On the semiotics of mythological conceptions about mushrooms*

V. N. TOPOROV

Translated by Stephen Rudy

1. Mushrooms as a universal semiotic classifier

Three aspects of the study of mushrooms have led in recent years to the creation of a special discipline: ethnomycology. First, the place occupied by mushrooms in the different culinary-food and chemical codes and in the corresponding dietary regimens, with the motivations supporting it, has been determined (C. Lévi-Strauss).[1] Second, the relation of mushrooms to other hallucinogens has been clarified (R. Heim).[2] Finally, the role of mushrooms in ritual-mythological systems, the extreme case being that of the mushroom cult, has been ascertained (R. G. Wasson).[3] The first steps in the new field of ethno-mycology have been taken by R. G. Wasson on the basis of material drawn from different cultural traditions. His discovery of the exceptionally important role which mushrooms play (or played) in many cultural traditions throughout history is a sensational one indeed.

In this essay I should like to emphasize the fact that mythological conceptions about mushrooms and the practice of live mushroom cults reveal the exceptional role that mushrooms play in the *semiotic* system of the corresponding traditions, a fact to which little significance is usually attached. To anticipate my argument, it may be said that in many traditions essential semiotic oppositions are formulated with particular clarity through the use of mushrooms as a classifier, such oppositions as, for example, *nature-culture, foreign* (or *collective)-native* (or *one's own), the profane-the sacred*, *feminine-masculine*, *the here and now* (terrestrial)-*the not-here* (celestial or subterranean), *water-fire*, etc. Certain of these pairs form a definite hierarchy, which may be represented by constructing a branching scheme, as, for example, given in Figure 1.

Owing to the fact that they participate in such essential oppositions, in many culturo-historical traditions mushrooms have the status of a universal classifier. Their universality is determined, in particular, by the connection of mushrooms with all three elements of the fundamental

Semiotica 53-4 (1985), 295-357 0037-1998/85/0053-0295 $2.00

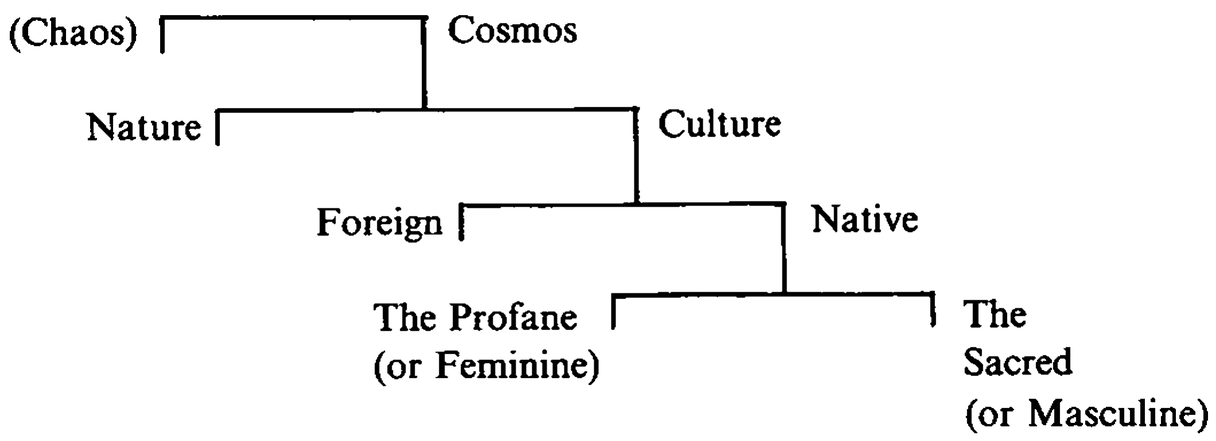

Figure 1.

complex *death-fertility-life* (see Samter 1911; Baumgartel 1950; Henderson and Oakes 1963), which is discussed below. Moreover, it is likely that the transformation of mushrooms into a universal classifier contributed to the absence of a clear-cut identification of mushrooms, to the impossibility of relating them with any certainty to one or another natural kingdom. As is well-known, there were discussions in the science of mycology over a long period of time as to which kingdom — animal, mineral or plant — mushrooms belonged to, and even Linnaeus oscillated between assigning mushrooms to the plant or animal kingdom in the first variants of his classification. In the mythopoeic traditions this indefiniteness manifested itself in the fact that mushrooms were correlated either with one of the kingdoms or with all of them together. In the first case each concrete correlation is reflected in corresponding motifs (for example, etiological: the origin of mushrooms from stone or the transformation of people into mushrooms, and so on) or in the presence of duplicate variants, where one and the same mythologem is connected now with mushrooms, now with stones, now with chthonic animals, now with cultivated plants. In the second case mushrooms act as a representation of all the kingdoms — mineral, plant, animal and human (in certain variants one may add here the kingdom of divine and infernal forces too). Here mushrooms play the role of a universal mediator that helps to neutralize those oppositions into which the representatives of the indicated kingdoms enter. Thus, the distinction between the immobility, immutability, absence of cycles and consequently, *eternity* (immortality) of stone, on the one hand, and the mobility (growth), changeability, presence of cycles and consequently, *transcience* (mortality) of plants, on the other, is eliminated. A similar sort of distinction existing between plants and animals or between animals and men, and so on, which may serve as the basis for constructing a corresponding matrix for identifying these elements according to their distinctive features,[4] is likewise overcome with the aid of mushrooms as a mediator. Inasmuch as the representatives of

these kingdoms can also be described by a gradual opposition of the feature 'life' ('life force') — from a minimal meaning (absence of life, death) to a maximal meaning (fertility, birth), — then it would appear that mushrooms, as an archi-element which arose as a result of the neutralization of particular oppositions and which replaced the concrete representatives of these kingdoms, acquire the entire scale of meanings from life to death (albeit in an undifferentiated form that presupposes ambivalence and a play on this scale, of which see below). This fact creates still another condition permitting one to connect mushrooms with the complex *death-fertility-life.* The consequences that follow from the mediational role of mushrooms within the limits of the indicated sphere are extremely significant, since the elements that comprise this sphere are isomorphic to elements of other spheres used for classification (as, for example, material substances, numbers, colors, the seasons, the cardinal points, etc.). Thus, mushrooms as a classifier go beyond the limits of their original sphere and induce the appearance of analogous mediators from other spheres as well. Naturally, the neutralization of oppositions, i.e., *coincidentia oppositorum*, may take place only when certain conditions are fulfilled, in particular when the limits of the given system are transgressed, or when one's psychological state has been radically altered. One of the most widespread means for such a change of psychological state is a substance found in certain types of mushrooms, namely *psilocybin.* It is characteristic that it is precisely these types of mushrooms which are, as a rule, mythologically and semiotically marked (cf. in particular the Mexican mushrooms assigned by Roger Heim to the family *Strophariaceae* and investigated by Wasson from the ethno-mycological point of view).[5] Moreover, it should be noted that only man is a sufficiently sensitive biological mechanism to react fully to the substance contained in these mushrooms.

2. The role of mushrooms in mythological conceptions

Little attention has been paid to the role of mushrooms in mythological conceptions. Even though there are abundant materials relating to this problem, they are scattered in various sources, usually appear in a completely disguised form, and most often are to be found outside the realm of 'official' mythology. Such information has to be gathered from current conceptions about mushrooms, which often appear on the surface to be quite contradictory. These conceptions are reflected in proverbs, sayings, embellishments of stories, omens, dream interpretations, interdictions, customs, phraseology, and symbolism which circulate in closed collectives and relate to the sphere of the 'indecent', to say nothing of the

linguistic data proper. The author of this monograph had occasion to observe the atmosphere of mystery and taboo which surrounded the topic of mushrooms even in the villages around Moscow in the pre-war period. In answer to innocent questions about mushrooms one had to hear out the rebukes of old women (sometimes even of relatively young women) who viewed this interest in mushrooms as a display of depravity or shamelessness. One would hear again and again such remarks as 'you're still little, when you grow up you'll find out' *(mal ešče, vyrasteš' — uznaeš')* or 'only girls know this; boys have no reason to' *(èto tol'ko devki znajut, a rebjatam nezačem*). One also encountered more particular interdictions (for example, there are certain types of mushrooms for pregnant women or for maidens), as well as certain identifications of mushrooms or proscriptions relating to them[6] (at least among juvenile boys), sayings, superstitions, etc. One could not help but have the impression that behind these deeply differentiated taboos, that were relaxed only when one was in the woods or in the company of other boys, there lay something possessing an extremely rich semantics and having a direct relation to the sphere of the 'indecent'.

Today it has become obvious that in many 'lower' cultural traditions, in particular among the Russians, there exist different attitudes toward mushrooms and their evaluation that indicate the social stratification of the given collective, even if only in the most general terms. To define in detail the features according to which such subcollectives are formed is a rather difficult task. Nevertheless, one can state that such features as *masculine-feminine*, *adult-child*, *married-unmarried*, etc., are quite relevant. No less important is the feature *native-foreign (one's own-alien*), that is realized in oppositions of the sort *in our village or neighborhood-in that (other) village or neighborhood.* This feature reproduces in miniature the picture of the grouping and alternation of large, extensive cultures that are either mycophobic or mycophilic in orientation, to use the terms coined by Wasson and his wife. It is hardly surprising that in cultures which are traditionally mycophobic the materials relating to mushrooms are quite meager, even on the linguistic level. In cultures that appear for the most part to be traditionally mycophilic, but that have different (usually contradictory) attitudes toward mushrooms, the system of taboos is strongly developed as a rule, which likewise hinders the preservation of information about mushrooms. Only in those cultural traditions where the cult of mushrooms received official recognition is the circle of sources significantly more extensive (cf. the ancient Central American and Chinese traditions, as well as other less significant ones). Incidentally, important information can be extracted from a diachronic analysis of those mycophobic traditions that have preserved the memory

of an earlier period when a different attitude toward mushrooms was dominant. An extremely diverse (sometimes diametrically opposed) view of mushrooms as an element of mythological conceptions in different cultures or even within the limits of the history of one and the same culture is usually linked to the presence of opposite views on mushrooms as an element of the culinary system. As a rule, the most negative attitude toward mushrooms is observed in those culinary-dietetic regimes that gravitate toward the right branch of Lévi-Strauss' well-known scheme (1964; 1966: 29f.) (Figure 2).

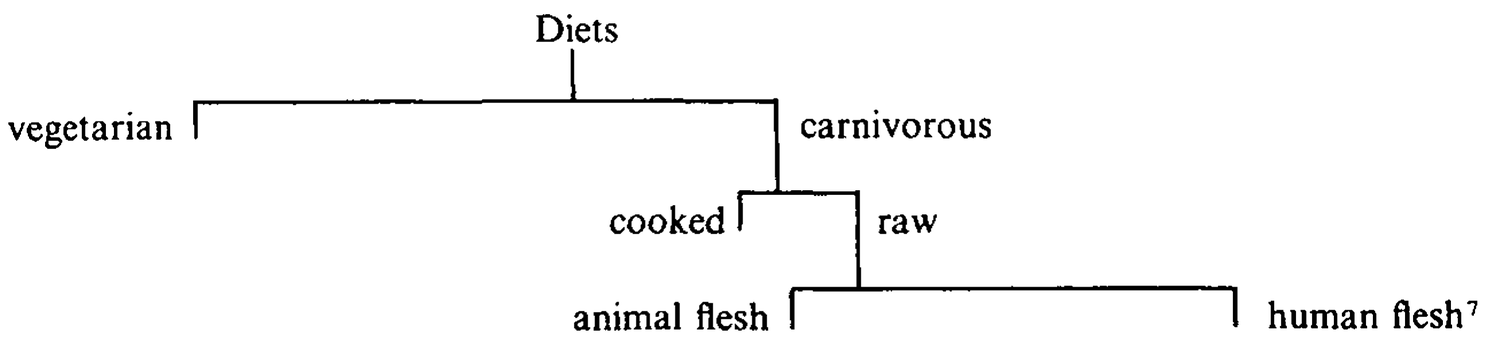

Figure 2.

Characteristic of such dietetic regimes (*régime diététique)* is the view of mushrooms as 'anti-food'. This view is testified to by legends about the fact that at one time, a time prior to the beginning of 'culture' and the emergence of the first culture hero, the ancestors of the given collective ate mushrooms (cf., for example, certain myths of the Mundurucu and Tucuna tribes cited and analyzed by Lévi-Strauss, or Russian local nicknames of the type *griboedy* 'mushroom-eaters'). Often the refusal to use mushrooms in cooking is connected with one of the first and most important acts of the culture hero of the given tradition and is equated to the transition from the state of 'nature' to that of 'culture'. Mushrooms as food are usually identified with the mold or fungus that, in many versions of such myths, appears on the hero's corpse.[8] Such myths go back to a period prior to agriculture or cuisine, the introduction of which resulted in the formation of the oppositions *raw-cooked*, *rotten~fermented* (cf. the opposition *honey-beer).* From the point of view of the 'culture' as a whole, mushrooms begin to be viewed as something related to death and hunger (as is the case among many South American Indians), as the food of the dead (the Ojibwa Indians), as excrement, often that of celestial objects (e.g. of *thunder* among the Siciatl or Seechelt Indians, of the *rainbow* among the Toba Indians and so on).[9] Yet many cultural traditions with such a negative attitude toward mushrooms, once they have made the transition from 'nature' to 'culture', turn to mushrooms with more particular needs. (Cf. the burning of mushrooms for the

purpose of expelling the evil spirit, among the Apache; the preparation of a drink from mushrooms for barren women who desire children, among the Warrau Indians; the use of mushrooms in their psychotropic function, as in the mixing of raw mushrooms with food, among the Kanaima Indians of the Guianas, or the preparation from mushrooms of an inebriating drink, among the Yurimagua Indians of the North-West Amazon; or, finally, the chewing of the ashes of mushrooms, often mixed with tobacco, among the Eskimos and Athabascans for the purpose of mood elevation [often to the point of reaching an ecstatic state — see Lévi-Strauss, 1970: 15].) However, in such mycophobic cultures mushrooms generally are identified as natural (not 'cultural'), as raw (not cooked), and as rotten (not fermented), which, taken together, determines the ban on their use in food, with the exception of such special cases as those described above, and their relegation to the status of chthonic objects. It is curious that in traditions gravitating toward the left branch of the dietary scheme given above, bans on the use of mushrooms in cooking are met with incomparably more rarely. Moreover, such cultures preserve the cult of mushrooms much more frequently, even if in a reduced form, or they may identify mushrooms with the celestial sphere. (This, of course, in no way excludes a negative attitude toward mushrooms in these traditions as well.) A clear example is St. Augustine's condemnation of the Manichaeans for their predilection for mushrooms and certain other food stuffs.[10]

Above we mentioned the fact that the mushrooms are often connected with culinary prohibitions, on the one hand, and with the opposition *masculine-feminine*, on the other. Actually, in numerous cultural traditions there is a direct and entirely conscious link made between culinary prohibitions and the rules for marital relations, which are likewise often formulated as prohibitions. This connection may be expressed on the linguistic level, as for example, in Yoruba, where 'to eat' and 'to marry' are expressed by one and the same word (cf. French *consommer,* which applies to both marriage and meals).[11] It may appear as well in the rules for behavior: cf. the ban on the use of certain plants and animals in the husband's food, particularly before intercourse, out of fear that the forbidden food will be transferred into the wife during coitus (Firth 1936: 319f.; Evans-Pritchard 1956: 86). It is omnipresent in legends, mythology, and symbolism: cf. the image of man-the-eater and woman-the-eaten, as well as the opposite image of the *vagina dentata*, whence the *vagina* = mouth.[12] In view of this connection it is hardly surprising that one of the most widespread motifs associated with mushrooms presupposes their division into *masculine* and *feminine*. In general terms this may be related to an opposition of types of mushrooms according to their external

appearance; cf., on the one hand, mushrooms with a clearly expressed stem and cap-shaped top, and on the other, mushrooms without a stem or with a stem inseparable from the cap, and with a cap in the shape of a hollow depression (cf. also the opposition *mushrooms-lips* in cases where neither mushrooms nor lips claim to be the sole possible general designation of mushrooms).[13] These two series of identifications of mushrooms are so constant in certain cultural traditions that the mushroom considered to be masculine and the *membrum virile* are designated by one word,[14] while the mushroom considered to be feminine has the same name as the *vagina.* In this connection the history of the Indo-European word **gm̥bh-*, **gombh-*, which was reflected in two basic series in the Indo-European languages, is interesting. The first series is attested by Old Indie *gabhá-* 'vulva' (cf. Old Indie *gámbha*, *gambhára*, *ga[m]bhīrá*, Avestan *ĵąfnu-*, Ancient Greek βαφή — all with the meaning 'depression', Old Norse *kafa* and similar forms), by Common Slavic **gǫba* (Old Church Slavic *gǫba*, Slovenian *gǫ̋ba*$_y$ Serbo-Croatian *gȕba*, Polish *gąbka*, *gębka,* Czech *houba*, West Slavic *gubá*, *gúba*, and the like), which designate both the class of 'feminine' mushrooms and 'vagina' (as well as *gubka* 'little lip', 'sponge'). The second series is attested by Lithuanian *gum̃bas, gum̃bras* 'lump', 'tumour', 'growth' (cf. the two meanings of Russian *šiška* 'cone' or 'lump'), Old Islandic *kumbr*, Pushtu *ɣumba* 'cone', Old Persian *gumbad*, *gumba*ð 'convexity'. In other words, two facts relating to this root are significant. The first is its use to designate genitalia and mushrooms. The second is the reflection in this root of an ambivalent relation *convex-concave*, belonging to an archetypal level and universally used in the symbolism of the sexes.[15]

In a less obvious way the same relations are present in the opposition of masculine and feminine names for mushrooms (cf. Russian *matrena, okulja, arina, dunja,* which relate to feminine personal names, as opposed to *vasjuxa, ivančik,* which derive from masculine personal names) or of the corresponding animal symbols used in their nomenclature (cf. Russian *korovka* 'little cow', *ovečka* 'little ewe', French *vache blanche* lit. 'white cow' for the milk-agaric, German *Kuhpilz*, *Pferdepilz*, as opposed to Russian *byk*, *byčok*, *voluj* [cf. Latin *boletus bovinus*], *kozël* and so on — cf. Merkulova, 1967). In the given instance the actual motivations for the names (e.g. *Kuhpilz* — a mushroom which cows eat, i.e., one which is unfit for human consumption) are not so significant. What is more important is the fact that the very principle of naming mushrooms according to masculine or feminine names or persons becomes one of the leading classificatory motifs. The same relations are reflected even more indirectly in a whole series of cultural phenomena. One finds, for example, significant identifications of mushrooms with male or female persons in

omens: cf. the typical example ‘when many *boys* are born, there will be a *war*’ — ‘when there is a large harvest of *mushrooms*, there will be a *war*', in which boys and mushrooms enter into a class of objects fulfilling *identical* functions.[16] The various interdictions or approbations for the collecting, eating, or even viewing of mushrooms are different for the masculine and feminine parts of the collective. In myths, etiological legends, folk tales, the difference between the two mentioned types of mushrooms are correlated in the plot with an opposition of men to women and, correspondingly, of their attributes; cf. certain Northern legends about mushrooms in connection with the *vagina dentata* (it is interesting that this motif often incorporates an explanation of the origin of mushrooms).[17] Of particular interest in connection with our further discussion is the folkloric motif Aarne 365, 3,2 (see Thompson 1955-58; Thompson and Balys 1958): A *boy* announces that his *wife* will be she who *eats a mushroom;* the boy’s *sister eats the mushroom*, and he runs away from her in terror (the theme of the threat of incest). Moreover, there are motifs which, although they are only distantly related to the initial motif, nevertheless allow one to uncover at least traces of the old scheme.[18]

The connection of mushrooms with the opposition *masculine-feminine*, in particular the coding of the members of this opposition through the use of the myco-classifier, may be observed in numerous examples of ‘lower’ humor and symbolism censored by the ‘official’ culture. It also occurs in the symbolism of ornamentation, where, according to at least one interpretation, masculine and feminine signs on one level are understood on another level as signs for the two types of mushrooms. This may be observed in cases of such diachronic sequences as given in Figure 3.

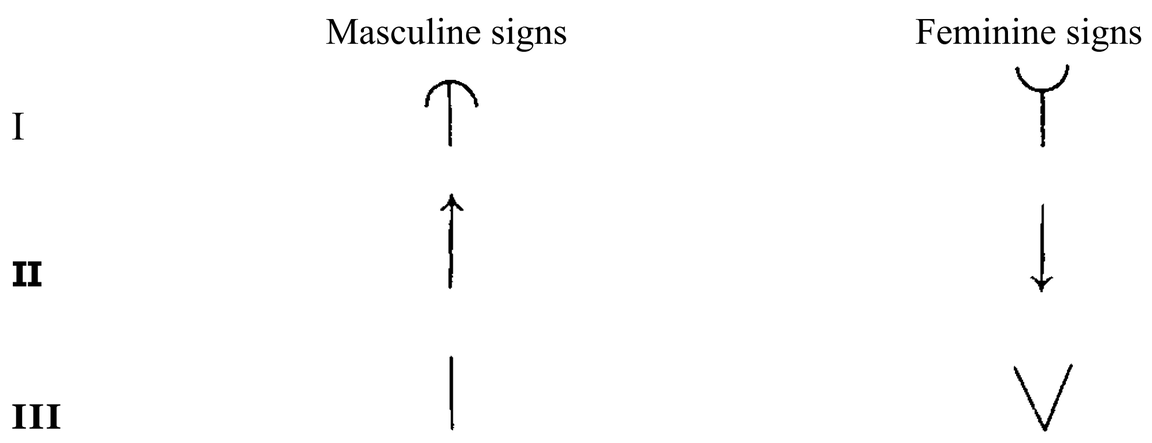

Figure 3.

Naturally, it is impossible to maintain in each concrete case that signs of the first form (I) have images of mushrooms as their exact source, and not solar or lunar images, for example. Nevertheless, there are several arguments which make the interpretation of such elements of ornament as

signs for mushrooms appear probable, even if only for a part of such examples:

First, the linguistic identification of masculine and feminine attributes precisely with mushrooms, discussed above.

Second, the use of these signs in cartouches surrounding universal schemes of the type of the *world tree*, where images for the sun and the moon are already depicted. Moreover, according to the evidence of the members of the given traditions, cartouches made up of such signs serve as magical devices aimed at evoking and augmenting fertility, which is analogous to at least one major function of mushrooms (cf. below).

Third, the presence in a number of cultural traditions of examples of a representation containing a doubled image of the world tree in the proximity of mushrooms. The best example is a three-membered mushroom depicted horizontally and vertically on a textile from the Mongolian tomb at Noin Ula now in the Hermitage, Leningrad (first century B.C.-first century A.D.). Along the sides of the mushroom *two birds* are depicted above, and the mushroom is surrounded to the right and left by a representation of the world tree. The entire composition is repeated several times, thus acquiring the function of an ornament.[19]

Fourth, the extremely close similarity between masculine and feminine signs of the type mentioned and the shape of figures for the game of draughts in a number of traditions (cf. ancient Ket checkers, checkers from Mohenjo-Daro, and others). Moreover, members of the given traditions clearly differentiate masculine and feminine checkers, have particular names for them,[20] and view the game as a sort of model for the social structure of the collective — as a type of duel between the masculine and feminine halves. In this connection one should recall the motif of a *war* between masculine and feminine mushrooms, with an emphasis on their relation to human attributes, in folk tales of the type 297B (Aarne),[21] in songs and various sorts of brachilogisms, as well as in children's games, counting-out rhymes (Russian *sčitalki*, French *comptines),* and various story formulae. A consideration of all these cultural phenomena reflecting archaic layers of mythological conceptions is essential for the reconstruction of mythological conceptions about mushrooms. Nor should one be embarrassed by the fact that the most significant mythological and cosmological motifs are preserved especially in jocular children's verses and games.[22]

What we have said above, particularly in connection with the interpretation of certain forms of ornament, should not be understood to imply that all such cases need be explained as reflections of images for mushrooms. What is essential is that the given correlation of forms undoubtedly reflects a certain rather elementary and, to all appearances,

archetypal conception, a function of sorts, that may be embodied in a whole series of concrete signs, mushrooms being only one of them. If one is attempting to define this function and the conceptions, legends, myths, etc. corresponding to it, then, naturally, one must turn to the whole class of objects which are synonymous (isofunctional) in the given relation. In general, we can state that the objects are chosen in such a way that the opposition of active, penetrating and passive, penetrated (receptive) principles is particularly underscored. Such a structure permits one to define the function and pragmatics of this entire relation as the overcoming of disconnectedness, the achievement of a state of unity, of primeval fullness and self-sufficiency.[23] Leaving aside for the moment an examination of these two principles, it is sufficient to limit ourselves here to three remarks.

The first of them has the aim of establishing a certain temporal reference point in the development of these forms (convex: concave, round: pointed, and the like). This has to do with the fact that the ancient megalithic culture reflected by monuments extending in space from the Mediterranean to India, Tibet, China and Indochina, used objects which embody these oppositions. The evolution of these objects led to the appearance of such structures as the stupa, the pagoda, and so on, on the one hand, and the pillar, the pole, the scepter, the Vajra, and so on, on the other hand. (It should be emphasized that both types of objects have a direct relation to funerals and weddings.) Moreover, in several traditions the semantics of these objects was preserved with extreme clarity; cf. the distinctly expressed phallic meaning of the pole *Ma-ni* or its diachronic variant, the arrow, the spear, and so on, in Tibet.[24] (Incidentally, one or another of such forms may have entered as well into a set of other identifications.)[25]

The second remark relates to the *umbrella* or *parasol* as the isofunctional object which is most clearly linked with mushrooms. Inasmuch as the identification of these two objects assumes, in many cases, a sufficiently direct character (cf. the names of mushrooms,[26] riddles,[27] symbolism,[28] and so on), the complementary data relating to the image of the parasol and its unconscious reflections in mythology and symbolism may be used, albeit with care, in a semiotic analysis of the image of mushrooms as well.

The third and last remark is aimed at directing attention toward the purely hypothetical, but in principle quite important, assumption that visual images for the convex and concave, which are constructed by identical forms conversely positioned to form an opposition, may correspond to linguistic expressions built precisely according to the same principle and used correspondingly as names of mushrooms. Moreover,

in some cases, it is quite probable that such 'converse' linguistic expressions were used precisely for the differentiation of 'masculine' and 'feminine[1] types of mushrooms. We have in mind the successors in various languages of two nostratic roots which are in a relation of metathesis one to the other, namely *b/p-N-g/k-:*g/k-N-b/p- (where N is a nasal archephoneme) or, on the Indo-European level, *bhoNg-:*goNbh-. Cf., on the one hand, Uralic **paŋg-/*poŋg-* (cf. Mordvin [Mordva] *paŋga, paŋgo,* Cheremis [Mari] *poŋge, paŋge,* Hanty Ostyak [Khanty] *poŋx, paŋx, paŋga*, Vogul [Mansi] *paŋx, piŋka),*[29] Paleosiberian **poŋ* (cf. Ket *haŋgo,* Yukagir [Odul], Chukchi, Koryak, Kamchadal [Itelman], and others, all extinct),[30] Indo-European — Ancient Greek *σπόγγος, σπόγγη, σφόγγος,* Latin *fungus,* and so on,[31] and, on the other hand, Slavic *gǫba* (Old Indie *gabhá*-), Hungarian *gomba* (cf. *bolond gomba* 'mad mushroom', similarly German *Narrenschwamm,* Serbo-Croatian *ljuta gljiva,* and so on), Lithuanian *gum̃b(r)as*, Old Icelandic *kumbr,* and others. In the capacity of semantically marked members, cf. Ket *haŋgo* in connection with the legend mentioned above and Slavic *gǫba* in its two meanings. If this hypothesis is correct, it opens the way toward the explanation of a series of other words which, until now, have also remained etymologically unclear.[32] Finally, it is not to be excluded that words of this root may occur in other languages as well.[33]

3. Lightning, thunder-bolt and mushroom

Another group of motifs that is reflected in language, superstititions, omens, as well as in myths, links mushrooms with *lightning* and *thunder*, and *storm,* often in their divine embodiment.[34] This is attested to by innumerable materials from ancient cultural traditions, some of which have been collected and analyzed by R. G. Wasson. One should note in particular a saying widespread among the Greeks and Romans according to which *thunder,* not rain, causes mushrooms to grow, a saying supported by the comments of naturalists and poets.[35] Analogous beliefs can be found in India, Kashmir, and Iran — reflected already in Kalidasa's poems,[36] — among the Bedouin,[37] in the Far East, in Oceania, among the Mexican Indians,[38] and others. Among all these data two categories of instances should be distinguished: in the first, the link between mushrooms and thunder, lightning and rain is reflected in the nomenclature for mushrooms (or similar words designate both certain types of mushrooms and thunder or lightning); whereas in the second, extant rituals involving mushrooms attest to the tie.

The first category of instances, in which mushrooms are identified with

thunder and lightning linguistically, is quite common. In Russian, for example, one finds such typical names for mushrooms as *gromovik* (from *grom* 'thunder') and *doždevik* (from *dožd'* 'rain'), etc., and the Russian term for 'sunshower' is *gribnoj dožd* lit. 'mushroom rain'. Among the Maoris *whatitiri* signifies 'thunder' and 'mushroom', and the name of the mythical ancestress is *Whatitiri*, her grandchild *Tawhaki* being further-more linked with lightning by the fact that lightning-bolts are emitted from his armpits.[39] The Pampango name for mushroom contains the element *kulog* 'thunder', as do certain Chinese names transmitted in *The History of Mushrooms*, a Japanese work written in 1811, such as *Lei-ching T'an* 'Thunder-aroused mushroom', *Lei-shêng Chün* 'Thunder-peal mush-room', etc. In a series of Altaic cultures the mushroom is correlated through its name with the sky: cf. Mongolian *tengriinku*, which is related to *tengriin* 'celestial', *tengri* 'sky' (see Potanin 1883: 132-138), and so on.

The second category of instances, involving mushroom rituals proper, is best attested to by the description of a Zapotec ritual cited by Wasson (1956: 609) and reported to him by a shaman. *Four* days after the last gathering of the sacred (entheogenic) mushrooms the shaman addresses to the 'Powers' a petition meant to insure a good harvest in the coming year. He appeals *first* to the Earth; *second,* to God the Father; *third,* to the Trinity; *fourth,* to the Great Lightning-Bolt that breeds the mushrooms; and *fifth,* to the Great Lightning-Bolt that injects blood into the mushrooms. (Here the numerical constant *four* is characteristic: the element of four days is relevant, and the number of powers addressed actually amounts to four; cf. in this respect the Russian expression *posle doždička v četverg* lit. 'some Thursday after a rainfall', the equivalent of 'when hell freezes over' in American English [Russian *četverg* 'Thursday' is derived from *četyre* 'four'], and several other analogies, of which see below.)

In the most diverse cultures utterances linking mushrooms with celestial phenomena, with the sky itself or with celestial inhabitants and, correspondingly, with the world of the spirits, are marked. Here are some examples. Let us mention first of all the well-known motif according to which mushrooms originated from the spittle of a deity (see Th A 2613.1, A 2686.1; A Th 774 L),[40] which is a parallel to one of the motifs about the origin of vegetables (Th 2686); cf. below on mushrooms as divine excrement and on the linking of mushrooms with celestial urine. Among the hunter tribes of the Somang race on the Malay Peninsula there exists a belief according to which mushrooms or fungi contain the souls of animals which have been scattered on the earth like seeds by Kari, the Thunder-god (see Skeat and Bladgen 1906: 4ff.). Poisonous mushrooms contain the souls of animals which are dangerous to men, chiefly tigers (cf.

susu harimau ‘tigress’-milk fungus). Human souls are supposed to grow up in a soul-tree in the other world, whence they are fetched by a bird that is killed and eaten by the expectant mother before birth, and in an analogous manner, the souls of animals are brought to earth by the parent’s eating of the appropriate *fungus* containing the corresponding animal soul placed there by Kari. One should mention in passing that what is established in this myth is not merely the equivalence of the given sort of plant or fungus and the given sort of animal (and their relation to man), but also the sequence of their appearance, which is essential for the question under analysis here.[41] A motif somewhat similar to the preceding one is reflected in the beliefs of the inhabitants of the Yaghnob Valley southeast of Samarkand (see Andreev 1925: 172f.). According to these beliefs, *thunder* arises when a sky-borne divinity known as Mama, the Great Mother, shakes lice out of her bloomers which tumble down to earth and are transformed into *mushrooms*, and when there are peals of thunder children cry out *'Puri, puri, xorč’* (where *puri* is the name of a plant, and *xorč* — ‘mushroom').[42]

In certain instances the relation between *mushrooms* and celestial objects is rather obscure, though present. Thus, the African Pangwe (Fan) tribe believe that their supreme deity, *Nsambe*, created only living creatures. The earth arose earlier from the lower half of a wooden mushroom, and the sky — from its upper half, similar to the way in which they arise from an *egg* in many cosmogonies. (Incidentally, further on in the myth the halves of the mushroom are equated to two eggs.) Thus was created the entire visible world: the sun, stars, trees, mountains, rivers, and the progenetrix who, like the wooden mushroom, is called *Alonkok*. *Lightning* was hidden in the egg, and with its help the progenetrix received *fire*. She then gave birth to the Twins, *Nkombodo* ‘marsh hill’ and *Odangemeko* ‘big mountain',[43] who brought into the world *Maböge* and his sister, from whom in turn came the highest god and father of all, *Nsambe*.[44] Nsambe lives in heaven (‘Lord Sky’), is in charge of thunder and lightning, and in time of drought is offered the sacrifice of a black bull, divided into *parts*.[45] The much more complex beliefs of the Dogon will not be discussed here in detail, though we should mention some features of their cosmogony (see Griaule and Dieterlen 1965). Certain motifs are relevant: the connection between the Creator God Amma and the four-part egg of the world (‘the mother of the stars’), from which arose the two twin placenta. Amma created the seed of the tree *sẹ̀nẹ̀ na* from dirt and spittle; through its rotation there arose all plants, including *mushrooms* (*tā boy*, lit. ‘hyena drum’), and then — *insects*. Amma created the *four* elements (also from his own spittle) — earth, water, fire and wind (air) — in order to create *sẹ̀nẹ̀ na* (his four elements are called the ‘four

nails' or 'four fingers' of Amma). Within the twin placenta Amma created the first animate creature *nǫmmǫ anagǫnno*, [46] which was divided into four parts. Of the four *nǫmmǫ* one should note in particular here the first, *nǫmmǫ dię* 'The Great Nommo', who remained with his father in heaven, where he took charge of *thunder, lightning*, *rain and the rainbow (nǫmmǫ dię* is represented in a manner which is quite similar to a *mushroom*), and the last, *ǫgǫ nǫmmǫ*, the first creature, who, having risen up against his creator, introduced into the universe disorder, psychological variety — if you like, accidentality in the form of chance. With *ǫgǫ* are linked the motifs of the descent to earth, the measuring of the universe, and the transformation into the Pale Fox; extremely significant are his relations to *water* and *fire*. More indirect evidence can be extracted from Aztec myths reflected in folklore. According to one of them, the rain-god Tlalokan lives in the heavens in a house made up of *four* chambers, each of which contains a tank filled with water: the first contains good water, with which he waters the ripening maize; the second — bad water, which engenders *fungal* mould;[47] the third — water which causes the ears of corn to freeze to death; the fourth — water which causes them to dry up and wither (see Krickeberg 1928: 34f.).

Finally, the link between mushrooms and celestial objects is also observed in data from the European 'lower' or 'unofficial' cultural tradition. First and foremost one should note the so-called 'mushroom circles' or 'fairy rings' (in the Tyrol they are termed 'Albert's rings'),[48] circles of correct form in the center of which — according to folk belief— nothing grows except *mushrooms.* Legend connects the origin of these 'mushroom circles' with the fact that on St. Martin's Day, and particularly during the period of falling *stars* (usually around St. Lawrence's Day, August 23rd), the fiery-tailed serpent Alber, flying over the meadows, sets the grass on fire. In Germany it was believed that witches fly out of such 'mushroom circles' to the Brocken on Walpurgis Night; in Holland, that butter is whipped up by the devil in such circles. In Switzerland and Russia people persistently linked 'mushroom circles' with buried treasure. In the scientific literature various opinions have been expressed as to the origin of these circles, one of which holds that bolts of lightning cause their appearance. If this is so, then scientific tradition is in agreement on this point with mythopoetic and contemporary 'lower' cultural traditions, which maintain that lightning bolts and the growth of mushrooms are linked. (More recent scientific evidence, it should be noted, disputes this theory; cf. Ainsworth 1976: 77f.)

In connection with the just-mentioned coincidence of the motif of fire or lightning striking and an increased growth of mushrooms toward the end of August, one should note another set of data usually not men-

tioned in this connection (see Kondrat'eva [1970] which contains valuable data used here in part). As is well known, August 25th is St. Titus' Day, a Christian festival celebrated at the very height of threshing. St. Titus' Day is characterized by *abundance*, while St. Karp's Day (March 26th), on the contrary, is associated with a shortage of bread.[49] It is thus extremely characteristic that one finds a proverb which links St. Titus precisely with mushrooms: *Svjatoj Tit griby rastit. Griby gribami, a molot'ba za plečami* 'St. Titus grows mushrooms. Mushrooms are a fine thing, but what awaits us is work'. There is no need to prove here that in a great many traditions mushrooms are a symbol of fertility, abundance, and plentiful progeny. Besides what we have said above, it is enough to refer to the cult of mushrooms in China (*ling chih)* and its reflection in art (see Sullivan 1962). One may therefore suggest the existence in pagan mythology of a certain personage, likewise in charge of abundance, who preceded the Christian Saint Titus (the 'Esteemed'). If this is so, then for the reconstruction of the basic mythologem about mushrooms (on which see below) the fact that in later tradition the *paternity* of Titus, his abundance of *children*, is underscored in every respect may prove to be essential as well. And even though 'Titus' children' as a cliché in the polemic of fathers and sons in the last century goes back to a children's song of Wordsworth translated by Ja. K. Grot,[50] whereas Titus the paternal father goes back to the neo-classical reception of the image of the Roman emperor,[51] nevertheless, it is not to be excluded that the same characterizations were inherent already in the diachronic predecessor of Titus. Moreover, in connection with the myth of mushrooms, one should not pass over such late texts as the Siberian bylina 'Daniluško Ignat'ič and Titus':

Podymalas' tuča, grjaz' velikaja ...
Podo mnoju, pod Titom
40 korolej, 40 korolevišen,
Ešce toj melkoj soški i sčetu net,
Na vse na četyre dal'ni storony ...
Ešče sam ja Tit, Tita brata zver' ...

'There rose up a cloud (fig. 'a host of people'), the *filth* was great / Under me, under *Titus*, / there are forty kings and forty queens, / As to commoners, they are *innumerable*, / Stretching in all *four* directions ... / And besides everyone, there am I, Titus, the beast of Titus' brother ...' (see Astaxova 1938-1951), cited by Kondrat'eva 1970). It is characteristic that Titus is defeated by his son Danila, with whom he enters into a duel.

Finally, one can go even further. In the riddle *Morščinistyj Tit vsju derevnju veselit* 'Wrinkled Titus gladdens the whole village', the answer to

which is *garmon* ‘accordion', it is quite legitimate to suppose an allusion to mushrooms — either through *morščinistyj Tit* ‘wrinkled Titus’ (the features ‘wrinkled’, ‘folded’, ‘stratified’, etc., are among the most frequent words used to describe mushrooms: cf. Russian dialectical *gribit’sja* ‘to make like a mushroom’ for normative *morščit’sja* ‘to make a wry face, wince’, justified by some linguists by the connection between **grib’’* ‘mushroom’ and **g’’rb’’* ‘wrinkle’ or ‘fold’; cf. above about *gǫnno* among the Dogon),[52] or through the identification *accordion = mushroom.* This sort of identification is rather widespread. It is based primarily on external similarity, although other explanations are not to be excluded.[53] Direct identifications of the Shamanistic tambourine and the mushroom are well known. It is quite curious that in the Selkup language ‘drum’ and certain other musical instruments are designated by words containing the root **poŋ*, **paŋ* ‘mushroom’: cf. Selkup *pöŋer*, *pəŋgar.* Among the Dogon mushrooms, which play an important role in the cosmological myth, are designated as *tā boy* ‘hyena drum’; cf. above on the connection between mushrooms and the bugle in the Burmese riddle (footnote 34), and so on.[54] In any event, one is led to the conclusion that in a series of traditions two mutually active elements of the myth — thunder and mushroom — are unified by a common feature, the ability to produce an acoustic effect.[55]

4. Mushrooms in pictorial art

Above we mentioned certain beliefs, current in the Yaghnob Valley, according to which *lice* are transformed into mushrooms and their appearance on earth is caused by *thunder.* This motif is widespread, mushrooms being linked, moreover, not just to lice, but to worms, flies, mosquitoes, mice, frogs, snakes and so on.[56] Linguistic evidence clearly speaks in support of this link: cf. names of the type of Russian *muxomor,* German *Fliegenpilz*, *Fliegelschwamm*, French *tue-mouche* or English *toadstool* as designations for nonedible mushrooms, French *crapaudin,* or the names for the fly-agaric, Slovak *žabací huby, hadáci huby, hadúnke huby*, Chinese *ha-ma chün*, and so on. This link is apparent, as well, in mythopoetic conceptions of transformation and equivalence (cf. above about the transformation of mushrooms into animals and so on). It is present in myths, whether it be a matter of encountering similar objects of both classes in one and the same text or of encountering them separately in different variants of one and the same text. Finally, it appears in archaic works of representational art based on the corresponding myth, as well as in the art of more recent times that reveals strong archetypal

tendencies. Before speaking in detail about the myth proper, a few words about the reflection of this motif in representational art are in order.

Among pictorial works of this sort the famous triptych by Hieronymous Bosch entitled *The Haywain* (circa 1480-1485, Madrid, The Prado), which the Wassons were the first to discuss, is exceptional. The content of the triptych is the history of evil, from its *origin* (the rebellion of the angels, the expulsion from the Garden of Eden) through its *flowering* (human life), right up to its *death* and posthumous punishment in hell. In Bosch's picture this completely orthodox scheme reveals such compositional peculiarities and such an abundance of symbols belonging to an entirely different tradition, that the triptych as a whole should be viewed as an exact and in-depth depiction of the structure of a myth in Lévi-Strauss' understanding of the term: it can be read or told (by following the sequence of symbols from left to right and from top to bottom) and can be analyzed (by isolating the bundles of repeated symbols). The triptych is unique precisely because the myth set forth in it is presented on both the paradigmatic and syntagmatic axes.

The left wing of the triptych depicts how the Almighty cast down the angels who rebelled against him, transforming them into insects, scorpions, salamanders and the like. They fall into a lake and onto the earth around cliffs (*petra genetrix)* which resemble at once a human profile and a mushroom (concave-convex forms). Further there unfolds the story of the consequences of this original evil: the creation of Eve, the fall into sin, and the expulsion from the earthly paradise. The central panel of the triptych depicts a haywain (hay is a symbol of *wealth*, envy and vanity; cf. the Flemish proverb 'All is hay', or Russian *tryn-trava* 'it's all the same', lit. 'weed-grass'), which is being drawn towards hell by monstrous animals, driven on by a man in the shape of a tree. Above the haywain is the *tree of life*, on which hangs a *vase* (a symbol of feminine voluptuousness), and the entire scene is crowned by God surrounded by clouds. The haywain draws close to a hill, on the top of which is a large *mushroom*[51] (here also is the motif, so characteristic for Bosch, of the *egg).* The bottom part of the central panel depicts various scenes of alchemy and witchcraft. The right part of the triptych is a depiction of the underworld, replete with fantastic constructions and an abundance of symbols (cups, vessels, an egg, chthonic creatures, and so on) which are even more fully presented in the later triptychs of the same artist ('The Last Judgment', 'The Garden of Delights'), which are essentially versions of the same myth.[58] In connection with what follows special attention should be paid to the punishment by the deity of his offspring (the angels), their transformation into insects[59] (with the further motifs of the mushroom, the tree of life, stone), and also to the alchemical aspect of the myth as a whole.

Certain other representations which contain the basic element, the mushroom or its substitute (often preserving a mushroom-like form) and the other two elements we have noted, signified in one way or another, the *celestial* and the *chthonic*, may be regarded as fragments of the same myth. One example is a bark drawing made by Australian aborigines from the Northern part of Arnhem Land, island of Goulburn (see Mountford 1964a: 23, pl. 15). In it one finds a *mushroom-like* plant, the *snake-shaped* roots of which extend into the earth and the upper parts of which extend into the sky. These upper branchings are covered with little arrow-shaped forms which are sometimes interpreted as leaves but which may easily be viewed as representations of *arrows.* (There is a whole series of representations in the same tradition in which similar signs are interpreted precisely as arrows or as bird tracks,[60] and certain rituals, in which mushrooms do not enter directly, support the plausibility of this reading.)[61] The symbolism of certain representations on funeral stiles in Lithuania and Latvia — crosses in the shape of mushrooms or flattened frogs accompanied by two birds above and below — can be explained as a relfection or further transformation of the image of the mushroom as part of the cosmological scheme.[62] These types of representations are repeated in a more generalized form in the carved decorations covering the fronts of v/ooden houses (particularly in Western Lithuania) and in West Latvian ornament (in particular, on shelves, trunks, and other depositories of riches).[63]

Depictions of mushrooms are particularly numerous in Chinese art.[64] Besides the most elementary compositions, in which the mushroom of longevity (*ling chih)* appears in the proximity of heraldic animals[65] or Taoistic deities, sitting in state on hills,[66] or in which a wise-man is shown contemplating the mushroom,[67] one should note in particular two more complex and substantive representations which go back to the period of the Han Dynasty. The first of them is a stone bas-relief on the tomb of Wan Te-yuan' (*Suit-te*, circa 100 A.D.): its upper part contains a depiction of a tall mountain on which two men sit in state, immersed in a game; behind them rises the mythic *ling chih*; to the side of the mountain is a deer, a symbol of longevity, accompanied by some sort of fantastic creatures; beneath the mountain is a *dragon*; still lower — wild grasses, a ploughing scene, and so on (see Sullivan 1962: pl. 84). The second representation is a carving on stone from Szechwan (1962: pl. 86). At a board for the game of *liu-po* sit two witches; next to them are two *cups* (it is possible that snakes are also depicted here); above the board is a fantastic bird; to the right — an enormous *ling chih.*[68] We have noted above the connection of mushrooms with games of the type of draughts. Chinese representational art provides supplementary evidence in support

of this association. Moreover, it allows one to bring the game into the wider cosmological scheme (the world mountain, the snake, the dragon, the bird, etc.). Certain Siberian traditions reveal a still more interesting picture: elements of the cosmic scheme not only form the frame for the game, but are directly introduced into the game itself. Cf. the game *tos'-červoj* among the Khants of the Kazym Valley or *topis'* among the Khants of the Vasyugan Valley; the figures for the game depict a deer, a cow, a horse; an otter; birds, including the fantastic *čorys-kony-voj*; sun and moon, and so on (see Suxov 1915; Ivanov 1970: 11ff.). These same elements appear separately in the forms of decorations (harness ornaments, pendants), toys, utensils and dishes.[69]

5. The myth of the Thunder-god and mushrooms

One of the most important conclusions to be drawn from a comparison of the motifs discussed above is that in the mythologem being analyzed mushrooms are linked in the closest way to certain animals — worms, lice, mice, frogs, snakes and the like. This connection is realized usually by two direct means: first, the transformation of these animals into mushrooms (cf. the belief current in the Yaghnob Valley), and second, the fact that they are jointly encountered in certain texts (cf. the analogous motif in Bosch or the scheme of wooden sculptural groups of Chinese origin depicting mushrooms and mice).[70] To these may be added a less direct means: in some variants mushrooms figure, in others — the animals we have mentioned. There are enough data to allow us to postulate the *equivalence* of these objects in the limits of the scheme under examination (at the very least) and to permit us to classify them as *chthonic* objects. In this case we are justified in proposing an analogy with the reconstruction, proposed elsewhere, of the myth of the casting down from the heavens by the Thunder-god of his sons and their transformation into chthonic beings of the type of worms, snakes, toads, and so on.[71] In this myth the storm is viewed as a moment of quarrel and punishment, and thunder and lightning serve as the instruments of punishment. Certain other features of this myth should be stated here: the role of the destroyer is assumed by a *deity*; his instruments are *thunder*, *lightnings fire*, *stone*, and *oak*; the number of objects struck is usually *fixed* (most often the number is nine or seven); and, finally, the entire drama is saturated with the notion of *increasing fertility and wealth.* All of these features occur in incantations which figure in the various cultural traditions where this myth is operative (cf. incantations against worms, snakes, etc.), as well as in myths, folktales, epics, and so on, which tell the tale of the Thundergod (see

Ivanov and Toporov 1969). Their constancy and antiquity justify our confidence in the reconstructed myth. There is no doubt that this mythologem was rather widespread and claimed universality to a large extent. We should like to underscore here one aspect of the myth to which too little attention has been paid thus far, namely, the fact that mushrooms play a significant role in it. Besides the data we have already adduced above, the role of mushrooms is attested to by other evidence, some of which is quite amazing. For instance, the Ancient Greek name for one of the types of underground fungi, *κεραύνιον* lit. 'bolt of lightning',[72] reveals a certain closeness to the Indo-European name for the god of thunder (cf. Slavic *Perun'*\ Lithuanian *Perkūnas*, Latvian *Pērkōns,* Old Prussian *percunis*, and so on). This designation of mushrooms is correctable, naturally, not only with *κεραύνός* 'thunder-bolt', 'lightning', *κεραύνιος* 'of thunder', 'striking with thunder', *κεραύνόω* 'to strike with lightning', etc., but also with *Ζεύς Κεραύνιος* 'Zeus the Thunderer' (it is interesting that the same adjective is used by Sophocles in connection with Semele *[Σεμέλη],* who was struck by the thunder of Zeus).[73] One could also add here another designation of mushrooms, 'devil's fingers', which coincides with the name for belemnite,[74] often interpreted as remnants of the weapons with which the Thunder-god defeated his enemies, particularly the Serpent ('devil's arrows').[75] Inasmuch as the very names for certain types of mushrooms point to thunder, lightning and their sovereign, one should not overlook the linguistic form of such utterances as Lithuanian *Po perkūnijos gerai grybai dygsta, mat*, *žemę sutranko* 'After a storm mushrooms grow well, it means, the earth has been shaken'[76] or such indications of a substantive character as the assignment of the *fourth day* (Thursday) to the Thunder-god and to mushrooms. Cf. the name for Thursday — *Donnerstag* in German or *Peräunedån* among the Polabian Slavs, indications to the effect that the fourth day is that of Perkunas, the numerous facts of the Thunder-god's quaternary nature or hypothesis in four, on the one hand, and the markedness of the fourth day for mushrooms — Russian *posle doždička v četverg* lit. 'some Thursday after a rainfall', the petition of the Zapotec shaman for a future abundant crop of mushrooms *four* days after their gathering, his addressing the *fourth* divinity with the name 'Great Lightning-Bolt, who grew the mushrooms', etc., on the other hand (cf. Section 3 above). The materials relating to the myth in question contain other significant hints that help to explain its entire point of departure. Particularly important is the fact that *Thursday* is linked with the motif of the wedding of the Thunder-god,[77] that this wedding was unsuccessful (according to some evidence the Thunder-god's adversary abducted his bride),[78] that the Thunder-god punished his adversary by striking him with lightning, transforming him into a

chthonic object, and so on. Moreover, it is rather easy to reconstruct the last link in the general scheme of the myth — the motif of the increase of fertility and wealth,[79] the accent on the ambivalent complex *death-life* (in particular, through the preparation of a drink of immortality, which marks the beginning of a new culinary-food regimen in the given tradition), which partly is mirrored in the opposition *water-fire.*

The opposition of fire and water in the myth about mushrooms and in myths isofunctional to it defines the spatial and elemental boundaries of the myth (active, dynamic, celestial, fiery-passive, inert, subterranean, watery). At the point where these features intersect there arises something which becomes a symbol of conception, birth and fertility. In the most diverse traditions mushrooms are linked with celestial fire (and later with earthly fire as well; cf. the use of *amadou* or fungal tinder) and with celestial and subterranean waters. The connection of mushrooms with lightning explains the constant motifs which unite mushrooms with fire, steel (used formerly for striking fire from a flint) and flint both in legends and in the evidence of material culture. This is not the first time that attention has been directed to the fact that in the excavations at Maglemose in Denmark, which date back to ca. 6000 B.C., remnants of the fungi *fomes fromentarius* were found together with implements for making fire,[80] which takes us back again to the themes of copulation and birth linked with both fire and mushrooms. The appearance of fire and mushrooms is believed to be the result of the sexual act, and this belief is reflected in one way or another both in archaic cultures[81] and in certain quite contemporary associations.[82] Here again it is essential to stress that what is important is not so much the fact of the appearance of mushrooms in the given part of the scheme as much as the markedness of this very part, which in various cultural traditions may be coded by different classifiers,[83] or even the markedness of the complex as a whole (as in Richard Wagner).

Above we spoke about the fact that, depending on the evaluation made of the motif for the cause of the separation of the Thunder-god and his children, who are turned, in the final account, into mushrooms, the latter are designated in one of two ways: they are either the ‘food of the gods’ or the ‘food of the devil’. A similar situation is reflected in myths, where the children of the Thunder-god or of some other celestial personage may be transformed not only into chthonic beings, but into celestial phenomena, such as stars, the Milky Way, rainbows, and so on, as well. (This transformation into stars, incidentally, is often depicted as a punishment also.) There is a rather large number of motifs in which stars figure in approximately the same function as do chthonic beings in the mythologem under analysis. Particularly interesting in this regard are those

instances where both stars and chthonic objects appear within the limits of one and the same text. First and foremost one should mention the variants of the motif A 14 (Thompson) in which a *worm* figures as the creator of the world. Cf. the myth of the Guarayu-Guarani Indians of Bolivia about the primordial worm Mbir which, having been turned into a man, created the world. People began to call the worm Miracucha, i.e., the same name used for the Sun and Moon; the first ancestor (the Grandfather), who sprang from them, taught people to plant *seeds*, to harvest the *crops*, to make *chicha,* an Indian beer brewed from maize and manichotte; he gave people *bows and arrows*, taught them how to *shoot* and how to obtain *fire*. He turned his *wife* and *child* into *stone* and then went off into the West. When the *spirits* of evil people arrive in the West, the Grandfather *breaks them up* into *pieces*. Even now people pray to him for *food* and *riches*, and he never deceives them. It is interesting that many people consider the Grandfather and Miracucha to be one and the same god.[84] Comparable here is the belief of the Mosetene Indians (Bolivia) that the Milky Way is an enormous worm (see Métraux 1946-1959, vol. 3: 503ff.). No less interesting for the interrelation of stars and chthonic beings are certain Altaic myths and legends. The great worm *Ürker* (Mongolian *Xorxo)* was defeated by his divine adversaries, but was nevertheless saved by ascending into the sky, where he was transformed into the six stars of the Pleiades. In the summer months *Ürker* (= the Pleiades) invisibly descends to earth. If he lands on the water, a bad winter and famine are expected; if he lands on dry land — a good winter and abundance.[85] Such is the legend among the Turkish population of the Altai and Tarbagatai (see Potanin 1881, vol. 2: 124f.). A Northern Mongolian legend relevant here involves a clever archer who dreamt of ruining life on earth and shot at the Pleiades, striking one of the stars. But, since God had imperceptibly replaced the star which had been struck with a target, the archer had to admit himself defeated. He cut off his *thumb (erkyök)*,[86] buried it in the *earth*, put on an animal hide and turned into a *marmot.* In other transcriptions the archer is named *Yörxyö* (*Yörkyö)-Myörgyön* (where *myörgyön* is 'archer', cf. the Buriat legend about *Irxii-Nomon-xan).* Similar beliefs of the Soyot (Tuva) are connected with *Yerlyen-Nomon-Xan* (a variant of Erlik); cf. *yerlyen* 'rat', *nomon* 'mole'. The plausible supposition that the figure of Erlik is concealed beneath that of Yörxyö-Myörgyön was voiced long ago by Potanin (1916: 7). Thus Erlik too, opposed to the Heavenly God, is linked with rats and other animals of the rodent type (for example, with the flying squirrel, enemy of the Son of Heaven, who defeats it by lightning, as well as with the chipmunk or ferret).[87] Another legend (Potanin 1881: 148ff.) contains the important motivation for the punishment, although the

theme of stars is left out. The older sister proposes that her brother copulate with her. In response to his refusal she puts out his eyes and buries them in the ground. They turn into a bat *(köri-tyškan),* which also lives underground. The father curses his daughter, and God turns her into a cat *(myalin)* which is inedible (only Torguts eat it). Attention should also be paid to a tradition which derives the Tarbagatai nobility from Kïzïl-gurt (the Red Worm), and the Chinese emperor — from stone. Such details as the punishment of the Great Bear or Big Dipper (cf. Mongolian *Doloon Övgön* lit. 'Seven Elders' or *Doloon Burxan* lit. 'Seven Gods'; Kirgiz *Džetï karakči [karakši* lit. 'Seven Thiefs' and so on),[88] on the one hand, and the motif of the seven (or nine) sons of the God of Heaven who are imprisoned in corresponding levels of the subterranean kingdom (see, e.g., Karunovskaja 1935: 160-183), on the other hand, should obviously be viewed as fragments of a single mythological scheme. One finds in them the spatial boundaries of the Universe and opposite variants of the fate of the children of the master of heaven.[89] The numbers *seven* or *nine* in this scheme are constant, but they relate not only to the number of the opponents of the divine hero, although this is most often the case, but also to the number of divine personages who defeat the opponent, or even to both sides in the struggle. Examples of the first type include: Australian legends about Mea-mei, the Seven Sisters who, in saving themselves from the culture hero Wurrunnah, are transformed into the seven sisters of the Pleiades (see, e.g., Parker 1897: 40ff.; 1898: 73ff.), or analogous myths about the seven Emu sisters;[90] Maori legends about Tane's striking a star and breaking it up into seven pieces which then made up the constellation *Matariki* 'Little Eyes';[91] American myths about the transformation of seven women guilty of homosexual love into the stars of the Pleiades (see Gayton and Newman 1960: 26ff.), or of the marriage of a woman to a star and the birth of her sidereal son;[92] the Chinese legend about the nine suns defeated by the Great Archer;[93] Indo-European incantations containing the motif of the destruction of nine worms or snakes by a divine personage (see Toporov 1969a: 24ff.), and so on. An example of the second type is the Ancient Egyptian mythologem about the Great Ennead of Gods who defeat the Serpent or about the nine bows of Horus (cf. the *Pyramid Tests*, utterance 385; Erman 1900: 19ff.). The most convincing example of the third type is one of the versions of the Ancient Chinese cosmogonic myth about P'an-ku, who nine times in the course of a day became now god of earth, now god of the sky.[94] The archetypal nature of these motifs is so obvious and influential that one should not be surprised at the numerous echoes of them in more recent fiction and poetry, which have absorbed and reworked the heritage of the mythopoeic epoch.[95] One could go on to cite further examples proving the isofunctionality of

mushrooms, chthonic animals, stars and fingers. However here we must limit ourselves to just one more. Above we spoke of the Altaic 'finger incantations' involving counting from one to ten and the reverse. The same occurs constantly in incantations against worms,[96] and a similar counting is practised during the gathering of mushrooms.[97] Finally, one can trace certain analogies with the art of *star-counting*. [98]

6. Further observations on the basic mythologem

As the data cited above indicate, the reason for the conflict in the family of the Thunder-god is linked most often with the violation of some tabu, above all, the tabu against marriages between persons of the same blood. Accordingly, the conflict should ideally be resolved by the establishment of a new system of marital relations, with those opposing it being punished (cf. Henning 1966: 356f.; Stephens 1962). But, at the same time, in many traditions where different norms hold, incest continues for a long time to be viewed as one of the most effective means of increasing fertility. It is enough to refer here, to descriptions of different types of incestuous relations in the *ṚgVeda*: the Father-Sky and his daughter Uṣas; Pūṣan the god of fertility and his sister Uṣas; Tvaṣṭar the creator and his daughter; Agni, the god of fire, and his sister Usas; Agni as the instigator of incest; Yama, the primeval man, and his sister Yamī, and so on.[99] Thus it is hardly surprising that the theme of incest and the subsequent punishment (death by means of dismemberment, etc.) is interwoven in the closest way with motifs of fertility, the origin of cultured plants, and the transition to a new culinary-food regimen (in particular, the acquisition of the drink of immortality).[100] Indicative of this are a series of folktale motifs, though one should stipulate here that it is necessary to turn to the whole totality of variants of the given motif for a complete judgment of it. We already spoke above about the motif 365.3.2 of the *sister* who has eaten a *mushroom* and becomes the *wife* of her brother.[101] In India, parallel to the motif of the origin of mushrooms (Thompson and Balys 1958: A 2686.1), and likewise of edible roots (A 2686.4), *narcotic* plants (A 2691.0), tobacco (A 2691.2), there exists a large number of motifs relating to chthonic objects: cf. A 2006, the origin of insects as a result of brother-sister incest (cf. likewise A 2000-2985, in particular: A 2011, ants; A 2031, flies; A 2034, mosquitoes; A 2051, lice); A 2001, the origin of insects from the body of a slain monster, and so on. Sometimes the two series of motifs are united: cf. A 2601, the origin of plants — the Creator sends insects down to earth who plant the plants; A 2611, plants from the body of a slain person or animal (cf. likewise A 2611.0.3 and 0.4), among others.[102]

Motifs involving the transformation of brother and sister into *flowers* as punishment for the crime of incest are rather widespread. Next to the theme we cited above of the sister's gathering of miraculous flowers while the brother is engaged in his quests, cf. the reconstruction of a similar myth on the basis of Slavic material, that of the flowers *Ivan-da-Mar'ja (Melampyrum nenorosum* or *Viola tricolor*), *bratki*, and the like.[103] Traces of similar motifs are often found in the extensive cycle of legends about the creation of the Universe and its separate parts: cf. Thompson A 642, the origin of the Universe from the body of a slain giant; A 614, from the parts of the creator's body; A 617, from a clam-shell;[104] A 1246, from a cliff; A 1236, from a tree; A 1241, from clay or earth; A 1245, from stones, and so on. In particular, the sequence of the creation first of *stone*, then of *plants* (or *animals*, or *people*) is observed quite often.[105]

Here one should mention certain standard myths and legends about the origin of cultured plants, which once again are related to the mythological scheme for the origin of mushrooms and their cultural role. Thus, for example, the typical Mesoamerican legend (Krickeberg 1928: 10ff., no. 4a) about the origin of man and cultured plants, among other things, contains the following motifs: the descent of Quetzalcoatl into the underworld to the god of the dead; *worms* and *bees*; *masculine* and *feminine* bones (cf. the Oceanic motif according to which the stars are the bones of dead spirits); the mountain of life; the *four* gods of *rain*; the transformation of Quetzalcoatl into *ants* of various colors; the *lightning bolt* which causes the appearance of *plants*, in particular, of maize. Another legend (Krickeberg 1928: 12f., no. 4) contains other motifs akin to those found in the basic mythological scheme for mushrooms: the *arrow* of the Sun God strikes the earth and gives rise to the first pair — a *man* and a *woman* — who have *seven* children (six *sons* and one *daughter*); the use of *fire* and *raw-cooked* food; the birth in the underworld of the God of Maize and the origin — from his various bodily parts, in particular, his *fingers* and *nails* — of edible fruits; the descent of the God of Wind Quetzalcoatl and of the divine girl Maiauel to the earth, their transformation into a *tree* with two branches, the death of the branch of Maiauel; the origin from her of the plant *Metl* (agave) and the preparation from it of wine which causes dancing, singing, and ecstacy, and so on.

In view of the importance of the number *four* in connection with the Thunder-god in the scheme under analysis here, particular attention should be paid to myths in which this number is constantly being played up (four gods, sons, rains, waters, jaguars, world periods, seasons, cardinal points, colors, and so on) in connection with the basic theme of the origin of fire, cultured plants, and drinks made from them (Krickeberg

1928: 3f., etc.). No less interesting is the use of the number *nine* in these same myths: cf. the preparation of *Xticane* from *nine* magical drinks that, when mixed with maize, gave man strength and fat; the birth to the pair of the first gods[106] — on a *cliff* amidst the *waters* — of two sons with the names 'Wind of the *nine* snakes' and 'Wind of the *nine* underworlds', who were turned into the Eagle and the Snake (cf. here the theme of *tobacco* as well).[107]

Myths with this basic content are repeatedly reflected in ancient Mesoamerican art (see Seler 1902-1923; 1903-1909; Krickeberg 1949). Another peculiarity of the American tradition is also characteristic, namely, the use of mushrooms in preparing a drink which causes visions. Furthermore, there is a wide diffusion of fetishes, certain of which (e.g., the holy *cap* with *four arrows* among the Cheyenne) look like direct representations of the most important motif of the myth of the origin of mushrooms.[108]

Data relating to the African traditions about the origin of life on earth and, in particular, of cultured plants, have been analyzed in detail in a series of works (cf. Baumann 1936: 191ff.). We need not dwell on them here, especially as they are merely variants of the same motifs we have mentioned repeatedly. One should, however, note the ancient Japanese version of the origin of cultured plants, inasmuch as it proves to have been recorded as early as the beginning of the thirteenth century (cf. the oldest historical composition, the *Kojiki* and the *Nihonshoki* annals) and contains several interesting details, for example, the accent on the *dismemberment* of the murdered goddess,[109] the focus on the motif of *nails,* and finally, the connection with the myth of Idzanagi and Idzanami, which permits one to establish other, less direct echoes of the scheme under analysis here (see, in more detail, Karow 1964).

Ancient Chinese myths are particularly rich in data reflecting an affinity with the mythological scheme for the origin of mushrooms. First and foremost one should mention the cycle of myths connected with P'an-ku, one of the basic demiurges in Chinese mythology. It was precisely P'an-ku who separated heaven and earth, his body *growing* according to their distance from one another, and it was from the parts of his body that the different elements of the Cosmos arose. The third son of P'an-ku bore the name *Lei* 'Thunder'; moreover, of P'an-ku himself it was said that when he inhaled, the wind rose and rain began to pour, and when he exhaled, the thunder pealed and lightning flashed. In times of drought prayers were addressed to him petitioning for rain. According to one legend, the human race arose from the *parasites* swarming on the body of the dying P'an-ku.[110] It is interesting that P'an-ku himself had the body of a snake and the head of a dragon.

No less curious are another group of Chinese legends about the origin of the human race. The girl Hua-siui-shi found herself in the thunder swamp (*Lei-tze*), became pregnant by the god of thunder, Lei-shen, and gave birth to a son, Fu-si, who married his *sister*, Njuj-va. It was they who begot the human race. (In several representations Fu-si is shown holding the sun in his hands, while Njuj-va holds the moon with an image of a toad, which links the two of them on the cosmological level with the theme of the primordial marriage.) Another cycle of legends narrates the story of the flood, caused by the god of thunder Lei-gun, and the destruction of everything living with the exception of a *brother* and *sister* saved in a bottle-shaped gourd which grew from the *tooth* of Lei-gun, buried in the earth. The sole survivors of the flood, the brother and sister, are called Fu-si (cf. Pao-si 'bottle-shaped gourd'); the boy is called 'brother-gourd', and the girl — 'sister-gourd'. It was through their marriage, with a further set of various transformations, that the human race arose again (cf. Yuan Ke 1965: 40ff.).

Another aspect of the mythologem is stressed in the Australian legend (Parker 1897) of the sisters who were turned into frogs as a punishment for betraying their mother to her husband (cf. the transformation of the Mea-mei sisters into the Pleiades), namely the opposition *food-non-food (stone).* This same legend contains the motif of rain caused by stone, a motif displayed in more detail in the legend of Verinun the rain-god, who by setting up a great *coniferous forest* causes abundance and assures the transition of boys into men.[111]

In many traditions the motif of the origin of food and of a drink which makes one merry is linked with an abduction or theft committed by the 'culture' hero (usually from the sky), rather than with incest: cf. the Polynesian legend of Lafanoga, who steals an intoxicating ritual drink from the spirit world; American and Oceanic legends about the origin of fresh water; the story of Odin, who steals honey; certain motifs connected with Loki (cf., incidentally, his ability to turn himself into various insects [cf. *locke* as the word for spider in various Scandinavian dialects] and the fact that he gave birth to chthonic monsters),[112] and so on. The motif of an ecstatic drink, the elixir of immortality, of a divine (or diabolical) liquid, takes us back once again to the theme of mushrooms, since as the investigations of Wasson, Lévi-Strauss, Heim and other specialists have shown, it is precisely certain types of mushrooms which serve as the best (and sometimes as the only available) material for preparing an hallucinogenic drink that facilitates communication with the other world. In any case, in the vast expanses of Eurasia and Amerindia a great deal of evidence has been found to indicate that mushrooms (above all — the fly-agaric)[113] are used for such purposes at the very least in esoteric groups

within the given traditions and that such a use of mushrooms is a remnant of archaic culture. In the corpus of myths as a whole the triad *life-death-fertility* noted above is duplicated in one way or other in a spatial displacement of the basic object of the myth, whatever its concrete transformations may be: *sky* (the children of god before the fall into sin) — *earth* (mushrooms, insects, and so on after the punishment for the fall) — *sky* (man, tasting of the drink of immortality).[114] This duality of mushrooms and objects isofunctional to them in the myth, which is manifested in the contamination of the heavenly (divine) and chthonic (diabolic) principles, reflects that element of risk with which the entire evolution of human culture is necessarily bound.[115] The turning to the dark forces of nature, forces fraught with danger, to the remnants of the chthonic, and the experiencing (and incorporation) of them by means of the heavenly and the cosmic introduced into life the element of dynamism and increased the role that chance, choice, and initiative played in human culture. This is the double blessing that determined, initially, man's progress from chaos to cosmos and, later on, his progress from cosmos to history: '.. who will bless you with blessings of *heaven above*, blessings of *the deep that crouches beneath*, blessings of the *breasts* and of the *womb*.'[116] But an imprudent contact with anything connected with the deep, with the abyss, is deadly. Any product of that realm can be used only if certain essential limitations are observed — spatial, temporal, and social: thus the necessity of a sacred place (center), a sacred time (holiday, sacrifice), a sacred group (shamans, priests, etc.). Only in these conditions can the turning to death for the sake of life be safely realized.[117]

7. The Soma-mushroom hypothesis from a mythological point of view

In conclusion we would like to turn to the unexpected, but interesting and promising hypothesis of Wasson according to which Old Indian *soma* (Avestan *haoma-,* Indo-Iranian **sauma-)* originally designated one of the varieties of agaric mushrooms, namely *Amanita muscaria* (English *fly agaric*, German *Fliegenpilz*, French *fausse oronge, tue mouche, crapaudin*, etc.). Without touching here upon the question of the *identity* of Soma and *Amanita muscaria,*[118] let us limit ourselves to a brief indication of the motifs that, when taken together, leave no doubt that Soma (god, plant, and drink) was included in the same mythological scheme in which in other traditions, as was demonstrated above, mushrooms play a role.

Among the data that Wasson used only in part or did not touch upon at all, there are several points that should be stressed. Soma is the *child of Parjanya*, the god of rain,[119] the carrier of thunder and lightning

(parjányaḥ pitā́. ṚV IX, 82, 3),[120] and Pajrā, Earth *(pájrāyā garbha.* ṚV IX, 82, 4).[121] The name Parjanya reflects the various designiations for the Indo-European god of thunder (Perkunas, Perun, etc.). Moreover, it is known that Parjanya produces cattle, plants, seeds,[122] and food;[123] he is connected with frogs,[124] and with milk and honey;[125] he is the son of the sky *(parjányāya divas ... putraya* ... ṚV VII, 102, 1), the support of the world (ṚV VII, 101, 4), the irrigator of both worlds (... *prá vidyútā ródasī ukṣamāṇaḥ.* ṚV V, 42, 14). It is interesting that the names of the divine spouses are constructed according to the principle of metathesis: *Parj-:Pajr-*. Thus Soma is a child resulting from the union of the deity connected with thunder, lightning, rain, and the Earth, the wife of this deity.[126] Moreover, there are hundreds of passages in the *ṚgVeda* where the link between Soma and the Thunder-god himself, Indra, is indicated. Soma is named the 'drink of Indra' (cf. *indrā́panaḥ.* ṚV IX, 96, 3)[127] and shares a whole series of motifs common to Indra, not to mention the frequent indications of the fact that Soma enters into Indra (ṚV IX, 2, 1: *índram indo vṛ́ṣā́ viśa*. 'O Indu, (thou) the male *par excellence* (lit. bull), enter into Indra!').[128] Nor is the connection between Soma and rain fortuitous: Soma's currents are the heavenly rain *(prá te dhā́rā asaścáto divó ná yanti vṛṣṭáyaḥ.* ṚV IX, 57, 1); Soma is addressed with a prayer to pour out the heavenly rain *(vṛṣṭíṃ diváḥ pári srava.* ṚV IX, 39, 2); he is the possessor of thunder *(pávamāno ajījanad... tanyatúm*. ṚV IX, 61, 16).[129] The role of Soma as a mediator is described in particular detail: he is the link between Heaven and Earth who was born in Heaven (cf. *aruṣáṃ ... diváḥ śíśum.* ṚV IV, 15, 6 'red child of the Sky'); he grows on the earth (cf. ṚV IX, 61, 10: *uccā́ te jātám ándhaso divi ṣád bhū́my ā́ dade* 'in the heights is the birth of your drink; I take on earth what was in the heavens', or ṚV IX, 79, 4: *diví te nā́bhā paramó yá ādadé pṛthivyā́s te ruruhuḥ sā́navi kṣípaḥ* 'Your highest navel [origin] is attached in heaven; your fingers grow on the spine of the earth'); he is between the two worlds, symbolized by the two parts of the press *(óbhé antā́ ródasī* ṚV IX, 70, 5); he is the navel of the earth (cf. *nā́bhā pṛthivyā́ dharúṇo mahó divó.* ṚV IX, 72, 7)[130] and the mainstay of the sky (cf. *divó ... skambhó.* ṚV IX, 74, 2; cf. IX 86, 35, 46).[131] In view of these data about Soma and the abundant typological parallels (cf. if only the combination of the three-membered mushroom with two birds on top of it in proximity to the world-tree in the already mentioned Noin Ula textile), there can be little doubt at this point that Soma is isofunctional to the world-tree.[132] With this fact in mind it is easy to explain the passages in the *ṚgVeda* that state that Soma is the child of the seasons *(ṛtúr jánitrī* ṚV II, 13, 1), that he is connected both with *water (tásyā apás pári makṣú jātá ā́viśad yā́su várdhate.* ṚV II, 13, 1 'born from her, he immediately penetrated into the water, in which he grows'; cf.

likewise IX, 71, 3; IX, 86, 45; IX, 97, 47; III, 36, 2; III, 43, 7; V, 30, 11; VIII, 1,17; IX, 62, 5; I, 134, 5, etc.) and with *fire* (Soma is the parent of Agni, as well as of thoughts, the Sky, the Earth, Surya, Indra, Viśnu; cf. ṚV, IX, 96, 5: *sómaḥ pavate janitā́ matīnā́m janitā́ divó janitā́ pṛthivyā́ḥ / janitā́gnér janitā́ sū́ryasya janiténdrasya*, *janitótá víśṇoḥ*, and others); cf. the similar role of Soma and Agni in the cosmological myths (their life in the primordial hill,[133] where they are guarded by the serpent-dragon *áhi,* etc.).

In connection with Soma there is another set of themes that, in other traditions, are not infrequently connected with mushrooms. We already spoke above about the role of *counting* applied both to Soma and to mushrooms. This is linked, to a certain extent, with the continual references to the ten fingers, the 'finger-sisters',[134] in the description of the preparation of Soma: cf. ṚV IX, 61, 7: *etám u tyám dáśa kṣípo mṛjánti síndhumātaram* 'The ten fingers cleanse this famous one [lit. the Soma] whose mothers are the rivers (Sindhu)[135] or ṚV IX, 89, 4: *svásāra īṃ jāmáyo marjayanti...* 'the related sisters (fingers) cleanse him', etc.[136] Not infrequently in connection with Soma one encounters the epithet *three-spined*, which also brings us back to images relating to mushrooms (the triple mushroom, the mushroom of the three kingdoms, and so on): cf. ṚV VII, 37, 1: *abhí tripṛṣṭhaíḥ sávaneṣu sómair ... pṛṇadhvam* 'Fill yourself at the sacral pourings with the three-spined Soma' (cf. IX, 75, 3; IX, 106, 11; for the three-spined bull, see IX, 71, 7; IX, 90, 2; IX, 111, 2). For the image of the *mushroom-king*[137] and the *parasol* (mushroom) as symbols of royal power, cf. *Somó rā́jā* 'Soma-king' (ṚV X, 109, 2; cf. X, 167, 3, and so on).

Like mushrooms, Soma symbolizes fertility and prosperity: he is the lord of strength *(śavasas pate.* ṚV IX, 36, 6; cf. also IX, 71, 4; for the connection with the life force — *váyo dadhe.* ṚV IX, 111, 2); lord of *food (íṣas pate*. ṚV IX, 108, 9; cf. IX, 14, 7; IX, 15, 7); the lord of *wealth (rayipátī* ṚV IX, 97, 24; cf. II, 40, 6; IX, 101, 6, etc.);[138] he is called immortal *(ámartyo.* ṚV IX, 84, *2;* cf. IX, 91, 2; VIII, 48, 12, and so on).

Characteristic is the repeatedly stressed linking of Soma with milk: his juice is milk, he is rich in milk, and the like (cf. ṚV II, 13, 1; VIII, 1, 17; VIII, 9, 19; IX, 6, 7; IX, 62, 20; IX, 89, 2, etc.). Bearing in mind the fact that Soma has the most direct relation to the productive force (on this see also below), as well as data from ritual practice in a series of traditions where milk is equated with semen (see Semeka 1970: 51ff.), the connection of Soma and milk acquires a particular significance. It is interesting that in several instances the theme of *milk*, of *milking*, is combined with the motif of stone (cf. ṚV IX, 65, 15: *yásya te mádyaṃ rásaṃ tīvráṃ duhánty ádribhiḥ / sá pavasvābhimātihā́* 'Of whom, the exhilarating, sharp juice,

they milk out with the press(-stones), — such (thou), flow on (so as to be) the destroyer of attacking (enemies)'; cf. also I, 121, 8). There are numerous typological parallels which support this link: cf. the extremely wide diffusion of sacrificial stones (most often of a cup-shaped form) on which *milk* is poured;[139] such stones often are located on a *hill* and serve for rituals having the aim of increasing fertility, for expelling evil spirits,[140] curing illness, and so on.[141] The connection between mushrooms and milk is obvious in a series of names for mushrooms (cf. Russian *molokanka*, *molokitnik*, *molokovnik*, *molokoedka*, etc., all derived from the root for 'milk', *moloko*), and poisonous or bitter mushrooms are soaked in *milk* to neutralize their negative qualities.

As is known, *urine* may also appear as an equivalent of semen.[142] It is characteristic that many legends, superstitions, omens, interpretations of dreams, and predictions are based on their close tie.[143] In a series of works Wasson and Lévi-Strauss have demonstrated the exceptional significance that this motif, which is tied to both Soma and mushrooms, has. As Wasson has shown, the hallucinogenic substances contained in *Amanita muscaria* are used in two ways (at least among the Paleosiberian tribes): the mushrooms are either consumed directly (most often in a dried form) or through the urine of a person who has ingested the mushroom. There is evidence to indicate that urine was preferred over the primary product. In a series of traditions it is used not only for the attainment of a state of trance, but also for ritual ablutions. Wasson has shown that in certain regions of the ancient settlements of the Indo-Aryans, who worshipped Soma, one finds traces of the previous cult: cf. the use of urine for ritual purposes by the Sikhs and Musulmans of Punjab, Kashmir, and certain other North-Western provinces.[144] These traces may be found, as well; in certain Ancient Indian texts; cf. the episode in the *Mahābhārata* (Aśvamedha Parvan 14.54, 12-35), in which the god Krishna gives his adept the urine of an untouchable (who turns out to have been the Thunder-god Indra in disguise) as the drink of immortality (see Wasson, *Soma*: 33f.). Noteworthy is the interpretation of a passage from the Avesta admonishing those who allowed themselves to be deceived by the 'urine of drunkenness': *Kadā aǰən mūθrdm ahyā madahyā* ... (Yasna 48: 10).[145] In any case, the Manicheans still used not only 'red mushrooms' but, as is well-known, urine as well.[146] It is interesting that in several traditions mushrooms that are unfit for such use are called 'dog's urine' (in several parts of India, among the Yukagirs, and so on; cf. Altaic *atïn sidegi* 'horse piss' or Russian *sobačnik*, *sobač'jaki*, *sobač'ij grib*, etc.). These facts lead to the following correlation, proposed by Lévi-Strauss (1970: 11): a) human urine: agaric = dog's urine: usual mushroom; b) agaric: usual mushroom = human: dog.[147]

The connection between Soma and urine has by now been established with as much certainty as the similar connection between mushrooms and urine. This is testified to by indications of the two forms of Soma (cf. the two ways of consuming *Amanita muscaria):* ṚV IX, 66, 2 *tā́bhyāṃ viśvasya rājasi ye pavamāna dhā́manī pratīcī́ soma tasthátuḥ* 'With these two forms which stand facing us, O Soma, thou reignest over all things, Pavamana!' (cf. likewise II, 3, 5, etc.). It is supported by individual passages in the Vedic texts of the type ṚV IX, 74, 4, where the motif of Soma is joined with the theme of the divine drink and with urinating.[148] Finally, there are other, less direct hints, among which ṚV VIII, 4, 10 is noteworthy: ... *píbā sómaṃ váśāṅ̌ ánu / nimégha*mā*no maghavan divé-diva ójiṣṭaṃ dadhiṣe sáhaḥ* '... Drink Soma, as much as you wish, pissing it out day after day, O mighty one [Indra], you have assumed your most mighty force';[149] cf. in part ṚV II, 34, 13 (a similar motif in connection with the sons of Rudra, who assumed the form of horses; cf. likewise the motif of the fructifying rain of Rudra — ṚV V, 53, 14; X, 59, 9).

The motif of Soma in the urine, supported by the above-mentioned practice of taking the drink of mushrooms in its second form, for all practical purposes resolves conclusively the question of the isofunctionality of Soma and mushrooms in the given mythological scheme,[150] regardless of what the actual Soma plant really was.[151] Moreover, this isofunctionality goes beyond the limits of the myth and finds application in the sphere of ritual practice, both in its culinary and chemical aspects.[152]

In view of the legitimacy of identifying Soma with mushrooms within the limits of the general mythological scheme, one is justified in pointing out other features in the description of Soma which likewise bring it into correlation with certain motifs noted above in connection with mushrooms.

Among these features is the ambiguity of the role of Soma in the mythological duel. In the Indo-Iranian period **Sauma* was understood as the 'murderer [or obstructor] of Vṛtra' (cf. Vedic *vṛtrahán-,* Avestan *vərəθrajan*), whereas in several later texts Soma is sometimes identified precisely with Vrtra (cf. *vṛtró vaí sóma āsīt.* SB IV, 2, 5, 15; SB III, 4, 3, 13; *somo vṛtro* KS XXIV, 9; KKS XXXVIII 1, 2; *sómo vaí vṛtráḥ* MS III 1, 7, 8, and the like).[153]

The sexuality of Soma also corresponds to themes connected with mushrooms and manifests itself in corresponding sexual symbolism.[154] The masculine principle of Soma is stressed repeatedly: cf. his ascent to heaven, growth, and increase in volume (comparable, incidentally, to the sensations of a person who has taken an hallucinogenic drink);[155] indications of the fact that Soma, is a bridegroom or lover (cf. ṚV IX, 107,

6 and X, 85, 9: *sómo vadhūyúr abhavad*, i.a.). Soma, mixed with water and milk, is spoken of as a bull united with a cow (ṚV IX, 6, 6), this coupling being compared, moreover, to the union with women (ṚV IX, 32, 5; IX, 56, 3), the possessors of beautiful genitalia (*sūpasthā*, ṚV IX, 61, 21); he couples with the 'sisters' *(jāmi*), the fingers pressing out the soma juice (cf. ṚV IX, 99, 6; IX, 68, 4, etc.),[156] and sometimes coitus itself is described (cf. ṚV IX, 69, 3 or X, 101, 12). In the renowned nuptial hymn (ṚV X, 85) Soma acts as the bridegroom of Surya, as a divine prototype and model of the bridegroom *par excellence*[151] 'Soma is the *masculine*, Surya — the *feminine*, together they form a *couple*,' testifies the Taittiriya Brahmana (I, 3.3.2). It is not surprising that it is the conjugal pair that is supposed to prepare Soma (ṚV VIII, 31, 5). Finally, the sexual qualities of Soma manifest themselves most fully in his fertilizing capabilities (Soma is a bull).

Finally, one other group of facts — this time relating to a mythical plot — allow one to include Soma in the same mythological scheme in which, in other traditions, mushrooms or other plants used in preparing the drink of immortality figure. We have in mind a well-known myth, analyzed by Lommel (1949: 207-218), which tells how the gods, headed by the founder of sacrifice, Mitra, had to commit the murder of their fellow god Soma (by shattering and dismembering him into small pieces) in order to insure the successful completion of the sacrifice. No less interesting is the repeated motif of the *eagle* which brings Soma or Indra (or some other deity): cf. ṚV IV, 18, 13 *ádhā me śyenó mádhv ā́ jabhāra* 'then the eagle brought me the sweet drink' (speech of Indra); ṚV III, 43, 7 *indra píba ... ā́ yáṃ te śyena ...jabhā́ra* 'drink, Indra,... (that) which the eagle has brought you'.[158] Sometimes Indra abducts Soma without assuming the form of an eagle or falcon: cf. ṚV III, 48, 4 *tváṣṭāram índro janúṣābhibhū́yāmuṣya sómam apibac camū́ṣu* 'Indra, excelling Tvaṣṭar in birth, having stolen the force, drank it from the vessels' (cf. also ṚV VIII, 4, 4). It is significant that Tvaṣṭar is the father of Indra and the creator of the world: cf. the motif of theft from the celestial god by his children or other adversaries of some wondrous means and their subsequent punishment. This motif has naturally been compared to the story of the abduction of the honey by Odin and in several instances has been projected into the Indo-European epoch.[159]

Not long ago, proceeding from ṚV IX, 71, 2 (*prá kṛṣṭihéva śūṣá eti róruvad asuryàṃ várṇaṃ nï riṇīte asya tám* 'Aggressive as a killer of peoples he advances, bellowing with power. He sloughs off the Asurian color that is his'), Kuiper (1970: 281f.) indicated several parallels (in particular, from later Vedic literature) that permit one to interpret *várṇa* as designating a certain element of organization of the dual type (cf. the

opposition of good and bad *várṇa: bhadrám várṇam —pāpám várṇam*). If one speaks of the cosmic level, day and night are differentiated with the aid of *varna-* (cf. KS VIII.3; KKS IV.8, and so on; cf. *uṣā́sā — náktā);* on the divine level two classes are differentiated through this concept — deva and assura,[160] as are two classes on the social level — Āryan and Dāsa.[161] Thus Soma figures also as an element serving to classify social structure, as was also the case with chessmen and mushrooms (see above). Still more interesting is the fact that here too a color opposition is used for the social differentiation (of which there are examples in more recent times as well).

All these examples convincingly demonstrate the way in which one and the same archetypal scheme is realized in different cultural-historical traditions, on the one hand, and the purposes for which this scheme is used, on the other. Despite all the differences in the actual realizations of the scheme and in the general evaluation given it by members of different cultures, one cannot deny the enormous role which it has played and continues to play in the cultural development of mankind.

Notes

* The present essay, translated by Stephen Rudy, is an outgrowth of our collective work (Elizarenkova and Toporov 1970), initiated by Elizarenkova's attempts to verify Wasson's hypothesis about Soma, which will be published separately.

1. Cf. Lévi-Strauss 1966: 45, 60, 151-152, 313, 330; 1968: 219-224, 325; 1958; 1970.
2. It is a matter not only of the world-renowned works of this author (among the most recent of which see the series of articles in *Revue de Mycologie* under the general title 'Un Problème à éclaircir: celui de la Tue-mouche', especially Heim 1966), but also of the reflections of this theme in fiction and journalism (cf. Aldous Huxley's novel *Island* and his essay on psychedelic substances). Among the more specialized literature on this question see Efron et al. (1967, especially the essay by Eugster and Waser and their bibliography) and Catalfomo and Eugster (1970).
3. Besides Wasson's and Heim's famous work on the mushroom cult in Mexico, which set ethnomycological research into motion, see Wasson (1956; 1969 [referred to throughout as *Soma];* 1970a and b) and Wasson and Wasson (1956). Among the reactions to Wasson's *Soma*, see Ingalls (1971) and Brough (1971). There recently appeared an extremely interesting monograph by R. G. Wasson, C. A. P. Ruck, and A. Hoffmann, *The Road to Eleusis: Unveiling the Mysteries* (1978). It offers one of the most astounding discoveries in the field of ethnomycology, that of the role played by the fungus *Claviceps purpurea* in the Eleusinian mysteries. Unfortunately, the many valuable insights of this work could not be taken into account in the present article. We should mention, however, that the materials the authors cite clearly explain the role of mushrooms in the marriage ceremony and their insistent phallic associations. It is indicative that the name Mycenae (*Μύκῆναι*), one of the main centers of the Creto-Mycenaean civilization, is formed from the name for mushrooms *(μύκης).* (Cf. also Allegro 1970.)

4. The actuality of these features is confirmed by the data from the cultural traditions in question (cf. Lévi-Strauss 1962 and Roux 1966, among others).
5. In 1953 the Wassons observed a secret nocturnal ritual conducted by an old woman shaman in a distant mountain region of southern Mexico (in the country of the Mazatec Indians). The central episode of the ritual is the consumption of dried mushrooms (interpreted by some as divine and by others as satanic) and the experiencing of visions that follow. Of interest is the fact that one of the basic motifs of the hallucinations is akin to colored ornamentation of the ancient Mexican type. These data about a live mushroom cult are confirmed by historical evidence as well. It is well known that around the threshold of our era there appeared in Mesoamerica mushroom-shaped sculptures with depictions of a mythical spirit on the base of the mushroom (cf. images from Kaminaljuyú). Several centuries later there appeared mushroom-idols, sculpted by masters from the Maya-Kichu tribe. In central America there existed at this time, it would seem, the cult of mushrooms that the Spanish encountered much later. Cf. the statement in Bernardino de Saaguna's *Chronicle* of the sixteenth century about the Indians' use of a hallucinogenic magic mushroom *(teo-nanácatl)* in their religious festivals. See, among others, Durán (1964: 180, 189, 225-226, 350-351). On traces of a mushroom cult in Scandinavia, see Kaplan (1975).
6. For example, urinating on certain mushrooms, using obscene language, and the like.
7. Further branchings are possible, for example, cannibal meat-noncannibal meat.
8. Cf. Tucun myths about the mad hunter (M_{240}) or the family who were changed into jaguars (M_{304}). In the latter what is significant is the motif of the old woman who has killed her son and tries to feed his *liver* to her grandchildren, claiming that it is a tree *fungus.* The correlation of mushrooms and mold is attested on the linguistic level by such forms as French *mousseron* 'a type of edible mushroom', from Old French *moisseron*, *mousheron* (whence Middle English *muscheron*, English *mushroom*), alongside French *moisi*, *moisissure* 'mold', *moisir* 'to cover with mold'.
9. See Lévi-Strauss (1970: 15). Incidentally, the view of mushrooms as feces (particularly that of divine beings) does not so much indicate a negative attitude toward them as much as it underlines the particular role of mushrooms on the path from nature to culture, taking into consideration the distinctions between the divine and human aspects of this problem (cf. the motifs of digestion and its results, and of vomiting in connection with this motif). It should be recalled that the Greeks termed mushrooms the 'food of the gods' (*cibus deorum* in Seutonius' transmission *[Nero* 33]; cf. *θεῶν βρῶμα* [Dio Cassius 61, 35]); the Aztecs, *teo-nanácatl* 'god's flesh'; cf. also Old Flemish *dyvelsbrood* 'devil's bread'. (Cf. also the Ojibwa belief that mushrooms are the food of the dead.)
10. Cf. 'Quid porro insanius dici aut cogitari potest, hominem boletus, orizum, tubera, placentas, caroenum, piper, laser, distento ventre cum gratulatione ructantem, et quotidie talia requirentem non inveniri quemadmodum a tribus signaculis, id est a regula sanctitatis excidisse videatur' — (*De Moribus Manichaeorum*, Cap. 13, §30; cf. Wasson, Soma: 71-72).
11. Lévi-Strauss (1962: 139) has shown that 'incest' and 'cannibalism', as the exaggerated forms of sexual union and the consumption of food, are designated in several languages by one and the same word (cf. *kuta kuta* in the language of the Koko Yao of Cape York Penninsula). Russian *est* ' in the meanings 'ĕděre' and 'futuĕre' is, of course, the result of convergence, but it is also conditioned by more general conceptions about the connection between these two spheres and others correctable with them (for example, vomiting = giving birth). Nothing need be said about the similar symbolism of these two acts. Similarly, the Ponapy equate the eating of the

totem with incest, and among the Mashona and Matabele of Africa the word for totem also signifies 'sororis vulva'. Such data affirm the equal antiquity of nutritional prohibitions and rules of exogamy. This same situation is reflected obliquely in the Tantric ritual *pañca-makāra*, which unites the use of meat, fish, cooked grain, wine, and copulation.

12. The *vagina dentata* may be depicted as an aggressive principle threatening the male with castration or as a passive principle receiving the male life force. Thus one finds, in the first instance, utterances of the type 'She, the sharp-clawed one, is scratching, biting, like one poisoned, for *food*' (*áttave*) or 'Do not be a husband-killer *(ápatighny edhi*) in the Old Indic nuptial hymn (RV X, 85, 34, 44) and, in the second instance, the cultivation (particularly in the Far East and Southeast Asia) on the part of the man of a particular type of intercourse guaranteeing the preservation of the life force by not communicating it to the woman (see Van Gulik 1961, 1951; cf. Malinowski 1927; Gessain 1957: 247-295). Analogies between a gaping mouth and a wide-open lap, and between genders and food, are analyzed by Baxtin (1965: 240, 303).

13. Just as *mushrooms* may be conveyed by two words ('mushrooms' and 'lips'), *lips* may be conveyed by the same two words ('lips' and 'mushrooms'); cf. Serbo-Croatian *vargan'* 'mushroom', alongside Polish *warga* 'lip'.

14. Associations of this sort have been noted repeatedly, in particular among the American Indians; cf. likewise Russian *pupyr'* designating both the membrum virile and a particular type of mushroom; Lithuanian *budẽ* (and *bùdė)* 'mushroom' and 'touchstone'. Finally, scientific mycological terminology is also drawn to such associations; cf. such names as *Amanita phalloides.* Cf. characteristic Russian indecent expressions (used, incidentally, by Dostoevsky repeatedly) such as *s"eš' grib* lit. 'you'll eat a mushroom', fig. 'you'll have nothing, you'll be unsuccessful' ("Mr. Proxarcin"); *ty grib*, *a on knjaz'* 'you're a mushroom, but he's a prince' (*The Brothers Karamazov*); *čto ty, ogribel čto-li* 'what's the matter, have you turned into a stump [lit. mushroom] or something?' (Dostoevsky's notebooks); where *grib* = 'penis', which is used in the more explicit colloquial variants of such expressions. Also relevant here is the nickname *griboedy* lit. 'mushroom eaters' or the almost formulaic expression *Kuda mne, staromu gribu, s molodoj ženoj vozit'sja!* 'What use is there in me, an old mushroom, fiddling around with a young wife!' (Meľnikov-Pečerskij, *V lesax* [In the woods], Book I, part 2, ch. 4). No less indicative are other contexts in Mel'nikov-Pečerskij's novel, as for example the description of the gathering of the first mushrooms of the year: 'The young girls rejoice over the first mushrooms ... stuffing themselves on them and feeding the lads who come to the maidens' mushroom hunts. And if only greenhorns would show up!... Then the girls could make fun of them to their hearts' content, could pull at the rascals' ears till they drew blood for the first mushroom [author's note; a well-known ancient custom = boxing behind the ears anyone who eats the first mushroom of the year]. It's for this that the large mushroom hunts of the maidens are organized ... Since Easter came late that year, the mushrooms were ripe before all the holy holidays. ... The lads went along too. ... Their business was not to gather mushrooms, but to help the fresh girls. The minute they're in the woods, there's laughter and screams. The girls are faithful to the old rule: whoever they were with in the winter when they did their spinning is the one they go with in summer to hunt mushrooms.... They started cooking the mushrooms. ... The girls each fed their own lad with their own little spoon.... And towards evening each of the lads is off into the bushes with his sweetheart. ... Oh, mushrooms, dear little mushrooms! Oh, dark, dear woods!' *(V lesax*, Book I, part III, ch. 6, with the further story of the girl *Malan'e* [a name related to *molnija* 'lightning'], who 'went into

the woods after mushrooms, and found instead irreparable maidenly misfortune . [a precedent which becomes an example]). The reference to a similar image in Leskov's 'Soborjane' [The Cathedral Folk] has a somewhat different character: *Ty ne smotri na menja, čto ja lakoj grib lafertovskij: griby-to i v lesu živut, a i po gorodam pro nix znajut* 'Don't look at me as if I were such an *infernal mushroom*: mushrooms live in the woods, but they know about them in the towns too'. Finally, the 'mushroom' theme unfolds along similar lines in Thomas Mann's *The Magic Mountain*, in Doctor Krokowski's lecture On love and death': 'And thus it was, in this connection, that the learned gentleman ... came upon the subject of botany, that is to say, upon the subject of mushrooms. These creatures of the shade, luxuriant and anomalous forms of organic life, are fleshy by nature, and closely related to the animal kingdom. ... Dr. Krokowski went on to speak of a mushroom, famous in classical antiquity and since, on account of its form and the powers ascribed to it — a fungus in whose Latin epithet *impudicus* occurred; and which in its form was suggestive of love, in its odor of death. For it was a striking fact that the odor of the Impudicus was that of animal decay: it gave out that odor when the viscous, greenish, spore-bearing fluid dripped from its bell-shaped top. Yet even today, among the ignorant, the mushroom passed for an aphrodisiac'. (Ch. 6, 'Changes', cited according to the Lowe-Porter translation.)

15. In the light of nostratic perspectives it is possible that related words include Turkic *gömba* 'mushroom' (cf. Bashkir, Tatar *köb~köm~göm* 'to puff up', 'to swell' + *bä,* towards the semantics of which cf. Slavic *grib" grebǫ)* and even Japanese *kobu* 'lump', 'protuberance': *kubo* 'depression", 'hollow' (cf. in particular, Japanese *kabu* 'stump', 'turnip', Tagal *kabuti* 'mushroom') and numerous examples of a similar type, all connected with the complex *g/k-(m)-b/p.* Cf. in part Syromjatnikov (1970: 563-564).

16. For the identification *boy = mushroom^* cf. Russian riddles about mushrooms of the type: *Mal'čik s pal'čik, belenkij balaxončik, krasnaja šapočka* 'A boy with a stick, white overalls, a red hat'; *Mal'čik udalen'kij skvoz' zemlju prošël — krasnu šapocku našël* 'A little far-way boy went through the ground — a red cap he found'; *Mal malyšok po podzemel'ju šël. Pered solncem stal, kolpačiško snjal* 'A little boy walked along underground. He got up before the sun, took off his little cap'; *V lesu na prigorke stoit Egor'ka* v *krasnoj šapke* 'In the woods on a little knoll stands Egor'ka in a red cap'; *Stoit Antoška* (*Troška*) *na odnoj nožke* 'Antoška (Troška) stands on one little leg'. (Cf. likewise *Stoj staričok — krasnyj kolpačok* 'Stand little old man — red little cap'; *Na boru, na juru stoit staričok, krasnyj kolpačok* 'In the coniferous forest, in a high, exposed place stands the little old man, the red little cap'.) The opposite identification occurs but rarely; cf. *Na lesnoj poljanke krasuetsja Tat'janka — alyj sarafan, belyj krapinki* 'In a glade in the woods little Tatyana stands, showing off-- a scarlet sarafan, white spots' (referring to the fly-agaric mushroom). See Mitrofanova (1968: 69).

17. Most interesting is the Ket variant: Women (who arose from earth scattered by the sky-god Es with his *left* hand to the *right)* and men (created similarly, but by Es's *right* hand scattering earth to the *left)* originally lived apart. Phalluses grew in the woods, where women went to them out of necessity. One of them got tired of going into the words, plucked out a phallus and carried it into the tent. Later on, as the result of a certain adventure, a man became its possessor, and the phalluses in the woods shrivelled up and turned into *mushrooms*; *Russians* are said to eat them, but they cause *Kets* to *vomit.* See Anučkin (1914: 9).

18. Cf. J. 1813.1: some *mushrooms* shrivelled up in *water*; a stupid *husband*, thinking that

his *wife* had *eaten* part of them, kills her. See Thompson (1955-1958), Smith and Dale (1920).

19. On this representation see Trever (1932: plate 15), Kozlov (1925: fig. 12), Yetts (1926: 176, pl. 4H), Sullivan (1962: 52ff.), Willetts (1958: 290ff.), Wasson *(Soma,* 89, pl. XVI-XVII). Considering the Noin Ula representation, one is tempted to interpret in a somewhat new way the famous Hopi pattern:

namely as a depiction of clouds, lightning, and rain. See Boas (1927: 120, Figure 117), cf. likewise the Pueblo drawing, Figure 118: three triangles, above which are three birds, which may be interpreted as rain coming out of the clouds and fertility. In any case, these two representations, taken together, are quite close both to the composition of the Noin Ula textile and to the favorite Chinese depictions of *ling chih* mushrooms *(thunder* mushrooms) surrounding the world tree, and to the scheme of the myth (the origin of mushrooms as a sign of fertility resulting from a lightning-bolt and rain). Cf. also the new interpretation of drawings on the spine of the statues on Easter Island as representing the elements of life (Sun, Moon, Lightning): see Maziere (1965).

20. Taking checkers as the basic form of the game, chess should be regarded as a later and more complex stage of development. In chess the opposition of *masculine-feminine* is replaced by the more abstract opposition of *white-black,* with the masculine-feminine pair (king-queen) being integrated into the set of players available to each side. One should recall that at one point the relation between these two elements was differentiated, *masculine* being associated with *white* and *feminine* with *black;* cf, the distinction, in ancient Mongolian chessmen, between men belonging to the *red* side and those belonging to the *yellow* side (see Montell 1939); cf., in part, Murray (1913), Orbeli and Trever (1936). The interpretation proposed here for the pieces of the two sides leads one to the conclusion that the original scheme for games like draughts or chess (Old Indie *caturaṅga*, lit. 'four corners'; cf. below on the significance of the number *four*, *four* directions, and the *fourth* day in connection with mushrooms) was a universal composition of the type of the world tree, with a particular accent on social relations. The characteristic terminology of the game — to 'hit', 'strike', 'eat up', 'take' — indirectly reproduces the basic predicates in the myth of the origin of mushrooms or, more generally, of cultured plants (on which see below). Finally, one should note that to 'hit', 'strike', 'take', 'eat up' (as well as 'stick', 'cue' and the like) are words used in a distinctly erotic sense. Moreover, in certain situations of the carnival type it is precisely the erotic sense that comes to the fore (cf. *baston de manage, baston à un bout* and the like in the works of Rabelais and his contemporaries): see M. Baxtin (1965: 222-223), where there is also a discussion of the ambivalence of meanings in this group of words (murder, destruction, the end of the old, as opposed to the gift of life, birth, and the beginning of the new). Taking all of the above into consideration, one cannot help but view games like draughts (at least, for a certain period) as, if not a ritual, then at least as an imitation of ritual in miniature, and thus as comparable to other archaic rituals in which the ambivalence of the concepts of life and death, and the neutralization of their opposition, is played upon. On the role of play in the works of Rabelais and in the carnival tradition see Baxtin (1965: 254ff.). It is interesting that American Indian tribes of the Salish group regard

fungus as a talisman which is obligatory for victory in *games.* Incidentally, it is precisely the Salish group and certain of its neighbors who are the only mycophiles among the American Indians (cf. their use of mushrooms in food, in medicine, their rubbing of their bodies with mushrooms to acquire strength, their use of mushrooms to designate clans and so on). See Lévi-Strauss (1970:

21. In Russian culture this motif has been preserved only in degenerated, humoristic variants such as folktales of the type Afanas'ev No. 90 (Andreev 1929: 297) and songs connected with them (cf. *Griby* ..., 1916), or in utterances like *Èto bylo pri care Goroxe, kogda griby voevali* This was in the days of yore [lit. 'during the reign of Tsar Pea'], when the mushrooms were at war'. It is interesting that the folktale in question contains (even if in a transformed guise) such archaic themes as, for example, the enumeration of mushrooms (*borovik, beljanki, ryžiki, volnuški, openki, gruzdi*); indications of social position (the *pany* 'lords[1] are 'white mushrooms[1] *[beljanki* and 'mythical warriors or giants living in the villages and enimical toward the population' [see Mel'nicenko, 1961: 141]; the boletus *[borovík]* is the 'lieutenant[1] of all the mushrooms: *borovik, vsem gribam polkov(n)ik ...; / olkazalisja beljanki*: / *'My gribovye dvorjanki/ otkazalis' ryžiki*: / *'My bogatye mužiki'* and so on. 'the boletus, *lieutenant* of all the mushrooms ...; the *white mushrooms* refused [to go off to war]: "we're the *aristocracy* of the mushrooms" the *saffron milk-cap mushrooms* refused [to go off to war]: *"we're rich folks*" [cf. likewise the image of *Car gribov* 'Tsar of the mushrooms' in folktales or the *Cezarskij grib* 'Caesar mushroom.[1] esteemed by the Romans]; the opposition of masculine mushrooms to feminine ones (the *gruzdi* 'milk-agarics') — all the mushrooms refused to go to war, with the exception of the milk-agarics, who cried: '*My gruzdi, rebjatuški družny*, *pojdëm na vojny!*' 'We milk-agarics, friendly fellows, we'll go off to war!' In this respect the Russian folktale in its original form may be juxtaposed to the scheme for games like draughts or chess, as well as to the scheme for the basic myth about mushrooms, on which see below. There also exist literary reworkings and continuations of the motif 297B: see Marcinkevičius (1958); the same motifs appear in a somewhat different form in Isokas (1970) or in the book *Griby* ... (1837). In Isokas' book several significant motifs connected with mushrooms and based on folk tradition are underscored. In the olden days all the mushrooms were the *same* and were distinguished only *by name.* However, one autumn a *mushroom carnival* was arranged to pick the *mushroom king.* All the mushrooms dressed up in clothes *differing in color*, divided up into *brothers and sisters* and stood up by *fours* (cf. *O mes-trimitėliai, pumpotaukšliai, dyglučiai, musmirės, voveruškos, kazlėkai... — šaukė grybai ir stojo po keturis* ... [p. 18]). The quarrel which arose did not result in the choice of a king, and each mushroom remained forever in the clothing it wore for the occasion and was chosen as *food* by an *animal* corresponding to its costume (e.g. *briedis* 'deer' was the costume of the *musmirė* 'fly-agaric'); on *trimitėliai* and the correspondences between the mushroom and animal codes see below. Cf., in part, Isokas (1960).

22. Cf. the myth of the world egg and the fairytale of the moor-hen; the abduction of a maiden by a dragon and the Russian children's game '*Ispekli my karavaj'*; the myth of the beginnings of fertility and the folktale of the war of the mushrooms, and so on. We hope to return in a future article to the question of archaisms in children's games and fairytales.

23. See, for the mythological aspect of this question, Eliade (1962), and, for its psychoanalytical aspect, Fromm (1965) and other works of the same author; cf. likewise Hunt (1959: 34ff.). Cf. also the androgynous myth in Plato's *Symposium.*

24. See Hummel (1953) and the other numerous works of this author; Schröder (1953: 21 Off.). Cf. the investigations of J. N. Roerich, G. Tucci, R. Heine-Geldern, O. Gut, and E. Russell.
25. Cf. the scheme for correspondences of this sort in Kundalini Yoga: triangle-red-fire; circle-white-water; square-yellow-earth. Cf. also ancient Mexican symbolism, on which see Krickeberg (1949: 63).
26. Cf. names for mushrooms like Russian *zontik pëstryj* lit. ‘variegated umbrella' for *Collybia albuminosa* or Pampango (central Luzon, Philippines) *payungpayungan kulog*, the first element of which is lit. ‘parasol-like’ and the second — ‘thunder': see Wasson (1956: 607).
27. Cf. Russian riddles like *Esť i korešok, esť i šljapka, a ne grib* ‘It has a stem, it has a hat, but it’s not a mushroom’, with the answer *Zont* ‘Umbrella’ (see *Zagadki* ..., p. 124) or ‘A white *umbrella* stands in a field’, with the answer ‘Mushroom’ (see Taylor 1951: 470), or the Burmese riddle ‘He appears after a fanfare, opens his big *umbrella*, because he’s proud of his royal origin’ (see Than-Sein and Dundes 1964: 69, 74). On the parasol as a symbol of royal power see Hahn (1904: 30-42); on the connection of the parasol with the sky (see below on that of the mushroom with the sky), cf. ancient Greek *ουρανίσκος* ‘vaulted awning’, ‘canopy’ (ἐν *τῷ βασιλικῷ θρόνῳ,* Plutarch). For the identification of mushrooms with the umbrella cf. the well-known English joke built on the fact that one and the same representation is taken by some to be a mushroom and by others to be an umbrella. One of the most famous megaliths of Kerala (India) is the so-called ‘parasol-stone’ *(ṭopi-kals, kuḍai-kals*), which is in the form of an enormous mushroom: see the reproduction in *Archaeological Remains* ... 1964: Plate IX, 37, 40. Cf. the famous ‘Sacred Mush-rooms’, stone sculptures which were widespread in the art of the ancient Mayans of the pre-classical period (Kaminaljuyú). It is interesting that a human face peers out from the foot of such stone mushrooms. This feature was apparently viewed as the prophetic spirit living in mushrooms (used as a hallucinogenic substance) and transmitted into a person who drank a beverage compounded of mushrooms: see Durán (1964: 180, 189, 225-226, 350-351); Kinžalov (1968: 24, 26).
28. Besides mushrooms, one also finds the umbrella, the cane, trees, etc., identified with the *membrum virile,* about which Erich Fromm wrote in the early 1950’s. It is interesting that both of these symbols are interpreted similarly in dreams as representing happiness, fertility, riches, a long life, protection, and the like. See Jobes (1962: part 2, 1139), as well as the key to the interpretation of dreams in the *Atharvaveda*, where the parasol, lightning, and so on, are mentioned *(Pariśiṣṭa* 68); see Esnoul (1959:217). This circle of questions was approached for the first time in Freud’s *Die Traumdeutung.*
29. Cf. Tavgi (Gnanasang) *ʃaʒkáʔam* ‘to be inebriated’, Zyrian (Komi) *pagalny, pagawny* ‘to lose consciousness’, ‘to be poisoned’, etc. P. Skok is perhaps right in linking Serbo-Croatian *mûnjen* ‘stultus’ (cf. Slovenian *mólnjav, mólnjen* ‘stunned’, dialectal *mólnjenost ,'munjenosi* ‘recklessness’, ‘madness’) with Slavic **ml''nji* ‘lightning’. But cf. Bezlaj (1975: 182).
30. The data on the root **paŋ, *poŋ* are collected in Wasson *(Soma:* 164ff.).
31. Several modern Indian languages have words designating ‘mad’, ‘madness’, etc., which go back to the hypothetical Old Indian **paggala*, which is, incidentally, of non-Arian origin. See Turner (1962-1966: No. 7643). It is interesting that both of the nostratic schemes we have cited used to designate mushrooms also relate to cannabis (cf. Greek *κάνναβις*, German *Hanf,* Russian *konopljá*, as opposed to Old Indie *bhangá*-, Avestan *baŋha-, bangha*-, Persian *bang* and so on), which, like certain

varieties of mushrooms, is used in preparing hallucinogenic means. The metathetic or 'inside-out' nature of the two indicated roots is sometimes correlated (iconically) with the 'topsy-turvey' nature of consciousness which is an effect of these substances (the fly-agaric and cannabis).

32. Cf. Vedic *kṣoṇī* alongside Indo-European **skoṷ-*, **sku-* (cf. Lithuanian *skų́jà* 'needles [of conifer]' and its Slavic correspondences). For Old Indie *kṣ~:* Indo-European *sk-:* Slavic *x*, cf. *kṣudh(ā): skùsti (skudaũ): xud''*, and the like. Interesting in this respect is an analysis of Slavíc *luna*, meaning 'moon', 'pit', 'hollow'.

33. R. G. Wasson *(Soma,* 170f.) raised this possibility in connection with Chinese *mo-ku,* which designates edible mushrooms (possibly from a Mongolian derivative of **poŋ?),* and Maori *pangè, pangī* 'tinder, touchwood, made from spongy fungus'. Reflections of this root in other languages may exist. Cf. the Australian mythological term *baŋ,* which has a wide circle of meanings from 'dead', 'spirit', 'apparition', 'shade' to 'man', I, 'occult force'. (On this word see Worms 1957.) It is characteristic that the soul of the deceased joined the realm of plant (or animal) life; cf. the interesting observation that among the natives of Vagi and Gwini (Northern Kimberley) the name of the deceased went over from the first class of names (designating people) to the second (designating animals); see Capell (1939: 385). It is noteworthy that *baŋ* is used to designate almost all of the basic objects which, in other traditions, are linked mythically with mushrooms.

34. This question was explored in detail in Wasson's trail-blazing 1956 article, 'Lightning-Bolt and Mushroom: An Essay in Early Cultural Exploration.'

35. Cf. Pliny the Elder: *De tuberibus haec traduntur peculiariter: cum fuerint imbres autumnales ac tonitrua crebra, tunc nasci, et maxime e tonitribus ...* 'Peculiarities reported about truffles are that they spring up when there have been spells of rain in autumn and repeated thunderstorms, and that thunderstorms bring them out particularly ...' *(Hist. Nat.* Bk. 19, 37) and Juvenal: *Post hunc tradentur tubera, si ver tunc erit et facient optata tonitrua cenas maiores.* 'Then will come truffles, if it be spring-time and the longed-for thunder have enlarged our dinners' *(Sat.* V, 116-118). Another variant, that mushrooms become worm-ridden from thunder (cf. the identification mushrooms: worms) is to be found in the Vladimir Province, as M. B. Mejlax informed us.

36. Cf. Kalidasa's Sanskrit lyric Meghaduta, 'The Cloud Messenger', cited by Wasson, where the exiled yaksha or demigod addresses the raincloud drifting northward over India: 'When they eagerly hear thy sweet-sounding, fertilizing thunder, which can cover the earth with mushrooms ...!' In local tradition, as Wasson notes, the mushroom, *śilīndhra-*, was linked with cow-dung (see above); the word's probable derivation is from *śili-,* perhaps meaning 'worm' or 'female toad', and *-dhra* 'carrying'. (On the connection between worms, toads, and mushrooms, see below.)

37. Cf. Wasson 1956: 607: 'In a personal letter to us, Colonel H. R. P. Dickson, author of *The Arab of the Desert*, tells us that the Bedouin are great lovers of terfezia, and that in the season of the *wasm* (October to early November) they look for heavy rains accompanied by *thunder and lightning*, and if the weather is propitious then, they know that some months later, in February and March, the terfezia will abound.'

38 Incidentally, such beliefs are known among the North American Indians as well. Thus, for example, certain tribes West of the Rockies think that mushrooms are born of thunder; in the upper reaches of the Missouri there is a belief which links mushrooms with stars (cf. the beliefs of the Toba about the connection between mushrooms and the rainbow).

39 In connection with what follows it is important to note that the generation of *Tawhaki*

descends from cannibals who came down from *Heaven* and her husband who lives on *Earth*; Tawhaki himself rises to the Heavens in search of a wife or descends to the Underworld along a string, rainbow, vine or the like. He avenges the death of his *father*, gaining victory in *games* or *competitions.* Finally, he gives *manna* to the rulers. The cycle of legends about Tawhaki is among the most widely-diffused in Polynesia, although certain motifs are limited to separate islands.

40. Cf. also Thompson and Balys (1958), Elwin (1949 and 1953), Venkataswami, Dahnhardt (1910: 107). Italian, Hungarian, and Lithuanian variants of this motif have also been noted.

41. For similar correspondences see Mooney (1900), Roth (1915), Nordenskiöld (1923), Nimuendaju (1939: 146), Pelikan (.1950: 7ff.), Jensen (1951: 374ff.). One must assume that the names assigned to mushrooms in analogy to animals, which are observed in the most diverse traditions, indirectly reflect an archaic system of vegetative-animal correspondences.

42. Taking into account the onomatopoeic function of this little chant, one can explain in a similar way the Russian riddle *(Zagadki*, No. 2442) *V pole-to go-go-go, a* v *lesax-to gi-gi-gi* 'If in the field — ho-ho-ho, but in the woods — hee-hee-hee', which has the answer *gorox i griby* 'peas and mushrooms'. It is interesting to note that in Russian riddles the relation of 'thunder' *(grom*) to 'mushroom' *(grib*) finds a curious echo in that of 'city' (*grad*) to 'peas' *(gorox):* cf. the riddle *Rassypalsja gorox na sem'desjat dorog* 'Peas scattered on seventy roads' which has as its answer *grad* 'city'. Moreover, in riddles 'peas' *(gorox)* are often defined by images similar to those used for mushrooms: cf. No. 2444-2445, ... *V syru zemlju ušel, sinju šapku našel* 'Into the damp earth he went, a blue cap he found'.

43. One should not exclude the possibility that this opposition is a transformation of a more ancient one — *concave* (e.g. a hollow in a swamp): convex (a mountain). And in this legend, it is with this pair that birth by copulation begins.

44. His other names include *Njambi, Ndjambi (-Karunga), Nyambi, (N)zambi* and so on.

45. In more detail, see Tessmann (1913: 17ff.), Baumann (1936: 23ff., 191ff.), Irle (1916-1917: 343).

46. *Ana* means 'rain', as well as a man whose seed is like fructifying rain; *gçnno* — 'with sinuous edges', 'with folds'. Considering the inner form of the word and the external appearance of *anagǫnno*, one should not exclude the possibility that he is mushroom-like in nature.

47. This semantic field would suggest that Yurak (Nentsy) *pǎŋg* 'root', 'stalk', 'stem', 'origin', as well as *pǎŋgǎl-pǎ(si)* 'to spin', 'braid', 'knit', 'wind' (cf. *pǎŋgǎlsi)* and so on, are likewise connected with **paŋ, *poŋ.* It is interesting that in the Dogon myth mushrooms are made of the same material as roots.

48. Other names for them include 'witches circles', 'magic circles', etc.

49. Cf. the Russian saying *Bylo Tita — bylo pito, a te per' Karpa — net ni kapli* 'Titus was here — there was plenty to drink, now Karp is here — there's not a drop'.

50. Cf. *U Tita bylo semero detej, / Semero malen'kix maljutok. / Oni ne pili i ne eli. / A drug na druga vse smotreli. / I delali vot tak ...* 'Titus had seven children, / Seven little babies. / They neither drank nor ate. / But they all just looked at one another. / And went like t h i s . (O n Titus, cf., on the contrary: *Bylo Tita — bylo pito ...* 'Titus was here — there was plenty to drink ...'; *Tit, idi kissel' esť...* 'Titus, go eat kissel ...'; *Tit, idi piť ...* 'Titus, go drink *P'jannyj Tit pod lavkoj ležit* Drunken Titus lies under the bench and so on. Cf. also Wordsworth's 'We Are Seven'.

51. Cf., for the Russian tradition, Knjažnin's *Titovo miloserdie* 'Titus' Charity' (1785): *Otečestva otca / Dražajše narečen'e / Esť Titova venca / Verxovno ukrašen'e ...* 'The

dearest name / Of the father of the fatherland / Is the supreme decoration / Of the wreath of Titus

52. If this is indeed so, then the prototype of the riddle might prove to be the analogous Vogul (Mansi) way of designating a man in a state of intoxication, namely as 'bemushroomed' (whatever the means of intoxication); both 'mushroom' and 'intoxication' are expressed by the words *ραŋx, piŋka*. It is interesting that the Iranian name for hashish later became in many Asian traditions the name for an inebriating mushroom used by shamans.

53. Among the explanations offered, one is indisputable: the capability of certain fungi ('ear-shaped', particularly those growing on trees) to absorb a sound and then immediately reproduce it. In the language of certain Indian tribes such mushrooms and 'echo' are designated by the same word: see Lévi-Strauss (1970: 14). Another explanation might be sought in the fact that in some places *mushroom* and *tambourine* are not only related to a class of semiotically equivalent objects of shamanistic culture (the drink made from mushrooms and the tambourine in the function of means making it possible to establish contact with other worlds), but are directly identified with each other, sometimes even on the linguistic level. On the motif of mushroom ear, cf. the following two Russian riddles: 1. *Gibkoe, krugloe, na kortočkax pod vereskom — Uxo* 'Flexible, round, squating under the heather — An ear'; 2. *Gladkaja pod mostom, šeršavaja pod vereskom, mjagkij pod sosnoj — Ryba, zemlja, grib* 'Smooth under the bridge, rough under the heather, soft under the pine — fish, earth, mushroom' (see Trusman [1980: 51]). Similar imagery occurs in the novels of Andrej Belyj: *Ja slyšal pro to, čto i steny imejut kakie-to uši. — Kakie že?— Dumaju ja: Malinovskoj! — Razvesit u nas svoi uši (suxie griby prinimal odno vremja za uši ee) ...; ... na kuxne ušami povisli suxie griby ... steny ušaty ili razvesjas' suximi ušami, kak svjazkoj gribov; ... kovyrjaet gribnoe, sušennoe uxo ...* (Belyj 1928: 55, 81, 137, 160).

54. On the erotic symbolism of the wedding drum, tambourine, and so on, in the carnival tradition, see Baxtin (1968: 204-205).

55. Cf. such names for mushrooms as Russian *skripun, skripica* (from *skrip* 'squeak, creak, crunch').

56. For the connection between lightning and insects, cf. such names as lightning-bug or fire-fly (from the family *Lampyridae).* According to certain beliefs current in North America (Alabama, Ontario), a person who kills this insect will die the following year from lightning, and the appearance of lightning-bugs is linked with rain.

57. An extremely close analogy is a scene of Achilles and Troilus in a fresco from the Etruscan Tomb of the Bulls (sixth century B.C.). In this composition, which is quite comparable to the shamanistic representation, one finds the *tree of life* in the vicinity of a *mushroom-shaped vase.* Cf. Pallottino (1952), Bargellini (1960). Another, contemporary example of a combination of the motifs of the tree, an ear and a mushroom is Ponce's sculpture 'Arbre à oreilles' (Paris, Galerie Europe), which consists of a tree of mushroom-like form with ears, or Naum Gabo's composition 'Mushroom Theme'(the motif of the ear). Cf. Read (1964: Nos, 109, 110).

58. See Wertheim-Aymès (1957), Combe (1957), Baltrušaitis (1960), Tolnay (1967), Bussagli (1968). Similar motifs, though on a smaller scale, are repeated in other works by Bosch, as well as in the works of several artists who were followers of Bosch to one degree or another. Among these cf. Pieter Bruegel (particularly *Allegory of Anger, The Land of Idlers*, *Summer, Children's Games, Carnival, Blindmen* [cf. this same theme in the work of Bosch and Massys]), Jan Mandein (e.g. *Landscape with the Legend of St. Christopher*), Jan Steen (e.g. *Marriage Contract*), Adrien van Ostade *(Village Holiday, Family Concert, The Fight, A Vision*, and so on). The hyper-

trophy of the motifs of hybridness, diabolical intercourse, concave-convex (an abundance of vessels, pails, barrels, baskets, hats, haystacks, eggs, long sharp objects, etc.), of food and drink, and fertility in the artistic works of this area from the end of the fifteenth through the seventeenth century is a riddle which remains to be solved. In connection with these themes Rabelais is frequently mentioned. Cf. also certain similar motifs in the work of Miró and Tyshler.

59. Cf. the belief we mentioned current in the Yaghnob Valley.

60. See Mountford (1965: 157ff., cf. Figures 5-7 and others). Quite interesting here are several representations of stylized human figures in the form of *mushrooms* (see Figure 39); cf. above on the *petra genetrix* in Bosch.

61. Cf. the rain-evoking ritual described by Clement (1904: 5ff.), in which in place of a mushroom a stone of particular form (connected with water and fire, ants, and the thunder-bird) is used.

62. See Basanavičius (1912), *Latvju Raksti* (Volume III, Plate IX, Figure 85-90), Gimbutas (1958).

63. One might also mention here the remarkable fresco in an old French church (Abbaye de Plaincourault) of the end of the thirteenth century that caused a sensation among mycologists. The fresco is a depiction of the temptation in the Garden of Eden: a huge mushroom-shaped tree the size of a man, around which a serpent is entwined, is shown; at the foot of the tree are four other mushroom-shaped trees of lesser size; along the sides are Adam and Eve. The trees have been interpreted by some as fly-agarics, though the evidence from art historians support their interpretation as stylized trees, the so-called *Pilzbaum* of Gothic and Romanesque; cf. the discussion in Wasson's *Soma* (178ff.). While one cannot despite the evidence of art history, the ambiguity here points to our main thesis about much of the evidence presented in this article, namely that the class of objects fulfilling similar functions in the cosmological schemes under investigation should be viewed on an abstract level functionally: the actual identity of the realized symbol (tree, mushroom, or similarly-shaped objects) may be ambiguous, but its mythological function is not. Among other examples of this type, cf. the famous representation from Saint-Savin (c. 1100) depicting God making the moon fast in the sky; in the right comer there are 'mushrooms' and the tree, which again supports the isofunctionality of the motifs of the 'world-tree' and mushrooms.

64. On mushrooms in Chinese art, see Sullivan (1962: 49, 52-53, 66-68, 140, 178—180-182). Valuable information about mushrooms in Ancient China is contained in the treatise *Pao-p'u-tzu* by Ko Hung (253-333); see Feifel (1941, 1944, 1946). Of particular interest is the classification of mushrooms (e.g. stone mushrooms, *shih chih*, which recall in form a stone elephant; wooden mushrooms, *mu-chih*\ grass mush-rooms, *ts'ao chih,* ate.) and their uses, not to mention their semiotic characteristics (cf. the mushroom of good omen).

65. Representations of this type often reveal traces of Iranian influence; cf. *ling chih* and two winged tigers, see Charleston (1948:63ff., fig. 18), *ling chih* rising out of a ram, see Sullivan (1962: pl. 82), and so on.

66. Cf. depictions of the Han Dynasty from Szechwan Province, intended for export.

67. Cf. the picture by Chen Hung-shou (1599-1652) or similar compositions like *Maid of Honor, attending the Heavenly Emperor* (the girl holds a vase with a *ling chih* in her left hand).

68. Also worthy of attention are depictions of *chih* and *ling chih* mushrooms on Chinese porcelain wares. Often they occur in strongly stylized form, for all practical purposes in the function of ornamentation (e.g., in semantically weakened or, in any case, non-

narrative parts of the vessel such as the neck or handle). Rather frequent as well as more indicative are cases in which depictions of mushrooms occur in the same context as depictions of a lion, tiger, deer, doe, or birds (in particular, cranes), butterflies, insects, fantastic animals, the lotus or trees (pine trees, the banana palm, and so on), cliffs, the divinity of longevity Shou, and so on (in similar contexts one also finds depictions of the *meixua* plum). Cf. Riedemeister (1935), Pope (1956), Sullivan (1960), Arapova (1977: Nos. 5, 11, 14, 15, 21, 22, 24, 28, 30, 34, 41, 46, 48, 70, 101, 102, 120, 122, 123, 126, 127, 152 [with Bosch-like associations: three cartouches containing a cliff, insects, flowers, and a *mushroom*], 169, 173).

69. It is quite interesting that in this same tradition one finds peculiar wooden representations of the *seven*-headed *jux-iljan*' (the heads are placed one on top of the other along a vertical axis), which are placed wherever one wants to secure success, good luck, or wealth (in this sense the *jux-iljan'* is analogous to *ling chih* and to the world-tree). Of particular importance here is the *seven*-compound nature which makes it possible to connect this material object with the mythological motif. On *jux-iljan'* see Dudin-Gorkabic (1911: Plate 16.4), Ivanov (1970: 32).
70. Wasson has shown convincingly that the original semantics of such names as *muxomor* lit. 'fly-killer' for the fly-agaric is distorted by a folk-etymological reinterpretation of them. Originally what was central was that flies are an embodiment of the evil spirit, of possession, or of a particular state; cf. Russian *on pod muxoj* 'he's typsy', lit. 'he's with fly' or French *la mouche lui monte à la tête* for an angry man, lit. 'a fly is climbing up into his head', and many other examples of this sort. This correction is not irrelevant for an understanding of the myth in its entirety.
71. See Toporov (1969a). A definite argument in favor of this hypothesis is the interpretation of certain dreams in the sixty-eighth Pariśiṣṭa of the *Atharva Veda*, e.g.: if someone in his dream *kills a snake* — white, yellow or red — or *cuts off* the head of a black *snake*, — his *son will die**.
72. Cf. another meaning of *κεραύνιον* 'tick' or 'checkmark', which is important for an understanding of symbolic representations of mushrooms that we spoke of above.
73. In connection with the name Semele one should mention Phrygian *ζεμέλω* 'mother-earth' (cf. Russian *zemlja* 'earth' and the like). Moreover, the entire myth of the death of Semele, struck by her lover Zeus with a bolt of lightning, reproduces certain important motifs of the reconstructed myth we are dealing with here, including the complex, the death of Semele — the birth and miraculous salvation of her son Dionysus, connected with the notion of fertility, productive power, etc.
74. The identification of lightning and stone is also hinted at in the Hungarian word for lightning *mennykö*, lit. 'stone of the sky'.
75. Worthy of attention in this regard is the combination of the motifs of the Thunder-god (Pirkūnas-Perun), mushrooms (*agaricus necator)* and the snake guarding them in Prosper Mérimée's 'Lokis' (the scene in which the Count and the Professor encounter an old witch in the forest).
76. See Balys (1937: 206, No. 947, and *Grybai auga kai po griausmo).*

11. On Perun-Perkūnas and his wedding, see Ivanov and Toporov (1969, 1970, 1974).

78. Other variants presuppose different explanations — the Thunder-god's infidelity to his wife (or vice-versa), the incestuous relations of the Thunder-god's children and their mother, the theft by the children of a miraculous object from their father, or even the attempt at parricide, and so on. The motif of parricide in the last case may be correlated with an analogous ritual in the carnival tradition, 'moccoli', described by Goethe in his *Italian Travels*, in which the *boy* blows out his *father's candle* with the exclamation: 'Sia ammazzato il Signore Padre!'

79. As a distant reflection of this motif, cf. traditional money-boxes in the shape of a mushroom.

80. See Sarauw (1907). Quite interesting in this regard is a Nardhan folktale from Patangarh (Mandla District): There are *seven* brothers, six of whom are married. The youngest *brother* wants to marry his sister. He brings from the forest a *mushroom* of unprecedented beauty and places it at the spot where the *fire is usually lit.* The sister is forbidden to *eat* the mushroom, since whoever eats it will become his wife, but ends up doing so. Her attempts at avoiding the marriage are described: she climbs up a tree to the heavens or falls into a stove, the flame of which transforms her into a beauty. The youngest brother, following her, perishes (see Elwin 1944: XVII, 8). A similar folktale is recorded among the Santal (see Bodding 1929: No. 92). Instead of a mushroom one finds here a *flower* which is planted near a stand holding pots of *water,* the ending is different in that both brother and sister perish. On the motif of incest in connection with similar schemes, see below.

81. Cf. the making of sacral fire in Ancient India by rubbing two sticks of wood together, an act interpreted as copulation in which the upper stick is considered the masculine organ (*prajanana*), and the lower — the feminine *(araṇi):* cf. *ṚgVeda* III, 29, 1-3. The same notions are found among the Yana Indians: cf. Kroeber (1964: Part I, ch. 9), cf. also the Aztec myth of the 'Nine Heavens', which mentions celestial masculine and feminine stones which produce on earth 'The Lord of Our Flesh' (Krickeberg 1928: 26). See below in the creation by the god of fire of fiery serpents and so on. On the combination in Australia and Oceania of the motifs of the freeing of the *waters* and the theft of *fire*, see Dixon (1916), Luomalas (1949: 93). Cf. also the connection of *ọgọ* among the Dogon with fire and water.

82. We hope to speak of this at length in a future article.

83. See Ivanov and Toporov (1970), where there is a discussion of Kupala in connection with fire and water; cf. the possibility of a double etymological explanation of this name — from *kupat'* 'to bathe', and *kupalo* 'flame', *kupec'* 'to rot', *kipet'* 'to boil'. The same relates to the explanation of Dionysus' epithet *Διαλος,* about which see above; see Toporov (1969a: 11-13).

84. See Métraux (1946-1959: vol. 3, 437ff), Leach (1956:119-120, 127). It should be noted that punishment by means of transformation into stone is among the most wide-spread motifs. One often finds jt combined with the motif of a prior dismemberment of the dead and with the solution to the problem of food. Cf. the Australian myth of the lizard-man Linga, honey-ants, the killing of a snake-girl, and the transformation of the dismembered parts of her body into rocks. See Mountford (1965: 114ff.).

85. Cf. Bosch's *Haywain,* where the insects are shown falling either into the water or on land.

86. The motif of a cut-off finger (cf. the corresponding interpretations) and its transformation into chthonic beings is among the plots wide-spread precisely in this group of myths (see above on 'devil's fingers' as a name for mushrooms, for remnants of the evil force struck by the Thunder-god, and for the Thunder-god's weapon). On the marmot Tarbagan, see Potanin (1881: 151, 1916: 2-3, 16). Cf. also the devil Araxi *(Araxi-čitkur),* who is among those whom the Sky chases and who is the thief of the *drink of immortality.* Araxi teases the Sky and hides behind a tree; after a bolt of *lightning* strikes he sticks his *finger* out from behind the tree. Finally God cuts him in two (into the sun and moon). See Potanin (1883: 209-210, 1916: 16, 68-69). Cf. Geser's abduction from the sky of Erdeni; Geser is the son of the Sky, sent to earth to purge it of monsters but, according to certain versions of the myth, perishes on earth; it is noteworthy that the legend of Geser was sung at weddings.

In the same tradition the so-called finger incantations are of exceptional significance. They consist of an enumeration of the fingers beginning with the thumb and ending with the little finger and the reverse, often in the framework of a question-answer construction. Here the very names for the fingers are rather characteristic: cf. the name for the thumb in Khalkha Mongolian, *irxe xuru* (the children's word is *erke mergen),* Altai, Kirghiz *erkyek*, and the like (next to Yakut *erbjax*, cf. Dorbot *erbeku,* Tungus *ärbäkä* 'butterfly'); the little finger is as a rule designated as a small child; the ring-finger as a mother, and so on, see Potanin (1881: 2ff\, 24). Cf. likewise the Russian game with children involving the counting of fingers: *Soroka-vorona (vorovka) kašu varila, detok kormila, ètomu* (sc. *palec — rebënok) davala, ètomu davala ... a ty, mal'čik-puzančik, ...net tebe nicego* and so on (the fingers are bent one after the other; cf. *mal'čik — s pal'čik).*

Among other traditions perhaps the most interesting as regards this motif is the Eskimo: the father of Sedna kills the her bird-husband and takes away his daughter by sea to his own place; during a storm he throws Sedna from the boat; she clings to the deck; the father cuts off her *fingers*, which change into fish. See Thompson (1919: 3, No. 1-2 [A215], 1946: 305ff.). Cf. also the works of Bogoraz. Cf. the Papuas myth of the fiery *finger* Iku, his abduction and the transition from raw food to cooked. On the symbolic role of fingers (and nails) in archaic cultures (Strehlow 1947: 112f.).

87. On the ritual for killing flying squirrels, which consists of nailing them live to the ground with *four* nails, see *ZSOIRGO* (1915: vol. 37, 272). On the *gromovnik* see Potanin (1882), Harva (1938).

88. Cf. the motif of seven stars imprisoned for a crime until the end of the world, see Porfir'ev (1872-1873: 205).

89. Extremely interesting is the Altaic tale of 'Er-Nazvai' (see the text and translation in Baskakov 1958: 77-80), which combines the motifs of *beating, flattening-out* of a boy on a stone ('When Del'begen beat the boy on a wide stone, the boy grew in width. When he beat him on a long stone, the boy grew in length. When he beat him on a sharp stone, the boy grew in height. Finally, he grew up to the height of Del'begen and killed him.'), *shooting from a bow* and the destruction of *six* opponents, a game of *draughts, rats*, and marriage to the daughter of Erlik, who dwells in *heaven.* As a parallel to the first motif, cf. the beating of Geb and his ascent by tree to the moon (by growing) in a Western Irian myth; see *Skazki i mify Okeanii* (1970: 52-53).

90. See Mountford (1966: 69ff.). Quite important is the legend cited here (p. 74) of the green frog Quork-Quork and her three children — Bumerali the Lightning-woman, Pakadringa the Thunder-man, and Tomituka the Woman of the Monsoon Rains, who in the dry season live high above the stars but in the wet season bring their activity to bear upon the earth.

91. See Reed (1946). For the theme of star-eyes, cf. Fet's lines: / v *zvëzdnom xore*
znakomye oči / Gorjat v *stepi nad zabytoj mogiloj ... / i tol'ko* v *nebe, kak večnaja durna, / Sverkajut zvëzd zolotye resnicy* 'And in the *starry* chorus familiar *eyes j* Burn in the steppes above the forgotten *grave* ... / And only in the *sky*, like an eternal thought, / Sparkle the golden *eyelashes* of the *stars'* or E. A. Poe's 'And the *stars* never rise, but I feel the bright *eyes* / Of the beautiful Annabel Lee'.

92. See Thompson (1919: 126, 128, (nos. 50, 51, 193; 1946: 345ff.; 1953), Dundes (1963). On the Micronesian tradition, see Lessa (1966, cf. in particular, the counting of names up to nine). The motif of prohibition (especially of incest) is likewise characteristic for many American myths.

93. Cf. Granet (1924: 377; also 1924: 238ff. on the fundamental role of *nine).* Quite curious is the connection of this scheme with a ritual dance which often figures in the

myth itself as a particular element (cf. the transformation into stars for ignoring a prohibition against dances in a series of American Indian texts). We should like to propose here, leaving the detailed proof aside for another occasion, that several dances in Central Europe and Mesoamerica (with an emphasis on the number seven — cf. the Slovenian *Sedmorka* — or *nine),* for example *Joc de Caluşări* in Rumania, originate in a ritual which reflects the myth under analysis here. Cf. also Kurath (1956).

94. Cf. Kaltenmark (1959: 456). Characteristic in this respect is the well-known Japanese myth of the god Idzanagi and his wife Idzanami, who go off into the land of shadows and give birth to monsters. Cf. the *eight* thunderbolts of Idzanagi and the *eight* island offspring created by the pair. In ancient Mexican cosmogony one finds an emphasis on the nine-leveled composition of the sky and netherworld (nine cross-beams of the sky, nine underworlds, *Chiconamictlan* — the ninth place of the dead). Cf. the myth of the *Sun*, which at the *ninth* hour let loose an arrow that formed a pit from which the first men and women issued. See Leon-Portilla (1961: 199).

95. We have in mind not only the general arena in which the action occurs ('A meadow with *flowers* and the firmament filled with *stars* ... Above you the flock of *starry* splinters / While below you *coals* of the bonfire'), but also the more specific echoes around the motifs of *stars, worms* (insects), *life* and *death.* One can see such echoes in Goethe's 'Das *Leben* wohnt in jedem *Sterne*' or 'Strömt *Lebenslust* aus allen Dingen, / Dem kleinsten wie dem größten *Stern*;' in Baudelaire's *'Serré, fourmillant,* comme un million *d'helminthes*, / Dans nos cerveaux ribote *un peuple de Demons'* ('Au lecteur'; cf. also the line 'C'est le *Diable* qui tient les fils qui nous remuent!'); and in Mandel'štam's '*Nel'zja dyšať i tverď kišit červjami*, / *I ni odna zvezda ne govorit.'* (One can't breathe, and the *firmament swarms with worms*, / And not a single *star* can find its voice,' — '*Koncert na vokzale*'). Sometimes this archaic symbolism determines important links in the chain of larger artistic conceptions (see Matlaw [1957], for the role of insect imagery in Dostoevsky's larger artistic scheme) or even the plot itself (cf. Yeats' 'Parnell's Funeral': 'a brighter *star shoots down*; / What shudders run through all that *animal blood*? / What is the *sacrifice*? ... / ... and where the branches sprang / A beautiful seated *boy*\ a sacred *bow;* / A *woman*, and an *arrow* on a string; / A *pierced boy*, image of a *star* laid *low.* / That *woman*, the *Great Mother* imaging, / Cut out his *heart... /* An age is the reversal of an age'). The typical Gogolian landscape (sultry midday or starry night), repeated continuously in, for example, *Evenings on a Farm near Dikanka*, almost to the point of monotony, occupies a particular place in this sense. As a model of this landscape one could cite the following passage from 'The Fair at Soročincy' (part I): 'How oppressively warm the hours when midday glitters in *silence* and sultry heat and the

> blue fathomless ocean, bowing over the earth like a voluptuous dome, seems to have fallen asleep, sunk in bliss, embracing and holding close the fair one in its airy embrace! ... Idle and thoughtless the oaks stand beneath the clouds, and dazzling blows of the sun's rays set on fire whole picturesque masses of leaves. ... The emeralds, topazes and rubies of the ethereal insects scatter over the variegated garden patches. Gray haystacks and golden sheaves of wheat, like tents, are set about the field and wander in its immeasurability. Bending from the weight of fruits the broad branches of cherries, plums, apples, and pears. ... How full of voluptuousness and bliss is the Little Russian summer!' (Or its nocturnal variant: 'The nocturnal stars looked straight at them. They heard with their own ears the whole innumerable world of the insects ... the steppe appeared to him as sowed with the glistening sparks of luminous worms ...' [Taras Bul'ba, II], or the image of little stars compared

to 'the *angels* of *God*, opening the windows of their bright dwellings in the sky and looking out at us ...' and the *counting* of them, 'one, two, three, four, five' in 'A May Night', in a context which is definitely cosmological in nature.) The opening landscape of The Fair at Soročincy' is unexpectedly repeated in many of its motifs (of course, without any conscious intent) in the description of night at the end of the first volume of Dostoevsky's *The Brothers Karamazov: 'Heaven's dome, full* of *quiet, shining stars*, stretched vast and *boundless* above him. The *Milky Way,* still unclear, *doubled* from the zenith to the horizon. The fresh night, *silent* to the point of motionlessness, *covered* the *earth.* The white *towers* and *golden domes* of the *cathedral* gleamed out against the *sapphire* sky. The luxurious autumn *flowers*, in the *beds* around the house, fell asleep till morning. The *silence* of the *earth merged* with that of the *sky*, the mystery of the *earth* became one with that of the *stars*. Alëša stood, gazed, and suddenly, like one struck down, *threw himself on the earth.* ... It was as if threads from all those innumerable worlds of God came together at once in his soul , and he trembled all over, having come into contact with other worlds. ... It was as though some idea had seized sovereignty over his mind — and it was for all his life and for ever and ever. He had *fallen on the earth* a weak boy, but he *rose up* a *resolute* champion *for his whole life*\ *(The Brothers Karamazov*, Part II, end of Book VII. There can be no doubt about the uniqueness of this passage in Dostoevsky's entire work.)

96. Cf. Belorussian *Čoren voron, ci mnoho w cjabe čarvej?— Dzevjac', a z dzevjaci vosem, a z vos'mi sem ..., a s odnoho nihódnogo* 'Black raven, how many *worms* do you have? — *Nine*, and from *nine eight*, and from *eight seven*, ... and from *one a worthless one*\

97. Cf. Russian *Ja šel — našel grib, ja šel — našel dva griba, ja šel — našel tri griba ...* 'I walked along, found a *mushroom*, walked along, found *two* mushrooms, walked along — found *three*\ etc., or *By I grib — stalo dva*, *bylo dva — stalo tri*: 'There was a *mushroom* — then there were *two,* there were *two* — then there were *three ...*', etc.

In view of this link between mushrooms and counting, it is hardly surprising that the folk motif 'Fools, unable to count themselves' (Aarne 1287: cf. J. 2031) has a variant dealing with mushrooms ('How to determine if mushrooms are poisonous' — 1287*). See Laport (1932: 1207.1): a peasant is told that a poisonous mushroom will turn black from contact with a *ten*-sous silver-piece; since all he has is *nine* sous, he cuts off a *tenth* of the mushroom and tests the other *nine-tenths* of the mushroom on his money. Certain other phenomena are also undoubtedly connected with the counting of mushrooms: 'mushroom' counting-out rhymes used by children in their round-dances (cf. the type: *Už ty grib molodoj*, / *Ne nalityj vodoj... / Šišel vyšel*, / *Von pošel!),* jocular divinations before the gathering of mushrooms (by tossing baskets), accompanied by a chant playing on the names of mushrooms and their physical characteristics (cf. *Stavčik, burčik*, / *Sam k avurčik, / Stogom, rogom*, / *Svin'ja pod porogom*); cf. Šejn (1898: nos. 220-221, 265). Extremely interesting in this regard are certain Lithuanian jocular counting-out rhymes *(juokavimai)* that contain valuable mythological evidence. Cf. *Kiek dievų? — Devyni. Kur anys? — Eglyni. — Ką veikią? — Kepures siuva. — Kam? — Kunigam*. — *Kokias? — Raudonas,* 'How many *gods* are there? — *Nine.* Where are they? — *In the fir-grove.* What do they do? — They sow *caps.* For whom? — For the *Roman Catholic priest.* — What sort? — *Red ones';* there is no doubt that mushrooms are the subject here. (For the image of the 'Roman Catholic priest', cf. the parasol as the regalia of Caesar in a series of cultural traditions; for the image of 'red caps', cf. the riddle about mushrooms, *Mažutis gražutis ėjo per žemę ir atrado raudoną kepurėlę*, or one about a shock of corn, *Devyni broliai vieną kepurę dėvi.)* Cf. also: *Kiek dievų?—Devyni*. — *Kur gyvena*?— *Eglyni. — Ką daro? — Vyžas pina. — Kam? — Kunigam,* (a parallel to the Russian counting-out

rhyme. *Zajac belyj, kuda begal ...* / *lyki dral* ...). These counting-out rhymes are directly linked, in turn, with 'numerical' counting-out rhymes containing an abundance of sound-figures: cf. *Pirmas vinį kala*, / *Antras antrą galą*, / *Trečias treinį trynė*, / *Ketvirtas kekę pynė ... Devintas dievą maldė* 'The *first*..., *second*..., *third*..., *fourth* ... *ninth* pray to God' (sometimes this sort of text is preceded by an explanation of the type The Nine Deadly Sins' or The Nine [Ten] Commandments of God'), cf. *Kiek dievų? — Devyni.* (For the Lithuanian examples, see *Lietuvių tautosaka*, vol. 5, nos. 8602-8606). Other data are equally of interest. Cf. a game *boys* and *girls* play, in which they form two rows and exchange places, singing a song analogous to the Russian *Grib-borovik* mentioned above: *Grybs, grybs, baravyks*, / *Visų pulkauniks* ..., with the additional lines *O jūs*, *bobos, netingėkit, / Virkit grybus ir maišykit* ... 'But you, old women, don't be lazy, / Cook the mushrooms, mix them up ...' Still more indicative for the marriage symbolism involved is a game played by pairs of men and women in which they line up in a row, change places and so on, singing: *Grybų rauti, grybų rauti*, / *O ne baravykų .../ Kožnas savo radęs radęs, / Už rankelės vedės, vedės ...* / *Oi jūs, bobos, netrūkinkit*, / *Virkit grybus ir maišykit* 'To pick mushrooms, to pick mushrooms, but not boletus ... Each finds, finds his own, takes, takes it by the hand'. (For these examples, see *Lietuvių tautosaka*, vol. 5, nos. 9686, 9688.)

98. Noteworthy in Hoffmann's fairytale 'The King's Bride' is the motif of the *transformation* of the *astrologer* Dapsul von Zabelthau into a *toadstool* as the result of his fight with the gnome king Daucus Carota.

99. See Fišer (1966: 46ff.). Interesting materials on this scheme are contained in contemporary Indian traditions, as well: cf. Elwin (1958: 40, 60-61): incest and punishment by thunder and lightning.

100. Sometimes, incidentally, all these acquisitions are motivated by the initiation of sexual relations between men and women (as opposed to prior relations with animals, e.g., turtles and so on): see *Skazki i mify Okeanii* (pp. 99-102), with the legend of the Melanesian tribe Paparatav, where the beginning of sexual relations is linked with the acquisition of fire and the establishment of new norms prohibiting incest. See also Zograf (1971: 237, No. 56).

101. Cf. the following variations: an old woman who has become *pregnant* wants to eat *mushrooms*; the huge *cobra* Basuk Nag gives them to her on the condition that the *daughter* born of their union will become his *wife;* from a *flower* (cf. the Santal folktale cited above) which sprang up in the spot where the placenta was buried (after the birth of the daughter) there emerges a *boy;* having grown up he lives with his sister, killing Basuk Nag and *cutting him up* into pieces. See Elwin (1944: XXII, 2). In a similar tale sparrows appear from the burned parts of the body of the leader of the cobras Nang Kuar (cf. the motif A 2000).

103. Cf. also Jobes (1962: 828ff.). In a future article we hope to show that several folktale motifs involving a sister and a family with nine or twelve brothers are linked in origin with this set of ideas. Cf. Aarne (1928: 451): a maiden searches for her brothers, collects miraculous flowers; the brothers are transformed into ravens, and so on. In the motif of the coming of the dead brother one can see a reflection of the earthly history of the punished children of the Thunder-god (the sister and nine brothers, the theme of marrying-off the sister away from her brothers, their death, etc.). For more details, see Seeman (1960) and Civ'jan (1973).

103. See Ivanov and Toporov (1970); as regards other traditions, see Lévi-Strauss (1962: 360). It is likely that such motifs were reflected in representational art as well. Cf. for example, the knotted wool rug from the Pazyryk barrow (sixth century A.D.), in the center of which one finds a series of squares, each of which contains a *yellow* flower

and a *blue* sepal (cf. the flower *Ivan-da-Mar'ja).* The whole scene is rather indicative: note the griffons, does, horsemen (seven in each row), the depiction of a tree in the ornament, etc. For more details about this rug see Rudenko (1968: 41ff.).

104. Cf. Aarne (1928: 1232.3): The raven finds a sea-shell, from which first the voices of people, then the people themselves, emerge (cf. above on the acoustic effects of certain mushrooms). See Swanton (1908), Barbeau (1944 and 1953; this same motif is reflected in the wood carvings of the Haida Indians). Cf. the motif of coitus in a sea-shell in the works of Bosch, above all in *The Garden of Earthly Delights)* or the motif of the sea-shell in works of art from Botticelli's *Birth of Venus* to the compositions of Naum Gabo.

105. The Cubeo Indians believe that they originated from stones, emerging in pairs in the form of anacondas and then shedding their skins. The god Quwai gave them manioc and fruit, taught them to sow crops and to bury the dead; the same god created flies (Goodman 1940: 242-247). According to the beliefs of certain Melanesians of the Banks Island, the god Qat was born of a stone-mother (with no father) who split in two. He had eleven brothers, created mankind out of wood, and, so that the human race would not die of hunger, created plants (Codrington 1891: 156-158; Leach 1956: 178ff.)

106. Their usual names are Tonacatecutli and Tonacaciuatl (lit. 'Lord and Mistress of our flesh'; 'flesh' in the given instance should be understood as the 'maize' from which the human body was supposedly created). Quite important is the fact that they are typologically similar to other images of creative duality; cf. Idzanagi and Idzanami in Shintoism, Pangi and Papa in the Oceanic tradition, Prajapati in the Vedas, and so on.

107. Particularly interesting in this respect is the testimony of Pan Ku (32-92 A.D.), a chronicler of the Han Dynasty, about the appearance, in August, in the inner pavilion of the royal palace, of a *mushroom with nine paired 'leaves'.* The Emperor Wu identified it with the renowned *chih* and wrote a poem dedicated to it. (Cf. 'My secluded dwelling produces an herb, / *Nine* stems with *twin* leaves! ... this superb growth, / This *chih*, which unfolds its beauties most marvelously!') See Wasson *(Soma:* 85-86 and plates XIV-XV; a *ling chih* mushroom with one stem and *twin* caps; cf. the *twin* parents and the *nine* children).

108. See also Hultkrantz (1963: 68ff., 50ff.). In connection with the mushroom, noteworthy are two bronze figures from Luristan (c. 1000 B.C.) which depict masculine and feminine deities of fertility wearing particular caps which have definite connotations (Godard 1931; 1964: Nos. 26-27).

109. Cf. magical anatomy in Ancient Mexico (the parts of the human body, their relation to the calendar and so on). See Danzel (1937: 55ff.). On the anatomization, dismemberment, tearing-apart of the sacred body as one of the leading motifs of the carnival (Baxtin 1965: 210-211, 286-287).

110. In connection with this theme see Jochelson (1918: 201-204). In American traditions analogous motifs sometimes coincide with the theme of the origin of tobacco (Kell 1965: 99-114, and 1966: 590-599). Cf. the name used in Russian for the dried *doždevik, čortov tabak* 'devil's tobacco'.

111. Cf. another variant, ritual coitus with the goal of causing rain and its reflection in certain episodes of the *Mahābhārata* (III, 110. 17-36; 111. 1-22; 112. 1-18; 113. 1-12) about the just Ṛṣyaśṛṅga, whose chastity during an encounter with a prostitute caused Indra to take mercy and send to earth the long-awaited *rain* (Schroeder 1908: 166; O'Flaherty 1969: 315 and 1973).

112. See Meletinskij (1969: 345ff.; and the bibliography given there). Cf. also the motifs of

wild apples, the apples of Idun, 'live' water and so on (A.Th. 551). Cf. also Meletinskij (1968: ch. II).

113. See Wasson (*Soma*; 231 if.) cf. also Dunn (1973: 488-492).

114. It is characteristic that the preparation or use of such a drink is often theprerogative of shamans. Moreover, they are linked to lightning and control thunder, rain, and the like. Cf. Balikci (1963: 386), Vasilevič (1969: 211).

115. Cf. Prometheus' gift of fire to man and the gods' reaction.

116. Genesis 49, 25. Cf. the way in which the story of Joseph in Thomas Mann's novels revolves around the framework of these two blessings.

117. Cf. Fet's lines: '*Pokorny solnečnym lučam, / Tak sxodjat komi* v *glub' mogily / I tam u smerti iščut sily / Bežať navstreču vešnim dnjam'.* ('Obedient to the sun's rays / Roots descend to the depths of the grave / And there seek from death the strength / To run back to face the vernal days'.

118. Serious doubts about the proposed identification of Soma as *Amanita muscaria* have been expressed recently by John Brough (1971; 1973), cf. Wasson's (1972) reply. The most significant objections involve general considerations (connected, in particular, with the differentiation in Indo-Iranian of two types of intoxicating drinks, *soma, haoma — surā, hurā*; cf. Mid Iranian, Pehlevi hwr_y on which see Henning [1955: 603]) and the analysis of individual words and expressions (*aṃśu. dhāman, megha* and *mih-, hari, nirṇij, sahasrabḥṛṣṭi*, and so on). Brough's basic point is that Wasson's argumentation is not sufficient enough to prove beyond doubt the identification of Soma as *A. muscaria*. Even if one agrees with Brough, one can still insist on the correlation of Soma with those mythologized products of the plant world which, when they become elements of culture, are isofunctional to mushrooms and drinks prepared from them. The fact that Soma and mushrooms belong to the same class determines the numerous similarities in descriptions of the two.

119. Cf. the use of the apellative *parjányāḥ* in the meaning of 'storm clouds' in ṚV I, 164, 51: *bḥūmim parjányā jínvanti dívaṃ jinvanty agnáyaḥ 'storm clouds* support (freshen) the earth, *flames* — the sky'; cf. also ṚV IX, 2, 9: *parjányovṛṣṭimā̃n̆* 'rain-giving Parjanya', or IX, 22, 2: *parjànyasyeva vṛṣṭáyah,* and so on.

120. Cf. ṚV V, 83, 2: *yat parjánya stanáyan hánti duṣkṛ́taḥ* 'when Parjanya roars,he kills evil-doers'; ṚV V, 83, 3: *dūrā́t siṅhásya stanáthā úd īrate yát parjányaḥ kṛṇuté varṣyàm nábhaḥ* 'From afar there rise up the lion's peals of thunder, when Parjanya creates the rain-cloud'; cf. also ṚV V, 83, 6 and 7; V, 83, 9; I, 38, 14; VIII, 21, 18, i.a.

121. This identification is based on the fact that the wife of Parjanya (andconsequently, one can assume, the mother of Soma) is the Earth (cf. ṚV V, 83,4; VII, 101, 3,etc.). It is interesting that in the hymn to the Earth (V, 84), which follows immediately after the hymn to Parjanya (V, 83), there are lines mentioning lightning from behind the clouds and rain from the sky *(yát te abhrásya vídyúto divó várṣanti vṛṣṭáyaḥ),* while Earth firmly restrains the trees in the soil.

122. Cf. ṚV V, 83, 4: *prá vā́tá vā́nti patáyanti vidyúta úd oṣadhīr jíhate pínvate svàḥ / írā víśvasmai bhūvanāya jāyate yat parjányaḥ pṛthivī́m retasā́vati* 'The winds howl, lightning falls, the plants grow, the sun swells up. Every creature feels a freshening when Parjanya fortifies the earth with his seed (rain)'. As is shown in another passage, **paj(r)ā* is literally 'fold', 'junction', 'space formed by two surfaces'; cf. in the special sense (in Lucretius) *Veněris compāgēs* 'the embraces of Venus' (Latin *pāg-:* Old Indian *pāj-).* Of particular significance is the epithet of Soma *sahásrapājas* 'possessing a thousand *pājas'.*

123. Cf. ṚV VI, 50, 12: *parjányāvā́tā pipyatām íṣaṃ naḥ* 'let Parjanya and Vata make food grow thickly for us'.

124. Cf. the famous hymn to the frogs (VII, 103, 1).
125. Cf. ṚV IV, 57, 8: *śunam parjányo mádhunā páyobhiḥ* ... 'Parjanya brings happiness through honey and milk'.
126. Strictly speaking, this version of the birth of Soma — as well as, of course, that of fire — in no way contradicts indications that Soma was born of itself, similar to the way that Tanūnapāt was born (cf. ṚV IX, 5, 2). It is quite noteworthy that in the most diverse traditions the motif of self-generation is connected precisely with mushrooms.
127. Cf. also ṚV IX, 85, 2; X, 22, 15; X, 24, 1, etc.
128. Cf. ṚV IX, 66, 5: *soma ... éndrasya jaṭháre viśa* 'O Soma ... enter Indra's belly!' Cf. also IX, 76, 3: *índrasya soma pávamāna ... jaṭháreṣv ā́ viśa / prá naḥ pinva vidyúd abhréva ródasī 'O* Soma Pávamāna, *descend* into Indra's belly, *fecundate* for us *both worlds*, as *lightning* does the *cloud* ...' and so on.
129. For the connection between Soma and the vajra, cf. ṚV V, 48, 3; 1, 121, 12. It is interesting that the epithet *sahásrabhṛṣṭí* — 'possessing a thousand teeth (notches)' equally characterizes both the vajra and Soma (which in such cases may be understood as a mushroom; cf. Wasson's *Soma);* cf. ṚV IX, 83, 5; IX, 86, 4.
130. Cf. the *navel* in connection with mushrooms: Russian *pupyr'* (from *pup* 'navel'), Cambodian *psət* 'navel' and 'mushroom', among others. Soma is called the navel of immortality (*amṛ́tasya nā́bhiḥ*, ṚV IV, 58, 1); cf. the designation of Soma as the 'drink of immortality'.
131. Such descriptions also relate to Agni as well: cf., i.a., ṚV I, 59, 2; III, 5, 10; VI, 8, 3.
132. Cf. Lommel (1938: 244) despite the opinions of Time, Kuhn and others).
133. On the motif of'Soma in the mountains' cf. ṚV I, 10,2; I, 176,5; III, 48, 2; V, 36, 2; V, 43, 4; V, 85, 2; VIII, 6, 28; IX, 18, 1; IX, 46, 1; IX, 62, 4 ,15; IX, 82, 3; on the motif 'mushroom in the mountains' see above. Noteworthy too is the fact that Parjanya is likewise localized in the mountains in the midst of the Earth, that he is a *bull.*, and that one of his attributes is his *roar* (ṚV IX, 82, 3: *Parjányaḥ pitā mahiṣásya parṇíno nābhā pṛthivyā giríṣu kṣayam dadhe;* ṚV IX, 85,10: *divó nāke... duhanty ukṣaṇaṃ giriṣṭhā́m;* on the *roar* cf. also ṚV V, 83; 1, 7, 9; VII, 101, 1). In this case the roaring bull in the mountains as an attribute of the storm-god Parjanya corresponds completely to the Russian riddle about thunderstorms: *Tur xodit po goram, Turica-to po dolam, Tur svistnet, Turica mignet* 'The goat walks in the mountains, the she-goat in the valleys; the goat gives a whistle, the she-goat blinks'. In another study we postulated the connection between the goat and Perun (cf. *Perkūno oželis* 'Perkun's goat'). The theme of the roaring bull may be combined with a riddle based on *counting* (see above about mushrooms in this respect). Cf. ṚV IV, 58, 3: *catvā́ri śṛ́ṅgā tráyo asya pā́dā dvé śīrṣé saptá hástāso asya / trídhā baddhó vṛṣabhó roravīti mahó devó mártyāṅ ā́ viveśa* 'He has four horns, three feet, he has two heads, seven hands; thrice the hobbled bull roars, the great god enters into mortals'. Cf. such riddles about bulls as Russian Četyre četyrki, dve rastopyrki, seďmoj vertun 'Four fours, two spread-out, the seventh — he who turns'.
134. Cf. I. Annenskij's line about fingers: '*O sestry, o nežnye desjat'!'* 'Oh *sisters*, oh tender *ten*!'
135. Cf. also ṚV V, 43, 4; IX, 8, 4; IX, 38, 3; IX, 46, 6; IX, 56, 3; IX, 80, 4 and 5. An interesting example is IX, 15, 8: *etám u tyaṃ dáśa kṣípo mṛjyánti saptá dhītáyaḥ* ... 'He himself (Soma) is cleansed by the ten fingers, the seven prayers'. The other motif connected with the ten fingers can be found in ṚV X, 90, 1 (the hymn to Puruśa), cf. (line 4): 'whoever *eats* and *does not eat'.*
136. Cf. ṚV IX, 68, 4; IX, 72, 3.
137. Cf. Russian *pan* 'lord' for the white mushroom *Boletus edulis* (cf. above, note 21: *vsem gribam polkovnik* ... 'lieutenant of all the mushrooms').

138. Cf. also ṚV I, 91, 23; VI, 44, 2; IX, 35, 2.
139. Cf. *Maitokivi* ‘milk-stone’ (Täräntö, the Finnish district Norrbotten in Sweden).
140. Cf. *Pirun-pöytä* ‘Devil’s table’, the name for stone in Kesälahti (Finland).
141. Cf. Hautala (1965). The inclusion of the motif of milk in the general scheme outlined is hardly fortuitous, as is demonstrated, for example, by Mongolian beliefs about thunder: a person killed by lightning is placed in a *pit; nine taidzhi* in *white* dress and on *white* horses take part in the ceremony; to avert thunder *milk* is sprinkled on a *white* strip of felt using a *tsasyla*, little spades with *nine* indentations, and so on (Potanin 1883: 140).
142. In certain Indian myths thunder’s urine conceives in maidens a son, Boy-Thunder, who is distinguished by his miraculously swift growth (Jacobs 1959: 149 [No. 30a]).
143. Cf. such interpretations of dreams as: ‘Si son *urine* s’étend par devant son penis, sur le mur et se répand dans la rue: il aura des *enfants.* S’il *urine* dans un fleuve, sa moisson sera *abondante*. S’il *urine* dans un puit, il perdra *ses biens* ...’ (Leibovici 1959: 70). Of interest is the fact that in the Babylonian tradition there are similar interpretations for dreams involving food: if one eats the flesh of one’s hand, one’s daughter shall die; if one eats the flesh of one’s foot, one’s eldest son shall die; if one eats the flesh of one’s penis, one’s son shall die, and so on (cf. Leibovici 1959: 68-69).
144. Cf. the symbolic ritual of drinking bull’s urine among the Parsees of Bombay (Modi 1937: 93). Of interest is the fact that urine has such a role in places where the population has remained mycophilic (against the background of a general shift to mycophobia). On urine and Soma see Ingalls (1971: 189ff.).
145. See Wasson (*Soma*, p. 32); cf. also Kuiper (1970: 283). In Zaehner’s translation: ‘When wilt thou do away with this urine of drunkenness with which the priests evilly delude [the people] as do the wicked rulers of the provinces in [full] consciousness [of what they do]?’; cf. Old Indian *mūtra-* ‘urine’ (Wasson, *Soma*: 32-33).
146. Cf. Chavannes and Pelliot (1912: 292-340, especially 302-305, 310-314), Wasson (1970a: 292).
147. One wonders whether the connection between mushrooms and urine is not reflected in a degenerated form in the Russian children’s saying: *‘Kak u Vani na posteli griby, jagody pospeli*, / *Otčego oni pospeli? — Vanja ssytsja na posteli'* ‘How is it that Vanja has *mushrooms* in his bed, that berries have ripened there? / Why have they ripened? — Vanja *pisses* on his bed.’
148. Cf. ṚV IX, 74, 4: *ātmanván nábho duhyate ghṛtám páya ṛtásya nā́bhir ámṛtaṃ ví jāyate / samīcīnā́ḥ sudā́navaḥ prīṇanti táṃ náro hitám áva mehanti péravaḥ* ‘Soma, storm cloud imbued with life, is milked of ghee, milk. Navel of the Way, Immortal Principle, he sprang into life in the far distance. Acting in concert, those charged with the Office, richly gifted, do full honor to Soma. The swollen men piss the flowing [Soma].’ Cf. Louis Renou’s translation: ‘Les [Maruts] seigneurs à la vessie pleine compissent [le Soma] mis-en-branle’. Old Indian *mehati* ‘to piss’ is apparently connected with Russian *mizinec, mezenec* and so on, designating not only the little finger but also the younger son, brother, and so on (cf. **mižǫ* 'I piss'). Cf. also such Russian names for mushrooms as *ssyxa* (related to *ssyt'sja* ‘to piss’), *navoznyj grib* lit. ‘dung mushroom’, *perdunok* (related to *perdeť* ‘to fart’), and *seruxa, serjak, serjanka, seruška* (possibly related to the word for defecation) for the *Lactarius flexiosus.* Cf. Merkulova (1967: 191ff.). On the images of urine and faeces in ‘lower’ culture, see Baxtin (1965: 362-363).
159. Cf. the episode in the *Brāhamaṇas* when Indra drinks so much Soma that urine pours even out of his ears.
150. References to the three filters of Soma (ṚV IX, 73, 8: *trī́ ṣá pavítrā hṛdy àntár ā́ dadhe*

'he carries three filters within his heart') may be interpreted in this sense. In Wasson's interpretation *(Soma,* p. 52ff.), the first filter consists of the numerous white patches on the cap of the fly-agaric, the second — the lamb's wool through which the juice of Soma is forced, and the third — the organism of Indra (or Vāyu), who drinks the juice and gives it back in the form of urine. Cf. in this connection such Russian names for mushrooms as *sit nik, si to v ik, situxa* (from *sito* 'sieve') and *rešetnik* (from *rešeto* 'sieve'). Incidentally, the motif of the insect (especially the fly), which is widespread in beliefs about mushrooms (cf. the name for the fly-agaric in various languages), is also marked in application to Soma: cf. ṚV I, 119, 9: *utá syā́ vām mádhuman makṣikārapan made sómasyauśijó huvanyati* 'Even this fly proclaims sweetness to you, says Auśija in the ecstacy of drinking Soma'.

151. Cf. the proposition that Soma was the plant (rhubarb?) that in the languages of the Kats, Prasuns and Khowars was designated by a word which originated in an epithet connected with Soma, '*svatra* (cf. Turner [1962-1966: No. 12762] — G. Morgenstierne's discovery). As far as the mushroom itself is concerned, it is mentioned only once in the *ṚgVeda* (I, 84, 8), but in a characteristic context: *kadā́ mártam arādhásam padā́ kṣúmpam iva sphurat* 'When will he trample upon the godless mortal as upon a mushroom?' Incidentally, the meaning of *kṣumpam* is not entirely clear. Cf. also *andhas* 'grass' and 'mushroom' *(Amarakośa).*

152. The question of 'ecstatic' alcaloid substances in contemporary India (like *bhāṅg* in the North or *siddhi,* lit. 'occult force', in Bengal) is relevant. It is possible that *bhāṅg* should be linked etymologically to the nostratic sound complex mentioned above (see p. 11). On such substances, cf. Ward (1959), Newland (1963), Bharati (1965: 285ff.).

153. See Kuiper (1970: 281). The ritual of buying the Soma plant reveals that Soma was identified at one time with Varuna (cf., i.a., MS III, 7, 8; KS XXIV, 6; TS VI, 1, 11, 4-5).

154. Cf. the typologically similar symbolism in a series of Southern traditions. We have in mind, for example, the splitting in two of a coconut and letting out of the liquid (the coconut is thought to have a 'masculine' and 'feminine' end) in connection with the symbolism of unity and copulation (e.g., Shiva and Shakti). See Yalman (1967: 374).

155. Cf. the self-praises of the god who has drunk Soma (ṚV X, 119).

156. The pressing-out of Soma is viewed as a symbol of intercourse, and the two parts of the palms, functioning like a press, — as the two feminine *labia (jaghanādhiṣavaṇyā.* ṚV I, 28, 2).

157. Cf. the role of Soma at weddings, riddles about Soma, and so on. On the divine bridegroom and his connection with the elements of the Cosmos see Dick (1966: 338-347). Cf. also AV XIV, 2, 71 (with the scheme for the identifications). One may assume that the ritual of the *domum deductio* (cf. German *Brautlauf* and the like) is originally based on cosmological images,

158. Cf. also ṚV IV, 26, 6; IV, 27, 4; IV, 26, 4 (for Manu); IX, 48, 3 and others. Sometimes a falcon appears instead of an eagle: cf. ṚV IX, 87, 6; I, 80, 2; I, 93, 6; IX, 86, 24, and so on.

159. See Schroder (1967) de Vries (1950: 71), Meletinskij (1969: 346ff.). Of interest is the fact that sometimes the conflict in the family of the Thunder-god is said to be caused not by the *theft* of some miraculous object, but by the free gift of it to mankind against the wishes of the Thunder-god's children. Cf. the West-Irian legend about the weapons of the Thunder-god (*Skazki i mify Okeanii*: 58-59).

160. That Soma, like Agni, belonged at one time to the Asuras is attested to by a number of texts. Cf. JB II. 155, 1, 7: *tasmād āhur agnīṣomāv asuryāv iti;* cf. KS XXXIV. 3. In another passage (KS IX. 11) we learn that Prajapati created the Devas and Asuras as

representatives of the two component parts of the divine world; moreover, the parts named are correlated with day and night, as well as with the opposition of the two colors. For the two *varnas* cf. the last verse of ṚV 1, 179 (Agastya and Lopamudra): Agastya serves *asceticism* and the *flourishing* of the species.

161. Cf. the following correlations: *daivyo vaí várṇo brāhmaṇáḥ, asuryàḥ śūdráḥ* (TB I, 2, 6, 7).

References

Aarne, A. and Thompson, S. (1928). *The Types of the Folk-Tale. Folklore Fellows Communications*, No. 74.

Afanas'ev, A. N. (1957). *Narodnye russkie skazki [Russian Folktales],* I—III. Moscow.

Ainsworth, G. C. (1976). *Introduction to the History of Mycology*. New York: Cambridge University Press.

Allegro, J. M. (1970). *The Sacred Mushroom and the Cross.* Garden City, N.Y.: Doubleday.

Andreev, M. S. (1925). Očerki po ètnografii tadžikov [Essays on the ethnography of the Tadzhiks]. In *Tadžikistán: Sbornik statej.* Taškent.

Andreev, N. (1929). *Ukazatel' skazočnyx sjužetov po sisteme Aarne [Index of Folktale Motifs According to Aarne's System].* Leningrad.

Anučkin, V. I. (1914). Očerk šamanstva u enisejskix ostjakov [Essay on shamanism among the Osjaks of the Enisej]. *Sbornix Muzeja Antropologii i Ètnografii 2* (2). Saint Petersburg.

Arapova, T. B. (1977). *Kitajskij farfor v sobranii Èrmitaža (konec XIV—pervaja treť XVIII veka) [Chinese Porcelain in the Collection of the Hermitage (end of the XIVth —first third of the XVIIIth century)].* Leningrad.

Astaxova, A. M. (1938-1951). *Byliny Severa [Northern Byliny*], I-II. Leningrad.

Balikci, A. (1963). Shamanistic behaviour among the Netsilik Eskimos. *Southwestern Journal of Anthropology* 19.

Baltrušaitis, J. (1960). *Le Moyen Age fantastique*. Paris.

Balys, J. (1937). Perkūnas lietuvių liaudies tikėjimuose. *Tautosakos darbai* 3 (Kaunas), 149-238.

Barbeau, M. (1944). How the raven stole the sun. *Transactions of the Royal Society of Canada* 38 (3rd series, section 2).

—(1953). Haida myths. *Bulletin 127, Anthropological Series 32* (Ottawa).

Bargellini, P. (1960). *Die Kunst der Etrusker.* Hamburg-Wien.

Basanavičius, J. (1912). Letuvių kryžiai archaiologijos šviesoje. *Lietuvių kryžiai.* Vilnius.

Baskakov, N. A. (1958). *Altajskij jazyk [The Altaic Language].* Moscow.

Baumann, H. (1936). *Schöpfung und Urzeit des Menschen im Mythus der afrikanischen* Völker. Berlin.

Baumgartel, E. (1950). Tomb and fertility. *JKF* 1.

Baxtin, M. M. (1965). *Tvorčestvo Fransua Rable i narodnaja kultura Srednevekov'ja i Renessansa.* Moscow. [Cf. *Rabelais and His World*, trans. H. Iswolsky. Cambridge, Mass.: M.I.T. Press, 1968.]

Bezlaj, J. (1975). Review of Petar Skok, *Etimologijski rječnik hrvatskoga ili srpskoga jezika,* Knj. II (Zagreb, 1972). In *Ètimologija 1973.* Moscow.

Bharati, A. (1965). *The Tantric Tradition.* London: Rider.

Boas, F. (1927). *Primitive Art.* Oslo: H. Aschehoug.

Bodding, P. O. (ed.) (1929). *Santal Folk Tales*, III. Oslo: H. Aschehoug.

Brough, J. (1971). Review of R. G. Wasson's *Soma*. *Bulletin of the School of Oriental and African Studies* (of the University of London) 34 (2), 331-362.

—(1973). Problems of the 'Soma-Mushroom Theory'. In *Indologia Taurinensia: I Atti del Convegno Internazionale di Studi Indologici.* Torino.

Bussagli, M. (1968). *Bosch.* Paris.

Capell, A. (1938-1939). Mythology in Northern Kimberley. *Oceania* 9.

Catalfomo, P. and Eugster, C. H. 'Amanita muscaria': Present understanding of its chemistry. *Bulletin of Narcotics* 22, 34ff.

Charleston, J. R. (1948). Han Damasks. *Oriental Art* 1 (2).

Chavannes, E. and Pelliot, P. (trans. and eds.) (1912). *Un traité manichéen retrouvé en Chine.* Paris.

Civ'jan, T. V. (1973). Sjužet 'prixod mërtvogo brata' v balkanskom fol'klore (K analizu sxodnyx motivov) [The plot of the 'Coming of the Dead Brother' in Balkan Folklore (Toward the analysis of similar motifs)]. *Trudy po znakovym sistemam* 6 (= *Učenye zapiski Tartuskogo gos. universiteta,* vyp. 308), 83-105.

Clement, E. (1904). Ethnographical notes on the Western-Australian Aborigines. *Internationales Archiv für Ethnographie* 16, 5ff.

Codrington, R. H. (1891). *The Melanesians: Studies in Their Anthropology and Folklore.* Oxford: Clarendon Press.

Combe, J. (1957). *Jérôme Bosch*, 2nd ed. Paris: P. Tisné.

Dähnhardt, O. (1910). *Natursagen*, II. Leipzig.

Danzel, Th.-W. (1937). *Handbuch der präkolumbischen Kulturen in Latinamerika.* Hamburg.

Dick, E. S. (1966). The bridesman in the Indo-European tradition: Ritual and myth in marriage ceremonies. *Journal of American Folklore* 79, 338-347.

Dickson, H. R. P. (1951). *The Arab of the Desert*, 2nd ed. London: Allen & Unwin.

Dixon, R. B. (1916). Oceania. In *Mythology of All Races*, L. H. Gray (ed.), IX. Boston: Marshall Jones Co.

Dundes, A. (1963). Structural typology of North American Indian folktales. *Southwestern Journal of Anthropology* 19, 121-130.

Dunin-Gorkavič, A. A. (1911). *Tobol'skij Sever [Northern Tobol'sk],* III. Tobol'sk.

Dunn, E. (1973). Russian use of *Amanita muscaria*: A footnote to Wasson's *Soma. Current Anthroplogy* 14, 488-492.

Durán, A. (1964). *The Aztecs: The History of the Indies of New Spain.* New York.

Efron, D. H., Holmstedt, B., Kline, N. S. (eds.) (1967). *Ethnopharmacologic Search for Psychoactive Drugs.* Proceedings of a Symposium held in San Francisco, Calif., Jan. 28-30, 1967. U.S. Public Health Service Publication No. 1965. Washington, D.C.

Eliade, M. (1962). *Méphistophélès et l'Androgyne.* Paris: Gallimard.

Elizarenkova, T. Ja. and Toporov, V. N. (1970). Mifologičeskie predstavlenija o gribax v svjazi s gipotezoj o pervonačal'nom xaraktere Somy [Mythological conceptions about mushrooms in connection with a hypothesis about the original nature of Soma]. *Tezisy dokladov Letnej Školy po vtoričnym modelirujuščim sistemam* (Tartu), 40-46.

Elwin, V. (1944). *Folk-Tales of Mahakoshal.* London: Oxford University Press.

—(1949). *Myths of Middle India*. London: Oxford University Press.

—(1953). *Tribal Myths of Orissa.* London: Oxford University Press.

—(1958). *Myths of the North-East Frontier of India.* Shillong: North-East Frontier Agency.

Erman, A. (1900). Gebete eines ungerecht Verfolgten und andere Osraca aus den Königsgräbern. *Zeitschrift für Aegyptische Sprache und Altertumskunde*, Bid. 38.

Esnoul, A.-M. (1959). Les songes et leurs interprétation dans l'Inde. *Sources Orientales 2* (Paris).

Eugster, C. H. (1967). Isolation, structure and synthesis of central-active compounds from *Amanita muscaria* (L. ex Fr.) Hooker. In Efron et al. 1967, 416-418.

Evans-Pritchard, E. E. (1956). *Nuer Religion.* Oxford: Clarendon Press.

Feifel, E. (1941). Specimen of early brush writing. *Monumentą Serica* 6, 390ff.
—(1944). Pao-p'u Tzu, Nei-p'ien. Ch. ÏV. *Monumentą Serica* 9, 1-33.
—(1946). Pao-P'u Tzu, Nei-p'ien. Ch. XI. *Monumentą Serica* 11, 1-32.
Firth, R. (1936). *We, the Tikopia.* New York: American Book Co.
Fišer, I. (1966). *Indian Erotics of the Oldest Period.* Prague.
Fromm, E. (1965). *The Art of Loving.* New York: Harper.
Gay ton, A. H. and Newman, S. S. (1960). Yokuts and Western Mono myths. *Anthropological Records* 5 (1).
Gessain, R. (1957). Vagina dentata dans la clinique et la mythologie. In *Psychanalyse et les sciences de l'homme.* Paris.
Gimbutas, M. (1958). *Ancient Symbolism in Lithuanian Folk Art* (= *Memoirs of the American Folklore Society*, vol. 49). Philadelphia: American Folklore Society.
Ginotti, Mia (1967). *Jérôme Bosch*. Paris.
Godard, A. (1931). *Bronzes du Luristan.* Paris: G. van Oest.
—(1964). *L'art de l'Iran.* Paris.
Goodman, J. (1940). Cosmological beliefs of the Cubeo Indians. *Journal of American Folklore* 53, 242-247.
Granet, M. (1926). *Danses et légendes de la Chine ancienne*, I—II. Paris: P.U.F.
Griaule, M. and Dieterlen, G. (1965). *Le renard pâle*, I: *Le mythe cosmogonique*. Paris: Institut d'ethnologie.
Griby, russkaja narodnaja pesnja [Mushrooms, a Russian Folk Song]. Moscow, 1916.
Griby, russkaja skazka v stixax [Mushrooms, a Russian Folktale in Verse]. Pskov, 1837.
Gulik, R. H. van (1951). *Erotic Colour Prints of the Ming Period*, I—III. Tokyo.
—(1961). *Sexual Life in Ancient China.* Leiden: E. J. Brill.
Hahn, E. (1904) Der Sonnenschirm als Königssymbol und die Einführung des Rosenkranz in Westeuropa. *Internationales Archiv für Ethnographie* 16, 30-42.
Harva, U. (1938). *Die religiösen Vorstellungen der altaischen Völker.* Helsinki.
Hautala, J. (1965). Survivals of the cult of sacrifice stones in Finland. *Temenos* 1, 65-86.
Heim, Roger (1966). L'Amanite tue-mouche nord-américaine n'est pas la Muscaria. *Revue de Mycologie* 30 (4), 294ff.
Henderson, J. L. and Oakes, M. (1963). *The Wisdom of the Serpent: The Myths of Death, Rebirth and Resurrection.* New York: G. Braziller.
Hennigh, L. (1966). Control of incest in Eskimo folktales. *Journal of American Folklore* 79.
Henning, W. B. (1955). *Bulletin of the School of Oriental and African Studies* (of the University of London) 17.
Hultkrantz, Å. (1963). *Les religions des Indiens primitifs de l'Amérique: Essai d'une synthèse typologique et historique.* Stockholm-Göteborg-Uppsala.
Hummel, S. (1953). *Geschichte der tibetischen Kuns.*. Leipzig.
Hunt, M. M. (1959). The Natural History of Love. New York: Knopf.
Ingalls, D. H. H. (1971). Remarks on Mr. Wasson's *Soma. Journal of the American Oriental Society* 91, 188-191.
Irle, J. (1916-1917). Die Religion der Herero. *Archiv für Anthropologie* 43, 337-367.
Isokas, G. (1960). *Šimtas girios mįslių.* Vilnius.
—(1970). *Grybų karnavalas.* Vilnius.
Ivanov, S. V. (1970). *Skulptura narodov Severą Sibiri XIX-pervoj poloviny XX* v. [*The Sculpture of the Peoples of Northern Siberia of the XIXth-First Half of the XXth Century*]. Leningrad.
Ivanov, V. V. and Toporov, V. N. (1970a). Le mythe indo-européen du dieu de l'orage poursuivant le serpent; reconstruction du schéma. In *Échanges et communication: Mélanges offert à Claude Lévi-Strauss à l'occasion de son 60-ème anniversaire*, 1180-1206. The Hague: Mouton.

—(1970b). K semiotičeskomu analizu mifa i rituala (na belorusskom materiale) [Toward the semiotic analysis of myth and ritual (on the basis of Belorussian material)]. In *Sign, Language, Culture.* The Hague: Mouton.

—(1974). *Issledovanija v oblasti slavjanskix drevnostej: Leksičeskie i frazeologičeskie voprosy rekonstrukcii tekstov [Investigations in the Field of Slavic Antiquities: Lexical and Phraseological Questions of the Reconstruction of Texts],* Moscow: Nauka.

Jacobs, M. (1959). *The Content and Style of an Oral Literature: Clackamas Chinook Myths and Tales.* Chicago: University of Chicago Press.

Jensen, Adolf E. (1951). *Mythos und Kult bei Naturvölkern.* Wiesbaden: F. Steiner.

Jobes, G. (1961). *Dictionary of Mythology, Folklore and Symbols*. New York: Scarecrow Press.

Jochelson, V. I. (1918). Naturalističeskij sjužet o proisxoždenii komarov i drugix gadov v sibirsko-amerikanskix mifax [The naturalistic plot of the origin of mosquitoes and other insects in Siberian-American myths]. *Sbornik Muzeja Antropologii i Ètnografii* 5 (1).

Kaltenmark, M. (1959). La naissance du monde en Chine. *Sources orientales* L

Kaplan, R. W. (1975). The sacred mushroom in Scandinavia. *Man* 10 (1), 72-79.

Karow, O. (1964). Die Tötung der Nahrungsgöttin und die Entstehung der Nutzpflanzen in der japanischen Mythologie. In *Festschrift für Adolf E. Jensen*, 279-284. Munich.

Karunovskaja, L. E. (1935). Predstavlenija altajcev o vselennoj [Conceptions of the Altaic peoples about the universe]. *Sbornik Ètnografii* 4-5, 160-183.

Ke, Yuan (1965). *Mify Drevnego Kitaja [Myths of Ancient China]*. Moscow.

Kinžalov, R. V. (1968). *Iskusstvo drevnix majja [Art of the Ancient Mayans]*. Leningrad.

Kell, K. T. (1965). Tobacco in folk cures in western society. *Journal of American Folklore* 78, 99-114.

—(1966). Folk names for tobacco. *Journal of American Folklore* 79, 590-599.

Kondrat'eva, T. N. (1970). O Titax, Titax Tityčax i Titovyx detjax. *Russkaja rec'* 1, 78-81.

Kozlov, P. K. (1925). *Comptes rendus des expéditions pour l'exploration du nord de la Mongolie.* Leningrad.

Krickeberg, W. (ed. and trans.) (1928). *Märchen der Azteken und Inkaperuaner, Maya und Muisca.* Jena.

—(1949). Felsplastik und Felsbilder bei den Kulturvölkern Altamerikas mit besonderer Berücksichtigung Mexicos, I. Rudolfstadt.

Kroeber, Th. (1964). *Ishi in Two Worlds*. Berkeley and Los Angeles: University of California Press.

Kuiper, F. B. J. (1970). Review of Wasson's *Soma. Indo-Iranian Journal* 12 (4), 279-285.

Kurath, G. P. (1956). Dance relatives of mid-Europe and middle America: A venture in comparative choreology. In *Slavic Folklore: A Symposium*, A. B. Lord (ed.), 88-100. Philadelphia: American Folklore Society.

Laport, G. (1932). *Les contes populaires Wallons* (= *Folklore Fellows Communications*, No. 101). Helsinki: Suomalainen tiedeakatemia.

Latvju Raksti, III (1924), ed. by Z. Lipers et al.

Leach, M. (1956). *The Beginning: Creation Myths Around the World.* New York: Funk and Wagnalls.

Leibovici, M. (1959). Les songes et leur interprétation à Babylone. *Sources orientales 2 (Les songes et leur interprétation)*. Paris.

Leon-Portil'ja, M. (1961). *Filosofija nahua.* Moscow.

Lessa, A. (1966). 'Discoverer-of-the-Sun': Mythology as a reflection of culture. *Journal of American Folklore* 79, 3-51.

Lévi-Strauss, C. (1958). Dis-moi quels champignons .... *L'Express*, 10 avril.

—(1962). *La pensée sauvage.* Paris: Plon.

—(1964). *Mythologiques*, I: *Le cru et le cuit.* Paris: Plon.
—(1966). *Mythologiques*, II: *Du miel aux cendres.* Paris: Plon.
—(1968). *Mythologiques*, III: *L'origine des manières de table.* Paris: Plon.
—(1970). Les champignons dans la culture: A propos d'un livre de M. R. G. Wasson. *L'Homme* 10, 5-16.
Lietuvių tautosaka (1968), ed. by T. S. Vilnius.
Lommel, H. (1938). Yasna 32. *Wörter und Sachen* 19.
—(1949). Mithra und das Stieropfer. *Paideuma* 3 (6/7), 207-218.
Luomala, K. (1949). Australian Aboriginal mythology. In: *Funk and Wagnall's Standard Dictionary of Folklore, Myths and Legends*, I. New York: Funk & Wagnalls.
Malinowski, B. (1927). *Sex and Repression in Savage Society.* New York: Humanities Press [1979].
Marcinkevičius, Juozas (1958). *Grybų karas.* Vilnius.
Matlaw, R. E. (1957). Recurrent imagery in Dostoevskij. *Harvard Slavic Studies* 3, 201-224.
Mazière, F. (1965). *Fantastique île de Pâques.* Paris.
Meletinskij, E. M. (1968). *'Edda' i rannie formy èposa [The* Edda *and early forms of the epic].* Moscow.
—(1969). Mifologičeskie povestvovatel'nye pesni 'Èddy' i rannie formy èposa [The mythological narrative songs of the *Edda* and early forms of the epic]. In: *Skandinavskij sbornik* 14. Tallin.
Mel'ničenko, G. G. (1961). Jaroslavskij slovar' [Dictionary of the Yaroslavl dialect]. Jaroslavl'.
Merkulova, V. A. (1967). *Očerki po russkoj narodnoj nomenklature rastenij [Essays on the Russian Folk Nomenclature of Plants],* II: *Nazvanija gribov [Names of Mushrooms],* 149-202. Moscow: Nauka.
Métraux, A. (1946-1959). Tribes of the eastern slopes of the Bolivian Andes. In: *Handbook of South American Indians*, III, Julian H. Steward (ed.). Washington: U.S. Government Printing Office.
Mitrofanova, V. V. (comp.) (1968). *Zagadki [Riddles].* Leningrad.
Modi, J. J. (1937). *The Religious Ceremonies and Customs of the Parsees,* 2nd ed. Bombay.
Montell, G. (1939). Mongolian chess and chess-men. *Ethnos* 4, 81-104.
Mooney, S. (1900). Myths of the Cherokee. *19th Annual Report of the Bureau of American Ethnology of the Smithsonian Institution.* Washington, D.C.
Mountford, Charles P. (1964a). *Peintures aborigènes d'Australie.* Paris.
—(1964b). *Aboriginal Paintings from Australia.* London: Collins.
—(1965). *Ayers Rock: Its People, Their Beliefs and Their Art.* Sydney: Angus and Robertson. "
—(1966). *The Dreamtime: Australian Aboriginal Myths in Paintings by Ainslie Roberts, as* Told by C. Mountford. London: Angus and Robertson.
Murray, H. J. R. (1913). *A History of Chess*. Oxford: Clarendon Press.
Newland, C. C. (1963). *Myself and I*. New York.
Nimuendaju, C. (1939). The Apinayé. *Anthropological Series*, No. 8. Washington.
Nordenskiöld, E. (1923). *Forschungen und Abenteuer in Süd-Amerika.* Stuttgart.
O'Flaherty, W. Doniger (1969). Asceticism and sexuality in the mythology of Śiva. *History of Religions* 8 (4).
—(1973). *Asceticism and Eroticism in the Mythology of Siva.* Oxford: Oxford University Press.
Orbeli, I. and Trever, K. (1936). *Šatrang, kniga o šaxmatax [The Šatrang, a Book about Chess].* Leningrad.
Pallottino, M. (1952). *La peinture Etrusque.* Geneva: Skira.
Parker, K. Longloh (1898a). *Australian Legendary Tales: Folklore of the Noon-gahburrahs as Told to the Piccaninnies*. London and Melbourne.

—(1896b). *More Australian Legendary Tales.* London and Melbourne.

Pelikan, W. (1950). Geheimnisvolle Beziehungen zwischen Tier und Pflanze. *Weleda-Nachrichten*, No. 23.

Pope, J. A. (1956). *Chinese Porcelains from the Ardebil Shrine.* Washington: Smithsonian Institution, Freer Gallery of Art.

Porfir'ev, I. Ja. (1872-1873). *Apokrifičeskie skazanija o vetxozavetnyx licax i sobytijax [Apocryphal Tales about Old Testament Persons and Events].* Kazan'.

Potanin, G. N. (1881-1883). *Očerki Severno-Zapadnoj Mongolii [Essays on North- Western Mongolia*], II—IV. Saint Petersburg.

—(1882). Gromovnik po pover'jam i skazanijam plemën Južnoj Sibiři i Severnoj Mongolii [The *Gromovnik* according to the beliefs and legends of the tribes of southern Siberia and northern Mongolia]. *Žurnal Ministerstva narodnogo prosveščenija,* No. 1.

—(1916). *Erke. Kul't syna neba v Severnoj Azii. Materialy k turko-mongol'skoj mifologii [Erke: The Cult of the Son of Heaven in Northern Asia. Materials for Turko-Mongolian Mythology].* Tomsk.

Read, H. (1964). *A Concise History of Modern Sculpture.* London.

Reed, A. W. (1946). *Myths and Legends of Maori-Land.* Wellington, N.Z.: A. H. and A. W. Reed.

Revue de Mycologie (1966). *Un problème à éclaircir: celui de la Tue-mouche.* Vol. 30, No. 4.

Riedemeister, L. (1935). *Ming Pozellane in schwedischen Sammlungen*. Berlin.

Roth, W. (1915). An inquiry into the animism and folklore of the Guinea Indians. *30th Annual Report of the Bureau of American Ethnology of the Smithsonian Institution.* Washington, D.C.

Roux, J. P. (1966). *Faune et flore sacrées dans les sociétés altaïques.* Paris: A. Maisonneuve.

Rudenko, S. I. (1968). *Drevnejšie* v *mire xudožestvennye kovry i tkani iz oledenelyx kurganov Gornogo Altaja [The Oldest Artistic Rugs and Textiles in the World, from the Frozen Burial Mounds of the Altai Mountains*]. Moscow.

Samter, E. (1911). *Geburt, Hochzeit und Tod*. Leipzig.

Sarauw, G. F. L. (1907). Le feu et son emploi dans le Nord de l'Europe aux temps préhistoriques et protohistoriques. *Annales du XX Congrès archéologique et historique de Belgique* 1, 192-226.

Schroder, D. (1953). Zur Religion der Tujen des Sininggebietes. *Anthropos.*

Schröder, F. R. (1967). Das Hymirlied. *Arkiv för nordisk filologi* 70, 1-40.

Schroeder, L. von (1908). *Mysterium und Mimus im Rig Veda.* Leipzig.

Seemann, E. (1960). 'Die zehnte Tochter': Eine Studie zu einer Gottscheer Ballade. In *Humaniora: Essays in Literature, Folklore, Bibliography, Honoring Archer Taylor on His Seventieth Birthday*, 102-114. Locust Valley, N.Y.: J. J. Augustin.

Seeler, E. (1902-1923). *Gesammelte Abhandlungen zur amerikanischen Sprach-und Altertums-kunde*, I-V. Berlin.

—(1903-1909). *Codex Borgia. Eine altmexikanische Bilderschrift*, I-III Berlin.

Semeka, E. S. (1970). K tiplogii oppozicii 'moloko'-'krov" v ritual'nyx i mifologičeskix sistemax Indii i Cejlona, [Toward a typology of the opposition 'rnilk'-'blood' in the ritualistic and mythological systems of India and Ceylon. *Tezisy dokladov IV Letnej skoly po vtoricnym modelirujuscim sistemam* (Tartu), 51-53.

Šejn, P. (1898). *Velikorus* v *svoix pesnjax, obrjadax, obyčajax, skazkax, legendax [Great Russia in its Songs, Rites, Customs, Folktales and Legends*], I. Saint Petersburg.

Šuxov, I. N. (1915). Iz otčeta o poezdke vesnoj 1914 g. k kazymskim ostjakam [From a report on a trip in the spring of 1914 to the Kazym Ostyaks]. *Sbornik Muzeja Antropologii i Ètnografii* 3. Petrograd.

Skazki i mify Okeanii (1970). Moscow.

Skeat, W. W. and Bladgen, Ch. O. (1906). *Pagan Races of the Malay Peninsula*, I. London: F. Cass.
Smith, E. W. and Dale, A. (1920). *The Ila-Speaking People of Northern Rhodesia,* II. London: Macmillan.
Stephens, W. N. (1962). *Oedipus Complex: Cross-Cultural Evidence.* New York: Free Press of Glencoe.
Strehlow, T. G. H. (1947). *Aranda Traditions*. Melbourne: Melbourne University Press.
Sullivan, M. (1960). *Chinese Ceramics, Bronzes and Jades in the Collection of Sir Alan and Lady Barlow*. London.
—(1962). *The Birth of Landscape in China.* Berkeley and Los Angeles: University of California Press.
Swanton, J. R. (1908). Haida Texts — Masset Dialects. In *Jessup North Pacific Expedition,* X (2).
Syromjatnikov, N. A. (1970). Teorija izosemantičeskix rjadov [The theory of isosemantic series]. In *Studies in General and Oriental Linguistics Presented to Shirô Hattori.* Tokyo.
Taylor, A. (1951). *English Riddles from Oral Tradition*. Berkeley and Los Angeles: University of California Press.
Tessmann, G. (1913). *Die Pangwe,* II. Berlin.
Than-Sein, Maung and Dundes, A. (1964). Twenty-three Riddles from Central Burma. *Journal of American Ethnology 77.*
Thompson, S. (1919). *Tales of the North American Indians,* Cambridge, Mass.: Harvard University Press.
—(1946). *The Folktale.* New York: Dryden Press.
—(1953). The Star Husband Tale. *Studia Septentrionalia* 3, 93-163.
—(1955-1958). *Motif-Index of Folk Literature*, I-VI. Bloomington: Indiana University Press.
Thompson, S. and Balys, J. (1958). *The Oral Tales of India.* Bloomington: Indiana University Press.
Tolnay, Ch. de (1967). *Hieronimus Bosch.* Paris.
Toporov, V. N. (1969a). K rekonstrukcii indroevropejskogo rituala i ritual'no-poètičeskix form ill (na materiale zagovorov) [Toward the reconstruction of Indo-European ritual and ritual-poetic formulae (on the basis of incantations)]. *Trudy po znakovym sistemam 4 (= Učenye zapiski Tartuskogo gos. universiteta,* vyp. 236), 9-43.
—(1969b). Iz nabljudenij nad ètimologiej slov mifologičeskogo xaraktera [From observations on the etymology of words of a mythological nature]. *Ètimologija 1967* (Moscow), 11-13.
Trever, K. V. (1932). *Excavations in Northern Mongolia.* Leningrad.
Trusman, Ju. (1890). Poluvercy Pskovo-Pečerskogo Kraja. Zagadki. *[Poluvercy* of the Pskov-Percerskij region Riddles], *Živaja starina*, 1.
Turner, R. L. (1962-1966). *A Comparative Dictionary of the Indo-Aryan Languages.* London and New York: Oxford University Press.
Vasilevič, G. M. (1969). *Èvenki.* Leningrad.
Venkataswami, M. N. (n.d.). Folklore in the central provinces of India. *Indian Antiquary* 167, No. 86.
Vries, J. de (1950). *Altnordische Religionsgeschichte,* II. Berlin: Walter de Gruyter.
Ward, R. H. (1959). *A Drug-taker's Notes.* London.
Waser, P. G. (1967). The pharmacology of *Amanita muscaria.* In Effron et al. 1967, 419-439.
Wasson, R. Gordon (1956). Lightning-bolt and mushrooms: An essay in early cultural exploration. In *For Roman Jakobson,* 605-612. The Hague: Mouton.
—(1969). *Soma: Divine Mushroom of Immortality.* New York: Harcourt Brace Jovanovich.

—(1970a). Soma: Comments inspired by Professor Kuiper's review. *Indo-Iranian Journal* 12, 286-298.
—(1970b). Soma of the Aryans: An ancient hallucinogen? *Bulletin of Narcotics* 22, 25-30.
—(1971). The Soma of the Rig Veda: What was it? *Journal of the American Oriental Society* 91 (2), 169-187.
—(1972). *Soma and the Fly Agaric: Mr. Wasson's Rejoinder to Professor Brough*, with intro. by R. E. Schultes. Cambridge, Mass.: Botanical Museum of Harvard University.
Wasson, R. G., Ruck, C. A. P. and Hofmann, A. (1978). *The Road to Eleusis: Unveiling the Secret of the Mysteries*. New York: Harcourt, Brace, Jovanovich.
Wasson, R. G. and Wasson, V. P. (1956). *Mushrooms, Russia and History*. New York.
Wertheim-Aymès, A. (1957). *Hiëronymus Bosch. Eine Einführung in seine geheime Symbolik*. Amsterdam: Van Ditmar.
Willetts, W. (1958). *Chinese Art*. Harmondsworth: Penguin Books.
Worms, E. A. (1957). Australian mythological terms: Their etymology and dispersion. *Anthropos* 52, 732-768.
Yalman, N. (1967). *Under the Bo Tree: Studies in Caste, Kinship, and Marriage in the Interior of Ceylon*. Berkeley: University of California Press.
Yetts, W. P. (1926). Discoveries of the Kozlov expedition. *Burlington Magazine* 48 (April).
ZSOIRGO (= Zapiski Sibirskogo Otdelenija Imp. Russkogo Geografičeskogo Obščestva) 37 (1915).
Zograf, G. A. (ed.) (1971). *Skazki central'noj Indii* [*Folktales of Central India*]. Moscow.

Vladimir Nikolaevič Toporov, one of the leading semioticians in the Soviet Union, is a senior researcher at the Institute of Slavic and Balkan Studies of the Soviet Academy of Sciences, Moscow. He is the co-author, with V. V. Ivanov, of two pioneering works on the ancient Slavic religious system: *Slavjanskie jazykovye modelirujuščie semiotičeskie sistemy* [Slavic linguistic semiotic modeling systems] (1965) and *Issledovanija* v *oblasti slavjcmskix drevnostej* [Investigations in the field of Slavic antiquities] (1974). Toporov is a frequent contributor to *Semiotica.* His articles have also appeared in English translation in the anthologies *Semiotics and Structuralism*, edited by H. Baran (1976) and *Soviet Semiotics*, edited by D. Lucid (1977). His recent books include: *Axmatova i Blok* [Axmatova and Blok] (1981) and *Gospodin Proxarčin: k analizu peterburgskoj povesti Dostoevskogo* ['Mr. Proxarčin': An analysis of Dostoevsky's Petersburg tale] (1984).

Stephen Rudy, an assistant professor of Slavic languages and literatures at New York University, has published several articles on poetics and semiotics, including a survey of 'Semiotics in the U.S.S.R' (in *The Semiotic Sphere*, ed. T. A. Sebeok, forthcoming). He is the editor of Boris Uspensky's *The Semiotics of the Russian Icon* (1976), co-editor of *Dostoevsky and Gogol: Texts and Criticism* (1979), and co-author (with Roman Jakobson) of *Yeats*' '*Sorrow of Love' through the Years* (1977). The editor of Jakobson's *Selected Writings*, volumes III (1981), V (1979), VI (1985) and VII (1985), he has also compiled *A Complete Bibliography of Roman Jakobson's Writings, 1915-1982* (1985).