*, "hearth"). The square altar, which is also the blacksmith's hearth, is related to the male god Hephaistos, originally a fire daemon from Asia Minor. In the Vedic ritual, the round domestic altar is also compared to a womb, while the square sacrificial altar represents the newly created world for the gods. All these facts seem connected, and admit of a generalization. While round and square—as the shapes of altars, temples, houses, and cities—are found separately or in various combinations throughout the world (see, e.g., Seidenberg, forthcoming), the specific contrast between round and square altars is in all likelihood Indo-European.

The burial mounds (*śmaśāna*) of Vedic times could be either square or round (Caland 1896, 141). Square seems to have been the preferred shape. According to the Śatapatha Brāhmaṇa (13.8.1.5; cf. 13.8.2.1), the burial mounds of the godly people (*daivyaḥ prajāḥ*) are four cornered (*catuḥ-srakti*), whereas those of "Asuras, easterners, and others" are round (*parimaṇḍala*). Thus the square or quadrangle seems to be the Vedic shape, the round one that of the original inhabitants. It has been suggested that the circular, "native" shape survives in the round stūpas of Buddhism, which are burial mounds in so far as they contain relics. The Vedic preference for the square burial might be related to the Vedic nomads Central-Asian background. Even in northern Asia, where the corpse is placed on a platform, the platform is square or at least rectangular. Among Altaic peoples, who perform a horse sacrifice, the bones of the horse are placed on a square platform (Nachtigall 1953, 54). Elsewhere we find a mixture of square and circular burial pits (as among the Lepchas in Sikkim: Nebesky de Wojkowitz 1951, 31). But all of this should merely alert us that such parallels may not be taken too seriously.

The main altar of the Agnicayana functions in several respects as a tomb: the golden man and five heads of sacrificial victims are buried under it. In the Agnicayana altar, the square definitely prevails over the circle. The bricks are square or have shapes derived from the square, such as rectangles and triangles (see Figure 9 on page 198). It is possible that an echo of round bricks survives in the so-called *maṇḍaleṣṭakās*, "circle bricks," but these are generally taken to be bricks on which a circle is carved or drawn. In the 1975 performance, they occurred in the first, third, and fifth layer, on top of each other. Circles made up of squares occur in the Agnicayana altar in two ways. In the central part of the first, third, and fifth layer of the bird-shaped altar, the bricks may be arranged in the shape of a circle. This is described in the Śatapatha Brāhmaṇa (for illustrations see Eggeling 1897, IV, 17, 48, and 98).

Or else, as a special form, the entire altar may be built in the shape of a chariot's wheel (*rathacakra*; for illustrations see van Gelder 1963, 311, 313). As we shall see, the altar may also be constructed in the shape of a "square" bird (*pīṭhan*) (see Volume II, pages 351–357).

The predominance of the square in the main altar of the Agnicayana derives from the squareness of the offering altar. Roundness is the mark of the domestic altar. It seems contradictory that in the Agnicayana the new domestic altar is constructed in the shape of square, but this is not difficult to explain. In the more complex śrauta rituals, the domestic sphere has receded further into the background. The higher we ascend in the hierarchy of rituals, the more predominant become śrauta features and the more recessive gṛhya features. The new domestic altar of the Agnicayana, following this trend, has become a square.

It is clear that it would be incorrect to say that the Vedic nomads had only square altars. They considered the square more sacred and made it the shape of their offering and divine altar. Their circular domestic altar, however, exhibited the basic shape. This is in accordance with the data from other Indo-European cultures, and is obvious from the ritual. For example, the fire for the square offering altar is lit from the circular domestic altar. The pre-Vedic Indians may have had circular altars, in which case the Vedic nomads scored two points at the same time when they began to construct their new domestic altar in the shape of a square: on the one hand they moved further into the divine sphere, on the other hand they put the indigenous inhabitants further down. Such double-edged moves are quite consistent with the general character of Vedic ritual.

In the Ṛgveda, three altars are mentioned, but the shape of an altar is mentioned only once, and indirectly. Ṛgveda 10.114.3 is a riddle that mentions a girl with four tufts (*catuṣkaparda*) who is butter-faced (*ghṛtapratīka*). The mention of butter makes it clear that a fire is referred to (cf. Ṛgveda 5.11.1, above page 74), and the riddle implies that the altar on which this fire was installed was quadrangular (cf. Potdar 1953, 73). That the Ṛgveda does not explicitly refer to round altars can of course not be construed as an argument that there were no such altars in the Ṛgvedic period. In view of the later development it is more likely that it was understood that the domestic altar was circular.

Śatapatha Brāhmaṇa 13.8.2.1 is another passage that contrasts the burial mounds of the Vedic nomads with those of the original inhabitants. It states that the former are close to the ground, while the latter are separated from the ground "on a *camū* or some such thing." Eggeling takes camū to be "a shallow stone basis or trough, either solid or consisting of masonry (bricks) in the manner of our stone-lined graves" (1900, V, 430, note 1). However, the term camū generally denotes a vessel or pot. It seems more likely that this camū was used as a coffin, in which case the reference is to urn burials. Prehistoric urn burials have been found in several parts of the Indian subconti-

nent (see, e.g., Longhurst 1936, 9–10 and Figure 8). Since the Vedic funeral involved cremation, there was an area on which the fire was installed. If this is the place specifically described as close to the ground, it would seem that the Vedic nomads had not reached that stage of development at which fire is installed at some height so as to benefit from draughts. This further corroborates the picture of the Indo-Iranian altar as simply a demarcated piece of soil.

There is a very wide gap between the simple altars of the Indo-Iranians and of the Ṛgveda, and those described in the Yajurveda. The texts of the Yajurveda describe the altar for the Agnicayana as an enormous structure piled up from at least a thousand kiln-fired bricks. The term used to denote bricks, iṣṭakā or iṣṭikā, occurs for the first time in the Taittirīya Saṃhitā, and is subsequently found in the other branches and texts of the Yajurveda. In these texts we also find elaborate references to the firing of the ukhā pot, which itself is not mentioned in any earlier text. Taittirīya Saṃhitā 4.1.6 provides the mantras that accompany the rites at which the pot is moulded from clay and smoked, after which a trench is dug, the pot is placed in it, covered with fire, and baked for three days. All these things are done, according to the mantras, "in the manner of Aṅgiras" (*aṅgirasvat*). Baudhāyana Śrauta Sūtra 10.6 (see Volume II, page 495) states that a second and third ukhā pot (obviously spares), five bricks called *ṛṣabha* ("bull"), and three bricks called maṇḍaleṣṭakā (the bricks already referred to, which have a circle carved or drawn on their surface) are to be treated in the same manner. The terms *dhūpayate* ("fumigate") and *sudhūpita* ("well fumigated") occur in this context for the first time. The verb used for "firing," *pacati*, is common from the Ṛgveda onwards for cooking, baking, roasting, or boiling, but is used for the first time in these Yajurvedic contexts for the baking of bricks. The technical sense of "fumigating" is not clear, unless it refers to reduction (cf. Saraswati and Behura, 1966, 128–129).

In an important article, Converse (1974) has argued for the indigenous origin of the Agnicayana construction, because the art of baking bricks, which was unknown to the Vedic nomads, was practiced by the much earlier Harappans:

> The Harappans used millions of kiln-fired bricks as well as countless sun-baked ones. . . . The bricks of the Harappa civilization in its mature phase were beautifully made, well fired, and standardized in size. The basic size for the bricks was 11 1/2 inches long, 5 3/4 inches wide, and two or three inches thick. There were also double bricks 11 inches square, and special bricks for well copings, drain covers, corners, etc.
>
> Now, in the whole of the Ṛg-Veda there is no word for brick, nor any descriptive phrase for bricks. So far no ruins of brick dwellings have been found that can be attributed to the Aryans in

the early Ṛg-Vedic period. The Ṛg-Vedic references to houses indicate that they were made of perishable wood and thatch. Bricks were thus not part of the Ṛg-Vedic technical or ritual accomplishments. There are also no references to bricks in the Ṛg-Veda Brāhmaṇas and outside of the Agnicayana sections of the Saṃhitās and Brāhmaṇas of the Yajurveda tradition, no significant references to bricks occur in these or in the Sāmaveda Brāhmaṇas. Thus, in the Brāhmaṇas, when references to bricks begin to appear, their use is confined to one specialized rite, and the rite itself is found only in the Yajurveda tradition. The fire altars in other rites were made of packed earth, not bricks.

The size of the bricks to be used in the rite was one foot square, and half-bricks were also to be used (ŚB vii, 5,3,2; viii, 7,2,17). This size and shape corresponds very closely to that of the Harappa bricks described above. The lack of any bricks in the early Vedic tradition and the presence of bricks in large numbers and of the same size in the adjacent indigenous Black-and-Red Ware territory suggest that the Black-and-Red Ware culture is the source of the Agnicayana brick-making skills.

The word for brick also suggests a probably non-Aryan origin. As a Sanskrit word, *iṣṭakā* is related to the ritual use of bricks as an oblation, an *iṣṭi*, and not to their general character as a building material. This suggests that bricks first came into Vedic usage through this ritual function, rather than through their usual building function. By contrast, the brick words in Dravidian-based languages such as Tamil are descriptive of the primary use for bricks for building. For instance, one Tamil word for brick is *cengal*; *cennu* means straightness, and *kal* or *gal* means stone or clay. Another Tamil word for burnt (fired) brick is *cuṭakal*, *suṭakal*; again *kal* means clay or stone, and *cuṭu*, *suṭu* means to burn, to bake, to burn bricks. It is possible that an early form of *suṭakal* was the foreign phonetic basis of what becomes Sanskritized into *iṣṭakā*: an inversion (not uncommon in the incorporation of Dravidian words into Sanskrit) of the *s* and the *u*, and the dropping of the final *l* to conform to Sanskrit endings, would give *uṣṭaka*; the use of the bricks as *iṣṭi* would tend to bring about the change from the initial *u* (not common in Sanskrit) to the more common *i*. Whatever the source word, it was the Sanskrit meaning of the approximate transliteration of the indigenous word that was emphasized, and this Sanskrit word, *iṣṭakā*, in no way reflects the building function of bricks but only their ritual use (Converse 1974, 83–85).

Converse's archaeological arguments are strong. It has to be noted, however, that the size of the bricks, though perhaps in practice having sides

of more or less a half foot, a foot, or one and a half feet long, was not an absolute measure, but relative to the size of the sacrificer. This is clear from the sūtra literature, and mentioned in the Śatapatha Brāhmaṇa (10.2.2.6): "He measures the altar by the sacrificer with upstretched arms".

Converse's linguistic arguments are less strong than her archaeological evidence, and require some comment. A Dravidian origin for iṣṭakā is improbable or impossible on etymological grounds (Emeneau, personal communication; Emeneau also points out that *ceṅ-kallu* means "red stone"). Moreover, iṣṭakā is not merely Indian, but also Indo-Iranian. Mayrhofer's *Etymological Dictionary* gives the Iranian cognate *ištya* with the same meaning, "brick." This term is attested only twice (Martin Schwartz, personal communication): both occurrences are in the *Videvdād* (*Vendidad*), 8.8 and 8.10, a late Avestan text, not earlier than the third century B.C. In both contexts, bricks or the dust from bricks or stones are used to cover a corpse, not for the construction of a burial mound, but to protect the corpse temporarily, in bad weather, before it is given to the birds and other animals. In Old Persian too *išti* occurs and means "brick" (allegedly fire dried). It is found, for example, in an inscription by Darius from Susa (fragment 29). It refers to the bricks used for the construction of Darius' palace. The inscription informs us that Babylonians were employed as brick makers. In modern Persian, derivatives from the same stem are also common.

In Iranian, then, the term for "brick" is used in a general sense, and is not confined to altar building, or similarly constrained to sacred usage. This does not invalidate Converse's view that iṣṭakā in the Yajurveda texts refers only to ritual bricks. In Vedic culture, bricks were never used in the construction of ordinary buildings: *l'emploi en est limitè á l'"empilement" de l'autel du feu* (*agnicayana*)*—et accessoirement des dhiṣṇya* (*'foyers'*) *annexes* (Renou 1939, 504, note 1). In Indian architecture (*vāstuvidyā*), bricks appear only much later (Bhattacharyya 1948, 249–258).

The term used for "brick" could have been taken by the Indians from the Iranians, or by the Iranians from the Indians, or by both from an earlier source. It is possible to derive it from an Indo-Iranian root, but this is open to doubt. The term iṣṭi, denoting the ritual oblation of a vegetable substance and the accompanying rites (see above pages 46–48), is derived from the root *yaj-*, "sacrifice, perform a rite," with past passive participle *iṣṭa*, "sacrificed." Śatapatha Brāhmaṇa 6.2.1.10 adopts this etymology for iṣṭakā: "Inasmuch as he saw them having sacrificed (*iṣṭvā*) they are called bricks (iṣṭakā)."

The root *iṣ-*, "desire," also has a past passive participle iṣṭa, "desired, liked, agreeable." So iṣṭakā might alternatively be derived from iṣ-, "desire," in which case it could denote a wished-for object, for example, a "wish stone" (like our "wishbone"). This is in accordance with an important feature of the bricks of the Agnicayana: as soon as the altar is completed, the yajamāna
PLATE 80 wishes the bricks to turn into cows, saying: "Agni, may these bricks be cows

for me" (*me agna iṣṭakā dhenavaḥ santu*: Taittirīya Saṃhitā 4.4.11.3p.) If this was felt to be the main import of the bricks, they would be called *iṣṭakā*, because they were wish fulfillers. This is related to a common theme in Vedic and in Hinduism, where Kāmadhenu, "Cow of Plenty," satisfies all desires. The yajamāna's recitation of the Taittirīya Saṃhitā ends: "Agni, may these bricks be cows for me, glorious, giving the milk of desire beyond in the other world." Whatever its interpretation, iṣṭakā does not always refer to bricks, for example, in Baudhāyana Śrauta Sūtra X (sections 27, 29, 31, 34, 39) it applies to a piece of gold (*hiraṇyeṣṭakā*), a pot (*kumbheṣṭakā*), and all kinds of pebbles. All we can say for the present is that the term iṣṭakā suggests an Indo-Iranian, not a Dravidian background.

The term iṣṭakā survives in modern India in the meaning "(kiln-fired) brick," and is connected with immortality in a manner curiously reminiscent of the Agnicayana. Here is a Hindi riddle: "It was born right in the water, but seeing the water it dies. Brothers, let's go and cremate it; then it will be immortal (*jal hī me paidā bhaī jalai dekh mar jāi; caliyo panco phūk dē pher amar ho jāi*). The solution is: īṭ, "brick." Dundes and Vatuk (1974, 128–130) explain this as follows:

> Brick making in India begins with taking mud out of a village pond. The mud is placed in a hollow rectangular wooden frame. After smoothing the top, the frame is removed and the brick-to-be is left to dry in the sun. Village homes are typically made of such sun-dried brick. Unfortunately, if rain falls on such a brick, it will dissolve. Thus, though the brick is "born in water," it may die upon coming into contact with water again. There is, however, a way of preventing this catastrophe. By "cremating," or baking the mud brick one renders it resistant to water and thus immortal. The suggestion that cremation ensures immortality is contrary to general eschatological theory inasmuch as everyone who dies becomes immortal. There is thus a philosophical contradiction in the second portion of the riddle statement. And even empirically there is a contradiction between an object's being cremated and thus utterly destroyed and that object's being made "immortal" in the sense of existing and withstanding destructive forces.

Converse has drawn attention to a special feature of the firing of the ukhā pot, which also applies to the mahāvīra vessel of the Pravargya: both are fired with the bottom turned up. This detail is referred to by Eggeling between brackets in his translation of Śatapatha Brāhmaṇa 6.5.4.4: "He then sets down the fire pan (with the bottom part upwards)." This information is not contained in the original, which merely says: "he sets down the ukhā" (*ukhām avadadhāti*). Eggeling has probably taken this extra informa-

PLATES 5,41,42, 46,58,60B,71,72A, 85

PLATE 5A

The Ukhā Pot

PLATE 5B

The Mahāvīra Pot

A

B

tion from Kātyāyana Śrauta Sūtra 16.4.11, which states that the adhvaryu sets down the ukhā pot "upside down" (*nyubjām*). As for the mahāvīra pot and the Pravargya, Converse refers to Śatapatha Brāhmaṇa 14.1.2.21, which, without entering into details, implies that the ukhā and mahāvīra pots are to be treated similarly. Kashikar, in a study on Vedic pottery, supports this: "Even though the size and shape of this cauldron (*ukhā*) are different, the procedure of preparing it is mostly identical with that prescribed in connexion with the preparation of the mahāvīra" (Kashikar 1969, 19). This similarity has been further explored by Ikari (1975, and Vol. II, pages 168–177) and fits in well with the relationships between the Agnicayana and the Pravargya noted by Rönnow and others (see above pages 183–184).

Converse comments on the "upside down":

> This may seem like an insignificant detail. But it was specifically this inverted firing technique by which the Black-and-Red Ware, the distinctive trait of the indigenous non-Vedic culture, was made black and red! The technique was not used in the making of the Gray Ware, except very sparsely at very late levels. Inverting the pot during firing limits the oxidation in the interior of the pot, and this partial reduction leaves the interior black, while the outside fires to a red color because of the full reduction of the clays and washes used (1974, 85).

Converse has drawn attention to another passage that also suggests a pre-Vedic origin for the ukhā pot: Śatapatha Brāhmaṇa 6.6.2.6 (misprinted as "7" on Converse's page 86) quotes a mantra with which this cauldron is addressed, and that Eggeling translated as: "An Asura contrivance thou art, made in the wonted manner." Converse comments:

> The reference to the pot as an "Asura contrivance" and to the inverted firing technique as the Asuras' wonted or habitual manner of making pots acknowledges that the making of the pot has been taken over from the enemy indigenous tradition. Thus the text independently corroborates the archaeological evidence that the Black-and-Red Ware technique was identified with the non-Vedic indigenous culture. And this in turn underlines the close connection of the Agnicayana rite with that culture (1974, 86).

These conclusions seem valid though the original text does not entirely back up Eggeling's translation. The mantra quoted in the Śatapatha Brāhmaṇa occurs in Vājasaneyi Saṃhitā 11.69 and similarly in Taittirīya Saṃhitā 4.1.9.2 d and in the other Saṃhitās of the Yajurveda. It says: "You are an Asuric trick (*māyā*), made by self-power (*sva-dhayā*)" (*āsurī māyā sva-dhayā kṛtā'si*; Keith translates: "Thou are the wile of the Asura, made

with power"). The magical force of māyā is indeed, from the Ṛgveda onwards, associated with the Asuras. It is true that svadhā can mean: "habitual state" or "custom." But the reference in this context is more likely to be to the idea that the ukhā pot is a spontaneous product that comes into being through its own power, just as the fire alights in it without being lit.

The basic conclusion of Converse stands unaffected: the ukhā pot is of Asuric origin. Taken together with the assumption that references to Asuras are often references to the original inhabitants, the ukhā pot must have an indigenous origin. This may apply to the mahāvīra pot as well. However, the non-Vedic character of the Pravargya ceremony should not be stressed too far. The hot milk offering (gharma) of the Pravargya, for example, has clearly Ṛgvedic origins. The term gharma itself does not, in the Ṛgveda, mean merely "heat," as has been often assumed. Velankar has enumerated fifteen Ṛgvedic verses in which gharma is used in the technical sense of "hot milk offering" (Velankar 1962, 228–237). Six of these verses occur in Aśvin hymns, which is in accordance with the fact that the gharma offering of the Pravargya is dedicated to the Aśvin twins. In the Pravargya, this hot milk is also connected with tapas, "heat," and with sexual excitation, a phenomenon not restricted to either Vedic or pre-Vedic India (cf. van Buitenen 1968, 37; Kaelber 1976, 348–349).

If Rönnow, Ruben, and others correctly assumed that references to Asuras often indicate indigenous, pre-Vedic practices and beliefs, the same appears to hold for the Aṅgirases. In the Brāhmaṇas, the Aṅgirases are often contrasted with the Ādityas, the golden sons of Aditi, who assist man in his struggle for freedom. The Aṅgirases stand in a similar relationship to the Ādityas as the Asuras do to the gods (Hillebrandt 1927, 181). Hillebrandt was the first to draw attention to the numerous references to Aṅgiras in the Agnicayana ritual (Hillebrandt 1927, 175–176). As we have seen, the preparation of the ukhā pot takes place in different stages, each of which is gone through "in the manner of Aṅgiras" (cf. Renou 1953, 18).

Who were these Aṅgirases, after whom Agni is frequently called "Aṅgiras" and "first Aṅgiras?" Hillebrandt concluded from a general survey of their occurrence in the Ṛgveda that "the Aṅgirases were originally a family which was rather outside the main Vedic tradition, as shown by their lack of prominence in books ii–ix" (Keith 1925, I, 224). Following this suggestion there has been a great deal of scholarly discussion on their identity and provenance, and on the possible etymologies of their name. Earlier, Macdonnell had defended the view that the Aṅgirases were intermediaries between gods and men, and that their name is related to Greek *ἄγγελος*, "messenger," English: angel. Evidence for their intermediary status, however, is slight, and this view has been generally rejected. More recently, the possibility of this etymology was revived by H.W. Bailey (1957, 52–53), who postulated a root **aṅg*, "sing, enunciate," which occurs in the Vedic word *āṅgūṣa*, "song of praise." But Schmidt (1968, 51–52) has pointed out that

there are several problems in the derivation of aṅgiras from such a root (including the fact that a suffix *-iras* is not known anywhere else).

Outside of language, etymologies prove little, "for usage is stronger than etymology" (*yogād rūḍher balīyastvāt*, as the Mīmāṃsā philosophers have it). Even if a word is Indo-European, like Asura, for example, it might refer to things Indian and pre-Vedic. It is possible that the Aṅgirases were singers, and reasonably certain that they were priests of a fire cult. They are directly related to the Asuras in Ṛgveda 3.53.7 and 10.67.2, where the Aṅgirases are called "heroes of Asura" (*asurasya vīrāḥ*). Following Hillebrandt, it would not be farfetched to suppose that the Aṅgirases were originally an indigenous tribe or family that was incorporated into the Vedic cult at a relatively early stage. It is conceivable that the Agnicayana was incorporated into the Vedic ritual through their intermediary, since they were primarily priests of a fire cult. Thus the theory of Kosambi (1950), criticized in Brough (1953, xiv-xvi), that the Vedic brahmins were to a large extent recruited from the priest class of the conquered pre-Aryan population, would seem to be valid at least in the case of the Aṅgirases.

In conclusion, available evidence suggests that the altar construction of the Agnicayana, and also the ukhā and mahāvīra pots—chief ritual vessels of the Agnicayana and the Pravargya, respectively—are of pre-Vedic origin, and should be explained by the techniques for firing bricks and pots that were known to the indigenous population, and that can ultimately be traced back to the Indus Civilization. Within a wider context, this is not surprising. The use of baked bricks, though not confined to the Indus Civilization, was one of its characteristic achievements. Baked bricks were used in Sumer, though not abundantly. In Mohenjo-daro and Harappā, the use of baked bricks, rather than of mud bricks, was normal (Wheeler 1968, 8, 55). Whatever the explanation of its early distribution, it is likely that the art of firing bricks was retained by the inhabitants of Northwest India even after the great Indus cities had disappeared. In Iran, the Indo-Iranian nomadic invaders also inherited the art from earlier, sedentary civilizations. Darius employed Babylonians as his brick makers, and, as Professor Schwartz informs me, the Iranian term for oven, *tanūra*, is of Mesopotamian origin. This Mesopotamian term survives to the present day in "chicken-tandoori."

Though the altar of the Agnicayana has not been incorporated in Hinduism, there are later Indian cults that make use of fire altars. These cults are characterized by homa, the act of offering an oblation (generally of ghee = ghṛta, "clarified butter") into the fire (cf. hotā: above page 89). Though there is hardly any literature on it, the homa cult is found in both temples and practised by wandering *saṃnyāsins* and *yogins*. It has been incorporated into Buddhism, and has taken root in Tibet, China, and Japan. In the cult of the Japanese Shingon and Tendai orders, fire altars play a preponderant role. These will be treated by Michel Strickmann in volume II (pages 418–455). There is a long gap between these cults and the Vedic fire altar, and not much

is known about the historical development. That Vedic elements survive is clear. Not only is the Shingon fire ceremony called *goma*, but the number of fire sticks (samidh) is twenty-one, as in the Puruṣa-sūkta (Ṛgveda 10.90.15: above page 115).

NATURALLY PERFORATED STONES

QUIBBLES ASIDE, CONVERSE'S demonstration has established beyond reasonable doubt that the construction of the two main altars of the Agnicayana from fired bricks must be traced back to the earlier civilization of the Indus Valley. This does not imply that the entire Agnicayana ritual is a Harappan ritual, nor is it the end of the story as far as the altar itself is concerned. The piling of bricks has many other specific features. The bricks are put down in a particular order, they have particular names, and they are consecrated with particular mantras. These particular features are basically the same in the various recensions of the Yajurveda, and must therefore be ancient (Weber 1873, 270).

Among the bricks, there are two kinds that deserve special mention. These are the *apasyāḥ* "water (bricks)" and the svayamātṛṇṇāḥ, "naturally perforated (bricks)." The apasya bricks are put down close to the heads of the animals, and it is said that thereby water is put into these victims (Śatapatha Brāhmaṇa 7.5.2.40; the positions adopted in 1975 were not the same, as we shall see, pages 437–438). Baudhāyana uses the term apasya to refer to certain pebbles or stones that Kātyāyana calls *pariśrit*, "encloser," and that are elsewhere called *śarkara*. Such pebbles are used to mark or demarcate the enclosures of altars. They occur in most rituals beginning with the installation of the fire (Agnyādhāna), in the Agnicayana itself (see below pages 339, 387) and also in the funerary rites, where they demarcate the śmaśāna burial mounds (Caland 1896, 145). It is possible that the bricks called after these pebbles are remnants of an earlier and less elaborate method of demarcating altars. Such methods were probably used by the Vedic nomads and by the Indo-Iranian nomads before they entered the subcontinent. Confining fire to a hearth by means of pebbles or stones is more or less universal.

Such a nomadic Vedic origin may also be assumed for the three svayamātṛṇṇā, "naturally perforated ones," though on different grounds. A Vedic origin would explain the extraordinary importance attached to these bricks, which are sometimes treated as pebbles, and which are generally shrouded in mystery. According to the Śatapatha Brāhmaṇa, three svayamātṛṇṇa should occupy the center of the first, third, and fifth layers of the altar. They represent the three worlds, earth (*pṛthivī, bhū*), air (*antarikṣam, bhuvas*), and sky (*dyaus, svar*). They permit the golden man, and thereby the sacrificer, to breath and to pass to the highest regions (Śatapatha Brāhmaṇa 6.1.2.31 sq; 6.2.3.1 sq; etc.). If a person who has already performed the

Agnicayana once wishes to perform another Soma ritual, but is not in a position to repeat the entire Agnicayana ceremony, it is sufficient for him to put down the three svayamātṛṇṇā: "He need only lay down the naturally perforated ones; for the naturally perforated ones are these worlds; and this built fire altar is the same as these worlds" (Śatapatha Brāhmaṇa 9.5.1.58). Thus the svayamātṛṇṇā represent the Agnicayana itself.

Though the svayamātṛṇṇā are sometimes regarded as iṣṭakā (which need not mean "brick," as we have seen), the Śatapatha Brāhmaṇa (8.7.3.20; 8.7.4.1) specifically states that they are pebbles or stones (apasya; śarkara; also *suṣkāḥ śarkarāḥ* "dry stones"). A commentator on the Vājasaneyi Saṃhitā explains svayamatṛṇṇā as "a pierced stone, transversely pierced" (*śarkarāṃ chidrāṃ chidrayuktāṃ tiryakchidrām*; quoted in Weber 1873, 249, note 4). The svayamātṛṇṇā were apparently called "naturally perforated" or "perforated by themselves" (*svayam*) because they were not artifacts
PLATE 6 but were found in nature. They were therefore independent of the brick-making activity that characterized the rest of the altar construction. In fact, they contrast in their naturalness with the artificial techniques of making bricks. This points to their non-Indian, i.e., Vedic origin.

It may be mentioned in passing that the svayamātṛṇṇā stones are the only important stones that play a role in Vedic ritual. The grāvāṇaḥ of the Soma rituals, which are generally called "pressing stones," and are used for extracting the juice from the Soma stalks, need not be stones, but are sometimes the mortar and pestle (*ulūkhala*) and sometimes wooden (*vanaspati*) (Oliphant 1920, 230–231).

Coomaraswamy, in one of his suggestive and speculative articles (1939), has related the svayamātṛṇṇā to a great variety of religious phenomena all over the world. All these express an ascent to heaven (*Himmelfahrt*). The passage of the sacrificer or golden man through the perforated stones and through the three worlds is related to the ritual climbing of a tree, a sacrificial pole, or the axis mundi, at the top of which is the gate to heaven (*janua coeli*). Such notions are found all over the world. They occur elsewhere in the Vedic ritual. In a Siberian rite, the Shaman climbs a birch tree placed within a yurt, sloping so as to leave space for the hearth, and with its crown rising above the smoke hole: this opening is "a hole through which it is possible to pass from one world to another" (Coomaraswamy 1939, 13). In a final comparison, Coomaraswamy relates Ṛgveda 4.6.2 (where Agni fixes his rays, as if setting up a pole, sending up smoke, and supporting heaven) to "Paleolithic man, who already possessed his circular hut with central hearth and a hole in the roof for the escape of smoke."

These speculations support the hypothesis that the idea of reaching a higher world by passing through natural holes, passages, and caves was brought by the Indo-Iranian nomads from Central Asia. Though Coomaraswamy's speculations appear farfetched, and I for one have long been sceptical, there is in fact a wealth of evidence in support of such a view. Some lin-

guistic evidence, inconclusive but suggestive, may be mentioned first. The term śarkara, "grit, pebbles, gravel," is probably of pre-Indo-European, in fact Caucasian, origin (Hubschmidt, quoted in Mayrhofer's Etymological Dictionary). This term is also related to Arabic *sukkar* (whence English "sugar") and Latin *calculus*, a small stone used for calculation with the help of an abacus.

In Siberian Shamanism, stones with holes in them are used in a variety of contexts. They are miniature representations of rocks with caves, through which the Shaman enters the other world (Eliade 1964, 202). The Yakut Shamans wear a symbol of the "Opening of the Earth," called "Hole of the Spirits" (*abassy-oibono*: Eliade 234). The gods descend to earth through the same hole through which the Shamans fly up in ecstasy (Eliade 259). Perforated stones, some used as beads, others of uncertain use, have been found all over Inner Asia. Here are two examples brought back by Aurel Stein:

> N.xiv, iii.0035. Circular ornament of dark paste inlay. Flat on back, and pierced with a hole. Front, from which outer shell is peeling, ornamented with six yellow radial stripes, divided by two thin radial lines. Between stripes, on dark ground, yellow circles surrounding black disks on which six-rayed yellow stars with red centres. Pendant or button. Fine work. 1″ × 3/8″. Pl. XXIX (Stein 1921, I, 252).
>
> D.K.01. Stone bead, echinus shape, facetted, and pierced with large hole. Black stone (?) jet. Well preserved. Diam. 1/2″, depth 3/8″. Pl. X. (Stein 1928, I, 133).

Nothing is known about the use of these stones, but their special character could point to a ritual or magical use. Their possible use as beads probably derives from this. Nothing is known about their age, but similar stones that are almost certainly prehistoric have been found in Tibet. These stones, called *gzi*, are highly valued and auspicious. They have complicated patterns of streaks and "eyes" (*mig*) on them (Nebesky-Wojkowitz 1952). They can be used as beads because they almost always have holes in them. Tibetans never make holes in them, because the stones are considered too hard. The few that are found without holes are therefore not worn as beads, but are kept separately (Lama Kunga Losang, personal communication). There are also parallels from further east that suggest that such perforated stones, and the ideas surrounding them, are in fact ancient.

The Chinese have long been interested in perforated stones, which are miniature representations of rocks with caves, and in particular of the World Mountain. These stones are sometimes placed in miniature gardens that exhibit the same general correspondence between micro- and macrocosm. The sacred mountains are regarded as the abodes of spirits, presided over by a great deity who can be approached through caves and tunnels. At the same time, the perforated stones are models of the celestial palaces of the gods.

PLATE 6

Chicken-Fish Pebbles

These pebbles were found in the Bharata Puzha (bhārata-puḻa) or Ponnani river at Kaṇṇanur, about one-and-a-half miles downstream from Pattambi. They are called kōḻipparal, "chicken-fish," in Malayalam. Some have holes in them and count as "naturally perforated" (svayamātṛṇṇā). The Agnicayana requires two pebbles with (at least) three holes, and one with (at least) five holes. If no pebbles can be found with fully perforated holes, dents or small depressions are acceptable.

These pebbles are composed of Vivianite, a scarce mineral named after the British mineralogist J.G.Vivian, who discovered it in Cornwall. It is an iron phosphate hydrate, $Fe_3(PO_4)\cdot 8H_2O$, often found in beds of clay or in cavities in altered fossils. The pebbles have an earthy, buff color, due to weathering of the surface, but the mineral inside is blue black. It occurs as spherical to irregular concretions with prismatic crystals in radiating groups. Scale in centimeters.

Photo Michael Beaucage


9 10 11 12 13 14 15 16 17 18 19 20 2

Their holes correspond to the stars. The expression used in this connection is "cave-heaven" or "grottoed heaven": *tung t'ien* 洞天, which also means "fairyland," "paradise."

These Chinese rock caves or palaces are conceived of as underground areas where the immortals dwell, and that are connected with other similar places through a network of caves and tunnels. The caves are connected with the subterraneous waters and also with the lights of heaven. They serve as retreats for hermits who meditate there or use them for initiation rites. Hermits also have the power to recreate these worlds in the miniature cosmos of gardens with rocks. The stones found in nature, which have the required characteristics, may have been eroded limestones, lava, or fossiliferous rocks (for further details see Soymié 1954; Stein 1942; Schafer 1961).

In Taoism, rocks have long been regarded as symbols of longevity. While the magico-religious background of the miniature rock caves and perforated stones has been mainly developed in Taoism, it acquired in later times an esthetic dimension. According to Schafer, "the creation of a miniature mountain in a garden goes back to the early part of the Six Dynasties period, probably even to the Han" (1961, 5). In T'ang times, collecting fantastic stones was a favorite pastime for cultured gentlemen, who rivalled with each other in setting up lapidaria, and became the first connoisseurs of stones.

> This not uncommon craze spread to the highest in the land. The last of the Northern Sung sovereigns, Hui Tsung, was a notorious petromaniac. His greatest single collecting effort was related to the construction of a magic mountain to the northeast of the imperial palace at K'ai-feng, at the urging of a geomancer. The completion of this monumental undertaking required several years, having been begun in A.D. 1117. To it were brought stones of wonderful shape from all parts of the realm, especially those of the Grand Lake and of Ling-pi (Schafer 1961, 8).

Many of these weird and rare stones were perforated and "riddled with holes." Schafer enumerates some of them in his translation of a Stone Catalogue compiled by Tu Wan in the twelfth century A.D. Here we find such entries as:

> 49. *Heart-pierced Stones* (in river at Hsiang-chou, N. Hupeh). Little blue-black pebbles, each with a hole, hence the name. The natives grope for them in the river bed each spring, as a way of divining the number of sons they will have. Recently my brother found one as large as a goose egg. It was blue, with two lines of white markings, suggesting cursive script done in ceruse. He was robbed of it by a young aristocrat. No other like it has been found (Schafer 1961, 72).

5. Origin and Significance

The importance the Chinese attached to perforated stones and rocks as well as cavernous mountains is abundantly illustrated in painting. Sometimes perforated rocks appear in isolation; more often they dot the landscape (Plate 7A). A sage frequently appears in front of such a rock (Plate 7B); at other times a Buddha is seated within it (Plate 8A; also reproduced in Hu, 1977, Plate 041–25, together with several similar paintings). There are also pictures of stones riddled with holes, which belong to a collection (Plate 8B). In one painting a cavernous rock appears on the waters like a supernatural apparition (Plate 9). Even at present, the Chinese preserve rocks with holes in gardens and other special places (Plates 10A-B). PLATES 7-10

The facts we have mentioned are all clearly connected, and a general picture emerges. Since ancient times the belief was held in Central Asia that caves are the abodes of spirits. Whether this can be traced back to the time that men were cave dwellers themselves can only be guessed. In Central Asia, speculations on the correspondences between micro- and macrocosm led to the importance of perforated stones, which are miniature representations of these cavernous rocks, and which were used for magical and ritual purposes, possibly connected with divination. Many such practices and beliefs survive in Shamanism. These ideas were introduced into China at an early period, and were mainly developed in Taoist circles. From the T'ang period onward, they acquired an esthetic dimension that survives to the present day in the rock gardens of the Orient.

The Indo-Europeans shared some of the Central Asiatic beliefs about perforated stones. The Indo-Iranians imported them into the Indian subcontinent. The Indo-Iranians were also engaged in a fire cult, and were possibly familiar with the notion of a Cosmic Man. In India, they met with similar beliefs and also with an advanced technology that included techniques for firing bricks. They adopted these techniques in the construction of a large fire altar for the Cosmic Man, piled up from fired bricks in the Indian manner, but with the addition of their own perforated stones. The Vedic nomads contrasted the naturalness of these stones with the artifacts of the sedentary civilization they encountered. Though they constructed the altar of the Agnicayana in the indigenous manner, the Vedic nomads continued to believe that the essence of the altar was already contained in their own naturally perforated stones.

Much of this picture is still speculative, but we shall see that there is evidence of a different kind that points in the same direction and is much more specific. This becomes clear as soon as we pay close attention to the role played by the naturally perforated stones in the construction of the Agnicayana altar. The Aṅgirases provide a starting point. We have seen that the ukhā pot is prepared "in the manner of Aṅgiras." As we shall presently see, all the bricks are put down in this same manner. We have also seen that the Aṅgirases might have been originally an indigenous tribe or family, perhaps priests of a fire cult. This implies in turn that the pre-Vedic Indians had their

PLATE 7A

Landscape with Perforated Rocks

The title of this painting is: "Forest Dwellings in the Chü Region" 具區林屋. The painter is Wang Meng 王蒙 (1308–1385), of the Yüan dynasty.

PLATE 7B

Sage in Front of a Perforated Rock

"Painting of a Lohan" 羅漢畫, by Ch'en Hung-shou 陳洪綬, a painter who lived during the Ming dynasty (1368–1644). A Lohan (Sanskrit: *arhat*, "deserving") is a Buddhist sage, defined as a person "in whom the outflows of sense desire, becoming, ignorance, and wrong views have dried up, who has greatly lived, who has done what had to be done, who has shed the burden, who has won his aim, who is no longer bound to becoming, who is set free, having rightly come to know" (after Conze 1959, 93–94).

Collection of the National Palace Museum, Taiwan, Republic of China.

A

B

PLATE 8A

Bodhidharma Inside a Cave

Bodhidharma introduced the Dhyāna (Meditation) School of Buddhism into China and became the First Patriarch of Ch'an (which in Japan developed into Zen). He practised what was known as wall contemplation, sitting in front of a wall, for nine years. He died in 535 A.D. Here he is depicted as the twenty-fifth of a series of twenty-five Buddhist dignitaries, associated with the Sūraṅgama Sūtra. The series is entitled: "The Twenty-five Perfected Buddhas of the Leng-yen Sutra" 楞嚴廿五圓通佛像. It was painted by Wu Pin 吳彬 (?1601–1643). The entire series is reproduced in Hu, 1977, Plates 041–1 through 041–25.

PLATE 8B

Perforated Rock in a Private Collection

The title is: "Painting of a Snow-wave Stone" 雪浪石圖, by the Ch'ing dynasty artist Chang Jo-ch'eng 張若澄 (eighteenth century). One of the inscriptions on the painting refers to a "snow-wave stone" mentioned by the celebrated eleventh century poet Su Tung-p'o. Chang Jo-ch'eng saw this stone in a private collection. When he met with it again, twenty years later, the characters 雪浪 Snow-Wave had been engraved on its surface. He made the painting to record this remarkable collector's piece.

Collection of the National Palace Muesum,
Taiwan, Republic of China

A

B

PLATE 9

Peak of the Jade Maiden

"Drawing of the Peak of the Jade Maiden" 玉女峯圖, attributed to the painter Fan Huai-chen 范懷珍, who lived during the Southern Ch'i dynasty (479–502); but obviously of later date. The Jade Maiden mountain is one of several mountains that were famous among Taoists.

Collection of the National Palace Museum, Taiwan, Republic of China

PLATE 10A

Perforated Rock in Lake Setting

The "Three Ponds Imprinted by the Moon" 三潭印月 are features of a small islet in the middle of the West Lake near Hangchow. Two great medieval poets, Po Chü-yi of the T'ang Dynasty and Su Tung-p'o of the Sung, as Governors of Hangchow, contributed to the development of scenic features of the West Lake. The pool-studded island on which this rock is set was built at the same time as "Su's Embankment" in the eleventh century.

PLATE 10B

Rock with Creeper Trained Through Perforations

In Soochow, ancient center of Chinese garden arts. The sixteenth-century garden to which this rock was brought from nearby Lake T'ai (T'aihu 太湖) was rebuilt in the late nineteenth century and re-named Liu-yuan 留園, "Dalliance Garden," as a pun on the family name of its owners, Liu 劉. T'aihu rocks of wave = worn limestone are a primary feature of Soochow garden landscapes.

Photographs Cyril Birch

A

B

own fire cult. This, of course, is only to be expected. The people whose ancestors had built large cities from fired bricks, who fired their pottery, ate cooked food, and needed fire for heating (even if not to the same extent as is required in Central Asia) could not fail to be concerned with fire.

At this point we encounter a difficulty. There are no data from the Indus Valley Civilization that point in the direction of a fire cult. The Kalibangan excavation has yielded "a terracotta tub with traces of ash, a cylindrical stone in the center and some terracotta 'cakes' arranged around it" (Romila Thapar, personal communication; also Volume II, page 14). While this establishes the presence of fire, it does not establish the existence of a fire cult. There are plenty of hearths at every Indus site, but whether there are altars is uncertain. The Harappā seals are equally unhelpful which need not cause surprise. Even if the inscriptions on these seals are properly understood, they would give an extremely limited picture of a civilization somewhat like the picture that would emerge if all that were left of contemporary civilization was a collection of postage stamps. Such data are beautiful and interesting, but they only make sense if a great deal more is known. For this reason, our knowledge of the Indus Valley Civilization, even assuming that the inscriptions were all satisfactorily deciphered, is of quite a different order from our knowledge of the civilizations of the Near East, which left large libraries of clay tablets.

Another comparison may help to put the significance of the Indus Valley seals in proper perspective. As is well known, the decipherment by Champollion of Egyptian hieroglyphs was made possible primarily by the discovery of the Rosetta stone, which contained 14 lines of hieroglyphs together with translations into 32 lines of Demotic and 54 lines of Greek. The key to the decipherment was the occurrence of names in the three languages. In the hieroglyphic portion, each of these was clearly marked by being placed inside an oval outline. All of this is quite different from the situation in India. In the case of the Harappā seals, we have not found a Rosetta stone, and the over 2,000 seals that have so far been found correspond at best to the material inside the oval outlines of Egyptian hieroglyphic inscriptions.

It is clear that an Indus Valley cult of fire could easily fail to leave any traces in the archaeological data or on the Harappā seals. However, such a cult could not remain unnoticed in a large body of literature. Therefore, if we wish to find out about a possible cult of fire in the Indus Valley Civilization, positive evidence from similar cultures in the Near East would be more significant than negative evidence from the Indus valley itself. Fortunately, the relevant evidence has recently been collected by Jean Bottéro (1973). From this evidence we learn that the ancient Mesopotamians were still close to the period of fire collecting. Though the production of fire must have been known, there is no single verb that seems to refer to it. There are numerous references, however, to the preservation and transportation of fire. There were movable fire hearths, there are references to the use of fire in con-

nection with pottery and brick making, and—last but not least—there were fire gods. The chief god of fire was called Gi-bil or Bil-gi (sometimes Giš-bar) in Sumerian, which corresponds to Girra, Gir(r)u in Akkadian. "This is the name of the God of Fire, or of deified fire, known since the period of Fara, around 2,600 B.C., or perhaps going back to 2,700 B.C. in the archaic archives of Ur. Gi-bil means 'burning reed'" (Bottéro 1973, 10). There was also another fire god, called Nusku (ibid., p. 11).

From this evidence it would seem likely that a similar situation obtained in the Indus Valley Civilization. If this is the case, however, the Vedic nomads did not merely import a fire cult into the subcontinent; they must also have found a fire cult that was already there. What we would expect under such circumstances is that the two fire cults were combined. The Agnicayana preserves evidence that suggests precisely this.

There is a curious personage in the Agnicayana who acts as a priest, but is not found in other Vedic ritual (cf. Staal 1978; 1982, 42f.). He is called a brahmin, but he is *avidvas*, "ignorant." The term brahmin should not mislead us into supposing that this personage must be a Vedic Aryan. Aside from the Puruṣasūkta, brāhmaṇa occurs only twice in the Ṛgveda, both occurrences in the hymn to the frogs, Ṛgveda 7.103. In this context the term, used in the plural, refers to officiating priests (cf. Renou 1967, 150). It would be safe to assign it the same meaning in the expression "ignorant brahmin" in the context of the Agnicayana. PLATES 11,67,79

Like everything else that concerns the Agnicayana, the ignorant brahmin appears for the first time in the Yajurveda. The Kāṭhaka Saṃhitā (20.6: 24.10) refers to an "ignorant adhvaryu." The "ignorant brahmin" is found in several śrauta sūtras of the Black Yajurveda, but not in the White Yajurveda. Since the Black Yajurveda is older, this seems to indicate that his function was important and ancient. Yet soon thereafter, he was no longer understood and hence omitted.

Who is this ignorant brahmin who continues to be ignored? Weber did not meet him in the Agnicayana, since his description was based upon the Kātyayāna Śrauta Sūtra, which belongs to the White Yajurveda and therefore does not mention him. Caland discovered him in the Śrauta Sūtras of Baudhāyana and of Āpastamba, but even he declared: "The real significance of this 'ignorant' (i.e., perhaps unfamiliar with the cult of Agni) brahmin is not clear to me" [*die eigentliche Bedeutung des 'unwissenden' (d.h. wohl des mit dem Agniritus nicht vertrauten) Brahmanen ist mir nicht klar*: note 4 on Āpastamba Śrauta Sūtra 16.23.1].

The ignorant brahmin appears thrice in the Agnicayana (cf. Baudhāyana Śrauta Sūtra 10.31:29.1; 10.39:37.17; 10.46:46.9–10; correspondingly Āpastamba Śrauta Sūtra 16.23.1, 17.1.12, and 17.3.8; Mānava 6.1.7; Vārāha 2.1.6). He has to assist when the adhvaryu lays down the svayamātṛṇṇā in the first, third, and fifth layers of the bird-shaped offering altar. On the first occasion, the adhvaryu recites Taittirīya Saṃhitā 4.2.9.1b:

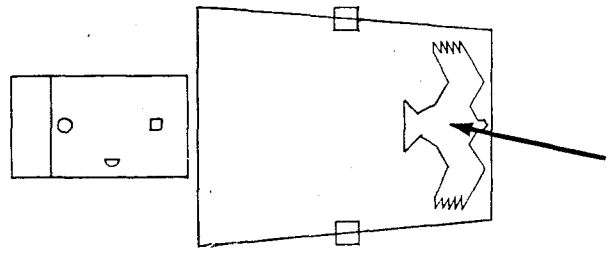
PLATE II

The Ignorant Brahmin

"Earth!
Let Prajāpati seat you on the back of the earth,
you who are wide and extending.
You are the land,
you are earth, you are the ground.
You are Aditi, all sustaining,
supporter of the entire world . . .
With that god,
in the fashion of Aṅgiras,
Sit firm!"

(TS 4.2.9.1b)

The Ignorant Brahmin (on the right) assists adhvaryu (center) and yajamāna (left) with the consecration of the first naturally perforated pebble, which has three holes in it. It is hidden in the ground, below the center of the altar, which is marked by a peg. Some bricks of the first layer of the altar have already been put down, but only two bricks have been consecrated.



Let the Lord of Creatures (Prajāpati) seat you
on the ridge of the earth,
you who are wide and extending.
You are broadness.
You are the earth. You are earth.
You are the ground.
You are Aditi all-sustaining, supporter of every being.
Hold fast the earth, make firm the earth, don't harm the earth.
For every breath, for every exhalation,
for every diffused breath, for every inhalation,
for support, for motion!
Let Agni protect you with great welfare,
a safe cover!
With that god, in the fashion of Aṅgiras, sit firm!

प्रजापतिस्त्वा सादयतु पृथिव्याः पृष्ठे
व्यचस्वतीं प्रथस्वतीं प्रथोऽसि
पृथिव्यसि भूरसि भूमिरस्यदितिरसि
विश्वधाया विश्वस्य भुवनस्य धर्त्री
पृथिवीं यच्छ पृथिवीं दृꣳह
पृथिवीं मा हिꣳसीर्विश्वस्मै प्राणायापानाय
व्यानायोदानाय प्रतिष्ठायै चरित्रायाग्नि-
स्त्वाऽभि पातु मह्या स्वस्त्या
छर्दिषा शन्तमेन तया देवतयाऽङ्गिरस्वद्
ध्रुवा सीद ॥

On the third layer, the adhvaryu recites Taittirīya Saṃhitā 4.3.6.2b:

Let the All-maker (Viśvakarman) seat you
on the ridge of the sky,
you who are wide and extending.
You are brilliant, sun-filled,
who shine on the land, in the wide sky.
Hold fast the sky, make firm the sky, don't harm the sky.
For every breath, for every exhalation,
for every diffused breath, for every inhalation,
for support, for motion!
Let Vāyu protect you with great welfare,
a safe cover!
With that god, in the fashion of Aṅgiras, sit firm!

विश्वकर्मा त्वा सादयत्वन्तरिक्षस्य पृष्ठे
व्यचस्वतीं प्रथस्वतीं भास्वतीꣳ सूरिमती-
मा या द्यां भास्या पृथिवीमोर्वन्तरिक्ष-
मन्तरिक्षं यच्छान्तरिक्षं दृꣳह्वा-
न्तरिक्षं मा हिꣳसी-
र्विश्वस्मै प्राणायापानाय
व्यानायोदानाय
प्रतिष्ठायै चरित्राय
वायुस्त्वाऽभि पातु
मह्या स्वस्त्या छर्दिषा शन्तमेन
तया देवतयाऽङ्गिरस्वद् ध्रुवा सीद ॥

On the fifth layer, the adhvaryu recites Taittirīya Saṃhitā 4.4.3.3 h:

Let the Supreme Being (Parameṣṭin) seat you
on the ridge of heaven,
you who are wide and extending.
You are strong, lordly, masterful.
Hold fast heaven, make firm heaven, don't harm heaven.
For every breath, for every exhalation,
for every diffused breath, for every inhalation,
for support, for motion!
Let Sūrya protect you with great welfare,
a safe cover!
With that god, in the fashion of Aṅgiras, sit firm!

परमेष्ठी त्वा सादयतु दिवः पृष्ठे
व्यचस्वतीं प्रथस्वतीं
विभूमतीं प्रभूमतीं परिभूमतीं
दिवं यच्छ दिवं दृꣳह
दिवं मा हिꣳसी-
र्विश्वस्मै प्राणायापानाय
व्यानायोदानाय प्रतिष्ठायै चरित्राय
सूर्यस्त्वाऽभि पातु मह्या
स्वस्त्या छर्दिषा शन्तमेन
तया देवतयाऽङ्गिरस्वद् ध्रुवा सीद ॥

There are obvious parallels between these three recitations (not brought out in Keith's translation). Let us consider them before we look at the differences. It is clear, first of all, that the three svayamātṛṇṇā in the first, third, and fifth layers are made to correspond to the three worlds: earth, sky, and heaven. Furthermore, the identical refrain: "With that god, in the Aṅgiras

manner, sit firm!" though referring to different deities, underlines that the svayamātṛṇṇā have to be incorporated into the altar in the indigenous manner, viz., in accordance with the brick-piling techniques of the pre-Vedic Indians. This refrain, moreover, is repeated for each of the bricks of the entire altar, i.e., more than a thousand times. Since the refrain is the same as Taittirīya Saṃhitā 4.2.4.4.1, where "that god" refers to Agni, the reference for each brick is taken to be to Agni.

Another mantra is similarly repeated for each brick:

The spotted cattle, pouring out milk, mix his Soma. At the birth of the gods, the tribes are in the three bright vaults of the sky (Taittirīya Saṃhitā 4.2.4.4 o = Ṛgveda 8.69.3).

ता अस्य सूदंदोहसः
सोमꣳश्रीणन्ति पृश्नयः ।
जन्मन् देवानां विशः-
खिष्वा रोचने दिवः ॥

The significance of this second mantra is not very clear. "His" Soma refers to Indra's Soma. The juice is mixed with milk. Cows are also related to bricks, because the bricks will turn into cows, and are therefore potentially cows. The bricks are wish bricks (see above, page 132). This mantra occurs also in the Great Litany (*mahad uktham*) of the Gavām Ayanam, "Cows' Walk," a sattra ritual that lasts for a year and that incorporates an Agnicayana. In this ritual, the mantra is meant to represent the vital air pervading the bird-shaped body of Agni-Prajāpati (Eggeling 1897, IV, 110–112, notes). Whatever puzzles surround this second mantra, it clearly refers to Soma, just as the first mantra, through Aṅgiras, refers to Agni. The function of the two mantras taken together, therefore, seems clear: they relate each of the bricks of the pre-Vedic altar to the Vedic cult of Agni and Soma.

Now let us look at the differences between the three recitations of the adhvaryu. In each case, a *first* deity is asked to seat the svayamātṛṇṇā; and a *second* deity is asked to protect it. The correspondence is as follows:

	FIRST DEITY	SECOND DEITY
1st svayamātṛṇṇā (1st layer)	Prajāpati	Agni
2nd svayamātṛṇṇā (3rd layer)	Viśvakarman	Vāyu
3rd svayamātṛṇṇā (5th layer)	Parameṣṭin	Sūrya.

The deities of the second group, Agni (fire), Vāyu (wind), and Sūrya (sun), are clearly Vedic deities. They occur in the earliest parts of the Ṛgveda, and they are also Indo-Iranian. They are also basic notions in Shamanism (cf. Anisimov 1963, 210–215). Their connection with the three worlds is straightforward. They occur frequently in the ritual, for example, when the yajamāna, before the Animal Sacrifice for Vāyu, takes vows of Agni Lord of Vows, Vāyu Lord of Vows, and Āditya (= Sūrya) Lord of Vows (below, page 306). Here, the three are invoked in order to secure the svayamātṛṇṇā within the realm of Vedic religion and culture.

The deities of the first group are invoked to incorporate the svayamā-

tṛṇṇa into the altar, which is constructed in the indigenous manner. While they incorporate the Vedic svayamātṛṇṇā into the pre-Vedic culture, the Vedic deities of the second group are asked to endorse and support this. But the deities of the first group, in order to carry out their task, should obviously be indigenous deities themselves.

This is precisely what they are. Prajāpati occurs only a few times in the Ṛgveda, always in the tenth book, which is the most recent. He is not Indo-Iranian. Though he can be put together from Ṛgvedic pieces, as we have seen, he is identified with the Cosmic Man, who occurs also in the tenth book, and was quite possibly a deity of the pre-Vedic Indians. Viśvakarman, architect of the universe, fits into the same category. He is not Indo-Iranian, and is clearly related to the Cosmic Man. Though Viśvakarman is, in the earlier portions of the Ṛgveda, an epithet of Savitṛ, the solar force, he occurs as an independent deity only in the tenth book, and is later identified with Prajāpati. Parameṣṭin is not Indo-Iranian, and does not occur in the Ṛgveda at all. He is found only in the Atharvaveda and in the Brāhmaṇas, and is identified with Prajāpati and Agni.

The difference in character between the two kinds of deities is also apparent from their names. Agni, Vāyu, and Sūrya are real names of phenomena and of the gods manifest in those phenomena. But Prajāpati ("lord of creatures"), Viśvakarman ("all-maker"), and Parameṣṭin ("supreme being") are not names, they are functional descriptions. These descriptions are pure Vedic, as far as the language goes. Thus Viśvakarman was applied to Savitṛ. Later they became Vedic descriptions of non-Vedic gods who had their own non-Vedic names, which must have been unintelligible and barbaric sounding to the Vedic nomads. That the Vedic nomads should refer in such descriptive terms to non-Vedic gods is only natural. We do the same when we refer to the Aztec Sun God or the Japanese Lord of Heaven rather than to Huitzilopochtli or Ame-no-minaka-nushi.

Such a situation is of course not uncommon. There are, in fact, parallels from all over the world. The Egyptians met with many gods that were different from their own. Sometimes they identified them with Egyptian gods, as when they turned Asiatic gods into Hat-Hor or Seth. Later Asiatic and Semitic gods (e.g., Baal, Astarte) were worshipped in Egypt (A.J. Wilson in Pritchard 1955, 249–250). Such exchanges must have taken place between the Vedic nomads and the indigenous Indians, though we know only one side of the story.

It becomes intelligible, within this context, why the Vedic Indians asked whom they should worship with oblations? This question occurs at the end of each of the nine verses of Ṛgveda 10.121, another recent hymn. A tenth verse was added subsequently, and provides the answer: Prajāpati. Such questions do not express scepticism, as has been suggested. They express a real question that the Vedic nomads asked themselves: what is the identity of the pre-Vedic gods of the Indians? No wonder this same question occurs several

times in the recitations that accompany typical episodes of the Agnicayana, such as the animal offering to Prajāpati at the beginning of the Agnicayana (TS 4.1.8), and the laying down of the golden man (TS 4.2.8.2 e).

The picture that emerges from the three recitations that accompany the putting down of the svayamātṛṇṇā expresses precisely the kind of synthesis between the two cults which we expected. Pre-Vedic deities are asked to incorporate Vedic cult objects into a pre-Vedic cult, and Vedic deities are asked to cooperate and endorse the operation. The brāhmaṇas that interpret these Taittirīya Saṃhitā mantras confirm this, specify it further, and enable us to solve the riddle of the ignorant brahmin.

The brāhmaṇas that explain the mantras of the first recitation are given in Taittirīya Saṃhitā 5.2.8.1–2. They explain the putting down of the svayamātṛṇṇā with the assistance of the ignorant brahmin in the following terms:

> They say: *fire should be piled upon fire* (*agnāv agniś cetavyaḥ*). The brahmin is Agni Vaiśvānara. To him should he (i.e., the adhvaryu) hand the first brick prepared with the formula. The brahmin should deposit it together with the adhvaryu. In so doing he piles fire upon fire.

This puzzling passage is found only once. It does not recur in the brāhmaṇa portions that explain the mantras of the second and third recitations (which are given in Taittirīya Saṃhitā 5.3.2 and 5.3.7, respectively). What does it mean?

I can think of only one explanation that makes sense. The adhvaryu is the representative of the Vedic fire cult. The ignorant brahmin is the representative of the pre-Vedic Indian fire cult. He is ignorant in the eyes of the Vedic nomads, because he is ignorant of the Vedic fire cult (as Caland had correctly guessed). It would not be enough to say that, in this ceremony, cooperation between the two is essential. Rather, that cooperation is the essence of the ceremony. When he puts down the svayamātṛṇṇā, together with the adhvaryu, the ignorant brahmin "piles fire upon fire," i.e., he incorporates his own non-Vedic fire cult into the Vedic fire-cult of the adhvaryu. Though ignorant, he is a brahmin. He is accepted as such because he officiates as a priest in the fire cult. His assistance is essential because he is the connecting link between the two fire cults, and he exchanges gifts with the adhvaryu to seal this cooperation.

There are parallels to the phrase "piling of fire upon fire." Ṛgveda 1.12.6 and 8.43.14 (= Taittirīya Saṃhitā 1.4.46 1-m) refer to the kindling of fire by fire. In the ritual context, this is taken to refer to the lighting of the sacrificial fire from the domestic fire. Elsewhere, fire is offered in fire. This is mentioned, for example, in the context of the animal sacrifice. Animals are not eager to be slaughtered, but the gods convinced them that it is always in fire that sacrificial food is offered:

> Having, then, first secured the animals, and churned the fire, they offered fire into the fire (*agnāv agnim ajuhuvuḥ*), and then they (the animals) knew that this truly is the manner of sacrificial food, this is its resort, that it is truly in fire that sacrificial food is offered. And accordingly they resigned themselves, and became favorably disposed to the slaughtering (Śatapatha Brāhmaṇa 3.7.3.5, after Eggeling).

In this context, the offering of fire in fire makes sense. If fire is always the receptacle in which everything is offered, even fire itself is offered in fire, and this is presented as the most telling example that proves the case. But there is no connection here with the piling of fire upon fire in Taittirīya Saṃhitā 5.2.8.1–2, which cannot be explained in such a simple, straightforward manner.

We have seen that the Agnicayana might have been introduced into the Vedic fire cult through the intermediary of an indigenous priest class, the Aṅgirases (see page 137). If this is true, it would seem likely that the ignorant brahmin was one of them. I know of no rules to that effect, and the gotra Āṅgirasa is not uncommon among the Nambudiris. Whatever its significance, the avidvān at the 1975 performance was a brahmin of the gotra Āṅgirasa (see below page 267).

It is possible that the avidvān should be related to the general class of priests of the Asuras or demon (asurya) priests, such as Viśvarūpa, Vṛtra, and Śukra (cf., e.g., O'Flaherty 1976, 98–99, 104–106, 120–122). I leave this for others to speculate, since we have yet to answer another question that is more germane to our investigation: why is the ignorant priest called Agni Vaiśvānara? Agni Vaiśvānara, "fire which is common to all men," is a common appellation of Agni from the Ṛgveda onwards. This has been interpreted as referring to the sun or to the sacrificial fire. It has also been related to fertility (Heesterman 1957, 46–47). In the Brāhmaṇas, Agni Vaiśvānara is identified with the sun, with the year, and with all fires. Later, in the Upaniṣads, he is said to include the "fire of digestion," for the digestive processes of men are everywhere the same.

But who were "all men" to the Vedic nomads who had entered the Indian subcontinent, if not they themselves and the people they met with and who were already there? Agni Vaiśvānara therefore has a meaning that is quite specific: it denotes Agni who is common to the Vedic nomads and the pre-Vedic Indians. Both had their fire cults. The ignorant brahmin is introduced into the Vedic ritual because he represents the indigenous fire cult. Agni Vaiśvānara expresses the discovery by the nomadic invaders that the settled peoples they encountered also knew Agni. Agni, therefore, is intensely sought (*pṛṣṭa*) [see Ṛgveda 1.98.2 = Taittirīya Saṃhitā 1.5.11.1 d (below page 342), etc. (Renou 1955–1967, XII, 98)].

We have almost come to the end of our story, a story that depicts the adventures of nomads who combined ideas they brought with them from

Central Asia with practices and beliefs of the sedentary citizens of India. If it is true that the Vedic Indians were so deeply convinced of the value of perforated stones that they insisted that these be integrated into a pre-Vedic fire altar, why did they not look for similar stones in India? From what we know of these pebbles, they are generally found in or near rivers. On Indian soil, the Vedic nomads generally followed the course of rivers, and sometimes tried to cross them. We have seen (above, page 97) that their original eastward expansion was limited to the foothills west of the Gandak river, which is wide and difficult to cross. Here is a river on whose banks the Vedic Indians must have spent some time, with plenty of opportunity to look for perforated stones.

As it happens, the Gandak river—which the Greeks called Κονδοχατης, but which the Hindus derive from gaṇḍaka, "rhinoceros"—is primarily known in Hinduism because a special kind of perforated stone is found in it: the *śālagrāma*, which is sacred to Viṣṇu. These stones are generally black and contain fossil ammonite. They contain apertures or holes that are supposed to have been made by an insect called *vajrakīṭa*. They are called *chidra*, "pierced" (e.g., in the *Garuḍa* and *Padma Purāṇas*: Kirfel 1935, 168), like the svayamātṛṇṇā. The name of these stones derives from a village (*grāma*) called after the *śāla* tree (*Vatica robusta*: Kirfel 1935, 165); or else from a mountainous track of land on the Gandak river, called Śālagrāmakṣetra (Venkatachalam 1958, 108; cf. also Bhardwaj 1973, 51). The main tributary of the Gandak river, the Kali Gandak, originates near the Tibetan border and flows south between the mountain massifs of Dhaulagiri and Annapurna. A little to the east of the river, in northern Nepal, lies Muktinath, a Hindu center of pilgrimage that is also associated with the worship of the śālagrāma. Downstream, in southern Nepal, several spots on the river are connected with the cult of Viṣṇu as Nārāyaṇa. A section of the Gandak river itself is called Nārāyaṇī. PLATE 12

The worship of the Śālagrāma is comparatively ancient. It is mentioned in Śaṅkara's *Vedānta Sūtra Bhāṣya* (eighth century A.D.) and in several Purāṇas (Kane 1941, II, 716). In the Garuḍa Purāṇa (with corresponding portions in other Purānas), the Śālagrāma cult is connected with the worship of Vāstu deities that play an important part in the foundation of a building. Chapter XLVI of this purāṇa gives a detailed description of a building with 81 rooms, placed in a diagram of nine by nine rooms. Different deities are placed in different squares or rooms, and in a particular order. Though very different in detail, the entire construction is not unlike that of the altar of the Agnicayana. Various forms of the śālagrāma are placed in this mystic diagram or *yantra*.

Venkatachalam (1958, 120) has drawn attention to some references to śālagrāma worship that may be earlier, but that I have not been able to trace. According to the Vīramitrodaya, a late text, the śālagrāma is mentioned in the Āpastamba Dharma Sūtra, which Kane has dated between 600

PLATE 12

Śālagrāma Stones

The Śālagrāma stone is sacred to Viṣṇu. It generally has holes in it and contains fossil ammonites. Originally, these stones were found in the Gandak river, the ancient Sadānīrā, which constituted a barrier to the eastward expansion of the Vedic Indians in the northern plains of the Ganges. The river originates in northern Nepal and joins the Ganges at Patna, the ancient Pāṭaliputra. There are many kinds of Śālagrāma that are distinguished by their names, often names of Viṣṇu or of vaiṣṇava attributes, e.g., Sanātana-gopāla, Sudarśana, etc. The stone on top is from the collection of Ajit Mookerjee, New Delhi. Below, in the center, a Sudarśana that is a cast of the umbilical area of an ammonite. The stone on the right shows parts of the ammonite itself, and a large hole on the left. Whether the stone on the left contains an ammonite or is artificial can only be ascertained by breaking it. Actually, holes could be produced in fossils through various causes. Rows of holes could be caused in fossils of amonites or other animals by snail-like shells, for example, when mud did not fully enter the shell but left open spaces which came to the surface later when the fossil was exposed to wind or water. All these ammonites probably belong to the large family of *Perisphinctaceae,* which occurred worldwide. They come from the Jurassic formation, which is found in the Himalayas but not in the Indian plains. Scale in centimeters.

Photos John Webb
Michael Beaucage

A

B

and 300 B.C. Venkatachalam also quotes a reference, in an *Āśvalāyana Gṛhya Sūtra Pariśiṣṭa*, to *svākṛti*, "having its own form," which has been explained as denoting such objects as Śiva's *liṅga* and Viṣṇu's śālagrāma. The term *svākṛti* expressed that these objects were not man-made artifacts, but originated spontaneously in nature, just like the svayamātṛṇṇā pebbles. Even at present, the sacred *rudrākṣa* beads (seeds of *Elaeocarpus ganitrus*) that are found naturally pierced for the insertion of a thread are preferred to those that have to be artificially pierced (Ghurye 1964, 92).

The cult of perforated stones in India is not confined to the śālagrāma. According to Crooke, who describes related beliefs in the popular religion and folklore of northern India, "The respect for these perforated stones rests on the well-known principle that looking through a stone which has a hole bored through it improves the sight" (Crooke 1896, II, 165). Crooke mentions parallels from other cultures, and relates perforated stones to beads, "whose efficacy is at the basis of the use of rosaries" (II, 19). Among their virtues are that they give sons, which reminds us of the beliefs of the natives of northern Hupeh, referred to in Tu Wan's catalogue of stones. The reason for this supernatural power is that the śālagrāma stones are themselves sons. The Purāṇas relate how the river goddess Gaṇḍakī engaged in ascetic exercises for many years, and was rewarded by Viṣṇu who took birth as her son in the form of śālagrāma stones (cf. Kirfel 1935, 165; Ruben 1939, 232). In Tantrism, lastly, similar stones are worshipped as representations of the vulva of the goddess.

If it is true that the śālagrāma cult of Hinduism is related to the svayamātṛṇṇā pebbles of the Agnicayana, the connections with Viṣṇu and Nārāyaṇa are not surprising, for we have seen that the Puruṣa of the Puruṣasūkta, which is also the Puruṣa of the Agnicayana, gradually merged with Viṣṇu and Nārāyaṇa in later Vedic literature (above, page 179). This is further confirmed by a Vaiṣṇava custom that continues to the present day: worshippers of Viṣṇu sip the water in which a śālagrāma has been washed to the recitation of the Puruṣasūkta (Gonda 1970, 205, note 36).

These scattered data show that the cult of perforated stones, which the Vedic nomads introduced into the Agnicayana ritual, has a widespread occurrence in Hinduism. It is not impossible that such cults existed in India at a much earlier date, for perforated stones have been found in Indus sites, but it is also possible that it originated when the Vedic Indians found perforated stones in the Gandak river similar to those that their ancestors had known in Central Asia.[1]

[1] Unexpected confirmation of the hypothesis set forth in this section was provided by Mr. Ajit Mookerjee, who told me that śālagrāma stones are invariably placed in the foundation of temples in Bengal (which is the area the Vedic Indians reached after crossing both the Gandak and Ganges rivers). An especially large number of such stones occurs in the foundation of the terra cotta temple dedicated to Haṃseśvarī, the Goose Goddess, vehicle of Brahmā, in Bāṃsabeḍi, a suburb of Bandel (Chinsura District), north of Calcutta. For further discussion, see Staal 1982, 42–53.