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FISH, SYMBOL AND MYTH

By

OTTO J. von SADOVSZKY



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SYMBOL AND MYTH**

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FISH, SYMBOL AND MYTH

**A HISTORICAL SEMANTIC
RECONSTRUCTION**

By

OTTO J. VON SADOVSZKY



Akadémiai Kiadó, Budapest
International Society for Trans-Oceanic Research, Los Angeles

On the cover:

A bronze axe-head from Luristan. (After Lloyd.)

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To my wife
MARIA

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Introduction

The present study is a reconstruction of the semantic sphere surrounding the concept of fish in the Eurasian culture area. The argumentation is based on semantic parallels drawn from modern and ancient languages, on archeological data indicating the artistic representation of these parallels and on mythology apparently developed in view of the same semantic associations.

Up to this date the Uralic semantic connection between the 'calf of the leg' and 'fish roe' was thought to occur only in Dutch and Russian. We will demonstrate, however, that the same association is made, at least implicitly, in several Indo-European languages. Archeological excavations, especially in the Altai Mountains, are indicative of this association, for we find that on the leg of the frozen body of a Scythian chieftain appears the tattooed image of fish. Linguistic and archeological data indicate that the lower leg was conceived as the reduced 'version' of the entire human body and the fish in connection with leg can be interpreted to be a representation of Babylonian and ancient Iranian fishgod.

The pivotal semantic reconstruction of concepts connected with pillar or support show that several items were connected in the cultural context, and consequently roots that have appeared to us as being homonyms are in fact culturally defined variants of one and the same unit. When the obvious context had been lost, polysemy changed into homophony, and the state of affairs in our handbooks has generally not penetrated this level.

Further, the analysis of semantic associations connected with fish provides us with a working tool not only to explain hitherto baffling artistic representations, but they also help us to interpret hitherto unexplained mythological material. This appears most clearly when we treat the problem of the mythological fish in connection with

earthquakes. The fish is conceived as supporting the earth in several Asiatic cultures. The movement of this 'support-fish' is considered to be the cause of earthquakes. In Germanic mythology Loki in the shape of a salmon is chained in a subterranean cavern and his movements cause earthquakes. In Greek mythology Salmoneus, after imitating the thunder and lighting of Zeus and mimicking the aegis of Zeus by the arrogant use of a greave on his shoulder and arm is banished to the lower world, where he continues his activity. His name seems to be connected with salmon. The eastern endpoint of Crete is named after him. The emphasis on greave, endpoint, his dwelling in the lower world, his name and foreign origin are in accord with the linguistic, archeological and mythological data presented in this study.

We treated the concept of fish only as much as it is connected with the central support and stem. This stem with its 'offshoots' is associated with fruits and implies the notion of fertility. The fish in this aspect is the well-established symbol of fertility. Further, the dual symbol of "mainstay-fertility" found its way into Christianity and into our modern culture.

Any final affirmative statement regarding the origin of interrelationship between the various subgroups would be premature. The semantic associations could be results of independent parallel development, borrowings from a common source, borrowing from the neighbouring cultures, or could be which is the most feasible assumption, indicative of a common cultural heritage. These problems, however, can be treated only when subsequent researchers gather sufficient data to allow us to reconstruct in more detail the paths of ancient semantic developments.

Finally, I would like to express my gratitude to my professors, colleagues and friends at the University of California in Los Angeles, where I presented this study in partial satisfaction of the requirements for the degree Doctor of Philosophy in Indo-European Studies (1970).

My very special thanks go first of all to Professor Hanns-Peter Schmidt, a scholar par excellence, who with his criticism and valuable discussions contributed so much to this work. I thank Professor Raimo Anttila, a superb comparative linguist, for his valuable suggestions. Similarly, I thank Professor Jaan Puhvel, the Founder and Chairman of Indo-European Studies at UCLA, for his guidance

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I will always cherish the memory of my long discussions with Daniel Gershenson, a man of great erudition, now Professor at the University of Tel Aviv.

And last, but not the least, I thank a truly memorable friend Professor Marija Gimbutas, for her help by checking the archeological material.

To my editor Pál Páricsy goes the credit for making my complex manuscript accessible to the public.

The dedication of this volume to my beloved wife Maria speaks for itself.

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Abbreviations

AS	Anglo-Saxon	OCSI	Old Church Slavic
AJOA	American Journal of Archeology	OE	Old English
AV	Atharvaveda	OF	Old French
BSOAS	Bulletin of the School of Oriental and African Studies	OHG	Old High German
Du	Dutch	OIr	Old Irish
E	English	OLt	Old Latin
Fi	Finnish	ON	Old Norse
Fr	French	OPr	Old Prussian
FUV	Fenno-Ugric Vocabulary (see <i>Bibliography: Collinder</i>)	OSw	Old Swedish
G	German	PBS	Proto Balto Slavic
Gk	Greek	PRo	Proto Romance
Go	Gothic	RE	(Paulys) Realencyclopädie (see <i>Bibliography: Pauly-Wissowa</i>)
Hdt	Herodot	RV	R̥gveda or Rig Veda
Hu	Hungarian	SBE	Sacred Books of the East (see <i>Bibliography: Müller</i>)
Ir	Irish	Snorri	Edda of Snorri Sturluson (see <i>Bibliography: Jónsson</i>)
IE	Indo-European	ŚBr	Śatapatha Brāhmana
JSFOu	Journal de la Société Finno-Ougrienne	Sk̄t	Sanskrit
KZ	(Kuhns) Zeitschrift für Vergleichende Sprachforschung	Sp	Spanish
Lex.	Lexical entry in Monier-Williams (see <i>Bibliography</i>)	s.v.	sub voce ('under the word entry')
LG	Low German	TPS	Transaction of the Philological Society, London
Lt	Latin	WP	Walde-Pokorny (see <i>Bibliography: Walde-Pokorny</i>)
MBh	Mahābhārata	ZDMG	Zeitschrift der Deutschen Morgenländischen Gesellschaft
MDu	Middle Dutch	ZfSlPh	Zeitschrift für Slavischen Philologie
MHG	Middle High German		
MIr	Middle Irish		
NHG	New High German		
OCor	Old Cornish		

Chapter I

Fish and the shinbone

1. Fish roe and the calf of the leg

Russian has a homophone which refers to three entirely different items:

1. *ikra* 'fish roe'
2. *ikra* 'calf of the leg'
3. *ikra* 'ice floe'

1. and 2. were connected by several scholars,¹ who based their argument on the Dutch parallel (*kuit* 'fish roe, calf of the leg') and a large number of parallels from the Finno-Ugric languages. Estonian has *kala-mari*² 'fish roe' (*kala* 'fish') *sääre-mari* 'calf of the leg' (*säär* 'leg'), *silma-mari* 'sty on the eye' (*silm* 'eye'). *mari*, *marja* means 'berry' which indicates that the berrylike appearance of the fish roe could have been the point of reference. In Vote *säri-marjaD* (pl.) means 'the calfs of the leg' from the same root. Lude, however, utilizes another word and therefore it is more valuable for our investigation. *mädähn-üksed* (pl.) means the 'calf of the leg', and *mädähn* 'fish roe'. A similar word occurs in Finnish *mä(ä)hnä*³ 'fish roe', *mähnä-nen* 'the front thick flesh of the sole' – i.e., some kind of fleshy protuberance on the human body. The etymologically related word in Olonets again refers by the word for 'fish roe' (*mähändü*), to the

1. Kalima, *ZfSlPh*, 9 (1932), 376; Uhlenbeck, C. C. *Beitr. zur Geschichte der deutschen Sprache und Literatur*, 29 (1874), 333; Brückner, *KZ*, 44. 333; Frank, J. and N. van Wijk, *Etymologisch woordenboek der nederlandsche Taal*, 3. ed. N. van Wijk and C. B. van Haeringen, Haag, 1949, 357.
2. For the cognates of Estonian *mari* (Finnish *marja*) see Collinder, Björn, *Fenno-Ugric Vocabulary, An Etymological Dictionary of the Uralic Languages*, Uppsala, 1955.
3. Sadeniemi, Matti (ed.), *Nyky-suomen sanakirja*, Helsinki, 1962–1963. s.v. *mähnä* and *mäti*.

'calf of the leg' (*mähändüs*). North Karelian *määhnenen* indicates muscles, or any soft portion of the extremities, but also the thick part of the horse's collar. Ziryene utilizes another word: *pök* means 'fish roe' and *kok-pök* 'calf of the leg' (*kok* 'leg'), (also more explicitly *kok-t'sér-pek*: 'leg-fish-roe').⁴ To the same root belongs⁵ Finnish *päkiä*, *päkkä*, another word for 'thick flesh of the sole', and *päkiäinen* 'the soft part of the horse's hoof'. Estonian *päkk*, *põkk* means the same thing, but it also refers to the 'balls on the palm'. Ostyak utilizes again another unrelated word: *pū-râ* 'fish roe' and *kôr-pū-râ* 'calf of the leg' (*kôr* 'leg'). Finally Lapp (Kola) again has a similar association: *mēin*^e 'fish roe', *mēinož* 'soft part of the thumb', which in Latin is called *musculus*.⁶ At this point it seems to be fitting to quote Kalima's concluding remarks to his article:

So wenig Ähnlichkeit der moderne Mensch zwischen dem aufgeblasenen Rogensack eines Fisches und der Form der Wade eines Menschen auch zu finden vermag, ist diese Ähnlichkeit unseren Vorfahren doch so in die Augen gesprungen, dass sie beides mit demselben Worte benannt haben, wovon viele Sprachen auch jetzt Zeugnis geben.⁷

In the course of this investigation we will demonstrate how much more widespread the association between the leg and fish is than was suspected by the early investigators.

That the fish is thought of in connection with the leg appears from expressions such as Lapp (Kola) *kwälle jwâlge* (lit. 'fish leg', Finnish **kala jalka*) glossed by Itkonen⁸ *mullo, kossi*, 'a little 2–3 kilogram salmon'. A Scottish Gaelic poet addresses his sweetheart:⁹ "As the white salmon thy legs, with thy short hose on thy calf."

4. Fokos-Fuchs, D. R., *Syrjänisches Wörterbuch*, Budapest: Akadémiai Kiadó, 1959. s.v. *pek*.

5. Setälä, *JSFOu*, 30, 5, 58–59.

6. Lewis, Charleton T. and Charles Short, *A Latin Dictionary*, Oxford: Clarendon Press, 1962 (1879).

7. Kalima, *ZfSlPh*, 9, 378.

8. Itkonen, T. I., *Wörterbuch des Kolta- und Kolalappischen*, Helsinki, 1958. vol. II, 877.

9. 'Mar ghela bhradan do chosan, te d'ghearr osan mu d'chalpa', Steward's *Collection of Gaelic Songs*, 441.

That the above-mentioned words were borrowings from Russian is unlikely because of the diversity of forms and because of the data in languages which had very little Russian influence. An explicit connection 'fish roe – calf of the leg' occurs only in Russian and Dutch among the Indo-European languages, while in the Finno-Ugric languages the examples are very abundant.

The most surprising data, however, come from Basque:¹⁰ *añau* or *añaba* 'fish roe', *zango añaba* 'calf of the leg'. There is no equation between the two items in any of the Romance or Celtic languages, and geographically the closest, where it occurs, are Dutch, Slavic and Finno-Ugric languages.

The situation is quite different in Hungarian. Hungarian borrowed, with small modification, all three forms from Russian. *hal-ikra*¹¹ means 'fish roe', *láb-ikra* 'calf of the leg'. The third meaning of Russian *ikra* 'ice-floe' occurs in Hungarian as an adjective. *ikrá-s* 'granulated', refers to half-frozen goose fat, or the pulp of the fruit. That it is the *ikra* 'ice floe' appears from the reference to the fat, which when cold or warm, floats on the top of the soup and has the appearance of floating ice. Fish roe also swims on the top of the water. Accordingly, the association between fish roe and ice floe is quite a natural one. The granulated, crushed form of ice, comparable to the pulp of fruit, makes this connection feasible too. A more original expression is Hungarian *in-kása* 'calf of the leg' lit. '(millet) porridge of the tendon' (*in-* 'tendon') (*kása* /borrowed from Slavic/ 'porridge, most commonly of millet'). We will treat the connection between millet and fish roe later in this chapter. English *pulp*, as in pulp of the wood and ice meant originally 'flesh of animal or fruit',¹² in Latin (*pulpa*). The Romance derivatives¹³ mean 'calf of the leg' (Italian *polpaccio* 'tip of the thumb', *polpacciuolo* 'tip of the finger', *polpastrello*, and in the Swiss dialects simply *porpa* 'palm').

The notion of 'broken, granulated' is compared to fish roe in Sanskrit:

10. Lhande, S. J. Pierre, *Dictionnaire Basque-Français, dialectes Labourdin, Bas-Navarrais et Souletin*, Tome I, G. Beauchesne, Paris, 1926, 73 and 1070.
11. Országh, László, *Magyar-angol kéziszótár*, Budapest: Akadémiai Kiadó, 1959.
12. Lewis and Short, s.v.
13. Meyer-Lübke, W., *Romanisches etymologisches Wörterbuch*, Heidelberg: Carl Winter, 1935, 6834.

<i>mīnāṇḍa</i> ¹⁴	‘fish roe, milt’
<i>mīnāṇḍā</i> (Lex.)	‘moist or brown sugar’
<i>mīnāṇḍī</i> (Lex.)	‘moist or brown sugar’ ('Sandzucker')
<i>matsyāṇḍa</i> ¹⁵	‘fish roe’
<i>matsyaṇḍī</i> ¹⁶ (Lex.)	‘the granulated juice of the sugar cane’
<i>matsyaṇḍikā</i> ¹⁷	‘the granulated juice of the sugar cane’

*Mīnā*¹⁸ and *matsya*¹⁹ mean ‘fish’ and *aṇḍa* ‘egg, semen’. The compounded forms *matsyaṇḍī*, *matsyāṇḍikā* should be **matsyāṇḍī*, **matsyāṇḍikā* with a long medial *ā*. On the basis of *mīnāṇḍī* ‘moist brown sugar’ lit. ‘fish roe’ and *matsyāṇḍa* ‘fish roe’ we should expect it. In Prakrit medial vowels followed by two consonants are shortened. Accordingly the short forms *matsyaṇḍī* and *matsyaṇḍikā* could be explained as ‘Prakritisms’. Since *-aṇḍa* is a productive suffix²⁰ in Sanskrit, it is also possible that in the course of time the semantic association with *aṇḍa* ‘egg’ was lost and the *aṇḍa* in *matsyaṇḍī* and *matsyaṇḍikā* was treated as a suffix. As we will see below, a similar situation occurred in *picaṇḍa* and *picaṇḍikā*.

14. Wilson, John A., “Egyptian Rituals and Incantations”, In Pritchard, James (ed.), *Ancient Near Eastern Texts Relating to the Old Testament*, Princeton: Princeton University Press, 1955.
15. Bhāvaprakāśa
16. Amarakoṣa 2.9. 43.
17. Suśruta 1. 187. 18.
18. Dravidian origin was proposed by Caldwell, Robert, *A Comparative Grammar of the Dravidian or South-Indian Family of Languages*, London, 1875, 2nd ed. 47, 460, and it is generally accepted. cf. Burrow, *TPS*, 1946, 10.
19. Avestan *masya*; perhaps the name of the Iranian people *Μασσα-γῆται* (**masya-ka-*) is related. cf. Jacobsohn, *KZ*, 55, 33, Mayrhofer, Manfred, *Kurzgefasstes etymologisches Wörterbuch des Altindischen*, Heidelberg: Carl Winter, 1953 ff., s.v.
20. Wackernagel, Jacob and Albert Debrunner, *Altindische Grammatik*, with a general intr. by Louis Renou, Göttingen: Vandenhoeck and Ruprecht, 1957–1964, II, 2, 159.

That granulated sugar is compared to a small globe (reminiscent of the fish roe) appears from the Sanskrit equation between *guḍa*²¹ 'globe, ball, granulated sugar' and *gula* 'unrefined sugar'. From the above quoted semantic parallels it appears possible that *guḍa* and *gula* together with Sanskrit *gudā*²² 'entrails' are related to Macedonian *γόδα* 'belly' and Dutch *kuit*²³ 'fish roe, calf of the leg'.

An association between egg and muscle occurs in Sanskrit:

<i>peśi</i> ²⁴ (Lex.)	'egg'
<i>peśī</i>	'a piece of flesh or meat; the fetus shortly after conception; a muscle'
<i>peśy-aṇḍa</i>	'a piece of flesh (esp. of fetus soon after conception); a bird's egg' (Lex.).

The calf of the leg in Sanskrit is associated with a small globe and round mass.

<i>piṇḍa</i> ²⁵	'calf of the leg'
<i>piṇḍa</i>	'round mass, ball, globe, bit, morsel; flesh'. ²⁶

A similar association between the calf of the leg and a small knob is readily apparent in Irish:

<i>pluc</i> ²⁷	'calf of the leg'
<i>pluc</i>	'lump, knot, knob, bulge, swelling, flock'.

21. Mayrhofer s.v. makes a queried suggestion as to the relationship of *guḍāh* 'ball' and *guḍāh* 'sugar'. The above data, however, reinforce the validity of the suggestion.

22. RV 10. 163. 3.

23. De Vries, Jan, *Altnordisches etymologisches Wörterbuch*, Leiden: Brill, 1962, 313, s.v. 'kjot'.

24. Monier-Williams, Sir, *A Sanskrit-English Dictionary*, Oxford: Clarendon Press, 1956 (1899), 648.

25. Monier-Williams, 625, *Mālatimādhava* V. 16.

26. RV 1. 162. 19.

27. Dinneen, Patrick, S., *An Irish-English Dictionary*, Dublin, 1965 (1927), s.v.

Irish also makes an equation between the fry of the fish and a small globe:

<i>meallog</i> ²⁸	‘fry of the fish’
<i>meallog</i>	‘small globe’

After these semantic equations the Sanskrit forms:

<i>picchā</i> ²⁹	‘calf of the leg’
<i>picchā</i> ³⁰	‘lump, multitude, mass, heap’

appear to be much clearer. The other Sanskrit forms for the calf of the leg seem to be connected also with egg:

<i>picaṇḍa</i> (Lex.)	‘belly; limb of an animal’
<i>picaṇḍaka</i> (Lex.)	‘calf of the leg’
<i>picaṇḍikā</i>	‘calf of the leg’

The form *picaṇḍaka* ‘calf of the leg’ is related to the above quoted *picchā* ‘calf of the leg, lump multitude, mass, heap’. The original form could have been **picchāṇḍaka* ‘calf of the leg’ lit. ‘fish roe’. The forms *picaṇḍa*, *picaṇḍaka*, *picaṇḍikā* could be secondary deaspiration and the ‘i’ in *picaṇḍa*, *picaṇḍikā*, is simply assimilation to the preceding ‘i’. For us the most important fact is, however, that the word *aṇḍa* ‘egg’ seems to appear in connection with the calf of the leg. We saw above that the calf of the leg is often associated with ‘fish roe’. If *aṇḍa* means ‘egg’, the word *pica* **piccha* should mean ‘fish’. If we search for the cognate of Western Indo-European **pisko* ‘fish’ in Sanskrit, we would expect as the regular reflex: *piccha*. As a

28. Dinneen, s.v.

29. Mayrhofer, s.v. *picchā*. According to Kuiper, F. B. J., “Proto-Munda Words in Sanskrit”, *Verhandeling der Koninklijke Nederlandsche Akademie van Wetenschappen, Afd. Letterkunde, N. R.*, Deel LI, No. 3, 1948, 142–148, *picchā* would belong to a wide spread Munda word class to which also *piṇḍa*. cf. p. 83; Burrow, *BSOAS*, 11, 347; 12, 384 compares it to Dravidian words for ‘calf of the leg’ (Telugu *pikka*).

30. Monier-Williams, 624.

result of the preceding investigation, it appears reasonable to suggest that **piccha-* in the meaning 'calf of the leg' is cognate to Latin *piscis* 'fish'. Up to the present time it was impossible to demonstrate the relationship between the two words because, although the formal comparative evidence would allow the connection between the two words, the semantic difficulties appear insurmountable. Only through a structural reconstruction of the semantic sphere of fish could a cognate of Latin *piscis* (English 'fish') be shown as having existed in any of the Indo-Iranian languages. In short: **piccha-* is perhaps only a semantically deviating reflex of Indo-European **peisko-*, **pisko*.³¹

The most common reference to the 'calf of the leg' is 'fish roe' and not 'fish' (*piccha*). In some languages a 'pars pro toto' transfer took place. This kind of generalization occurred e.g. in Sardinian,³² Sicilian and Istrian:³³

North Sardinian	<i>pische de sa camba</i>	'calf of the leg'
South Sardinian	<i>piscioni</i>	'calf of the leg'
Sicilian	<i>pisciuni</i>	'calf of the leg'
Istrian	<i>pisét(o)</i>	'calf of the leg'
Abruzzian ³⁴	<i>pešë (f)</i>	'calf of the leg'

To quote examples outside of Indo-European languages, a similar generalization occurs in Arabic:³⁵

<i>houtah de- 'r ridjl</i>	'calf of the leg'
<i>hout</i>	'fish'

31. Pokorny, Julius, *Indogermanisches etymologisches Wörterbuch*, 2 vol., Bern – München: Francke Verlag, 1959–1969, 796.

32. Wagner, M. L., *Studien über den sardischen Wortschatz* (I. Die Familie – II. Der menschliche Körper), Geneva: Olschki, 1930, 107.

33. Zauner, Adolf, "Die romanischen Namen der Körperteile", In *Romanische Forschungen*, Bd. 14, 1903, 468.

34. Meyer-Lübke, 6532.

35. Wagner (1930), 107; Marcel, J. J., *Vocabulaire français-arabe*, Paris, 1885, s.v. 'gras de la jambe'.

The Karachai,³⁶ a Turkic-speaking people in the Caucasus, have a similar association:

<i>čàbágét</i>	‘Fischfleisch’
<i>čabág</i>	‘Wade’

Greek sees in the ‘fish roe’ a similarity to millet. We met this semantic association already above, when we dealt with the archaic Hungarian form for the ‘calf of the leg’. *κέγχρος* means ‘a little ball, millet fish roe, sty on the eye’ (cf. the common reference to the ‘sty’ in German as *Gerstenkorn*, and Estonian *silma-mari* ‘sty’, and *kalamari* ‘roe’) and ‘the small perforations around the shield’.³⁷ *κέγχρωδης* means ‘granulated’ and, ‘the roughened surface (of a table)’. *κέγχρος* is from IE **gher-ghr-os*.³⁸ Its cognates are *κάχρυσ* ‘parched barley’, *χεράς* ‘pebbles’, Latin *furfur* ‘bran’ (clay, loam, marl), ‘chaff of cereals’, etc. (also belongs: Lithuanian *gurūs* ‘broken’, *gūrti* ‘to break up’). The -s extension of the root **gher-* appears in Sanskrit *gharṣati*³⁹ ‘to rub’, Russian *goróchʒ* ‘pea’. Ultimately the ‘extensions’ **ghrēu-*, **ghrāu-*⁴⁰ resulted in:

MHG	<i>grūz</i>	‘Korn von Getreide und Sand’
Lithuanian	<i>grúdas</i>	‘Korn’
	<i>groudás</i>	‘Reinfrost’
	<i>groudís</i>	‘Gerste, Hautentzündung, December’
Polish	<i>gruda</i>	‘Klumpen, Scholle’
OCSl	<i>gruda</i>	‘Erdscholle’
ON	<i>grautr</i>	‘Grütze, Brei’.

All of these items indicated the notion of ‘to be broken up into small particles’. This notion is clearly present in the Romance forms

36. Pröhle, W., “Karatschaisches Wörterverzeichnis”, *Keleti Szemle*, 10, 1909, 96.

37. Liddell, Henry George and Robert A. Scott, *Greek-English Lexicon*, Oxford: The Clarendon Press, 1961 (1940), s.v.

38. Pokorny, 439; Frisk, Hjalmar, *Griechisches etymologisches Wörterbuch*, Heidelberg, 1954 ff., s.v.

39. Mayrhofer, s.v.

40. Pokorny, 460-462.

for 'fish roe' and the words for 'spawing'. Latin *fricāre* and *frangere* both contributed to the following forms:⁴¹

Italian	<i>fregola (andar in)</i>	'to spawn'
	<i>fregola</i>	'fish roe'
	<i>frega</i>	'rutting'
	<i>fregare</i>	'to rub'
Spanish	<i>freza</i>	'fish roe'
	<i>frezar</i>	'to spawn'
French	<i>frai</i>	'fish roe'
	<i>fraye</i>	'to spawn'
	<i>frayer</i>	'to rub against'

The notion of breaking up into small pieces recalls English *pulp*, Sanskrit *piṇḍa*, OCS *lgruda* 'Scholle' (cf. German *Eisscholle* 'ice floe'). Accordingly, the third Russian *ikra* 'ice floe' must be listed as belonging to the same semantic sphere along with 'calf of the leg' and 'fish roe'.

Up to this point we have treated mostly words relating to the female eggs. Fish roe and grain refer to the hard roe in most of the languages.⁴² The soft roe, i.e., the male sperm of fish, is called *milt* in English. The selected cognates of the IE root **mel-*⁴³ (to which English 'milt' belongs) and **smel-* 'zermalmen; zerrieben, fein, zart, weich' branch out into the semantic sphere of reproduction.

IE <i>*mel-</i>		
Sanskrit	<i>mṛṇāti</i> ⁴⁴	'zermalmt, mahlt'
	<i>mṛdu-</i>	'weich'
Greek	<i>βλαδύς</i>	'langsam'
	<i>ἀμαλδύνω</i>	'schwäche, zerstöre'
Armenian	<i>malem</i>	'zerstosse'
	<i>ml-ml-em</i>	'reibe'
	<i>melm</i>	'weich'

41. Meyer-Lübke, 3501.

42. cf. Welsh (Bangor) *bol graun* (lit. 'belly grain'), 'hard roe', *bol laiθ* (lit. 'belly' + 'damp') 'soft roe'. Fynes-Clinton, O. H., *The Welsh Vocabulary of Bangor District*, London: Oxford Univ. Press, 1913, 49.

43. Pokorny, 716.

44. cf. Mayrhofer, s.v. 'mṛṇāti', 'mṛdnāti', 'mrdúh'.

Albanian	<i>mjel</i>	'Mehl'
Latin	<i>molo</i>	'mahlen'
	<i>mollis</i>	'weich'
	<i>mollia</i>	'sea mussels'
French	<i>mollet</i> ⁴⁵	'calf of the leg'
OIr	<i>melim</i>	"molō"
	<i>mol</i>	'Mühlstange; nave'
Welsh	<i>malu</i>	'mahlen'
Breton	<i>malaf</i>	'mahlen'
PCeltic	* <i>molto</i>	'Widder (verschnittenes)'
Gothic	<i>malan</i>	'mahlen'
English	<i>melt</i>	
	<i>milt</i>	'soft roe, spleen'
German	<i>Milz</i>	'spleen'
	<i>mild</i>	'mild'
Lithuanian	<i>malu</i>	'mahlen'
OCSl	<i>mladъ</i>	'jung, zart'

French *mollet* 'calf of the leg', English *milt* 'soft roe, spleen', Ir. *mol* 'nave of the wheel', PCeltic **molto* 'castrated ram', are all derivatives of the same IE root. These words, together with the general meaning 'to grind', will become clarified during this study.⁴⁶

45. Meyer-Lübke, 5649; also borrowed into Spanish *molledo* 'id.'

46. The famous mill, *Sampo*, of the Kalevala and its association with sturgeon is similar to these Indo-European concepts. Magoun, F. P., *The Kalevala* (Oxford: Harvard Univ. Press, 1963, 400-401), has this to say: "The Sampo is pictured as a three-sided mill, one side or face grinding out grain, one salt and one money, all in unlimited amounts... its lid is 'of many colors'. It is a producer and symbol of prosperity, a quality to some extent shared even by its fragments. There seems to be no question of ever making a duplicate. This mysterious object is in a sense central to much of the action of the Kalevala in that it becomes a bone of contention between the peoples of North farm and the Kaleva District."

"The name would seem to be somehow connected with *sammās* (gen. *sampan*) 'pillar, post' in Vedic and *sammās* (gen. *samba*) 'prop, mainstay, support' in Estonian. Estonian *sammās* posits a base-word *sampa*, of which *sampo* would be an *o*-diminutive and thus mean or suggest 'prop of life'."

Finno-Ugrian⁴⁷ uses the root **joksō* to indicate reproduction. Its reflexes are

Finnish	<i>juokse</i>	'to run, to flow'
Olonetz	<i>juokse</i>	'id., to become pregnant'
Estonian	<i>jookse</i>	'to run, to flow, to rut, to breed'
	<i>jooksu-aeg</i>	'mating season'
Hungarian	<i>ív - ívo-</i>	'to spawn, to pair, to copulate'
	<i>iva-dék</i>	'offspring'

If the calf of the leg is connected with the reproduction of the fish, it has to be connected with the reproductive organs of fish, or reproductive organs in general. The most important examples for this association appear in Greek, Celtic, Romance and Kafir, where the calf of the leg is simply referred to as 'belly, womb':

γαστήρ	'belly, womb'
γαστρο-κνήμη	'calf of the leg'
κνήμη ⁴⁸	'shinbone, stem'
κνημῖς	'greave, legging'
κνημία	'leg of chair'

We believe that the Estonian *samm* (*samba*), as in *lülisamm* 'Rückgrat, Wirbelsäule' is connected with *samb*, *sambi* (Fi *sampi*, *sammen-mäti* 'caviar'), 'sturgeon'. In this word the association of the concept of the fish with prop, pillar, appears very clearly. The fact that it is a mill (cf. fishroe vs. grain; to spawn vs. to rub, to grind) all point to the validity of this connection. The favorite reference: to the lid as 'of many colors', seems to refer to the concept of 'dotted, spotted, colorful' and could have originated from a reference to the colorful scales of the fish. Martti Haavio in his Finnish mythology equates the Sampo also with the sturgeon. Martti Haavio, *Suomalainen Mytologia*, Helsinki, 1967. 179–215.

47. Collinder, *FUV*, 84.

48. *κνήμη* is cognate with OIr *cnaim* where it simply means 'bone'. – WP 1. 460; Frisk, s.v. *κνήμη*.

A similar association is present in Welsh:⁴⁹

<i>croth</i>	‘womb, belly’
<i>croth coes</i>	‘calf of leg’
<i>bol, bola</i>	‘belly, stomach, abdomen’
<i>bola coes</i>	‘calf of the leg’ ⁵⁰

Breton has the same association:⁵¹

<i>kof</i>	‘ventre’
<i>kof - gar</i>	‘mollet’
<i>gar</i>	‘jambe’

In Romance the association between the two is very common:⁵²

Latin	<i>venter</i> ⁵³	‘belly’
Graubünden	<i>vantrill</i>	‘calf of the leg’
Catalan	<i>ventrell de la cama</i>	‘calf of the leg’
Aveyron	<i>bentre de la combo</i>	‘calf of the leg’
Latin	<i>pantex</i> ⁵⁴	‘belly’
Spanish	<i>pantorilla</i>	‘calf of the leg’
Portugese	<i>panturrilha</i>	‘calf of the leg’

The Kafir languages, which belong to the Iranian linguistic branch and are spoken in Eastern Afghanistan, have the same semantic associations.⁵⁵ Here the R̥gvedic *kukṣi* ‘belly’ came to mean ‘calf of the leg’ in several languages.

From the above presented data it is apparent that many cultures associated the lower leg with a fish. The calf of the leg was com-

49. Evans, H. Meurig, Thomas, W. O., Yr Athro Stephen Williams, Y Geiriadur Mawr, *The Complete Welsh-English, English-Welsh Dictionary*, Aberystwyth, 1968, s.v. (Further on abbreviated as Evans-Thomas.)

50. Evans-Thomas, s.v. ‘calf’.

51. Hemon, Roparz, *Dictionnaire Breton-Français*, Brest: Al Liamm, 1964, s.v.

52. Zauner, 467-468.

53. Zauner, 467.

54. Meyer-Lübke, 6207.

55. Turner, R. L., *A Comparative Dictionary of the Indo-Aryan Languages*, London: Oxford Univ. Press, 1963-1969, s.v. ‘*kukṣi*’.

pared with the belly of a fish full of eggs, or just simply referred to as belly. In some cases the concept of fish was entirely transferred to the calf of the leg. The similar shape of both 'items' must have been the point of reference. The lower leg 'looks like' a fish. If, however, this association was so widespread, one would expect to find artistic representations of these ancient associations. Our most important archaeological data for our argument were discovered in 1947, during an excavation in Siberia.

2. The fish and the Pazyryk man

In 1929 S. I. Rudenko opened a large boulder-roofed mound in the Pazyryk Valley. These excavations in the Altai Mountains became celebrated for the richness of the archaeological finds. He returned to Pazyryk Valley in 1947⁵⁶ and soon excavated six more mounds. Pazyryk 2 was a chieftain's tomb. Freezing temperatures preserved the body of a tattooed man.⁵⁷ (Figs 1–3.) The find is attributed to the Scythians and dated for the sixth century B. C.

56. Rudenko, S. I., *Kul'tura naseleniya Gornogo Altaya v skifskoe vremya*, Moskva, 1953; also by S. I. Rudenko, *Kul'tura naseleniya central'nogo Altaya v skifskoe vremya*, Moskva – Leningrad, 1960; Jettmar, K., "Die Fürstengräber der Skythen im Altai", *Umschau* (Frankfurt a.M.), 61, H. 12, 1961; Rudenko, S. I., *Der zweite Kurgan von Pasyryk*, transl. by Ida-Maria Görner, Berlin, 1951. For the general description of the Pazyryk excavations see Phillips, E. D., *The Royal Hordes: Nomad Peoples of the Steppes*, New York: McGraw-Hill, 1965, 78–89; Jettmar, Karl, *Die frühen Steppenvölker, Der eurasiatische Tierstil, Entstehung und sozialer Hintergrund*, Baden-Baden, 1964.
57. For the Pazyryk tattoos see the illustrations in Rudenko (1953), 80–83, 172, 174, 175, 177–185; for the descriptions *ibid*; Wiesner, J., "Die Kunst des Alten Orients – Eurasische Kunst in Steppenraum und Waldgebiet – Ägyptische Kunst", In *Illustrierte Weltkunstgeschichte*, Bd. I, Zürich, 1959, 57, 199, 233. Tattooing was known among the Thracians and Scythians (Hdt. V. 6). It was the sign of nobility; Pliny the Elder (VII. 50 and XXII. 2) and Vergil (Aen. IV. 146) mention that it was practised exclusively by the nobility. Among the Thracian women, tattooing was very popular (Artemidorus Onirocriticus, I. 9, Dio Chrysostomus XIV. 235) and it was tied in with the death of Orpheus. For illustrations see Wiesner, J., *Die Thraker*, Urban Bücher 41, Stuttgart, Tafel II. Further literature: Tomaschek, W., *Die alten Thraker. Eine ethnologische Untersuchung*, Sitzungsberichte der phil.-hist. Kl. der kaiserl. Akademie d. Wiss., Wien, 1893, 116; Oberhummer, Art.

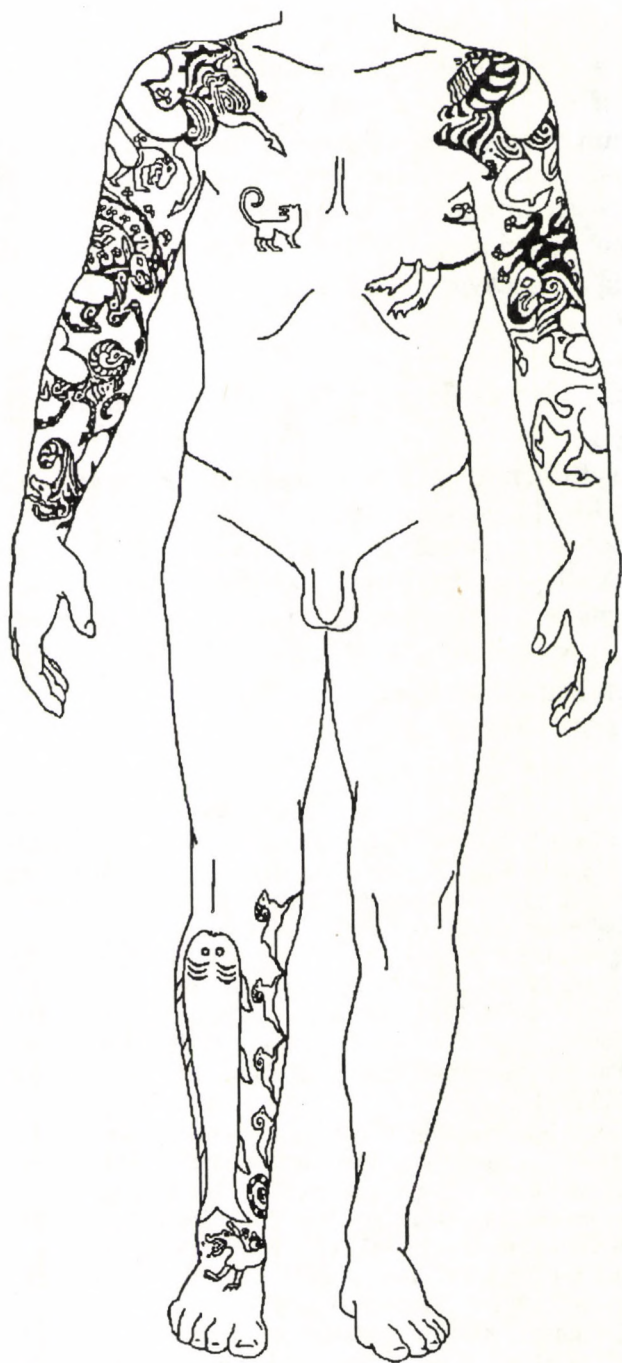


Fig. 1. The tattooed chieftain of Pazyryk II; front view. (After Artamonov.)

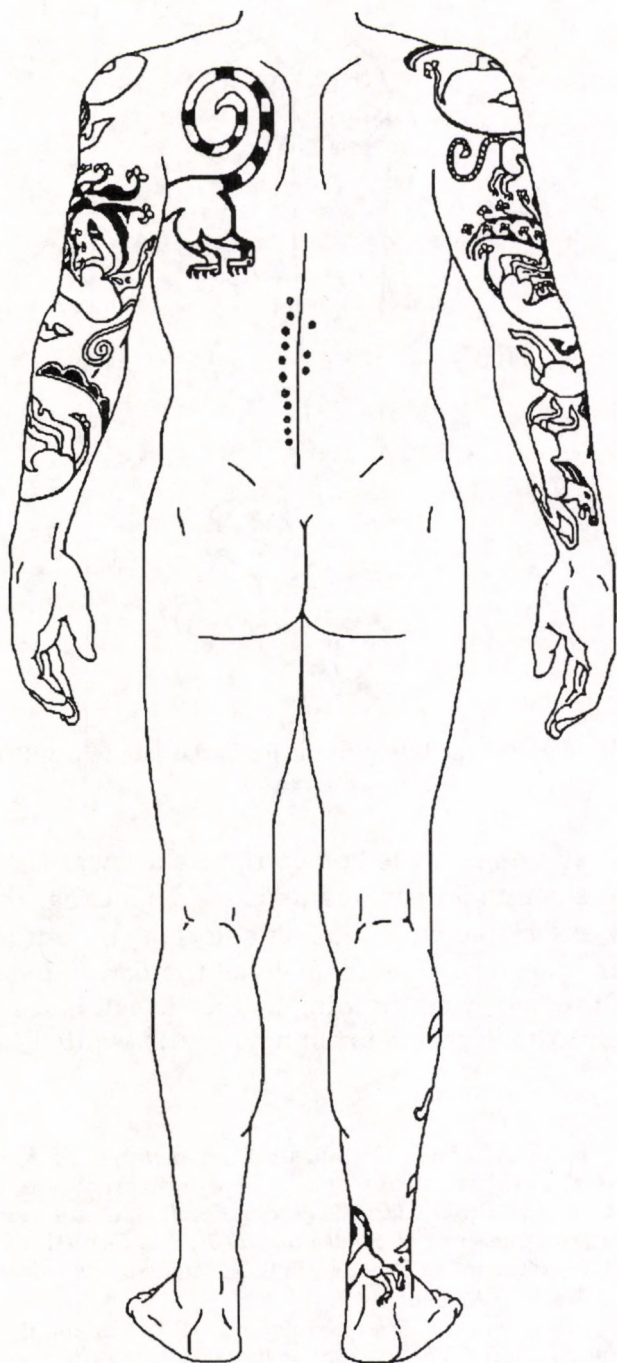


Fig. 2. The tattooed chieftain of Pazyryk II; back view. (After Artamonov.)

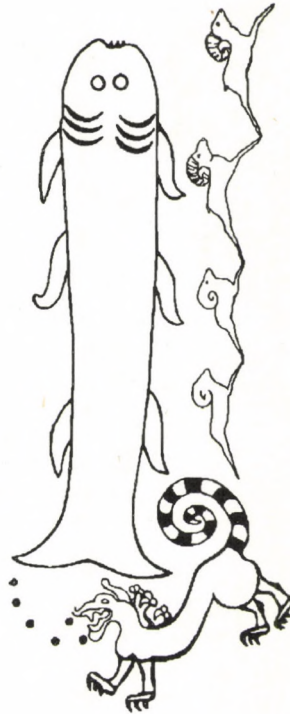


Fig. 3. The detail of the tattoo on the leg of the chieftain of Pazyryk II.
(Rudenko.)

The tattooed image of the fish on the right lower leg of the chief offers an illustration for the linguistic argument that the lower leg is somehow associated with the fish and that the calf of the leg in particular is conceived of as the belly of the fish full of eggs.⁵⁸ The meaning of the four rams running up on the calf is less obvious at first sight, but the Scythian artist apparently wanted to avoid tau-

Thrake, *RE*, VI. A (1936), 393; Kazarow, G., *Beiträge zur Kulturgeschichte der Thraker*, Sarajevo, 1916. For the prehistoric practice of tattooing, see Menghin, O., *Die Denkmäler. Jüngere Steinzeit und Bronzezeit in Europa und einigen angrenzenden Gebieten bis um 1000 v. Chr.* (Handb. d. Arch. II. 1950), 56, 64; tattooing in Greece: Pfuhl, E. *Meisterwerke griechischer Zeichnung und Malerei*, München, 1924.

58. Sadovszky, Otto von, "The Reconstruction of IE *pisko and the Extension of its Semantic Sphere." *The Journal of Indo-European Studies*, Vol. 1, No. 1 (1973); Sadovszky, Otto von, "Siberia's Frozen Mummy and the Genesis of California Indian Culture", *The Californians* (San Francisco) 3, 6 (1985).

tology by not depicting fish roe in this position. Small animals in connection with muscle, however (calf, mouse [Latin: *musculus*], lizard [Latin: *lacerta*]), fit the semantic sphere of rams in this position. PCeltic **molto* 'ram' belongs to the same root as French *mollet* 'calf of the leg' and English *milt* 'soft roe, spleen'. In this study we will be mostly concerned with the nature of the prop as it is associated with bones. To go further into the semantic associations concerning the muscle would distract us from our goal. Consequently, it is treated only insofar as it is related to our problem.

3. The fish and the greave

The fish on the leg of Pazyryk man appears to be a greave. Fishskins were used for clothing from the earliest time and are still in use among the central Asiatic peoples.⁵⁹ Especially the sturgeon with its plated skin must have been used for this purpose as the analysis of the associations connected with it will demonstrate.

German *Hausen* (*Acipenser huso*), a species of sturgeon, is a very important source of caviar and isinglas (Middle Dutch *hūsenblas* = 'huso-bladder'), fish glue. Proto Germanic **hūsa* is from IE **(s)keu-s*⁶⁰ 'to cover'. Among the derivatives of this root we find the following items:

OHG	<i>hūso</i>	'Stör'
MHG	<i>hūse(n)</i>	'Stör'
MDu	<i>hūsen</i>	'Stör'
Norw. (dial)	<i>hūse</i>	'Fischkopf' Hirnschale (von Fischen)
ON	<i>hauss</i>	'Hirnschale'
	<i>hús</i>	'Haus'
	<i>húsi</i>	'Gehäuse, Futteral' ⁶¹

59. Levin, M. G. and L. P. Potapov (eds), *The Peoples of Siberia*, translation ed. by Stephen Dunn, Chicago and London: University of Chicago Press, 1964.

60. Pokorny, 953; Kluge, Friedrich, *Etymologisches Wörterbuch der deutschen Sprache*, 18. Auflage bearbeitet von Walther Mitzka, Berlin: De Gruyter, 1960, s.v. *Hausen*; also Kluge, *Grundr. d. germ. Phil.* 1, 2 (1901), 332; R. Henning, *Anz. f. dt. Altert.* 44, 4 (1925).

61. de Vries, s.v. 'hús'.

Go	<i>hūs</i>	'Haus'
ON, OHG	<i>hosa</i>	'hose, Bedeckung des Unterschenkels, Strumpf, Schaft am Schuch'
AS	<i>hose</i>	'Fruchthülse, Schrote'

The Germanic word was borrowed into Cornish as

hos 'greaves, "ocrea".'

As a parallel from Finno-Ugrian we refer to Hungarian *tok* 'sturgeon'. *Tok* translates into German: 'Stör, Gehäuse, Scheide, Schale, Kiel (also of feather), Futteral, Grieb's'.⁶² This indicates that the sturgeon was considered as a 'container fish'.

The Latin word for sturgeon *acipenser* with *aci-* 'sharp, pointed' (with a problematic second member)⁶³ belongs possibly to IE **ak-*, *ok-*.⁶⁴

Greek	ὄκρῖς	'Spitze, Bergspitze, Ecke, Kante'
OLatin	<i>ocris</i> <i>-ocris</i> (medi-)	'mons confragosus' 'mittel-mässig' (being in the center)
	<i>ocrea</i>	'Beinschiene'
Umbrian	<i>ocar</i> , ⁶⁵ <i>ukar</i>	'mons, Burgberg'
MIr	<i>och(a)ir</i>	'Ecke, Rand'
borrowed to Welsh	<i>ochr</i>	'Rand'

62. The Swedish word for greave is '*ben-fodral*' (*Futteral*, Hu. *tok*). The English word greaves is possibly related to grieves (cracklings) and meant originally the leftover of the skin (and bone) of fishes. Cf.

NHG	<i>Griebe</i>	'Reste von Fettwürfeln'
	<i>Grieb's</i>	'Kernhaus des Obstes'
LG	<i>greven</i>	'cracklings'
OF	<i>greves</i>	'greaves, shins'

63. Walde, A. and J. B. Hofmann, *Lateinisches etymologisches Wörterbuch*, Heidelberg: Carl Winter, 1938–1956, s.v.

64. Pokorny, 18, 21.

65. *ocar*, *ukar* is the sacred Fisian Mount of Iguvium; Poultney, James Wilson, *The Bronze Tables of Iguvium*, Baltimore: Am. Phil. Ass., 1959, 313; Lewis and Short, s.v. *ocrea*: "ocrem antiqui... montem confragosum vocabant" (to ὄκρῖς and cf. *acer*).

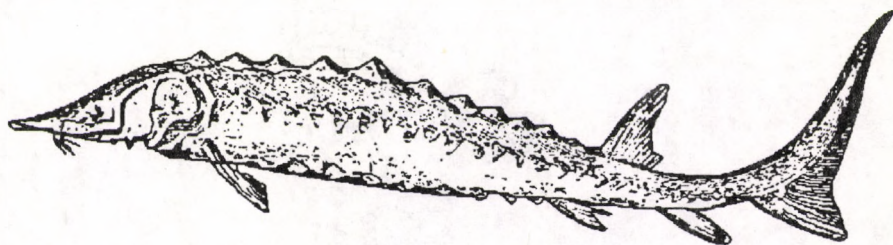


Fig. 4. The sturgeon.

We can set up an equation for the above mentioned data:

OHG	<i>hūso</i>	sturgeon	<i>aci-penser</i>	Latin
Cornish	<i>hos</i>	greaves	<i>ocrea</i> ⁶⁶	Latin

In Modern Irish we have the following equations:

<i>ochar</i>	'border, edge'	<i>ochar</i>	greaves
<i>eochair</i>	'border, edge'	<i>eochair</i>	female fish, spawner
<i>eochair</i>	'keystone, cornerstone'		

The notion of jagged (Greek ὄκρις, Latin *acris*) fits the sturgeon (Fig. 4) and the design of early greaves (Fig. 5).

The importance of defensive armour⁶⁷ lies in defending both the bones from breaking and the vital soft parts of the body from being injured. A greave defends the shinbone and then the muscles and the entire lower leg. The body armour protects the ribs and the vital parts. The soft belly is protected only by the armour.

Greek art provides us with an explicit argument, that the greave is related to fish. We are told in Homer's Iliad,⁶⁸ that after Hephaestus

66. In this problematic equation: *eochair* 'border-fish' and *ochar* 'border-greaves' *eochair* is assumed to be related to Russian *ikra* (Vasmer, M., *Russisches etymologisches Wörterbuch*, Heidelberg: Carl Winter, 1950–1958) and *ochar* to Latin *ocrea*.

67. Snodgrass, Anthony, *Early Greek Armour and Weapons from the End of the Bronze Age to 600 B. C.*, Edinburgh: University Press, 1964.

68. Iliad XIX. 1–3.

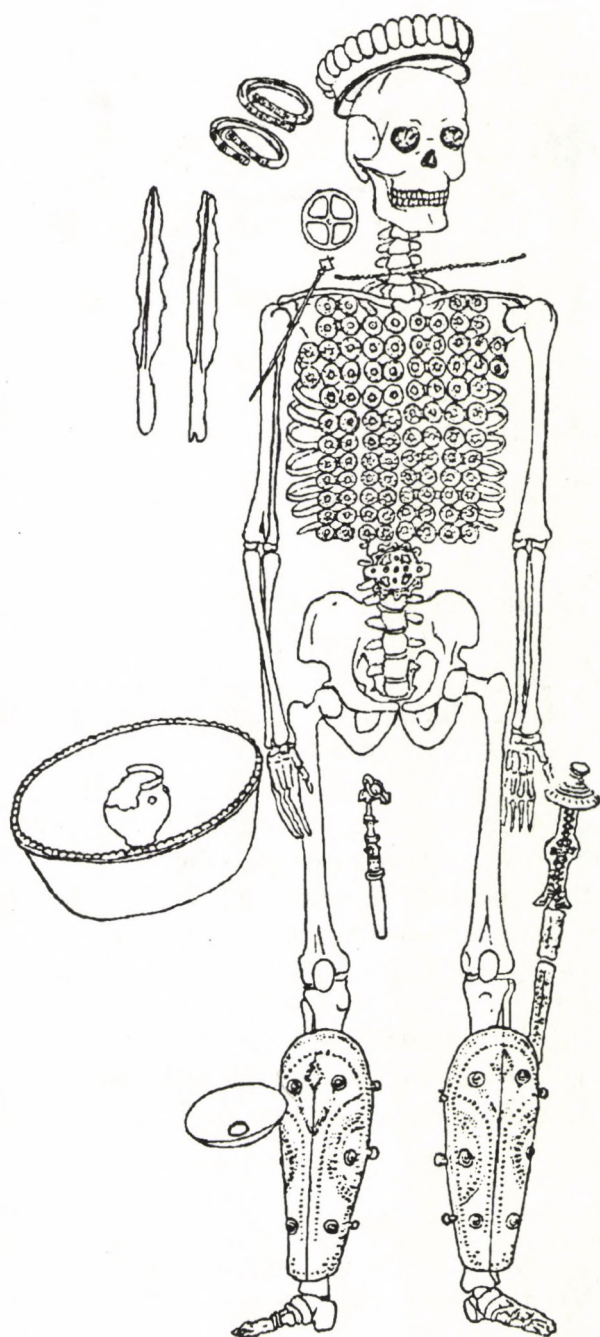


Fig. 5. The chief of Ilijak. (After Benac and Čović.)



Fig. 6. The Nereid with the helmet of Achilles.
(After Hydemann and Roscher.)

fashioned new armour, Thetis carried it to Achilles. Greek tradition assigned this task to the Nereids. This scene is depicted on a Greek amphora⁶⁹ in great detail (Figs 6–9). The four parts of the armour (helmet, thorax, two greaves) are carried by four Nereids. Each Nereid rides on a separate ‘water animal’. There is a remarkable similarity between the shape of the animal and the shape of the armour.

The first Nereid carries a crested helmet. The shape of the back ridges of the seaserpent on which the Nereid is riding is exactly the same as the ridges of the crest of the helmet. The linguistic and physical association between the back-ridge of an animal⁷⁰ and the crest is so strong that the artist could not resist making this association.

69. For description and literature cf. Roscher, W. H., *Ausführliches Lexicon der griechischen und römischen Mythologie*, Hildesheim: G. Olms, 1965 (Leipzig, 1909–1915): ‘Nereiden’.

70. *λόφος* ‘the crest of a helmet’, Il. III. 337, and ‘the neck of the horse’, Il. XXIII. 508 ‘any eminence or ridge’. Cunliffe, Richard John, *A Lexicon of the Homeric Dialect*, 1924 (Norman, 1963), s.v.

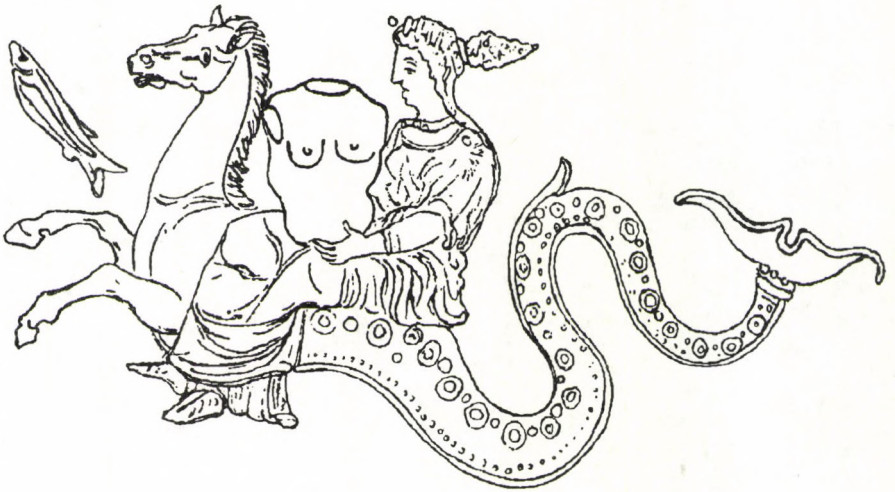


Fig. 7. The Nereid with the thorax of Achilles.
(After Hydemann and Roscher.)



Fig. 8. The Nereid with the greave of Achilles.
(After Hydemann and Roscher.)

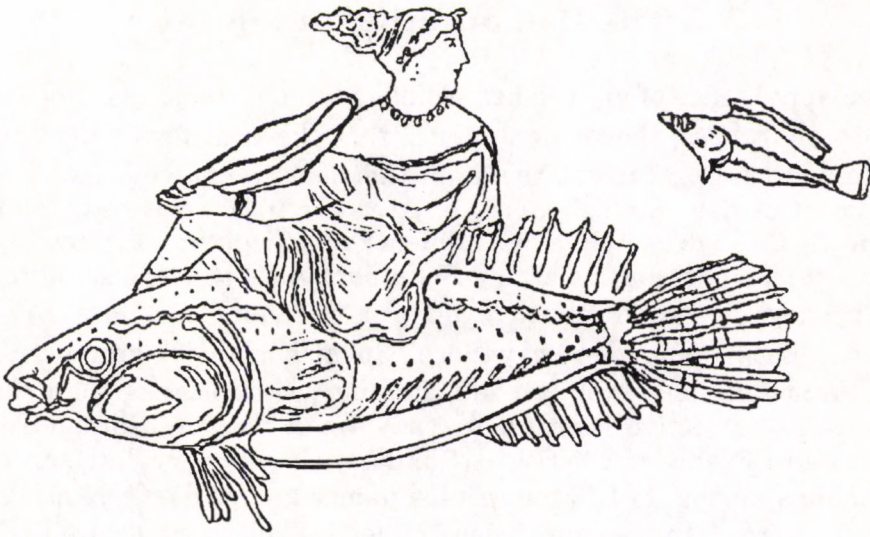


Fig. 9. The Nereid with the greave of Achilles.
(After Hydemann and Roscher.)

The second Nereid carries a thorax. The shape of the thorax is the same as the breast of the realistically depicted sea-horse (hippocampus).

The third Nereid carries one of the greaves. She is riding on a dolphin. The shape of the entire dolphin is practically identical with the shape of the greave.

The fourth Nereid carries the other greave. She is riding on a fish (perhaps tunny, the fish sacred to Poseidon). In this case the shape of the greave is only vaguely similar to the oblong shape of the fish. At this point the artist only indicates fish as fish, because he wants to point out the association between fish and greave and does not want to use the theme of the dolphin twice. We will see another close association between fish and greave in chapter III. 3, where we attempt to interpret the iconographic representation of Salmoneus.

The shinbone on the human body is a bone provided with a sharp edge. Ancient greaves often were provided with a similar edge. This characteristic of the shinbone, its opposition to the soft flesh, made the semantic associations with fish a close-knit system. In the next chapter we will treat the *shinbone-fish-end-point* semantic associations and the artistic realizations of these associations.

4. The fish and the end-point

The appearance of most fishes seems to be so intimately connected with sharpness, thorns and spines, that the transfer to edge and end-point is a recurrent theme in the semantic extensions of the concept of fish. English *butt*⁷¹ e. g. occurs in several fish names (mostly through Scandinavian influence): *hali-but*, *tur-bot*, OSw *torn-but* (**thorn-but*), also German *Stein-but*, *Aal-but*. The same root is utilized for the thornbush *haw-thorn*, German *Hage-butte* (*Hagedorn*), Latin *spīna alba*, 'hawthorn', Spanish *espino*,⁷² 'hawthorn'.

French *but* 'mark; object, end, aim, purpose, design, goal, a winning-post, objective' is originally⁷³ a Norman word and spread from Northern France to the South. Similarly Greek *στόχος* 'but, target, aim' has among its IE cognates fishnames and so does ON *broddr* 'point, arrow'. In the chart below (under 1–8) eight words are listed from several Indo-European languages. The *x* mark indicates that these words have cognates in the appropriate (a–f) semantic sphere. The explanation below documents the semantic extension on the Indo-European comparative level.

		a	b	c	d	e	f
		<i>dot</i>	<i>stick</i>	<i>ridge</i>	<i>leg</i>	<i>fish</i>	<i>aim</i>
1	Fr <i>but</i>		x	x		x	x
2	Gk <i>στόχος</i>	x	x	x		x	x
3	Lt <i>finis</i>	x	x	x	x		x
4	ON <i>broddr</i>	x	x	x	x	x	
5	G <i>Lachs</i>	x				x	x
6	E <i>perch</i>	x		x	x	x	
7	Gk <i>τέλος</i>	x	x	x	x		x
8	Lt <i>pungo</i>	x	x	x			x

71. Pokorny, 112; Kluge.

72. Meyer-Lübke, 8155.

73. Meyer-Lübke, 1424a.

1. IE *bhāu-, *bhu* with *-d* extension⁷⁴
 - 1.b. *stick*: Very numerous cognates. e. g. Latin *fūstis*⁷⁵ 'stick, staff, club, stem, stalk (*fusticulus*), *bhūd-*sti-s*.
 - 1.c. *ridge*: The notion of ridge or elevation appears in German *Butzen-scheibe*,⁷⁶ 'pane of glass with thick protuberance in the middle'.
 - 1.e. *fish*: English *hali-but* ('Hippoglossus'), Dutch *heil-bot*, German *Heil-butt* 'holy-but'. Received perhaps its name from being the precious fish for holy days.⁷⁷ To this set belong *Stein-butt*, *Aal-butt*, *tur-bot*.
 - 1.f. French *but* (cf. above), OE *buttuc* 'end, piece'.

2. IE *stegh nasalized: *stengh.⁷⁸
 - 2.a. *dot*: Russian⁷⁹ *stegátb*, *stegnút* 'to quilt, to sew'.
 - 2.b. *stick*: OHG *stanga*,⁸⁰ ON *stǫng* 'stick, pole'; OHG *stengil* 'stalk'.
 - 2.e. *fish*: Proto Germanic **stagg* (Sw *stagg*) 'stickleback' (fish), Lithuanian *stēge*, *stėkis*⁸¹ 'id.', Lettish *staga(i)s* 'a prickly fish', *stage* 'chub' (a fish similar to carp).
 - 2.c. *ridge*: Greek *στοχάς*⁸² 'an erection of stone or wood for fixing net poles [*στοῖχοι*] on uneven ground, which will in a row constitute a ridgelike projection', *στοχάς* adj. 'in a row'.
 - 2.f. *aim*: Greek *στόχος* 'aim, aiming, butt, target; guess, conjecture'.

3. IE *dhēig^w-, *dhōig^w-, *dhīg^w-.⁸³
 - 3.a. *dot*: OPr *deiktas* 'Stätte' originally 'dot, point, Stitch', Lithuanian *dáiktas*⁸⁴ 'Punkt, Sache' (cf. also *dygùs* 'pointed, thorny', *dyl̃s* 'thorn', *dygė* 'goosberries' [Stachelbeere]).

74. Pokorny, 112.

75. Persson, Per, *Beiträge zur indogermanischen Wortforschung*, Uppsala, 1910–1912 (2 Bde), 259. 2.

76. Kluge, s.v..

77. Kluge, s.v. 'Butte'.

78. Pokorny, 1014.

79. Vasmer, s.v.

80. de Vries, s.v. 'stǫng' cf. *stinga*

81. Fraenkel, Ernst, *Litauisches etymologisches Wörterbuch*, Heidelberg 1955 ff., s.v. 'stėkis'

82. Frisk, s.v. *στόχος*.

83. Pokorny, 243.

84. Fraenkel, s.v.

- 3.c. *ridge*: OE *dīc*⁸⁵ 'Erdwall, Abzugsgraben', LG *dīk*, ON *dīk(i)*, German *Deich* originally 'Ausstich'.
- 3.d. *leg*: Latin *fībula*⁸⁶ (**fīgibula*) 'Wadenbein'.
- 3.f. *aim*: Latin *finis* (*fīgō*, **fīg-snis*) ("festgestecktes") 'end, outmost, highest, aim, goal, border', the verbal form *fīniō* 'to set a limit', Olt *fīvo* (**dhīg^wo*), English *fix*.
4. IE **bhar-*, **bhor-*, **bhr-*⁸⁷
- 4.a. *dot*: Perhaps English *embroider*, Old French *broder* from Germanic **bruzdan* could be listed under this heading.
- 4.b. *stick*: Mir *barc* 'shaft of spear', Welsh *barch* 'spear', French *broche* 'spit' (English *brooch* 'fibula'),
- 4.c. *ridge*: Sanskrit *bhr̥ṣṭi*⁸⁸ 'Zacke, Spitze, Kante, Ecke'; ON *burst* 'Borste, Dachfirst' (ridge-pole), OHG *burst*, *borst* 'Borste', German *Bürste* 'brush'; Latin *fastīgium* (**bharsti-*) 'Spitze, Gipfel, Abdachung'.
- 4.d. *leg*: Russian *bérce*, *bérco* 'shinbone' dial. 'pole, post' (cf. Hungarian *bérc* 'mountain ridge').
- 4.e. *fish*: OE *bærs*⁸⁹, *bears* 'perch', MHG *bars*, *Barsch*, OHG *bersich* 'id.'.
5. IE **lak-*⁹⁰
- 5.a. *dot*: Lithuanian *lāšas* 'Tropfen', *lašėti* 'tröpfeln', Lettish *lāse* 'Sprenkel, Tupfen', *lāsains* 'punktiert, gesprenkelt'; Sanskrit *lākṣā* 'Lack' a secondary development from *lākṣa* 'red'.
- 5.e. *fish*: OHG *lahs*, OE *leax*, ON *lax* 'Lachs', OPr *lassasso*, Lithuanian *lašišà*, *lašis*, Lettish *lasis*, Russian *losoš* id.
- 5.f. *aim*: Sanskrit *lakṣa*⁹¹ 'mark, sign, token, a mark to aim at, target, butt, aim, object'.

85. de Vries, s.v. *diki*.

86. Walde—Hofmann, *fīg-snis* = Lithuanian *dýgsnis* 'Stich'.

87. Pokorny, 108.

88. Mayrhofer, following Vasmer I. III. connects it rather to Russian *boršč* 'Bärenklau' (**bhr̥stjo-*) 'wegen der spitzen Blätter', and to Latin *fa(r)stīgium* 'Spitze'.

89. Kluge, s.v. *Barsch*.

90. Pokorny, 653.

91. Monier-Williams, 891.

The problem of 'Lachs' in India preoccupied several scholars⁹² in the last decades. In 1951 Thieme proposed that Sanskrit *lākṣa* 'red' and *lakṣa* 'multitude', 100000, should be regarded as cognates to the Indo-European root **lakṣ-* 'salmon'. *Lākṣ-man*, *lakṣana* 'mark', *lakṣayati* 'kennzeichnen, markieren' according to the general opinion belong to the root *rakṣ* 'schützen, beobachten'. For us the most important word is *lakṣá*, 'Spieleinsatz' 'stake at gambling'. The notion of this word seems to imply the concept of goal and purpose, end-point. From this entire study it appears that the fish was conceived as the end-point. Semantically significant also is the fact that the cognates of Indo-European **lak-* imply the notion of drops and dots. Löwenthal⁹³ quotes the reflexes of Indo-European **perk-* in the meaning of 'spotted' and 'salmon'. The semantic transfer from the spotted trout to salmon occurred in Irish *orc* 'salmon'. Semantically the fish was also considered as the symbol of the goal. In India when one sets out on a journey and sees a fish, it is a sign of successful return.⁹⁴ The image of the fish also served as a moving target already in Mahābhārata. Pischel collected several data⁹⁵ which indicate that in the epic period it was a well-understood practice. In the iconographic representation of the Rāmāyaṇa the target is depicted as a fish. The practice must have been connected with the notion of *lakṣá* 'Spieleinsatz' and it expresses a traditional adherence to the semantic associations of this concept with fish. The separation⁹⁶ of *lakṣá* 'Spieleinsatz' from Indo-European **lakṣ-* 'salmon, trout', would imply the denial of semantic association presented in this study.

92. Thieme, Paul, *KZ*, 69 (1951), 209–216; also Thieme, Paul, *Die Heimat der indogermanischen Gemeinsprache*, Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse (Nr. 11), Wiesbaden, 1953; Mayrhofer, *Die Sprache*, 7 (1961), 182–184; or the physiological background of salmon in relation to the 'Lachsargument' see Krogmann, Willy, *KZ*, 76 (1960), 161–178.

93. Löwenthal, John, *KZ*, 52, 98.

94. Pischel, R., *Der Ursprung des christlichen Fischsymbols*, Sitzungsab. d. königl. preuss. Ak. d. Wiss., 1905, 524.

95. Pischel, 524–525.

96. Mayrhofer, *ZDMG*, 105 (1955), 175–183.

6. IE **perk-*, **prek-*.⁹⁷
- 6.a. *dot*: Sanskrit *prśni*⁹⁸ 'dotted, spotted, variegated, colourful'; Welsh *erch* 'dotted'; OHG *farawa* (**pork-wo*) 'Farbe'; Greek *περκνός* 'dunkel-fleckig, blauschwarz', *περκάξει* 'to become dark'.
- 6.c. *ridge*: Latin *porca*⁹⁹ 'Furche im Acker', OHG *furuh*, OE *furh* 'Furche'; Pokorny assumes for 3. **perk*, **prk* 'aufwühlen'; Furche, und die daneben aufgewühlte Erde'.
- 6.d. *leg*: Irish *orc* 'calf of the leg'.¹⁰⁰
- 6.e. *fish*: MIr *erc*¹⁰¹ 'salmon, trout' (cf. *orc* 'salmon, captain, chief of the tribe'); OHG *forhana* 'Forelle'; OE *forn(e)* (**prk-nā*), Swedish *färna* (**perk-nā*) 'Weissfisch'; Greek *πέρκη* (Latin *perca*) 'Barsch', Latin *porcus* 'ein Fisch mit Stachelflossen'; Ligurian *Porco-bera* ('trout-leading'); Thracian *πα-πραξ* 'a fish'.
7. IE **k^wel-*, **k^wol-*.¹⁰²
- 7.a. *dot*: Greek *κυκλίσκος*¹⁰³ (redupl.) 'a round spot'; cf. Spanish *rodado* (from Latin *rota* 'wheel') 'spotted, dappled'.
- 7.b. *stick*: Greek *πόλος* 'axis, pole of an axis'.
- 7.c. *ridge*: Perhaps Sanskrit *karṣū* 'furrow, trench, incision (made by ploughing)' if the word belongs to *cāрати*.¹⁰⁴ Olt *collus*,¹⁰⁵ *collum* 'Hals', 'Bergjoch', Go *hols* 'Hals'.
- 7.d. *leg*: Sanskrit *caritra-* 'Fuss, Bein'. PBSI **kelya* 'Knie'; OCSI *kolěno* 'Knie, Stamm, Geschlecht'.
- 7.f. *aim*: Greek *τέλος* 'Ende', *τελέω* 'enden', *τέλσον* (**τελσον*) 'Grenzfurche', *τελευτή* 'Vollendung, Beendigung, Ende'.

97. Pokorny, 820, 821 **perk* 2 and 3.

98. Wackernagel—Debrunner, 11. 2. 741 to Greek *περκνός*, *πρακνός*.

99. Walde—Hofmann, s.v. *porcus* 2.

100. Dinneen, s.v.

101. Lewis, H. and H. Pedersen, *A Concise Comparative Celtic Grammar*, Göttingen, 1961, 43.

102. Pokorny, 639.

103. Frisk, s.v. *κύκλος*.

104. Mayrhofer, s.v. *karṣūh*, *kārṣati*, *kṛṣṭh*, *kṛṣṭīh*.

105. Walde—Hofmann to *κύκλος*.

8. IE **peuk-*, **peug-*¹⁰⁶
- 8.a. *dot*: Latin *punctum*¹⁰⁷ (*pungō*) ‘dot’ (*ova punctīs distincta*), ‘spot on the dice’, Spanish *puntar* ‘to mark with dots’.
- 8.b. *stick*: Mir *ochtach* ‘spear, fir’, Greek *πεῦκος* ‘Spitze, Stachel’, Latin *pūgiō* ‘dagger’.
- 8.c. *ridge*: French *pinçon* ‘ridge-pole, central pole of anything on which the rafters are attached’. Italian *puntone* ‘Dachstuhlbalcken’. Portugese *ponta* ‘Spitze, Zacke’.
- 8.f. *aim*: Latin *punctum* in its numerous derivations (English *point*) indicating the sign of end (.); ‘to point, to aim at’.

The archaeological data indicate also that the fish are connected with the concept of point and edge.

1. The golden fish of Vettersfelde (Fig. 10)¹⁰⁸ is divided in the center by a spearhead. The various meaning of the Irish word *bradán*¹⁰⁹ (OIr *bratán*) help us to understand the meaning of this semantic association. *bradán* means ‘the salmon, or any large fish’ (*bradán feárna* ‘sturgeon’). The central ridge of metal in certain implements is also *bradán*. *bradán grafáin* e. g. indicates a little ridge extending through the middle of the upper or front side of a grubber (*grafán*), from the socket to near the edge. *bradán* is the ‘best part’, the ‘most substantial part of anything’, and ultimately also means the ‘life and soul’. In Scottish it means also the ‘ridgy tumor’ or ‘protuberance on the surface of the body’; and besides salmon also ‘halibut’.

To complete the analysis of this artifact one also should note the four small fish in the belly of the animal.¹¹⁰ These fish are the products of the big fish which they resemble in shape. At least the number four reminds us of the four rams on the calf (‘belly of the shinbone’) of the Pazyryk man. The rams on the Vettersfelde fish appear as extension of the tail-fin of the fish. The two dolphins represent an implicit statement. Greek *δελφίς* ‘dolphin’ is cognate with *δελφύς* ‘womb,

106. Pokorny, 828.

107. Walde—Hofmann, s.v. *pūgil*.

108. Furtwängler, A., *Der Goldfund von Vettersfelde*, 43, Winckelmanns Festprogramm, 1883.

109. Dinneen, s.v.

110. Phillips, fig. 42.

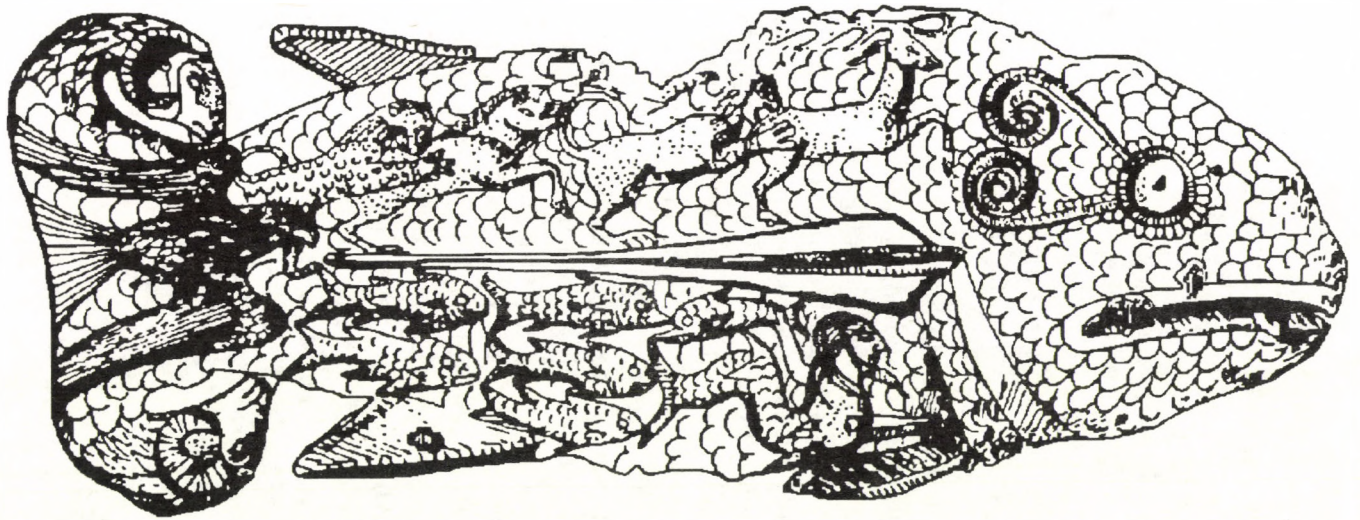


Fig. 10. The golden fish of Vetttersfelde. (After Jettmar.)

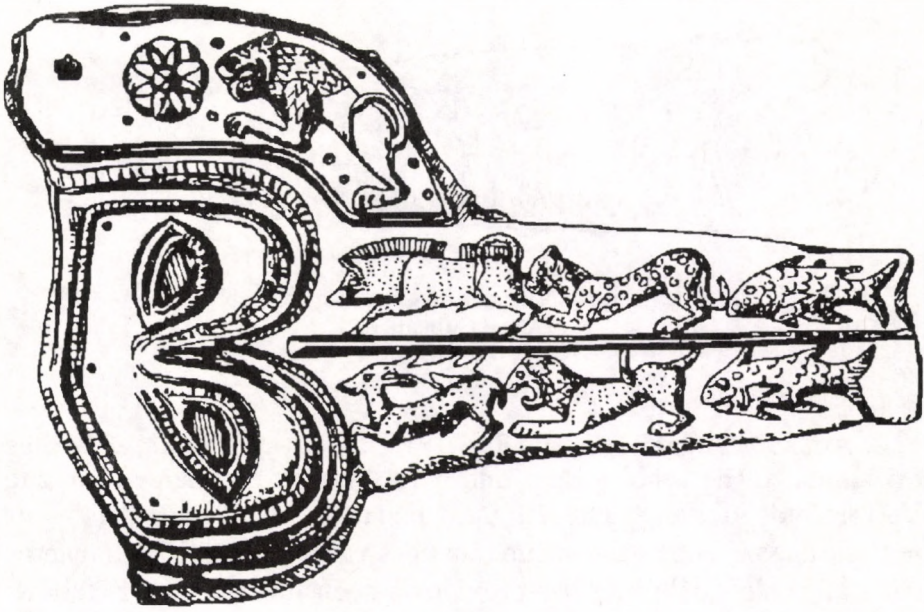


Fig. 11. The akinakes-sabbard of Vetersfelde. (After Jettmar.)

belly' and ultimately related to Sanskrit *gárbha* (IE **g^welbh-*).¹¹¹ The chase scene above the central ridge occurs on the other Vetersfelde item, the akinakes-sabbard, and also on an *Amorite dagger*, in both cases in combination with fish.

2. The akinakes-sabbard of Vetersfelde (Fig. 11) brandishes two fish on both sides of the central ridge. The fish is located toward the point of the akinakes, which implies that the fish is equated with the point. The chase scene is the same as on the golden fish of Vetersfelde, only here the animals are paired up on both sides of the central ridge.¹¹²

111. Frisk, s.v.; Pokorny, 473.

112. For another example of fish in connection with the point of akinakes, see Artamonov, M. I. (Photography Werner Forman), *Les trésors d'art des Scythes de Musée de l'Ermitage à Leningrad*, Gründ, 1968, 145. On this sabbard only the fishtail is indicated on the circular decoration at the tip.



Fig. 12. An Amorite dagger-sheath from Byblos.
(After Culican.)

3. Amorite dagger-sheath (Fig. 12)¹¹³ from the temple of Byblos brings us to the Middle East and it is 1200 years earlier than the Vetersfelde artifacts. The fish here also takes the place at the point of the dagger. The chase scene has here rather an idyllic character with animals (including the previously seen lion-deer pair) following each other and even a mounted man seems to be in charge of the strange array of animals.

4. A Luristan bronze axe-head (Fig. 13)¹¹⁴ presently in the Teheran Museum seems to indicate the same semantic association. The tail of the fish points toward the cutting tip of the edge of the axe. In this case, however, the fish takes over the function and position of leg of the man; thus we have again a Scythian equation between *leg* – *fish* – *edge*.

5. A Middle Minoan I clay sealing (Fig. 14)¹¹⁵ on the foundation of a pillar in Knossos contains all the above-mentioned items. Here we

113. Culican, William, "The First Merchant Venturers", In Piggott, *The Dawn of Civilization*, New York: McGraw, 1967, 135, 151.

114. Lloyd, Seton, *The Art of the Ancient Near East*, New York: Praeger, 1965, 239; Huot, Jean-Louis, *Persia I, From the Origins to the Achaemenids*, transl. by H. S. B. Harrison, *Archeologia Mundi* series, World, Cleveland and New York, 1965, plate 72; Ghirshman, Roman, *The Arts of Ancient Iran, From its Origins to the Time of Alexander the Great*, transl. by Stuart Gilbert and James Emmons, New York: Golden Press, 1964, fig. 82 (original size 7 7/8 inches); Plates 49–108 from the art of Luristan.

115. Davis, Simon, *The Decipherment of the Minoan Linear A and Pictographic Scripts*, Johannesburg, 1967, 227, fig. 201.



Fig. 13. A bronze axe-head from Luristan. (After Lloyd.)

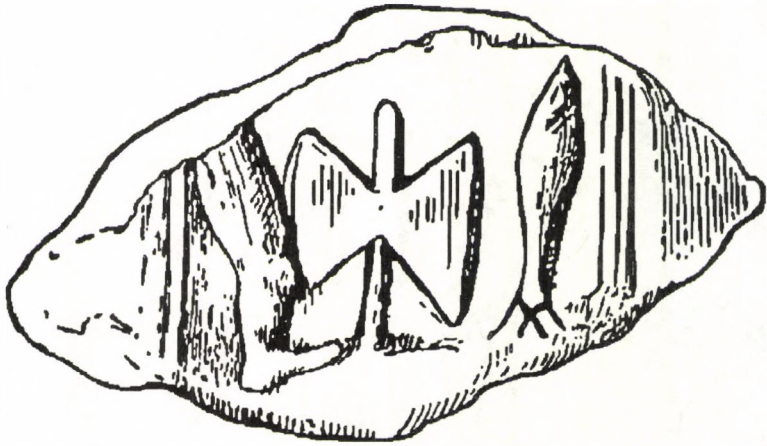


Fig. 14. A Middle-Minoan clay-sealing from Knossos. (After Davis.)

see a leg and a fish on both sides of the double-axe. It is significant that this seal-impression was found on the foundation of a pillar. As we will demonstrate in the following chapters, the leg and the fish are conceived of as props. This makes the position of the seal-impression even more appropriate. We find other seal-marks of this sort outside the pillar foundation. The execution of these marks is so stylized that one has to attribute them to a later development.

5. The fish and the backbone

In the course of this investigation it appeared that the fish is often connected with the concept of a sharp point. We also saw that especially the fishbone is often referred to as thorn. Latin gives a clear indication of this, when it refers to the fishbones as fish-thorns. *Spīna* means first of all 'thorn' (*spīna alba* = hawthorn, Hagebutte). Quintilian,¹¹⁶ however, refers to the fishbone as *spīna*: "*humus spinis*

116. Quintilian, *Institutiones Oratoriae* 8. 3. 66; cf. also Ovid: *Metamorphoses*, 8. 244.

cooperta piscium". The backbone of humans and of animals is referred to as *spīna* because of its thorny appearance. In Ovid¹¹⁷ it simply means the back. The English word *spine*, borrowed from Romance, is essentially the same word. The following Greek set demonstrates this natural association very clearly:

ῥᾶχος	'thorn hedge'
ῥάχισ	'spine, backbone'
ῥάχισ	'anything ridge, (e.g. hill)'

We also saw that the calf of the leg is often associated with belly, and that the shinbone is conceived of as the backbone of the lower leg. Linguistically Spanish *espinilla* completes the semantic transfer of the entire human body to the lower leg, when it refers to the shinbone as 'the little spine'.

If, however, the shinbone is connected with the fish one would expect that the back of the human body also is associated with the fish.

In the Indo-European cultural area – particularly among the Iranians – there is one remnant of an archeological find which indicates that the back of the entire human body was covered with an image of a fish.

The remnant of a big stele was found in the palace of Cyrus at Pasargadae (Fig. 15).¹¹⁸ Only the lower legs of a stepping figure are preserved. The left leg is covered with the tail portion of a fish. The size of the fish is too big to be equated with the lower leg alone. It must have covered the entire human being.

The figure clearly represents a god similar to the Babylonian god Oannes (Figs 16–19). He is the god entirely clad in fishskin. In a later Akkadian period he is equated with Ea, who is the god of the ocean in the cosmic triad: heaven, earth and ocean.¹¹⁹ Ea is the friend and protector of mankind, although inadvertently by his bad advice

117. Ovid: *Metamorphoses* 6. 380; 3. 66; 3. 672.

118. Huot, plate 69, facing p. 77.

119. Speiser, E. A. "Akkadian Myths and Epics," in Pritchard, James (ed.), *Ancient Near Eastern Texts Relating to the Old Testament*, Princeton: Princeton University Press, 1955, 60–119; Roscher, s.v. 'Oannes'.

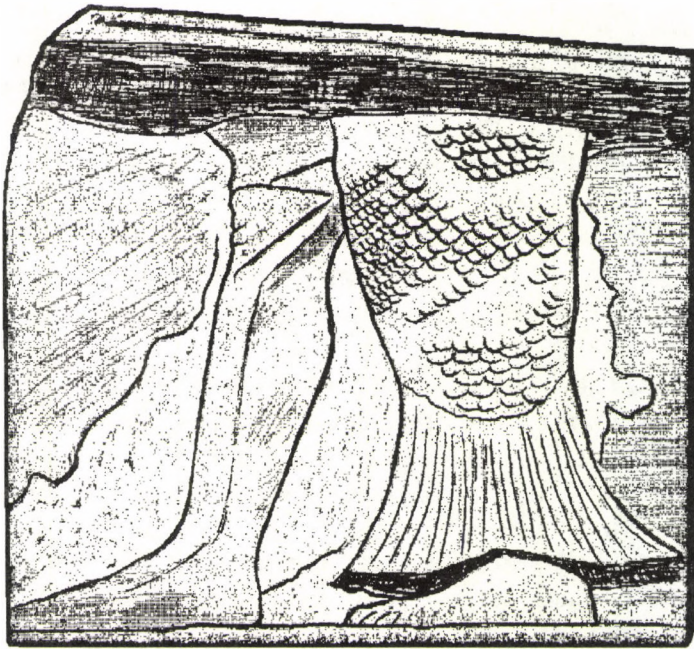


Fig. 15. The fish-god from Pasargadae. (After Huot.)

to Adapa, he causes the first man to lose his immortality. Berossos, priest of Bel-Merodach in Babylon at the time of Alexander the Great, relates¹²⁰ that at the beginning of the world a great number of people belonging to different tribes lived in Babylon. They had no organized community, but lived like animals. In the first year after the creation a figure appeared in the Persian Gulf. His name was Ὠάννης. He had the complete body of a fish, but under the head of the fish grew out a human head, and also feet grew out of the fins, and he had a human voice. His picture is preserved up to the present time. This creature mingled with men during the day, without eating; he transmitted his knowledge of writing symbols, sciences and several arts; he taught men how to live in cities and how to build a temple, introduced laws, surveyed the land, showed them how to sow and harvest the fruits and altogether everything which is ne-

120. *Χαλδαϊκὴ ἀρχαιολογία* (Fragment ed. by Fr. Lenormant, no 1. Alexander Polyhistor, *Fragm. Hist. Gr.* ed. Müller, 2. 496. fragments 1, 3.

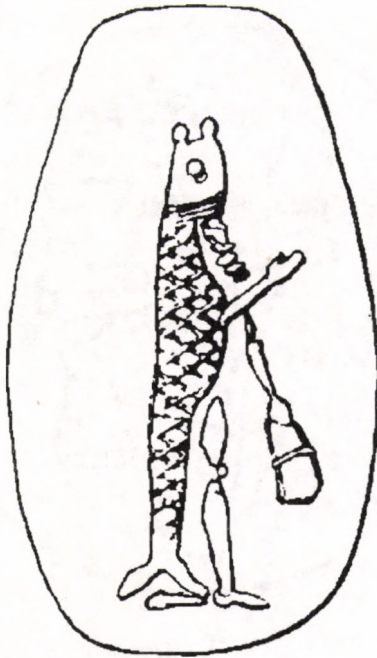


Fig. 16. Ea-Oannes.
(After Lajard and Roscher.)



Fig. 17. Ea-Oannes.
(After Lajard and Roscher.)



Fig. 18. Ea-Oannes.
(After Lajard and Roscher.)

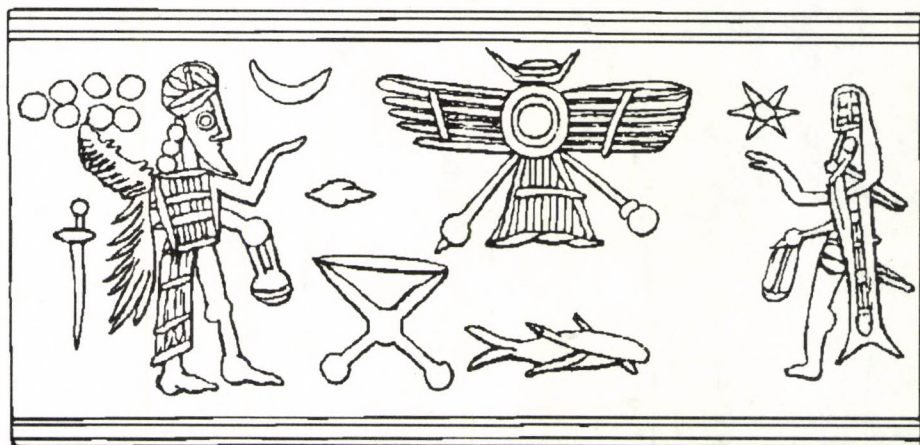


Fig. 19. Ea-Oannes. (After Lajard and Roscher.)

cessary to satisfy the daily needs. Since that time one could not find out anything more about him. With the sunset he submerged into the Persian Gulf. Later other deities also came from the Persian Gulf. Oannes wrote a book about *γενεά και πολιτεία* and presented the book to men. Eusebius writes in a passage, which he took from Alexander Polyhistor, about the fourth King of Babylon, Ammenon: "*bellua quaedam, cui nomen Idotioni, e Rubro mari emersit, forma ex homine et pisce mixta*".

The protective activity of Oannes and Ea reminds us of a passage from a short Egyptian incantation for a magical protection of a child:¹²¹

I have made his magical protection against thee [i.e. evil spirit] ... out of the roe of the abdu-fish, out of the jawbone of a meret-fish, and out of the backbone of the perch.

The protective skin of the fish on the backbone is the symbol of protection in general, as the greave on the leg is the protection of the lower leg.

Ea is the god of the lower world and two of his priests seem to be represented on the famous 'Hadesrelief' standing on the side of a man lying in bed surrounded by evil spirits with animal heads.

The worship of Ea may have been preserved until the ninth century A. D. His worship is possibly connected with the Iranian god Žūn,¹²² who in the Kingdom of Zābul had a magnificent temple. His symbol was the fish and in front of the temple stood a backbone of a fish through which a horseman could ride. The ruler of the Kingdom wore a crown with the golden head of a fish, reminiscent of the image of Ea. The temple was a famous and wealthy center of pilgrimage, and Chinese and Arabian writers often refer to it. For us the most interesting detail is that the priests went to the pilgrimage

121. Wilson, 328.

122. For a description for the entire problem connected with Žūn, see Marquart, Jos and Johan J. M. de Groot, "Das Reich Zābul und der Gott Žūn von 6–9 Jahrhundert", In Weil, Gotthold (ed.), *Festschrift Eduard Sachau zum siebenzigsten Geburtstage*, Berlin, 1915. Marquart and de Groot, however, do not make the connection with the Old Iranian fish god.

with painted shinbones. Marquart quotes¹²³ an old poet of the Omaid period, Ḥumaid: "Der Ochse mit bemalten (farbigen) Schienbeinen schreitet damit einher, wie die Herbede, welche zum Dome des Žūn wallfahrteten". The association and significance of the "painted shinbone" in connection with the fishgod only becomes apparent from the semantic analysis of this entire study.

Similarly the Albanian¹²⁴ reference to the spine as *peskhu i kurrizit* (lit. 'the fish of the back') 'backbone, spine' becomes also clear. In this expression the equation between fish and backbone found an explicit linguistic documentation, spanning a period of several thousand years.

123. Marquart—de Groot, 283.

124. Mann, Stuart E., *An Historical Albanian—English Dictionary*, London: Longmans, Green and Co., 1948, s.v.

Chapter II

The semantic analysis of the central support

In the previous chapter we saw the semantic association between the fish and the shinbone, the fish and the end-point, and between the fish and the backbone. In this chapter we intend to show the further extension of these associations as much as they are connected with the notion of central support. Some of the associations will still be centering around the structure of the human body; others, however, will be extended into the area immediately concerning human subsistence: i.e. home, means of conveyance and the source of food.

In the description of the body, the Sanskrit law book of Manu (6. 76) uses the expression *asthi-sthūṇa* 'whose pillars are the bones', which shows that the bones of the human body were conceived of as props of the body. The most important support of the human body is the backbone. The transfer of the spine onto the leg is a logical one (cf. Spanish *espinilla* 'little spine' i.e. 'shinbone') since the trunk of the body cannot stand without the support of the leg. We find that words referring to the 'props' of the body are often transferred to other areas. Besides the obvious analogy of the stem of plants and trees, we have the transfer to the backbone of animals with their horizontal position, then to the ridge-pole of the house, the mountain ridges (cf. Bergrücken, Bergkamm), the structure of the boat (the keel vs. the ribs). The wheel and the structure of the honeycomb (cf. comb) are also described by similar terms.

Some of these associations imply only the notion of support, but as in the case of leg, boat and wheel, the notion of locomotion plays also an important role. To reconstruct the full set of semantic associations connected with the central support, all these semantic extension have to be taken into consideration.

1. The concept of the support and the ridgepole

The meanings of the Welsh word *kefn*¹²⁵ already present a summary of the above mentioned semantic extensions. *kefn* means 'back, ridge, stay, support'. Its Breton cognates¹²⁶ *kein* (to Brit. **cebno*¹²⁷ – MBr *queyn*, MW *cein* and *cefyn*, OCorn *chein*, MCorn *keyn*) mean 'back, keel, the front part of the leg (*devant de la jambe*)'. *mell-kein* means the 'spinal column' (*mell* 'ball, articulation, suture'). Similar associations are found in German *Wirbelsäule* and in Estonian *lüli-sammas* (lit. 'bone-pillar') and in English 'spinal column'. In these and similar expressions we are confronted with a complex interplay of terms relating to man and terms relating to his environment. In most cases the starting point cannot yet be indicated. One would expect anthropocentric metaphors to be the primary ones, in the case of the central support; however, it is difficult to decide the direction of the flow of associations. It is possible that in the course of time an exact 'mapping' of these directions can be achieved within the same linguistic groups and on a wider comparative level. Since a relatively precise formulation was achieved in phonetics, one would expect that structural semantic analysis would yield similarly precise results.

The semantic association between the shinbone and (tubular) stalk is an eminent example of the above-mentioned problem.

Welsh *coes* 'leg' means also 'stalk and handle', *coesgyn* 'lower leg'. Hungarian *lábszár* lit. is 'leg-stalk'. In Hungarian the association is even reversed; the wheat (*búza*) stand on 'human leg': *lábon áll a búza*. Latin *tibia* 'shinbone' came to mean only 'stalk', in French *tige*.¹²⁸ Latin *coxa* 'hip', from which the above-mentioned Welsh *coes*

125. Evans—Thomas.

126. Hemon.

127. Jackson, Kenneth Hurlstone, *A Historical Phonology of Breton*, Dublin: The Dublin Institute for Advanced Studies, 1967, 160.

128. Meyer-Lübke, 8727; Wartburg, Walter von, *Französisches etymologisches Wörterbuch, Eine Darstellung des galloromanischen Sprachschatzes*, Bonn: F. Kopp, 1928–1969, s.v.

was borrowed,¹²⁹ developed in Lotharingian to mean 'branch'.¹³⁰ OIr *lorc* 'stick'¹³¹ came to mean 'shinbone' in MIr (*lurga*) and it is related to OCorn *lorch* 'staff', Breton *lorc henn* 'Deichsel' and to OE *lorg* 'Stange, Spindel'. Similar associations are apparent in Germanic.¹³² MHG *schīe* 'Zaupfahl', OE *scīa* 'shinbone' and OHG *scīna* 'Schienbein, Nadel'. Pokorny also assumes as cognate forms OCSl *čěvnica* 'λύρα' ('fistula'), Ru *čěvjě* 'Griff, Handhabe, Schienbein', *čěvka* 'Spule, Röhre; Schienbein des Pferdes'. That the 'Rohr, Röhre – reed, pipe' is associated with the shinbone is apparent from the meanings of Sanskrit *vaṃśa*. *vaṃśa* presents a sort of résumé of the above indicated semantic associations. Its original meaning is 'bamboo cane'. According to the lexicographers it is also 'sugar cane'.¹³³ Later it came to mean 'ridgepole' and 'the rafters of the roof', 'a pipe', 'any tubular bone', 'the central ridge of a sword', 'the line of descent', 'race', 'family' and 'stock'. The tubular nature of the shinbone is expressed by Latin *tibia*¹³⁴ 'shinbone' ('leg, pipe, flute'), and *tībīcen* 'fluteplayer; a kind of pillar, support or prop'. Ovid writes¹³⁵ "*urbem colimus tenui tibicine fultum*". Arnobius Afer, a third century Christian writer, refers to Atlas as *tībīcen* 'supporting the heaven'. And *tībīcino*, *-āre* means 'to prop up, to support anything'. PRO **canna*¹³⁶ means 'Schilf, Ried, Rohr'. Spanish *cana* means the 'Knochenmark'.¹³⁷ In Sicilian and Abruzzian *canna* means 'shinbone'. Modern Greek borrowed the word *kanne* 'Bein vom Knie abwärts'.

Beside the reed, the stalk of several other plants is tubular. The most prominent, however, among these plants is the cabbage. The white color of its stalk, when dry, makes it a likely candidate for an

129. Zauner, 457, Pokorny, 611.

130. Zauner: "Bemerkenswert ist die lotharingische form *čīx*; *cæx*, das man erwarten würde findet sich in der Bedeutung 'Ast', *čīx* ist dem Einflusse des schriftsprachlichen *cuisse* zuzuschreiben."

131. Pokorny, 691.

132. Pokorny, 920.

133. Monier-Williams, 910; Mayrhofer, s.v. (Waigali *wāš*, Waḥi *was* 'roof-beam').

134. Lewis—Short, s.v.

135. Ovid, *Fasti* 4. 695.

136. Meyer-Lübke, 1597: "Das Wort bezeichnet in Rom, Norditalien und Südfrankreich mehrfach die Kehle z. T. mit erklärenden Zusätzen wie nordit. *canna della gola*, log. *canna su gutturu*."

137. Zauner, 350.

association with the shinbone. Latin *caulis* (also *colus*)¹³⁸ means 'stem, stalk', 'cabbage stalk', *κατ' ἐξοχήν*, 'a cabbage, the stem or bony part of an ox's tail, a quill of the feather' (German: '*Kiel der Federn*'). The Indo-European root to which *caulis* belongs is **kaul-*¹³⁹ 'hollow stalk'. Its derivatives are often connected with bone. Greek *καυλός* 'stalk, shaft, quill of a feather', OPr *caulan* 'bone, leg' and *caules* 'thorn', Lithuanian *káulas* 'bone, stone of a fruit', Lettish *kaūls* 'id.' and 'stalk'. The zero grade form appears in Sanskrit *kulyam*¹⁴⁰ 'bone', *kulyā* 'small river, channel for irrigation' (cf. pipe); also in ON *holr*, OHG, OE *hol* 'hollow', Goth *ushulōn* 'to hollow out'. De Vries¹⁴¹ also connects Mīr *cūal* 'Holzbundel' and *cuaille* 'Pfahl', and makes a reference to the above *kulyam* 'Knochen'. Modern Irish *cualach*¹⁴² which is connected by de Vries, means 'faggots' a 'heap of faggots' and *cuail* 'a faggot, a pile, a bundle'. *cuail cnamh* (to Greek *κνήμη* 'shinbone') means 'a heap of bones, skeleton'; *cuaille* (originally *cuailne*, singular of *cual* [*cuail*]) 'a stake, pole, post, baton, club, strand of cord'. The English form *stock* and German *Stamm* in relation to lineage (cf. line, rope, cord, as in spinal cord) indicate the natural link of these semantic associations.

Bone-pipes and reed-pipes were common in ancient times. The Sanskrit word *naḍá*¹⁴³ (or *naḷá*) means first of all '*Arundo Tibialis*', *naḍaka* 'hollow bone' and *naḷaka* 'any long bone'. In Sindhī¹⁴⁴ *naṛī* means a 'long tube, the bone of leg or arm'; Panjābī *nalī* 'hollow reed, shinbone, hooka tube'; Nepāli *nali-hār* 'shinbone'; Bengali *nali* 'bone of arm or shin'; Oṛiyā *naḷi* 'slender tube, shinbone'; Hindi *nala* 'hollow reed, windpipe, shinbone'. We have already seen the association with windpipe (note the English reference to windpipe as 'pipe') in the Romance derivatives of Latin *canna*.

138. Lewis—Short, s.v.

139. Pokorny, 537; Walde, I. 188—189; Fraenkel, I, 230.

140. *kulyam* 'bone' is only lexical. The attested meaning is only 'receptacle for bones' (MBh. Hariv.). *Kulyā* is already R̥gvedic and its connection with *kūla* appears possible from the above indicated semantic parallels. Cf. Mayrhofer, s.v. '*kulyam*', *kulyā*.

141. de Vries, 248.

142. Dinneen, s.v.

143. For the etymology of *naḍá* etc. cf. Mayrhofer.

144. Cf. footnote 143.

Among the Finno-Ugrians there is an association between the reed and the backbone. Estonian *roog* means 'reed' and 'pipe' (Finnish *ruoko* 'cane, reed'¹⁴⁵), *selg-roog* means the 'backbone' and *kala-roog* 'fish-bone'.

All these semantic associations indicate that the hollow bone of the shinbone was associated with the hollow stems of reed and cabbage stalk. If we transfer the concept of shinbone to the concept of the ridgepole we expect to find some kind of an equation between reed-shinbone-roof. Greek provides us with this equation. *κάλαμος*¹⁴⁶ means 'reed, used for thatching or wattling'¹⁴⁷ (Hdt. 5. 101), 'reed-pipe, flute', also 'splint (to correct broken bones)', 'roof of reeds'; *ὁ κάλαμος τοῦ σκέλους* 'the shinbone'. The verb *καλαμῶω* means 'to bind a fractured bone with a splint of reed'; in passive usage: 'to grow into stalk'. Etymologically the Greek word is connected with German *Halm*.¹⁴⁸ ON *hjalrn-róða*¹⁴⁹ means 'pole' and *hjalrn* "Gestell zum aufbewahren des Heus". The OPr cognate is *salme* 'straw', Russian is *solóma*. All these words are reconstructed as Indo-European **kólamo* or *kolamā*.¹⁵⁰ The Latin cognate *culmus* yields in Portuguese *colmo* 'Strohdach'.¹⁵¹ Latin *columen*, *culmen* and *columna* belong to an entirely different root (IE **kel-*).¹⁵² According to Pokorny¹⁵³ "Beziehung zu *kel-* etwa 'dünnere Schaft, Pfeil, steifer Halm' ist erwägenswert". Under **kel* he adduces Sanskrit *śalá* 'Stock, Stachel', *śalyá* 'Pfeilspitze, Dorn', and *śarā* 'Rohr, Pfeil'. To the same root belong *śalākā* 'stick, chip, splinter, splint' (cf. Greek *κάλαμος*), and *śalka* 'a chip, shaving, piece, bit, portion',¹⁵⁴ 'fishscale' in Manu's Law Book and in the Mahābhārata.

From the investigation of these semantic parallels it appears that these associations often operate down to the smallest detail. The

145. Alanne, V. S., *Finnish-English Dictionary*, Porvoo, Helsinki, 1962, s.v.

146. Liddell-Scott, s.v.

147. Herodotus writes "the houses in Sardis were constructed of reeds, reed-thatch being used even on the few houses which were built of brick." (From the translation of Aubrey de Sélincourt.)

148. Frisk, s.v., Kluge, s.v.

149. de Vries, s.v.

150. Pokorny, 612.

151. Meyer-Lübke, 2378.

152. Pokorny, 552.

153. Pokorny, 612.

154. Monier-Williams, 1059.

materials utilized for covering the roof were originally reed and straw or similar hollow stem stalks. The English word *thatch* is related to German 'Dach' and Latin *tectō* 'to cover' and refers first of all to 'Strohdach'. Further, the English word *scale* (as in *fish-scale*) is related to Gothic *skalja* 'Ziegel' (tile from Latin *tegula*).

The image of the fish in connection with the upper covering is appropriate not only because the backbone suggests the ridgepole and the sidebones or ribs the rafters, but also because the covering-pattern of the thatch, shingles or tiles is that of the pattern suggested by the scales of the fish.

The spine, shinbone, ridgepole, the keel of the boat and even the ridge of a mountain can be represented by a simple graphic sign, which can be viewed from different directions. There is a stem with smaller side-lines connected in successive intervals (Fig. 20).

2. The concept of the felly and the nave of the wheel

When one tries to establish a similarity between the basic design indicated in Fig. 20 and the wheel, at first sight one faces serious problems. We find, however, that since the wheel supports the wagon, as the shinbone and spine support the body, it is basically a prop. But in the shape indicated in Fig. 20 a wheel as a support is entirely useless as the means of conveyance. In order to move, this prop has to be round. This simple fact will give us the final solution. In this section we will demonstrate that ancient cultures had a predilection for associating the parts of the wheel with body parts.

The Romance languages have a widespread root for the leg P^{Ro} **camba*¹⁵⁵ from which we have Italian *gamba*, French *jambe*, Catalan *camba*, Logudorian *gambiolu* 'branch'. The antiquity of the root is apparent from Albanian *kambë* 'foot, leg'.¹⁵⁶ Its origin becomes apparent from the P^{Ro}¹⁵⁷ term for the felly of the wheel (Radfelge)

155. Meyer-Lübke, 1539.

156. Mann, s.v.

157. Meyer-Lübke, 1542.



Fig. 20. The basic design of a ridgepole.

**cambita*; Parman *gambol* 'felly', *gambli* 'Schlittendeichsel', Asturian and Leonian *camba* felly (*cambigo* 'Krummholz am Pfluge'). The root for 'leg' is connected by Meyer-Lübke to Greek *καμπή* 'Biegung' and it is reconstructed in Indo-European as **kam-p*.¹⁵⁸ The root for felly is Indo-European *(s)*kam-b*.¹⁵⁹ 'biegen, krümmen'. The PRO word for felly **cambita* is clearly of Celtic origin.¹⁶⁰ Irish *cam*¹⁶¹ means 'bent, curved, crooked', *cam-khos* 'bendy, crooked leg', Welsh *camen*¹⁶² 'crookedness' but also very significantly 'prop'. The word *cameg* means 'the felly of the wheel', Breton *camhet an rot*¹⁶³ 'felly of the wheel' and *kammed*¹⁶⁴ 'id.'. If the wheel is a support, it can be associated with leg. Consequently, its parts could also be referred to in terms of 'spine' and 'belly'. The subsequent discussion will demonstrate that there is sufficient evidence to reconstruct a transposition of the above items outlined among the peoples in the Eurasian area.

Estonian views the felly as the back or backbone of the wheel and refers to it as *rattaselg* 'back of the wheel'. Irish supports this evidence. The word *fead*¹⁶⁵ means first of all 'a whistle', *feadan* 'a tube, a pipe, reed, flute, spinal column, the marrow or pith of the alder', and *feadhan* means 'tribe, troop, teem, yoke, leadership, felly of the

158. Pokorny, 525.

159. Pokorny, 918.

160. Meyer-Lübke, 1542.

161. Dinneen, s.v.

162. Evans-Thomas, s.v.

163. Pokorny, 918.

164. Hemon, s.v.

165. Dinneen, s.v.

wheel'. The function of the spine is to hold together the ribs, the function of the felly is to hold together the spokes.

We have already indicated the dual function of the wheel: holding up and rolling. The felly in itself had a dual function, it holds the spokes and also envelops the spokes. This dual function is very similar to the concept of the fish as it appears on the leg of the Pazyryk man. It is connected with the shinbone but it is also a greave. The fish seems to play a similar role when it is associated with the ridgepole and the roof. We also saw that the fish was connected with the end-point. The English term 'rim of the wheel' already indicates that this position of the wheel is associated with the outer edge. To return to the dual function of the wheel i. e. supporting and enveloping the spokes: we find that Scottish Gaelic views the felly as an envelope. *cuairsgean* means 'wrapper, envelope' and 'felly of the wheel' (cf. Latin *volūmen* and *volvō*). According to this analysis e.g. English *felly* and German *Felge* could be derivatives of the basic Indo-European form **pel*-¹⁶⁶ 'verdecken, verhüllen', to which also Latin *pellis* 'skin' belongs. This equation is corroborated with other associations between 'skin' and the felly. Pokorny assumes that Indo-European **(s)ken(-d)-* 'abspalten', 'abgespaltene Haut, Schuppe, Rinde' is "Erweiterung von **sek-* 'schneiden'"¹⁶⁷ and ultimately related to **skei*-¹⁶⁸ 'schneiden, trennen, scheiden'. To the first one belongs English *skin*, loanword from Skandinavian, and to the second English *shin*. We have here an equation between the shinbone, curved. The associations between leg, felly and fish in Celtic and Romance can be represented in the following schema:

PRo	<i>*cam-ba</i>	'leg'
PRo	<i>*cam-bita</i>	'felly'
Welsh	<i>*cam-og</i>	'felly'
Welsh	<i>*cam-og</i>	'salmon' (-male-)

We have seen that the function of the felly is very similar to that of the spine and the ridgepole. The shape of the felly is determined

166. Pokorny, 803; Kluge's suggestion, that *Felge* is related to IE **k^wel-* (to which English *wheel*) is formally unacceptable.

167. Pokorny, 929, 919, 895.

168. Pokorny, 919.

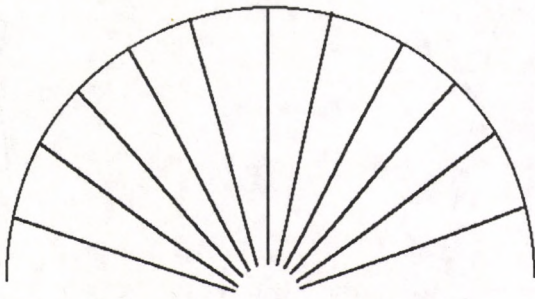


Fig. 21. The basic desing of a felly.

by its function, namely 'rolling'. This is the reason why the prop is bent in the manner indicated in Fig. 21.

The small 'offshoots' which radiate from the stem are converging into the center of the wheel. The center is referred to in English as *nave*, in German *Nabe*, in Sanskrit *nābhi*. All these words are associated with navel. In the following section we will see how widespread it is to refer to the center of the wheel by terms connected with the abdominal region. Greave and the outer edge of the wheel appears in the German

Schien-bein	'shinbone'
Bein-schiene	'greave'
Rad-schiene	'rim of the wheel'

To the Indo-European root **(s)kend*¹⁶⁹ belong OIr *ceinn* 'Schuppe, Schale' (*Schale* is related to English [*fish-*] *scale*), Breton *skant* coll. 'Schuppen'. According to the above suggestion of Pokorny, the English *shin* is ultimately related to OIr *ceinn* 'fishscale', and to the German form *Rad-schiene* 'rim of the wheel'.

Celtic provides us with the most convincing argument that the felly of the wheel is associated with fish. We have already mentioned the Welsh word *cameg* for the 'felly of the wheel'. The alternant form *camog*¹⁷⁰ means the same: 'felly of the wheel'. This word *camog*, how-

169. Pokorny, 929.

170. Evans—Thomas, s.v.

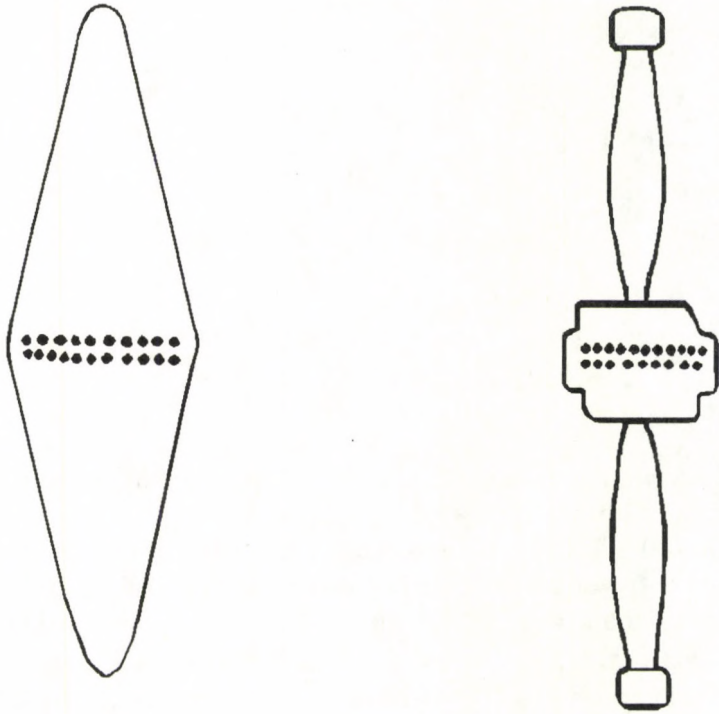


Fig. 22. The side view of an ancient and modern wheel.

ever, also means 'male salmon'. The rough scaly pattern of the outer surface is indicated by the Irish form *camog*¹⁷¹ 'wave' (cf. English 'rough sea').

We have seen in chapter I that the shinbone and fish referred to the sharp point. Subsequently we demonstrated that the felly of the wheel is associated with both concepts. We have seen also that the calf of the leg in opposition to the shinbone is often referred to as 'belly'. In the reconstructed structure of these semantic associations we find that the center of the wheel is referred to with similar terms. The side view of the original¹⁷² and modern wheels makes this easily

171. Dinneen, s.v.

172. Piggott, Stuart, *Ancient Europe*, Chicago: Aldine Publishing Co., 1965, 142 and passim.; Wheeler, Sir Mortimer, *Civilisation of the Indus Valley and Beyond*, New York: McGraw-Hill, 1966, figs 56, 62.

understandable (Fig. 22). The basic design indicates the pointed thin part toward the felly and the obtuse portion toward the nave. We have seen that the felly is often considered to be the spine of the wheel. Consequently the nave of the wheel should be called the belly of the wheel. This is one of the reasons why the nave is referred to as navel, that is, the nave received its name from something in the abdominal region. The equations are as follows:

shinbone	calf
spine	belly
felly	nave

Sanskrit *piṇḍa*.¹⁷³ means 'lump, clod, piece, calf of the leg', *piṇḍika* 'any fleshy swelling, especially the calf of the leg'; 'nave of the wheel' (Lex.), *piṇḍi* 'nave of the wheel' (Lex.), *piṇḍī* 'ball, lump', 'nave of the wheel' (Lex.); *piṇḍī* $-\sqrt{kr}$ means 'to make into a lump or ball, to press together, to join, to unite, to concentrate'. The meaning 'concentrate' is indeed appropriate in connection with the 'center' of the wheel. Turner¹⁷⁴ assumes *pēnda*, *pēntha*, *pēṇḍa*, *punḍa*, *puḍa*, etc. as variations of the same root: *piṇḍa*. The root *punḍa* appears in Waigalī as *pūṣ* meaning 'calf of the leg' and 'spleen'. The soft roe which we related to the calf of the leg is in English *milt*, which in turn means also 'spleen' in archaic English (German: *Milz*). Here again in Waigalī we see a reference to the abdominal region. Linguistic connection between the navel and the belly is also quite common. Lithuanian¹⁷⁵ e.g. has *bámba* for 'navel', *baĩbalas* 'Dickbauch, Fettwanst'; Lettish *baĩba* 'Kugel, Ball, Schlägel'; Swedish (dial.) *bamb* 'Wanst'; Norwegian (dial.) *bembel* 'Nabel'. Similar meaning association is apparent in OHG *amban(a)*, OHG, OE *ambon* 'abdomen, fetter Unterleib in der Gegend des Nabels, Schmerbauch, Wanst der Tiere'. Irish¹⁷⁶ has *mol* for the nave of the wheel. Its original meaning appears from the additional glosses: 'heap, huge mass, top, extremity or protuberant part of anything, axis, nave, pole of the

173. Monier-Williams, 625., cf. above Chapter I. 1.

174. Turner, 8377.

175. Fraenkel, I. 33.

176. Dinneen, s.v.

earth'; the genitive form of *mol* is *muil* which occurs in *muil a orcan ar a luirgnibh* 'the protuberances of his calves on his shins'. The word *molach* means both 'lumpy' and 'having a nave'. Irish *mol* is related¹⁷⁷ to Breton *mell* which we saw above.¹⁷⁸ *mell-kein* means 'backbone' (*kein* 'back, quill of the feather, front part of leg'). The opposition between the soft part of the body and the hard bones appears in Greek *μυελός*¹⁷⁹ 'marrow, brain' *μυελός ραχίτης* 'spinal cord'; 'fat, inmost part' (*πρός ἄκρον μυελός φυγῆς*) and generally: 'soft, marrow-like meat'. The word is etymologically connected¹⁸⁰ to *μυών* 'Muskelballen, Muskelknoten', and ultimately to *μῦς*, and reconstructed in Indo-European as **mūs*.¹⁸¹ English *muscle* is related to the same root. Frisk notes¹⁸² that: "Sowohl das weiche Mark wie die weichen Muskeln bilden einen Gegensatz zu harten Knochen".

Hungarian calls the nave of the wheel *kerék-agy*, lit. 'wheel-brain'. From the above analysis this seems to be an appropriate semantic transfer. The skull constitutes the outside covering, the brain the inside. This seems to explain why the PRo form **medulla*¹⁸³ 'marrow, brain' which in Portuguese *moela* came to mean the 'Fleischmagen der Vogel', shows such a great 'Einmischung von *medius*' 'middle'. In Catalan¹⁸⁴ *moll del os* 'the soft of the bone' completely eliminated *medulla*. *moll*, however, reminds us of French *mollet* 'calf of the leg' and even Celtic *mol* 'nave of the wheel'. This means that ultimately we could equate the two different Indo-European roots **mel-* 'to break up, make soft' and **mel-* 'to protrude'. We already saw that notions associated with the central portion of the wheel are somewhat related to marrow and brain; and that Hungarian

177. Pokorny, 721.

178. cf. Chapter I. 1.

179. Liddell—Scott, s.v.

180. Frisk, s.v.

181. Pokorny, 752.

182. Frisk, s.v. 'μυών'.

183. Meyer-Lübke, 5463; Pokorny, 970, suggests *medullae* perhaps from **merulla* (to IE **smeru-* 'schmer, Fett') 'durch Einfluss von *'medius*'. This suggestion, however, has to be rejected, because the *-d* is original. Cf. Walde—Hofmann, s.v.

184. Zauner, 350.

refers to the nave as the 'brain of the wheel'. According to the Edda,¹⁸⁵ however, the clouds were created from the brain of the primeval giant Ymir:

From Ymir'flesh
the earth was made
and from his blood the seas
craggs from his bones
trees from his hair
and from his skull the sky.
From his eyebrows
the blessed gods
made Miðgarð for the sons of men,
and from his brains
were created
all storm – threatening clouds.

Further "They also took his skull and made the sky from it and set it over the earth with its four sides" and "They took his brains too and flung them up into the air and made from them clouds."... The simile is appropriate: the firmament is compared to the hard skull, the content to the soft and loose accumulation (cf. 'cumulus' clouds) of the clouds.

This simile implicitly also establishes the semantic relationship between the two Indo-European roots:

*(*enebh-*), *(*embh-*), *nōbh-*¹⁸⁶ etc. 'Nabel, Nabe'.

*(*enebh-*), *(*embh-*), *nebh-*¹⁸⁷ etc. 'Nebel, Wolke', etc.

The Sanskrit forms, derived from the two roots, indicate also the semantic transfer. Sanskrit *nabh*¹⁸⁸ means 'to burst, to be torn or

185. Snorri, Sturluson, *The Prose Edda*, complete edition by Finnur Jónsson, 1926. We use the translation of Jean I. Young, *The Prose Edda, Tales from Norse Mythology*, Berkeley and Los Angeles: Univ. of California Press, 1966, 36.

186. Pokorny, 314.

187. Pokorny, 315.

188. Monier-Williams, 527; RV 9. 39. 1; 10. 133. 1; Grassmann, Hermann, *Wörterbuch zum Rig-Veda*, Wiesbaden: Harrassowitz, 1964, s.v.

rent asunder'; *nábhas*¹⁸⁹ 'mist, cloud, vapor'; 'sky or atmosphere' (MBh.) *nābh* occurs only once in the Ṛgveda (9. 74. 6), and its meaning is given by Grassmann¹⁹⁰ as 'Öffnung oder Quell (von *nabh*)'. Geldner translates it with 'Zitze (?)' (sic). Renou,¹⁹¹ however, connects the word with 'bursting' and translates '*cátasras nābhābhas nīhitās*' as '*Quatre jaillissements cachés*'. In short: both Sanskrit roots *nabh-* and *nābh-* imply the notion of bursting. The word *nabh-* includes¹⁹² also the meaning of bursting asunder (of the clouds) or only clouds. Both roots *nabh-* and *nābh-* are associated with the nave of the wheel. *nábhyam* (RV) and *nābhi* (RV) both mean the nave of the wheel, and *nābhi* also means 'navel, center, origin, relationship'. The notion of bursting asunder fits the two aspects of the nave of the wheel. First: it is a hole, opening or fissure. Second: from this portion of the wheel, the spokes radiate in every direction. When we analyse the function of the nave we find that it is a connecting joint of the wheel and it is the focus of dispersion. This dual function of the nave is already sufficient reason to associate it with the loose accumulation of clouds. Through this analysis the relationship between Greek *χνούς* 'foam of the ocean, dust, down of the feather' and *χνόη* (ion. *χνόη*) 'nave of the wheel'¹⁹³ becomes understandable.

The Ṛgvedic poet describing the division of Puruṣa follows a similar association:¹⁹⁴

From his navel the atmosphere was (made),
from his head came forth the sky.

In the creation-myth of the Edda there was a relation between the skull and the brain. In the Sanskrit creation-myth it is between the head and the atmosphere. *Dyauḥ* is the firmament and *antarikṣa* the place below it, where the wind and the clouds move about. The

189. RV; AV; ŚBr.

190. Grassmann, 722.

191. Renou, Louis, *Études védiques et Pāṇinéennes*, Paris, 1955–1967, vol. 9, 24.

192. For literature on relation between *nabh-* 'bursting' and *nabh-* 'cloud' cf. Mayrhofer, s.v.

193. Hofmann, Johann Baptist, *Etymologisches Wörterbuch des Griechischen*, München: R. Oldenbourg Verlag, 1966, 420, to root **ghnēu-* 'zerreiben'.

194. RV 10. 90. 14.

word *antarikṣa* is often translated as the ‘intermediate space’, ‘the middle space’, which *antar* ‘between’ (i.e., heaven and earth) implies. From the above analysis it appears that since in Indo-European the inside content of the outer covering generally is referred to by similar terms, a poetic simile, when it is well formulated, will ‘move’ in a limited area of semantic associations.

3. The concept of the honeycomb

To the general concept of the center ridge the concept of the honeycomb is closely allied (cf. German: *Kamm – Bergkamm – Bergrücken*). Already the analysis of the origin of the English word *comb* (as in *honey-comb*) will remind us of the basic graph established in Fig. 20. The English word *comb* and German *Kamm* is from the Indo-European root **gembh-*, *gombh-*.¹⁹⁵ From this root is derived Sanskrit *jambha* ‘tooth, jaw’, Greek *γόμφος* ‘Zahn, Pflock, Nagel’, Lithuanian *žam̃bas* ‘scharfe Kante’, *žam̃bis* ‘Holzpfflug’; OHG *kamb* ‘Kamm’; ON *kambr* ‘Kamm, gezackter Rand, gezackter Bergrücken, Bergkamm’; Tocharian A *kam*, B *keme* ‘Zahn’, and through a semantic development ‘tooth – offshoots in the arrangement similar to the row of teeth’, also Lithuanian *žem̃bu*, *žembėti* ‘keimen’, OCSl *pro-zębati* ‘id.’, and Latin *gemma* (**gembhnā*) ‘Auge oder Knospe am Weinstock oder Baumen, Edelstein’, OHG *champ* ‘racemus’, German *Kamm* (gezähntes Gerät). The important realia are: tooth, mountain ridge, comb of a rooster, honeycomb, to sprout. All these items can be visualized according to our basic design.

There is, however, another item which is often associated with honeycomb, namely: the spleen. French *rate* ‘spleen’ is originally from Middle Dutch *rate* ‘honeycomb’.¹⁹⁶ The connection between the two items is obvious. Not only has the spleen the color of the honeycomb, but it is also characterized by a design suggestive of the hexa-

195. Pokorny, 369.

196. Wartburg, vol. 16, 673–674. “Die milz sieht schwammigporös aus; ihre hülle verlängert sich ins innere des organs in gestalt von regelmässigen wänden. Das spricht für Diez, der das wort aus mndl. rate ‘wabe’ herleiten will.” (From Germanic also Italian *milza*.)

gonal patterns of the honeycomb. Turkish *dalak*¹⁹⁷ accordingly means both honeycomb and spleen, Hungarian also makes the same association: *lép* 'honeycomb, spleen'. We already noted above¹⁹⁸ that one of the Kafir languages has the same word for spleen and the calf of the leg. English *milt* means both soft roe and spleen. That means that the honeycomb, which we want to establish as a central ridge, means also the offshoots of this ridge. The function of the central ridge is only the function of a support. The real interest lies in the cells which contain the honey and which form a likeness to a comb. The basic design is still the same. Because of its rib-like cells, which are supported by the back-wall or center prop, and because of its orderly structure, the honeycomb is often associated with weaving. German *Wabe*¹⁹⁹ 'honeycomb' expresses this association. *Wabe* is related to German *Gewebe* 'texture' and to English *weave*. Greek *συν-ύφεια*²⁰⁰ 'honeycomb' is related to *ύφος* 'web' and *ύφή* 'id'. A similar association is expressed by Lettish²⁰¹ *šūni* 'honeycomb' and *šūt* 'to sew'.

For us the most significant fact is, however, that the notion of weaving is associated with spawning. The orderly arrangement of the 'eggs' during spawning makes this association natural. The most common word for honeycomb in Greek is *κηρίον*. The word *κηριάξω*, however, means 'to spawn; of the purple-fish, whose spawn is like a honeycomb'.²⁰² According to these semantic parallels a connection between Finnish *kutea* 'to spawn' and *kutoa* 'to weave' also becomes feasible.

The manyfold expressions connected with Latin *crātis*²⁰³ are enlightening. The meanings are: 'Flechtwerk aus Ästen oder Ruten, Hürde, Rost', and *crātis spīnae* 'Gefüge des Rückgrats', *crātis pectoris* 'Brustkorb', *crātis favōrum* 'Honigwaben', and *crātiō* 'to harrow'.

197. Hony, H. C. and Fahir Iz, *A Turkish-English Dictionary*, 2nd ed., Oxford: Clarendon Press, 1957, s.v.

198. Page 51.

199. Kluge, s.v.

200. Liddell-Scott, s.v.

201. Walde-Hofmann, s.v. '*favus*'.

202. Liddell-Scott, s.v.

203. Walde-Hofmann, s.v.

Another example can be adduced from Cornish:²⁰⁴ *crȳb* means a 'comb, crest, ridge or reef of rocks', *crȳb an chȳ* 'ridge of the roof', and *crȳben mēl* 'honeycomb'.

The semantic sphere of the Irish root *cīr-*,²⁰⁵ MÍr *cīr* 'comb' (**kēs-rā*,²⁰⁶ to Indo-European **kes-* 'kratzen, kammern') indicates similar associations. *cīrin* means 'a little comb, crest, ridge, ornament on the top of the house, flesh of jaw'. A variation of the root is *cior* 'comb, crest of a helmet, row, tuft, mane of a beast, the teeth, the spine, the ridge of the house, honeycomb'.

It is significant that a derivative of this root: *cioran* means 'sturgeon'. The five series of ridges on the skin of the sturgeon makes it a likely candidate for these semantic associations (Fig. 4). Consequently it is not surprising if we find an explicit equation between comb and sturgeon in the Scottish dialect: *cirean* means 'crest, comb, sturgeon'. The gloss of Latin²⁰⁷ *mirmillo* (*murmillo*, *myrmillo*) (Greek *μυρμύλος*) strengthens our argument that the crest, comb is related to fish. It refers to "a kind of gladiator that used to fight with a Thracian (*Threx*), or a net fighter (*retiarius*), and wore a Gallic helmet, with the image of a fish for a crest (whence the name)".²⁰⁸

As we saw, the basic design for these various metaphorical transfers is a line crossed with smaller lines in regular intervals. These characteristics of the honeycomb appear in further associations in Hungarian, where *lép* means not only honeycomb and spleen, but also 'he strides, steps', and in derivatives *lép-cső* 'stairs'. The same semantic association recurs in Sanskrit *madhu-krama*²⁰⁹ 'bee-hive' (Lex.), 'honeycomb', lit. 'honey step'. *krama* means already in AV "a step, regular progress, order, series and succession".²¹⁰ The verb *krámati* (RV) means 'to step' and in Vedic also 'to climb (as on a

204. Nance, R. Morton (ed.), *A Cornish-English Dictionary*, Morazion: Worden Printers, 1955; and *An English-Cornish Dictionary*, Morazion: Worden Printers, 1952, s.v.

205. Dinneen, s.v.

206. Pokorny, 585.

207. Lewis-Short, s.v.

208. Lewis-Short adds further that: "*retiario pugnanti adversus mirmillonem cantatur: Not te peto, pisces peto, quid me fugis, Galle?*"

209. Monier-Williams, 779.

210. Monier-Williams, 319.

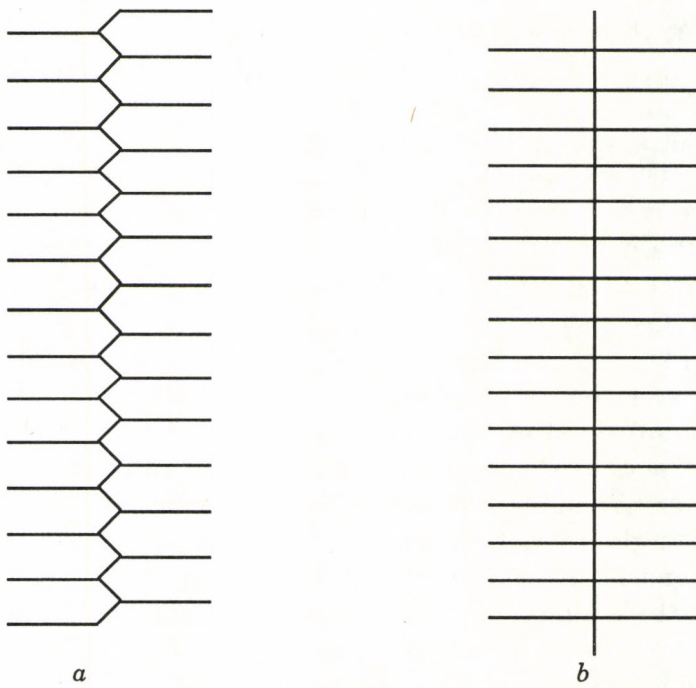


Fig. 23. The basic design of a honeycomb's side view. (a - exact design; b - schematic design)



Fig. 24. The world-tree of the Dolgans. (After Wasiljev and Harva.)

tree's branch)'.²¹¹ In literary Hungarian the scale is called *lép-ték* (cf. *scāla*²¹² 'Treppe, Leiter, Gerüst', also 'escalate' etc.). The best examples for the same association come from P^Ro *regula*²¹³ 'Stab, Schiene, Regel, Weberkamm'. In Calabrian *reyya* means 'a span' (that is 'a step with the fingers') and in Logudorian *reya* means 'honeycomb'. The term honeycomb implies the meaning of comb and teeth of the comb; it can be applied to the rung of a ladder and even to the spokes of the wheel. The schematic cross-section of the honeycomb (Fig. 23b) represents the shape of a ladder still in use in rural areas of Europe. It is basically a simple design of the spine of the human body. The design of this central support was adapted to represent important cult-objects, and this seems to be the reason why e.g. Dolgans, wishing to represent the world tree (that is the mainstay, the spine of the world) adopted the shape of a primitive ladder (Fig. 24).

The regular succession of ridges which we treated frequently during the course of this chapter seem to be emphasized by 14 (11+1+2) dots along the spine of the Pazyryk man. These dots recall Ausonius²¹⁴ description of the trout (?) "*purpureisque salar stellatus tergora guttis*". The transfer from the shinbone to the spine by the means of dots is in harmony with the argument presented in the last two chapters.

211. Pāṇini VII. 1. 40. Kāśikā Vṛtti.

212. Meyer-Lübke, 7637.

213. Meyer-Lübke, 7177.

214. Ausonius, Mosella 88. Quoted by Löwenthal, John, KZ, 52, 98.

Chapter III

The fish as the support of the earth

In the first chapter we treated the conceptual associations of fish in connection with the human body. In the second chapter we followed the extension of this 'anthropocentric' view to man's immediate environment. Our argumentation was mostly drawn from linguistic and archeological evidence and was based on the tacit understanding that language and art are closely allied cultural products of man. The most important cultural tenet of man, however, is myth. It remains to be shown that the above established associations are indeed reflected in the religious beliefs of certain cultures. In the case of Oannes-Ea, in chapter I. 4, we already saw the transfer of anthropocentric associations to the cosmic level. In Babylonia the fish-god Ea occupies the lowest level of the cosmic triad: heaven, earth, water. In the following chapter we will investigate the role of the fish and prop in several myths of Eurasia.

1. The fish as the support of the earth in Asia

Among many peoples in Central Asia the fish is the supporter of the earth.²¹⁵ The Buryats of Balagansk say that the fish swims in the ocean and supports the earth.²¹⁶ When the fish moves there is an earthquake. A piece of earth taken up during an earthquake can be

215. Harva, Uno, *Die Religiösen Vorstellungen der Altaischen Völker*, FF Communications No 125, Helsinki, 1938 (Finnish 1933), 28-30.

216. *Buryatskie skazki*, 128, quoted by Harva.

used to ease the pain of a woman in labor. Some others say that the fish lies on its side. When it gets tired of holding up the heavy earth, it changes its position. The Tatars of the Altai Mountain, at the original home of the Pazyryk man, relate that the earth is supported by three fishes. When their chief god Ulgen created the earth, he put it on the water. He put one fish in the center, two smaller ones on each side. The head of the fish in the middle points toward the north. Whenever it bends its head, there is a flood in the north. On its gills it has a rope tied which reaches to the sky, and the rope is tied to three posts. A helper of god regulates the movement of the head of the fish by tying or untying the rope from one or the other post. Afanasev mentions²¹⁷ a similar conception among the Russians. To come to the Finno-Ugrians, the Votyaks also speak of a fish which causes earthquakes. The Mordvins in the district of Tambor also know of the earth-supporting fish. This concept is even more widespread toward the east among the Asiatic peoples.

Batchelor²¹⁸ writes about the Ainus:

Like the Japanese, this people also appears to imagine that the world rests upon the back of a large fish, the Ainu name for which is moshiri ikkewe chep, i.e. 'the backbone fish of the world'. It is said that whenever this creature moves it causes the earth to quake, and it is likewise thought by some to be the direct cause of the ebb and flow of the tide.

In the following passage we learn that the fish is a trout.

Before God made the world there was nothing but swamp to be seen, in which, however, there dwelt a very large trout. This trout was indeed a mighty fish, for his body reached from one end of the swamp to the other. Now, when the Creator produced the earth He made this creature to become its foundation.

217. Afanasev, Aleksandr Nikolaevich, *Poeticheskaya vozzrenija slavyan na prirodu*, 3 vols., Moskva, 1965-1969, vol. II, 162, 164, 166.

218. Batchelor, John, *The Ainu and their Folk-Lore*, London, 1901, 52-55.

According to the Ainus the cosmic fish has two additional supports on its side. These 'side-props' are similar to the two additional fishes reported from the Altai Mountains. According to the Ainu myth:

So, again, when he shakes himself the consequence is an earthquake. When he moves gently the earthquake is small, but when he is angry and moves furiously it is great. As this is such a dangerous fish, the Creator has sent two deities to stand one on either side of him, to keep him quiet. These divine beings always keep one hand each on him, to hold him down and prevent any severe movements. Whether they eat or drink they must each keep one hand upon him without fail; they may never on any account take it off.

The Japanese also speak of an "earthquakefish".²¹⁹ This myth is found in many cultures of South-East Asia. According to the Siamese the foundation of the Zinnalo mountain (which is the center of the world) is a fish.²²⁰ The Batak of Sumatra know a dragon which supports the earth and causes earthquakes.²²¹ The Tangu at the north coast of New Guinea speak about a magical fish 'ramatzka' which causes earthquakes, flood and dissension among humans.²²² Eating the 'ramatzka' the woman's

son quickly develops into manhood. This occasions the curiosity and envy of the husband's brother and his family. Letting them in on the secret, the woman warns her relatives by marriage that they must not shoot the 'ramatzka' fish. But the warning goes unheeded; the 'ramatzka' is shot; the earth rumbles; and the sea rises up to

219. Lasch, "Die Ursache", *Archiv für Religionswissenschaft*, V. 253-254.

220. Andrian-Werburg, Ferdinand von, *Der höhenkultus asiatischer und europäischer Völker, Eine ethnologische Studie*, Wien: C. Konegen, 1891, 124.

221. Warneck, Johannes Gustav, *Die Religion der Batak, Ein paradigma für die animistischen religionen des indischen Archipels*, Göttingen: Vandenhoeck and Ruprecht, 1909, 30-31.

222. Burridge, Kenelm O. L., "Social Implication of Some Tangu Myths, Myth and Cosmos", In Middleton, John (ed.), *Reading in Mythology and Symbolism*, Garden City, N. Y.: The Natural History Press, 1967, 39.

divide brother from brother. Later, when the brothers get in touch with one another again, their relationship appears as a competitive one, and one of them emerges as much cleverer than the other.

In the Indian story of the flood²²³ the fish of Manu is essentially a support in the great distress caused by the flood. This fish will lead Manu to the central mountain of the world, Meru.

2. The fish and the myth of Loki

In the Germanic mythology we also find that the fish is the cause of earthquakes. Loki, the chief adversary of gods, during the final stage of his downfall changes himself into a fish. He is captured by the gods, tied to the rocks in a cave, and his movements shake the earth.

We are told by Snorri²²⁴ that after the killing of Baldur the gods decided to capture Loki. Loki ran away and

hid himself on a mountain. There he built himself a house with four doors so that he could see out of it in all directions. Often during the day, however, he changed himself into the shape of a salmon and hid in the place called the waterfall of Franang.²²⁵

Here follows the elaborate description of the fishing for Loki. He hides among the rocks and escapes the well weighted drag-net. Finally "Thor clutched at him and caught him, but he slipped through his hand until he had him fast by the tail, and it is for this reason that the salmon tapers towards the tail."²²⁶ Then Loki was "put into a cave". The "the Aesir took his (his son's, Narfi's) entrails and with them bound Loki over the edges of the three stones – one under his

223. ŚBr. I. 8. 1. Transl. by Eggeling, *SBE*, 12, 216 ff. cf. Winternitz, M., *History of Indian Literature*, Calcutta, 1927, 210.

224. Snorri.

225. Snorri, 84.

226. Snorri, 85.

shoulder, the second under his loins, the third under his kneejoints – and these bonds became iron.²²⁷ Then a poisonous snake was fastened over him so that the venom should drop on to his face.

His wife Sigyn, however, sits by him holding a basin under the poison drops. When the basin becomes full she goes away to empty it, but in the meantime the venom drips on to his face and then he shudders so violently that the whole earth shakes – you call that an earthquake. There he will lie in bonds until Ragnarök.²²⁸

The earth shakes, because when he moves he shakes the three rocks to which he is tied in the cave. These rocks, we learn from Snorri, were created from Ymir's bones.

From Ymir's flesh
the earth was made
and from his blood the seas,
craggs from his bones
trees from his hair
and from his skull the sky.²²⁹

We learn from another passage that the dwarfs were created from the 'bloody surf' and 'from the legs of Blain'. The translator notes: Ymir's bones? (sic).²³⁰ If, however, the crags are Ymir's bones, the dwarfs, having been created perhaps from Ymir's bones, should be living in the crags. The skaldic poet is very consistent in his metaphor. We are told that "the dwarfs had first emerged and came to life in Ymir's flesh... and they acquired human understanding and appearance of men, although they lived in the earth and in rocks."²³¹ Ymir's flesh is the earth, his bones the rocks and mountains. The linguistic evidence of the previous chapters finds a corroboration also in the more elaborate passage of the Edda where the creation of the world is described: The gods

227. Snorri, 85.

228. Snorri, 86.

229. Snorri, 36.

230. Snorri, 41.

231. Snorri, 41.

took Ymir... and made the world from him: from his blood the sea and lakes, from his flesh the earth, from his bones the mountains; rocks and pebbles they made from his teeth and jaws and those bones that were broken.²³²

As the bone supports the flesh so the crags in the cave support the earth. The movements of these crags will move the earth. If we wish to continue the metaphor of the skaldic poet, we have to say that the earth shakes because Loki in the shape of a salmon is tied to Ymir's bones and to the legs of Blain. This logical conclusion is in accord with the close connection between the fish and the support.

It was not our intention to go into the complexities of the figure of Loki.²³³ His activity, however, as the shaker of the earth is significant for our study. Dumézil²³⁴ and Olrik²³⁵ have found sociomythological parallels in the Caucasus. Up to the present day there are stories told about chained monsters which cause earthquakes. Turville-Petre holds that "The bound Loki must be related to the bound monsters of the Caucasus".²³⁶ As to the symbolism, it is noteworthy that we meet in the Caucasus a large number of stone steles.²³⁷

These steles cover also Armenia and are called in Armenian *Vishap's* (Fig. 25). The word means 'a huge fish, dragon, monster'. The steles most often represent a fish and their function has puzzled archeologists for a long time. The parallels among the Scythian Ossetes in the Caucasus and the bound fish which causes earthquakes in the Altai region, the home of the Pazyryk man, establishes a chain of long tradition among the Euro-Asiatic peoples.

The myth of the "Earthquake Fish" can be found even on the American side of the Pacific Ocean. According to the Marin Miwok Indian

232. Snorri, 35.

233. For this cf. Turville-Petre, E. O. G., *Myth and Religion of the North, The Religion of Ancient Scandinavia*, New York: Holt, Rinehart and Winston, 1964, chapter V.

234. Dumézil, G., *Loki*, Paris, 1948; also Dumézil, G., *Les dieux des Germains*, Paris, 1959, 102-103.

235. Olrik, A., "Myterne om Loke", in *Festskrift til H. F. Feilberg*, 1911.

236. Turville-Petre, 144.

237. Nersessian, Sirarpie Der, *The Armenians*, Norwich: Thames and Hudson, 1969, p. 14.



Fig. 25. A 'Vishap'. (After Marr and Smirnov.)

living a few miles from San Francisco, close to the ill fated San Andreas Fault a huge fish living in the Ocean causes earthquakes. They call it *helwa tului* "Western Fish". The comparative evidence points to *tur-ui* 'shaking animal'.²³⁸

An iconographic argument also can be adduced. The winged dragon (Fig. 26) of the reconstructed shield from the Sutton Hoo ship,²³⁹ presently in the British Museum, has three pairs of wings and tail of the similar design. This animal is very similar to the fish on the leg of the Pazyryk man. The words and concepts for wing and fin are often interchanged, and the boot (Fig. 27) found in Pazyryk also brandishes two and a half pair of wings cut out of red felt. The third

238. Callaghan, Catherine A. and Zinny S. Bond, "Marin Miwok Dictionary." (MS) Ohio State University, 100.

239. Davidson, H. R. Ellis, *Scandinavian Mythology*, London: Paul Hamlyn, 1969, 59.



Fig. 26. The dragon of the shield from Sutton Hoo ship. (After Davidson.)

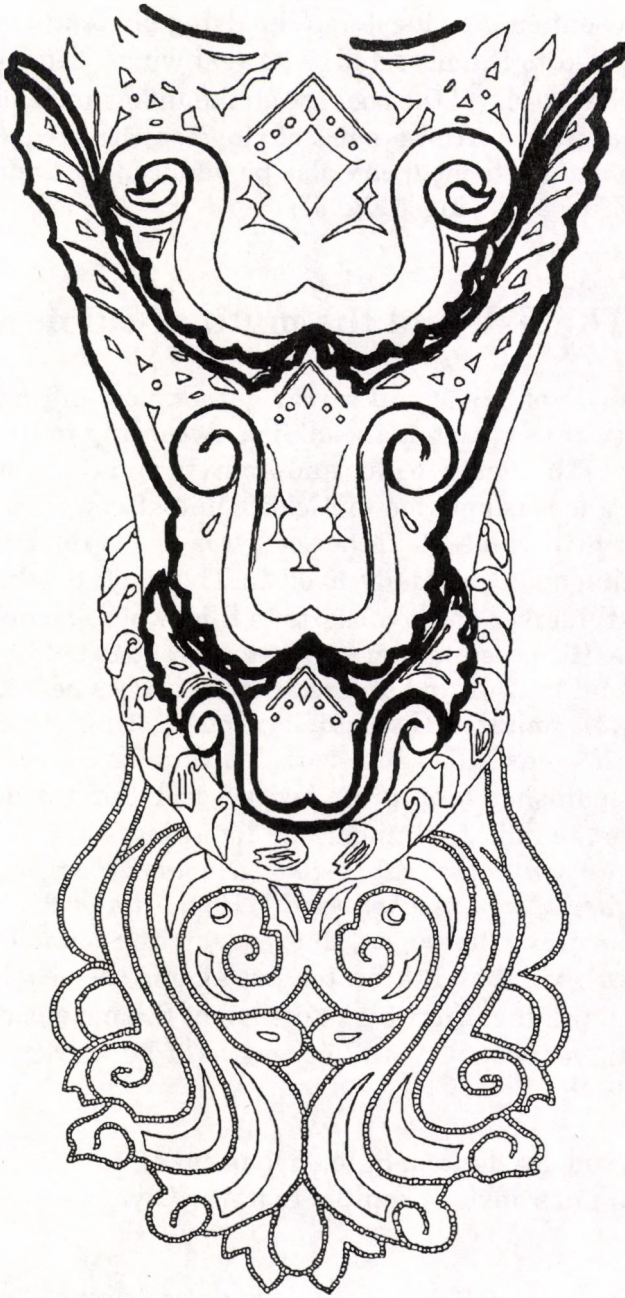


Fig. 27. The felt-boot from Pazyryk II.
(After Rudenko.)

wing is present only by its stem. The flying pin feathers were obviously attached to the boot and were real wings. Similar wings attached to the top rim of the boot are abundant on ancient vase paintings. The customary three pairs of rings on the greaves, to which the straps were attached, can also be adduced as evidence for the number of fins and wings (Fig. 5).

3. The fish and the myth of Salmoneus

From the myth of Salmoneus we can gather more information about the identity of the 'subterranean' fish. According to Greek mythology²⁴⁰ he was the son of Aeolus and Enarete and the brother of Sisyphus. First he was married to Alcidence and afterward to Sidero. By the former he became the father of Tyro, who is referred to as Salmonis. Salmoneus originally lived in Thessaly, but he emigrated with a vast number of his consorts to Elis, where he built the town of Salmone. His presumption was just as great as Loki's. He deemed himself equal to Zeus and ordered that sacrifices be offered to himself. He even imitated the thunder and lighting of Zeus, but the father of the gods killed him with his thunderbolt, destroyed his town, and punished him in the lower world. Servius describes the way he tried to imitate thunder and lightning.

"Fabricato ponte aereo super eum agitabat currus, in quem fuisset iaculatus facem, eum iubebat occidi". He built a bridge out of metal on which he drove the wagon, thus causing the sound of a thunder. He was sitting in it and threw torches among the people which signified the lightning. After his punishment Salmoneus did not seem to cease his activity.²⁴¹ Vergil speaks as if he carried it on in the underworld.²⁴²

vidi et crudeles dantem Salmonea poenas,
dum flammas Jovis et sonitus imitatur Olympi.

240. Cf. Grimal, Pierre, *Dictionnaire de la mythologie grecque et romaine*, Paris: Presses Universitaires de France, 1963, 414. Sources: Od. XI. 236; Diod. Sic. IV. 68. i; Hyg. Fab. 61; Verg. Aen. VI. 585; Serv. ad loc.; Strab. VII. 3. 31.

241. Roscher, IV. 291.

242. Aen. VI. 585.

Roscher and the RE²⁴³ assume that Salmoneus' activity represents an "Uralter Zauberbrauch des Gewitterbeschwörens". In a similar fashion during a period of drought a wagon was driven around in Thessaly, the homeland of Salmoneus. A similar custom is reported from Dorpat.²⁴⁴

Bei grosser Dürre stiegen dre Männer auf die Fichten eines alten heiligen Haines. Der eine trommelte dort oben mit einem Hammer auf einen Kessel oder eine kleine Tonne, um den Donner darzustellen; der zweite schlug zwei Feuerbrände an einander und liess die Funken sprühen (Blitz), und der dritte, 'der Regenschmager', sprengte mit einem Reisigquast aus einem Eimer Wasser nach allen Seiten. Bald darauf spendete der Himmel Regen in Fülle.

According to Weinreich²⁴⁵ Salmoneus was a pre-Greek god who opposed the Indo-European Zeus-worship, and became a *θεομάχος*. Nestle agrees with Weinreich and calls Salmoneus "die erste deutliche Gestalt dieses Typus".²⁴⁶ The widespread comparative evidence supports Weinreich's and Nestle's statements.

The promontory at the easternmost tip of Crete is called Salmonium or Salmone (today: Cape Salmon).²⁴⁷ We saw the close association between fish and the end-point (Chapter I. 3). The concept of mountain ridge is also closely associated with backbone and fish. Consequently the logical conclusion suggests itself, to equate Salmoneus with the Latin name for 'salmon', i.e. *salmo*, *salmōnis*. That the promontory is named after Salmoneus is clear from the fact that

243. RE IA 2, 1990.

244. Mannhardt, Wilhelm, *Wald- und Feldkunde*, 2 vols. Darmstadt: Wissenschaftliche Buchgesellschaft, 1963 (Berlin, 1905), vol. II, 342 footnote.

245. Weinreich, Menekrates, *Zeus und Salmoneus*, Tübinger Beiträge zur Alt. Wiss., 18, 1933, 86.

246. Nestle, W., "Legenden vom Tod der Gottesverächter", *Archiv für Religionswissenschaft*, 33, 1936, 248.

247. The etymological connection with 'shinbone - mountain peak' etc. appears in Sanskrit *agra-jāṅghā* 'shinbone'. Mayrhofer, 18, *āgram n.* 'Anfang', Lett *agrs* 'frühe', *agrums* 'die Frühe'; perhaps Latin *Agrippa* and Hitt. *hékur*, *hégur* 'Felsgipfel'. cf. Pokorny, 8-9.

the small islands which surround the promontory are called the Islands of Sidero. Sidero was the second wife of Salmoneus. Indo-European *s- regularly changes to spiritus asper in Greek. There are, however, dialectal variants where both spiritus asper and s- occur. The initial s- is in accord with Salmoneus' foreign character. His northern origin also suggests perhaps Thracian influence.

The iconographic evidence for the equation of Salmoneus with the fish comes from a fifty-century vase painting correctly identified²⁴⁸ as representing Salmoneus. The painting²⁴⁹ (Fig. 28) represents Salmoneus in his attempt to imitate Zeus. He has a sword in his left hand and a bolt of lightning in his right. He is accompanied by Sidero on his left and Iris on his right. His head is surrounded by a fillet from which olive branches are scattered all around. He is further wearing fillets on his waist and shoulder, on his left thigh, on his right calf, on his right upper arm, and seems to be bound by broken chains on the left upper arm. The fetters on his left ankle are still on, but the connecting link is free. We saw above the elaborate description of the bonds of Loki. The bonds of Salmoneus are very similar. The most important characteristic of this vase-painting, however, is the position of the greaves. The figure wears one greave on the right leg, the other one on the left arm which holds the sword; and the position of the greave makes his elbows completely stiff. A comparison with the tattoo marks of the Pazyryk man is close at hand. The markings on the right leg and on at least one arm make the similarity quite startling. We saw (Fig. 28) that the Scythian warrior had the most ornate protective shield (the greaves) on his leg. The Greeks decorated their shields in the most ornate fashion. Already Gardner²⁵⁰ suggested that "the greave on the left arm may be an imitation of aegis held in a similar position by Zeus when holding the thunderbolt". Roscher²⁵¹ agrees with this suggestion: "Salmoneus hat sich ganz als Zeus kostümiert, eine über den linken Arm gelegte Beinschiene, ... soll die Aigis vorstellen". The empha-

248. RE IA2, 1990 'richtig gedeutet'.

249. Described by Gardner, Ernestin, *The American Journal of Archeology*, 3 (1899) plate IV, opp. to p. 331.

250. Gardner, 334. footnote 2.

251. Roscher, IV. 291.




Fig. 28. Salmoneus. (After Gardner.)

sis, however, is so much on this extraordinary position of the left greave, that already Gardner brought it in connection with other mythological ideas, concerning oneleggedness.²⁵² "He wears greaves in an extraordinary way, one on his left arm, one on his right leg. I can quote no parallel in literature or art; the arrangement is not one adapted for defence, nor, I believe, is it sufficiently explained as a mere symptom for madness. I have little doubt that it has some definite meaning, if one could only trace what that meaning is. It may have some connection with the commoner practice of having only one foot shod. Students of folk-lore may perhaps be able to throw more light on the question". Taking into consideration the whole of the present study, the meaning is very simple: it expresses the very essence of Salmoneus' arrogance. He who was designed to be the lower covering and support wants to become the upper covering and support, i.e., he wants to become the Aegis and Zeus. After his punishment, he returns to the lower world, like Loki, in the shape of a salmon.

252. Gardner, 334.

Conclusion

All the three chapters of the preceding study treated basically the semantic associations between the fish and the central support. Some material was adduced as to the nature of the 'supported' only in so far as it helped us to establish the identity of the 'supporter'. A further investigation of the semantic associations connected with the calf of the leg, fish roe, egg, small offspring, womb, belly would have lead us into the problems connected with reproduction. The periodic return of the spawning season, the extremely large number of the fish-spawns, the importance of fish as food supply, make fish a favorite focus of other associations. It is connected with good luck and fertility. This aspect of the semantic associations surrounding the fish was already treated by several scholars.²⁵³

Both aspects: the fish as 'support' and the fish as the symbol of fertility must have played an important role in ancient times and found its way, as ἸΧΘΥΣ (Ichthys) 'fish'  the favorite symbol of early Christianity interpreted as Iēsous **CH**ristos **THE**ou **HY**ious **Sōtēr** 'Jesus Christ Son of God, Savior', into our modern western civilization.

253. e.g. Wagner, Scheftelowitz, Dölger, cf. the bibliographical entries under: Wagner, de Gubernatis, Dölger, Scheftelowitz.

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