

JIES Reviews

Archaeology

Elena E. Kuz'mina, *The Origin of the Indo-Iranians*. J. P. Mallory (ed.). Leiden/Boston: Brill, 2007. 762 pages, 18 maps, 114 figures, and 2 appendices. \$218.00. Part of the Leiden Indo-European Etymological Dictionary Series.

Elena Kuz'mina has produced a remarkable work. It was first published in Russian in 1994 and completely revised with a great deal of new information for this English version. The book is profusely illustrated and provides 18 maps which are extremely helpful in locating sites and ecological zones. The Bibliography alone is 105 pages.

This massive book has 26 chapters divided into four parts. Part 1 (Chapters 1-14) gives us the Andronovo Cultural Entity, and begins with the History of Research on the Andronovo Culture and goes on to Methodological Aspects of Ethnocultural Reconstruction, where she lays out her methodology including her levels of interpretation. The following chapters, 3-14, give us Classification of the Sites and the Primary Features of Andronovo Unity in which the various groups such as Petrovka, Alakul' and Fedorovo are discussed. The next six chapters describe the material culture, including ceramics, architecture, mining and metallurgy, textiles, transport, and economy. Part 1 of the book takes up nearly half of the text and the detail is encyclopedic.

Part 2, (Chapters 15 to 22) describes "The Migrations of Tribes and their Cultures in Central Asia" including the area of Xinjiang. Part 3 (Chapters 23-25) gives us "The Genesis of the Different Branches of Indo-Iranians" with the bulk of the material exploring the Indo-Aryans and how the Andronovo culture relates to them. Part 4 (Chapter 26), "The Genesis of the Iranians," gives the history of the research of the Timber-grave culture and emphasizes the East Iranian Scythians and Saka. Each chapter is filled with extraordinary detail and fully documented.

The origin of the Indo-Iranians is a complex matter, and Kuz'mina lays out the situation fully. There may be more information on the subject but given the detail of this book, it hardly seems possible. The Introduction sets out the methodology of the work, the various Indo-Iranian theories including the two major theories for the origin of the Indo-Iranians (I-I): the first theory espoused by Gamkrelidze and Ivanov suggests an early view placing the homeland for Indo-Europeans in Asia Minor and the I-I homeland to the northern part of the Iranian plateau. The second theory puts the I-I homeland in Europe and connects the I-I with the Timber-grave and Andronovo cultures.

Kuz'mina subscribes to the second theory and in the Introduction sets the place and time for the Indo-Iranians, who are first heard of in the 16th-15th centuries BC in cuneiform texts: I-I gods are mentioned in Hittite and Hurrian oaths, and we have the famous missive by Kikkuli who uses I-I words for horse-breeding. By the mid 2nd millennium I-I is not only separate from IE but had formed separate dialects. Kuz'mina says the hypotheses that I-I is connected either with grey ware or Bactrian ceramics of the 2nd millennium BC has neither been proved nor generally accepted and that wheel made pottery "cannot be considered as a true ethnic indicator." She further states that "no single hypothesis from the competing linguistic and archaeological solutions to the location of the Indo-Iranian homeland has been proved at present" (xv). She believes that a thorough review of the linguistic and archaeological data is necessary and "an assessment of the ethnic attribution of the Andronovo culture" (xvi); that is what she sets out to do. To accomplish this, she looks 1) at all the linguistic and written I-I sources, 2) archaeological material relating to I-I with particular attention to the Andronovo culture, 3) reviews the Sarmatian and Saka archaeological material, 4) looks at ethnographic sources relating to both Iranian and Indian peoples, and 5) the anthropological sources.

The cultural sources of most interest for this work are from the earliest:

Poltavka, Catacomb (Novy Kumak) culture, Multi-roller, Abashevo, Sintashta, Petrovka, Alakul', and Fedorovo. However, the hypothesis that Catacomb and Abashevo were I-I "cannot be strictly proven...[but] probably took

part in the formation of the Andronovo and Timber-grave cultures to some extent, so providing them with a Proto-Indo-Iranian identity can hardly be excluded" (167-68).

In Chapter 3 she lays out an "archaeological data bank" according to her methodology from 100 sites from the Urals and Kazakhstan; twenty-five of these were her own excavations. She also lays out the differences and similarities of Andronovo Alakul' and Andronovo Fedorovo. She thinks Alakul' and Fedorovo are two genetically different groups that were independently developed, but they are "the product of integration and assimilation" (26) and each have their own variants. On a more general note she points out overlapping characteristics and variants within a type that allows us to see that sharp divisions cannot be made between groups. It is clear that not all sites are just A or B; they could be A/B and some C. There certainly was very little if any ethnic purity. This view would be useful for Western archaeologists who have difficulty seeing Steppe characteristics in Western burials; i.e., mound cemeteries in England.

In the following chapters she examines the archaeological evidence and again relates it to the textual, linguistic, and mythological evidence all the while building her case.

The chapter on the economy is of particular importance and shows how the Andronovo culture was most suitable for a mobile economy as there were no pigs, but a large percentage of sheep and horses. There were also innovations such as deep wells in the desert, light frame mobile houses, wheeled transport using bullocks and heavy horses, Bactrian camels, appearance of horsemen, cheese (food for the long term), and the proper use of seasonal steppe changes that allowed the transition to nomadism and made distant migration possible. By the 12-10th centuries there is evidence that the climate had become more severe and was thus contributing to a more nomadic lifestyle.

Other evidence ties the I-I to the *Rig Veda* and pastoralism. There are common IE words for cattle which means 'movable property' and 'war' meaning 'cattle stealing'. Indra (*Rig Veda* 3.31.4; 7.18.22) is called 'ruler of golden horses' among other epithets relating to cows and horses as wealth. In the Gāthas (Yasna 12) there is a call to reject pastoralism, and thus we can see a time for Zarathuštra (161).

Kuz'mina reviews what the *Rig Veda* and *Avesta* say about where Indo-Iranians lived. I-I has poorer agricultural terms than IE in general but cattle and horse breeding terms are numerous, I-I gods have epithets about the richness of horses and cattle and they were asked to give more cattle and horse.

Of particular interest to the Indo-Europeanist is her Chapter 8 on Transport. Here she looks not only at the actual wheels and vehicles but gives full descriptions of the various types of cheek-pieces. Table 5 classifies the shieldlike cheek-pieces and gives full descriptions of the other types. The detail of her cheek-piece discussion should not disappoint even the most interested student of the subject.

She also thoroughly reviews petroglyphs that show a variety of 4-wheeled covered and open wagons as well as "chariots." Her discussion of vehicles is lengthy, and she provides some less well-known information. She writes of the sledges known in the 4th millennium from Mesopotamia and the Tripol'ye culture, and also of Bactrian camels and specially bred horses as well as oxen which were used as draft animals. The discussion of camels is particularly interesting as they are seen in petroglyphs as well as horses. Furthermore, she tells us that in early Assyrian texts the Semitic term for dromedary, *gammālu*, is used but the texts also note the two humps of the Bactrian camel. This is another piece of evidence she uses to reject the Near Eastern hypothesis for IE. Petroglyphs indicate that the chariots were of great importance to Andronovo people, and despite the dating problem of petroglyphs a goodly number of images of chariots can be dated to the Bronze Age.

Kuz'mina constantly refers back to the early texts and compares what is found there to the archaeology. In the case of vehicles she points out that Aryan vehicles are reconstructed from Vedic texts and the *Mahābhārata*; later texts mention six types of vehicles. She takes up the question of where the chariot was invented and because we have primarily wheel imprints at Sintashta, she rightfully says "[w]e do not have enough evidence to reconstruct the chariot type" and "[s]uggested reconstructions [such as Anthony and Vinogradov 1995] have been justly criticized" by Littauer and Crouwel (1996:934-39) (110). Nevertheless, she says the evidence supports the hypothesis that the chariot was invented on the South Russian Steppe (135).

She rejects Gimbutas' idea of mounted warriors coming off the steppe to destroy European cultures in the Eneolithic, (later taken up by Anthony and others). Instead, she prefers the gradual penetration of groups of steppe people. She points out that the early texts only occasionally mention horse riding and that chariots were more prevalent. Only in a late Avestan text, Yasna 11.2, does *bāšar* 'horseman' replace 'chariot driver' *raθaeštar*. Further, Mycenaean refers to *hyppēús* 'chariot driver' and even Homeric fighters drove to battle in chariots (139). It was not until the 12th century BC that chariots gave way to mounted horsemen. She differentiates between pastoralist riding and warrior riding and reminds us that images of mounted riders are not found in the Near East until the end of the 2nd/beginning of the 1st millennium BC. Even though horses were known in the Near East in the 3rd millennium, they didn't play a large role.

She sees a need to distinguish I-I from IE and the Near East and points out a number of differences: 1) of all IE people virtually only the I-I did not raise pigs — Andronovo people did not raise pigs. 2) Only I-I raised Bactrian camels and had a cult of them along with horses. 3) In the Near East, only the dromedary was present but there was no cult. 4) Only in I-I is camel **uštra* and it is not a Semitic loan. 5) Andronovo social structure, ritual, and belief system corresponds to I-I (168).

Like other issues her review of burial rite is thorough and she believes in "elite dominance migration and then integration" which she sees in burials (454).

Chronology is a problem to which Kuz'mina attempts to bring order in her Appendix One. Appendix Two presents tables of the actual radiocarbon dates for the Andronovo culture and other groups pertinent to the study.

In previous reviews published in this journal, I have lamented the lack of interest by numerous archaeologists, (see for example Jones-Bley 2007) in dealing with the subject of Indo-European in general and the connection of archaeology and language in particular. This is not the case here. Kuz'mina believes "A common language is not only the main sign but also the main condition for forming and preserving a traditional culture" (11). She further says the manufacturing techniques of pots, forms, and decoration are "very important ethnic indicators and are used as the basis for defining cultures, stages, local variants and types" (18) — perhaps pots

do equal people.

A major problem with this book is not the content but the lack of a good copy editor. Brill is an excellent publisher but seems to have skimmed on the copy editing. A book that costs over \$200 should not have words hyphenated in the middle of the line, e.g., p.121 development and embroidered; inconsistency of quotation marks — straight in some places and curly in other, e.g., p. 30 and 214; works cited in the text but not found in the References, e.g. p.190, Della Volpe 1992. Fig. 10 is printed twice on facing pages, 618 and 619; references are made to plates that don't exist, pp. 275 and 282 refer to Pl. 10 and p. 287 refers the reader to Pl. IV, V; and spelling errors, e.g., 54 subterranean, 69 disappearance. This is by no means an exhaustive list. From a researcher's point of view a greater problem is the errors in the references and text when, for example, there is 1999a, 1999b, and 1999c. Sometimes the letters are there, sometimes not, and sometimes the letters are confused. While mistakes will always creep in, there are an excessive number in this book, and a good copy editor would have caught most of them.

To some this work may seem a bit old-fashioned because of its emphasis on data, but there is so much information that even if one would prefer a more theory driven work, this book has great value and will continue to have value long after the current theories are replaced by others.

References

- Anthony, D. and N.B. Vinogradov
1995 Birth of the Chariot. *Archaeology* 48(2):36-41.
- Jones-Bley, Karlene
2007 Review of Philip Kohl, *The Making of the Bronze Age in Eurasia*. *JIES* 35(3&4):371-87.
- Littauer, M.A., and J.H. Crouwel
1996 The origin of the true chariot. *Antiquity* 70:934-939.

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Culture

Anders Kaliff *Fire, Water, Heaven and Earth — Ritual practice and cosmology in ancient Scandinavia: an Indo-European perspective* (Riksanantikvarieämbetet, Stockholm, Sweden, 2007 and Oxbow Books, Oxford).

This book, the title of which accurately describes the contents, makes some interesting suggestions for the interpretation of prehistoric, mainly Bronze Age, ceremonial sites in Scandinavia which are similar to some broadly contemporary monuments in Ireland such as burnt mounds.¹ As Kaliff points out much archaeological thinking and expression is based on analogy and he argues that use of the rich evidence for the ritual and meaning of Vedic sacrifice as an analogy for interpretation of similar-looking remains in Scandinavia may be helpful. The book is focused on the analogies arising from the author's exploration of Vedic religion and could be amplified by reference to the early historic evidence for ritual and its interpretation in areas closer to Northern Europe, for example, in general works on Greek (Burkert 1983) and Roman (Dumézil 1996) religions. The book is clearly written, well researched and up to date: it does not attempt to impress or put off the reader with obscure jargon: it explains itself fully as it moves along. The book is divided into seventeen short chapters which I will selectively quote from in turn (I have added chapter numbers). I make brief comments at intervals and note some possible local instances of the features discussed.

In the introduction Kaliff points out that when he began studies of cosmological beliefs and rituals in ancient Scandinavia around 1990 there was widespread scepticism about research into ancient religion and cosmology. Secular interpretations of sites and features were considered more probable and relevant than interpretations that evoked the sacred. As leader of various projects his interest in aspects of the emerging archaeology was stimulated and in 1997 he completed a dissertation on aspects of the archaeological evidence for ritual with emphasis on the meaning of cremation. He points out that comparative study is essential for

¹This reviewer is based in Ireland and draws on familiar material for comparison.

proposing relevant interpretations: analogies can be used in several ways — as direct comparisons, as a catalyst for considering evidence in new ways and as a way of inspiring novel interpretations.

The book extends the methodology used in the dissertation with a focus on cosmological ideas in Scandinavian society in the Bronze Age and Early Iron Age, and how these might be expressed in ritual practice. A parallel approach would be to interpret the archaeological evidence that points to ritual activity and to see if it throws any light on the cosmological ideas of the people that created the evidence. The book sets out to “concentrate the discussion on interpretations of sacrifice and funeral rituals, and various connections between these, with special emphasis on the meaning of fire” (p11). In Chapter 1 “Religion as a force in the creation of culture — a revived research field” it is pointed out that we should be constantly aware of the difference between our present-day view of the world and the cosmology that was embraced by the ancient society we wish to study. “In Scandinavian Bronze Age society one can expect a basic cosmological outlook in which ideas that in our time are separated into sacred and profane were instead interwoven” (p21).

Chapter 2 deals with the significance of terminology for interpretation: cosmology, religion, ideology and iconography are defined. Often the same term is used both as a description and an interpretation. Grave is such a term: attempts to make something unknown comprehensible require a degree of change and simplification. A translation into the reality of our own culture is necessary if a study is to be meaningful, or even possible (pp27-28).

It is suggested that perhaps altar might be an equally valid term for some features normally called a grave (pp31-32). One could suggest, however, that changing the interpretation of a feature as a “grave” (at its simplest a hole in the ground containing human remains) to an “altar” — a place or thing used for sacrifice- requires an even more complex justification. Nevertheless, the point is well made that features, which we have almost by convention been content to describe and interpret as graves, could have had different or extended purposes, including use as altars.

Chapter 3 deals with analogies and phenomenology “...I think that comparative Indo-European studies can ... be valuable as analogies, regardless of whether there is any kinship between the traditions ... My fundamental stance ... is that the Indo-European religions also reflect a common background, with the different traditions being dialects in the same way as the Indo-European languages” (p33). Several questions are raised by this approach not all of which can readily be answered: what is the evidence that an Indo-European language was spoken in Scandinavia in the Bronze Age?² Are there any aspects of ancient religious practices accessible to archaeologists that enable us to interpret them as evidence that they were made by speakers of an Indo-European language?³ While Indo-European languages generally show only slight borrowings or influences from non-Indo-European languages is the same necessarily true for religious beliefs and ritual practices? How distinctly Indo-European and how homogeneous was their religion or religions? Is it correct to differentiate Indo-European languages only as dialects? Whatever the answers to these questions, however, I would agree that carefully considered ethnographic analogies for consistent patterns in archaeological evidence for ritual practices are valuable instruments for interpretation.

In Chapter 4, the Indo-European context, the possible processes of “Indo-Europeanisation”, its chronology and effects are reviewed. The works of scholars such as Kristian Kristiansen and Thomas B. Larsson (2005), Bruce Lincoln (1986, 1998), Georges Dumézil (1958, 1962), Jim Mallory (1989) and Colin Renfrew (1987) on the spread of Indo-European languages and its implications are discussed. The author concludes that the Indo-European languages and religion were spread by a process of exchange between neighbouring areas, probably also in conjunction with the physical migration of influential groups of people (p46).

²Apparently answered in the affirmative on p 40: “...cultural development in south Scandinavia in the Bronze Age suggests that contacts with distant areas were direct and frequent. I myself find it likely that it was as a part of this process that Indo-European languages...were established in Europe.”

³For one attempt see Lynn 2006 where it was suggested that the consistent phenomenon of depositing bronze objects in hoards practised widely in Europe, including Scandinavia and Ireland, might indicate the presence of a pan-European belief, possibly one characteristic of Indo-European speakers.

Chapter 5 begins with the observation that Indo-Iranian traditions are useful for the interpretation of Scandinavian evidence for prehistoric ritual and cosmology because they are well documented and because of “the general cosmological and mythological similarities, which in turn can be linked to a common Proto-Indo-European background” (p47). It is asserted that the Vedic and Iranian religions, together with Germanic, Celtic and ancient Greek and Roman religions are all variants developed against this background. Similarities between Scandinavia and other Indo-European traditions can be demonstrated in cosmology, the perception of death and the properties of certain divinities. The possibility that religious ideas relating to rituals originating as far back as the Bronze Age were preserved orally in Scandinavia to be written down in the Middle Ages is rehearsed (pp53-54). Here we could be more convinced by a demonstration of the existence of complex shared mythological constructs in different regions of Europe arguably having a common origin that might have contributed to the aetiology of ritual or vice versa.⁴

It is pointed out in Chapter 6 “The source material and the ancient Scandinavian conceptual world” that Scandinavian rock carvings are as close as we can get to written sources. They do not give a clear overall picture of a Bronze Age cosmology, but certain features have been identified that seem meaningful, possibly the passage of the sun across the sky and portrayals of figures that may be divine twins. The pictures in the rock carvings may have been linked to an elite with long-distance trading interests in bronze and hides. Apart from the rock carvings the source material is scanty: classical authors such as Tacitus mention the Roman equivalents of the gods worshipped by the Germans. The potential relevance of the Icelandic sagas for Bronze Age religion is questioned although some material derived from these sources is reviewed.

Chapter 7 deals with “Cosmology and ritual practice”: the Indo-European myth of the creation of the world and of human society by the sacrifice and dismemberment of the first man, Ymir, by his twin brother is explained, mainly on the basis of Bruce Lincoln’s *Myth, Cosmos and Society* (1986). The occurrence of pairs in the archaeological record, for example axes, horns (*lurer*), helmets or paired figures on rock carvings may have been an expression of these divine twins or of the

⁴One thinks of the “fire in water” motif discussed by Puhvel (1987, 277-283).

other twins known from Indo-European myth such as the Dioscuri or the Aśvins. The creation myth explains that different materials of the cosmos are related to specific parts of the primordial twin's body, for example, the matching of earth with flesh, hair with plants, rocks with stones, blood with water and thoughts with clouds. These relationships are repeated in Germanic, Roman, Vedic and Celtic myth and may provide one basis for interpreting the remains of sacrifices or rituals of reassembly that might be found in archaeological contexts. In one view of Indo-European religion sacrifice and dismemberment brought about a strengthening of the equivalent cosmological component. The symbolism of sacred fires in rituals is also summarised in anticipation of a review of the hypothesis that fire sacrifice was an important element in ancient Scandinavian society.

In Chapter 8 "Grave monuments and sacrificial altars" Kaliff discusses how archaeologists' analysis and interpretation of structures normally termed "graves" on account of the presence of human bones may be affected by our natural rush to categorization. "Both graves and altars were often built according to the same cosmological ideas, and in both cases the design symbolises the principles underlying existence" (citing Parker Pearson and Richards 1994). Although far removed from the Bronze Age there is an interesting section on Scandinavian folk beliefs, for example the offerings of buttermilk, beer and porridge made on a farm's burial ground in the 19th century.

In Chapter 9 "The cremation ritual and the ideas behind it" it is pointed out that the most frequently used methods for dealing with the disposal of the dead -inhumation, cremation and excarnation- have all been recorded in societies that spoke Indo-European languages. In Greek, Roman and Germanic traditions both inhumation and cremation were practised. We could, however, comment that the same rites were practised in societies that were definitely not Indo-European. The value of analogies in informing interpretation is again noted, but in terms of confidence it is still at the level of speculation. As Kaliff points out, however, without good analogies the interpretation would be even more speculative. I would agree, whether or not the people who left the remains were Indo-European speakers that analogies drawn from Indo-European sources are useful and on occasions, probably

unknown to us, may provide an insight into the religious beliefs that gave rise to a particular set of material remains.

The cremation of remains can be interpreted in positive or negative aspects: in one view the cremation (and crushing) of the bones was meant to transfer the deceased's life force to society: the design of the grave structure and the function of the funeral ritual were regarded as important for the survival of society. In the negative view, for example according to Zoroastrianism, the dead body was impure and had to be prevented from defiling fire and earth. Funeral rituals were intended to dispose of the corpse in such a way that the living were not harmed by its impurity and to ease the passage of the soul from this world to the next (p 93).

It is possible that rituals of a public nature could be expected to be more explicitly Indo-European, perhaps presided over by priestly specialists, whereas personal or family rituals might draw in part on a bigger or different body of beliefs perhaps inherited from local and pre Indo-European traditions?

Chapter 10 deals with "Traces of Scandinavian fire sacrifice". Burnt mounds, stone settings and cult houses are discussed in terms of possible analogies with complex Vedic rituals such as the *agnicayana* (101-102). The rectangular plan stone frame or "house of Broby type" named from the type site in Uppland is discussed (p104): they exhibit evidence of mortuary rituals: fire-cracked stones, hearths and layers of soot and charcoal are associated. In Scandinavia hearths are found grouped in systems and some forms of geometrically placed hearths, sometimes located in a row on ridges or beside wetlands, can be interpreted as ritual arrangements (p105).

There is an extensive and interesting discussion of the possible ritual significance of burnt mounds that were commonly constructed in Scandinavia in the Bronze Age (pp106-119). It should be noted, however, that there appear to be some differences in the composition and associated features of the burnt mounds in Scandinavia as compared to the analogous or even cognate monuments that are now becoming familiar from Bronze Age Ireland. Scandinavian burnt mounds are often associated with hearths, pits and stone settings and or buildings that are often found beside them. They are often found on cemeteries and settlement sites. It seems from variations in date and morphology that burnt

mounds may be open to a variety of interpretations, but in Kaliff's opinion some burnt mounds can be interpreted as complex altar structures. These are mostly built of burnt stone — material affected by fire — and they yield finds for which an obvious secular explanation cannot be provided. An analysis of 42 burnt mounds from the Stockholm area showed that 30% of the Bronze Age structures contained human bones. Some burnt mounds contained large amounts of fire-cracked stones, together with soot and charcoal and the more complex types often contained circles and foundations of stones and deposits of bones and artifacts. In many cases there are deposits of pottery, objects connected with metal production and especially burnt and unburnt bones of humans and animals. A widespread interpretation is that they are rubbish dumps from settlement sites. Some have been interpreted as butchering sites and places for treating hides and leather. One study of Scandinavian burnt mounds interpreted them as possibly representing a “communication between different spheres” and that they thereby represented life itself (p118). As the author points out that could also be a definition of an altar, which can in turn be a recreation of the cosmos. The burnt mounds are compared with the altars for burnt offerings that were used in ancient Greece. A suggestion is repeated that some fire sacrifices were “concave”, in pits, and were devoted to chthonic deities while “convex” sacrifices were heaps of burnt materials dedicated to celestial deities (p119).⁵ This is related to the possibility that the offering is consigned to different cosmic levels related to the nature of the sacrificed material.

Irish burnt mounds do not appear to display the same morphological range, though it must be admitted that most of those being excavated at present in the course of rescue excavations have been spread out in the past by agriculture and may be further truncated by mechanised topsoil stripping. Artifacts that may be in the topsoil — evidence for what the mound might have contained — in these cases have been removed before the archaeologist even knows that a burnt mound site exists below. In many cases we can only trace the extent of the “burnt mound spread”, which is often associated with a sub-rectangular “trough” (almost an expected

⁵In the book the words convex and concave are transposed: the ordering used here seems more appropriate.

component), which may have been lined with wood or fibre, and with a pit or pits. The emphasis here by necessity tends to be on the surviving sub-surface features (which are sometimes filled or part filled with burnt mound material), rather than on the structure and contents of the mound itself.

Kaliff points out in Chapter 11 “Fire sacrifice rituals and the elements” that in Scandinavia burnt mound materials are often found in contexts other than mounds, for example in pits where they are also given ritual explanations. In Scandinavia the burnt stones are usually seen as by-products of some other process (p121). Similarly prosaic interpretations are proposed for Irish burnt mound materials that have been interpreted as by-products, for example, of cooking, bathing or brewing. Kaliff suggests that it was the burnt stone that was itself the “product” — the fire-cracked stones could have been a visible sign that the fire was born from the stone, corresponding with the Vedic idea that Agni was born on the fire altar. Burnt mounds in Scandinavia are often associated with water; indeed this is also a characteristic of the Irish examples. It is suggested by Kaliff that the water was poured over the red-hot stones to crack them and to produce masses of steam. One of the key ideas may have been the dramatic demonstration of the transformative properties of fire.

In Chapter 12 “Death and grinding — the annihilation of the body” some of the ideas thought to underlie the rite of cremation are linked to the possibility that the body was destroyed in such a way that the different parts were returned to the cosmic elements of which they were believed to consist (p135). It could be pointed out that while the primordial being may have been described as contributing three bodily zones to three levels of society as laid out by Lincoln (1986, 1-40): head = priests (sky); arms and torso = warriors (land surface); waist and legs = farmers and providers (earth, water), an individual would thus be expected to be disposed of entirely to the cosmic realm appropriate to his or her class. Only kings (or their substitutes), who were regarded as embodying the qualities of all three groups, would be dismembered and each part disposed of to the appropriate realm. Much would also depend on whether a particular deity (primarily operating in one of the three cosmic levels) was being honoured. We also have to ask whether this could be considered a normal burial rite: dismemberment and disposal in a chosen cosmic zone

would be necessary only in a sacrificial context and human sacrifice would surely have been uncommon? Even if these ideas did influence sacrificial rituals they might not have been reflected in normal burial rites.⁶

Whereas bones may fragment to some extent during cremation and cooling the author believes that the cremated bones found in many graves were deliberately crushed.⁷ This crushing was part of the ritual destruction of the body. “Fragmentation...may have been combined with a distribution of the physical remains in agreement with the dismemberment of the cosmological sacrificial victim — the image of cremation” (p141). Querns and rubbing stones occupy a special position among grave finds from the Late Bronze Age and Early Iron Age, a fact that in Kaliff’s opinion has not been sufficiently considered. Querns are also common finds in Scadinavian burnt mounds. While they may have been deposited as symbols of agriculture, fertility and rebirth they could also have been used for ritual crushing of bones. It is noteworthy that one of very few finds to have come from a burnt mound in Ulster was a saddle quern found in a burnt mound excavated by Fred Carroll at Derrybrusk, Co. Fermanagh (www.excavations.ie, 1994). The same burnt mound also covered the remains of two log boats. Another possibly relevant site was excavated by D.P. Hurl in a small bog at Killymoon Demesne, Co Tyrone consisted of three mounds made up of a series of layers of baked clay and charcoal. Spreads of charcoal and charred barley lay on a deposit of ashy soil that emanated from the mounds. Associated finds included two gold ornaments, a bronze socketed axe, querns, pottery and human hair (www.excavations.ie 1995).

Chapter 13 deals with “Ritual dismemberment and deposition”. Early accounts of cosmogonic sacrifice are repeated in summary, for example, the Roman *Feriae Latinae*, and Tacitus’ description of the sacrifice of the Semnones. The dispersal of human remains over wide areas, for example by disposal in rivers, is noted and reminds us of the idea that

⁶It is worth noting that consistent patterns in the proportion of species of the bones of animals, and the parts from which they were obtained, found in ritual contexts could be significant.

⁷Two colleagues, P. Logue and L. McQuillan (pers comm), have an article in draft suggesting that the basin stones found in some Late Neolithic passage tombs in Ireland may have in part represented quern stones, used for or symbolising the grinding down of the cremated remains.

sacrifice could be seen in part as a process of making the victim larger, expanding the elements of a microcosm to cosmic dimensions (Lincoln 1986, 63-64).

In Chapter 14 “Everyday life and ritual — different expressions of the same cosmology” it is suggested that farming can be regarded as a system of “rituals” to improve and promote re-growth in nature. By cultivating the land people assist Mother Earth, or some other fertility divinity, to be fertilised: rituals performed for the dead are also believed to be important for agricultural fertility (p163). Religious beliefs and ritual customs can intervene or be present in activities that we now regard as purely functional. In a genuinely religious society, rituals can have an obvious purpose. Fire sacrifice conveys the sun as an element to the new life, creation, re-growth and re-birth: it is part of the same essence as the sun. “In the same way that a person’s new life begins with the destruction of the old body through fire, the new cultivation year begins with the bonfire [literally “bone fire”] on May Eve”...humans help the sun to revive the fields and to drive away winter and death (p166).

There is a discussion of different types of grave-goods and what they were intended to symbolise or achieve by reference to modern folk-belief and ethnographic comparisons. Finds of ore and metal waste in ritual contexts and the transformative quality of fire suggest analogies with the perceived effects of combustion on human remains (pp167-174).

Chapter 15 considers “stone as a medium and a cultic implement.” The hardness of stone and its apparent eternal quality in itself make it symbolically appropriate as material for graves and other monuments. At several cemetery sites in Sweden dating from the Late Bronze Age and Early Iron Age large amounts of stone were transported and piled up beside areas of rock in extensive layers (p177). Cup marks may have been regarded as doorways into the interior of the stone, paths of communication between the human world and the otherworld. “The cup-marks could have been used in rituals performed to give the deceased the energy needed for a rebirth, and the carving could have been intended to give the living some of the power of the stone and the place. This...dual meaning may also be a reason why cup marks are found not only at graves and cremation sites but also in fields and settlement sites” (p185). An Irish example of the latter is

the discovery of a cup- and-ring marked stone in Haughey's Fort, Co Armagh, a Bronze Age hill-fort (Aitchison 1998).

Chapter 16 reviews "Aspects of the dead as mythical beings" in folklore.

"...ostensibly contradicting features of burial ritual and practice may originally have reflected ideas that different aspects of the deceased had different destinies after death...It is interesting here to consider the various mythical beings associated in folk tradition with dead people" (p187). This material is interesting in itself, but it is the least satisfying in terms of evidence for what people might have been hoping to achieve when using apparently similar rituals in the Bronze Age.

I end this review with the following comments. The archaeological remains uncovered in ongoing development schemes in Ireland and elsewhere are samples from large tracts of countryside that reveal new types of sites, many of them dating from the Middle and Late Bronze Age. Burnt mound "spreads" and associated "troughs" and "pits" turn up frequently near streams and wet places. If we are to adequately attempt the necessary interpretation of these new data we have to be aware of the widest range of possibilities and then to identify those that best fit the data for the time being as the most likely interpretations. Anders Kaliff's book is a useful and relatively brief introduction to many of the possibilities that arise from considering analogies to inform archaeological speculation from the world of Vedic and Indo-European religion in general. But even if Indo-European languages were spoken in Scandinavia (and Ireland) in the Bronze Age that does not mean that Indo-European or Vedic-based interpretations are necessarily correct for ritual deposits of that date: Indo-European religious ideas were not expressed materially in such orthodox ways that their remains could be used to trace the spread of Indo-European speakers. There may, on one hand, have been variability in contemporary religious views while, on the other, similar beliefs might have been expressed ritually (and thus archaeologically) in a variety of ways at the same time. Indo-European speakers may have shared some religious beliefs and ritual expressions with speakers of other languages or may have inherited such rituals from the occupants of the regions into which an Indo-

European language may have spread. These indigenes were in most cases the direct ancestors of the speakers of the “new” Indo-European language.

Everyone experienced the same cosmos — sky, air, water — and the same cosmic materials — stones, earth, fire, plants and animals. With such a relatively restricted supply of building blocks it is likely that people with different beliefs could create similar-looking structures and archaeological traces of ritual. This may seem a despairing view, but we must be aware that if some religious construct, explained historically, seems to fit with anonymous prehistoric remains of ritual activity it does not necessarily follow that there was a genetic connection. Archaeologists, however, are not in a position to abandon interpretation as “too speculative”. In pursuit of a thoughtful study of archaeological material, Kaliff’s book is stimulating and forms one point of departure for further debate on the significance of the enigmatic remains of prehistoric rituals.⁸ It is worthwhile to bear in mind as many possibilities as can realistically be admitted to the debate so that a full range of appropriate questions and techniques can be applied to the data when they are dissected in the field and afterwards in the laboratory.

References

Aitchison, Nick

- 1998 Late Bronze Age ritual at Haughey’s Fort: the evidence of the deposited cup-and-ring marked stone. *Emania* 17, 31-40.

Burkert, Walter

- 1983 *Homo Necans: the anthropology of ancient Greek sacrificial ritual and myth*. Berkeley and London: University of California.

Dumézil, Georges

- 1958 La *Rígspula* et la structure sociale indo-européenne. *Revue de l’Histoire des Religions*, 154, 1-19. Paris.
- 1962 *De nordiska gudarna. En undersökning av den skandinaviska religionen*. Stockholm: Aldus/Bonniers.
- 1996 *Archaic Roman Religion*. Baltimore: The Johns Hopkins University Press (reprint).

⁸I am not yet entirely able to let go of the idea that burnt mounds may have some “practical” explanation, even if sometimes combined with an element of “ritual”.

- Kristiansen, Kristian and Thomas B. Larsson
 2005 *The Rise of Bronze Age Society. Travels, Transmissions and Transformations*. Cambridge: Cambridge University Press.
- Mallory, J. P.
 1989 *In Search of the Indo-Europeans. Language, Archaeology and Myth*. London: Thames and Hudson.
- Lincoln, Bruce
 1986 *Myth, Cosmos and Society. Indo-European Themes of Creation and Destruction*. Cambridge, Mass: Harvard University Press.
 1998 På spaning efter den germanska krigsguden: Georges Dumézil, politik och forskning under det sena 1930-talet. *Svensk religionshistorisk årskrift* 7.
- Lynn, Chris
 2006 Suggested archaeological and architectural examples of tripartite structures. *Journal of Indo-European Studies* 34, 111-141.
- Parker Pearson, M. and Richards, C.
 1994 Ordering the World. Perceptions of Architecture, Space and Time: in Parker Pearson, M. and Richards, C. (eds) *Architecture and Order: Approaches to Social Space*. London and New York: Routledge, 1-33.
- Puhvel, Jaan
 1987 *Comparative Mythology*. Baltimore and London: The Johns Hopkins University Press.
- Renfrew, Colin
 1987 *Archaeology and Language. The Puzzle of Indo-European Origins*. London: Jonathan Cape.

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Linguistics

Amalia E. Gnanadesikan, *The Writing Revolution. Cuneiform to the Internet*. The Language Library. Oxford: Wiley-Blackwell, 2009. XII + 310 pages, 21 figures, 9 plates. ISBN 978-1-4051-5406-2.

Gnanadesikan covers the world's major scripts and writing traditions from early cuneiform clay tablets to the World Wide Web. The forte of her presentation lies in its clear diction and conciseness, and the reviewer finds it defensible that the author omits some minor 'exotic' traditions such as Easter Island's rongo-rongo and the Anatolian hieroglyphs (xi), while Germanic runes are at least treated cursorily (243-245; on runic writing, see below). The fascinating story of the major

breakthroughs in deciphering ancient scripts such as hieroglyphic writing and the Maya glyphs are told in an insightful, yet vivid manner. So is the invention of various alphabets and their subsequent fate, e.g. King Njoya's logographically based efforts in Cameroon that had a sad ending (10). It is probably correct to state, as the author does, that "What kind of writing system a language uses is largely determined by the accidents of history and by the properties of the language itself" (10). Thus Gnanadesikan's basic aim is to show how writing developed historically, how it was applied and adapted in different socio-cultural settings, and last but not least how it impacted human culture and society from its early forms to the present stages:

The goal of this book is to shed light on how this remarkable technology actually works, where it came from, what it has done for us, and why it looks so different in different parts of the world. (2)

In chapters 2 through 5 the book illuminates ancient logographic systems — Mesopotamian cuneiform, Egyptian hieroglyphs, Chinese characters, and Maya script — along with their syllabic or consonantal basis (13-94). In what follows, Gnanadesikan discusses syllabaries, first the Bronze-Age Linear B used for Greek, then the two Japanese syllabaries, and finally the modern invention of the Cherokee script (95-142). The subsequent chapters deal with phonemic writing systems, i.e. consonantal alphabets (also known as *abjads*), *akṣara* systems or *alphasyllabaries*, and vowelized or 'true' alphabets (143-248). Compare figure 1.1 as to how different writing systems represent language (8). In the final part, "The alphabet meets the machine", several stages of the writing revolution are highlighted, hence the subtitle of the monograph *Cuneiform to the Internet* (249-272).

Early writing

As Gnanadesikan notes, early business records on proto-cuneiform tablets feature numerals; sixty of roughly eight hundred different signs are numerals. Sumerians used them with reference to what was being counted. Different number systems thus counted different things. In the author's opinion, "This was probably a holdover from the tally system of the preliterate period, when numerals that told you something

about what was being counted were an advantage rather than a cumbersome inconvenience” (15). It is noteworthy that German *Zahl* itself originally referred to the ‘notches’ or ‘scores’ which were cut as marks of number on pieces of wood etc. (Kluge 1995:902, under *Zahl*).⁹ The three basic functions of early writing pertain to three realms, viz. (1) administration and bureaucracy, (2) trade and commerce, and (3) religion. This accords with the fact that early writing is both utilitarian and ceremonial (see Postgate, Wang, and Wilkinson 1995). Literature in the modern sense, Gnanadesikan adds, is a ‘much later development’ which in some writing traditions never developed at all (2). From the reviewer’s point of view, it should be emphasized that ancient literacy is élitist which means that it runs counter to our modern conception of mass literacy:

The *intended* restricted uses of early writing provided a positive disincentive for devising less ambiguous writing systems. The kings and priests of ancient Sumer wanted writing to be used by professional scribes to record numbers of sheep owed in taxes, not by the masses to write poetry and hatch plots. As the anthropologist Claude Lévi-Strauss put it, ancient writing’s main function was “to facilitate the enslavement of other human beings.” Personal uses of writing by nonprofessionals came only much later, as writing systems grew simpler and more expressive. (Diamond 1997: 235, his emphasis)

Early writing systems, we are told, were all highly logographic (10). Later systems used far fewer logograms and operated on a (more or less strictly) phonological basis. The advantage of alphabets lies in their limitation in the number of signs which aids cognitive structuring and memory storage; cf. the Western alphabet and the fixed three-ætt structure of the Germanic *fupark*. It is sound to state, as Gnanadesikan does (10), that the choice of writing systems involves a factor of chance which means we are dealing with “accidents of history”. Still, a reservation to be made is that Modern English, for instance, although employing a voweled, hence in Gnanadesikan’s sense a ‘true’ alphabet, is *not* necessarily a truly phonemic

⁹Compare the Early Runic inscriptions of KJ 13a Nøvling clasp **bidawarjaz talgidai** and KJ 10 Vimose woodplane **talijo** [...] with the underlying verb **talg(i)jan-* ‘incise, carve’/**taljan-* ‘tell, recount’ (e.g. Oldcel. *telgja/telja*).

script, but rather a logographic or phonographic one.¹⁰ Compare Sampson (1985) on the issue of reforms:

Paradoxically it seems to be broadly true that those European nations with the most phonemic scripts are the most inclined to reform them. If your script is almost perfectly phonemic, then you see its graphemes as devices for representing sounds and you perceive the respect in which they fail to do so as striking and curable imperfections. An Englishman, on the other hand, does not see his orthography as a system deviating in certain limited respects from an essentially phonographic ideal — and rightly so, since modern English spelling has as much title to be called logographic as phonographic. (Sampson 1985: 207)

To conclude, the writing system itself does not determine its typological status alone, hence the diagnostic relevance of phoneme-grapheme links (including multifunctional graphemes and complex phoneme-grapheme relationships) in the given language context. Although Gnanadesikan seems aware of the problem addressed here, she does not discuss this issue, nor the notion of orthographic reforms as addressed in the above statement (cf. the index of her work, 297-310).

Oral traditions versus written culture

There is yet another weakness in the overall presentation. The critical reader might notice an overemphasis of written traditions with the neglect of oral traditions. What about the power of the spoken word and recitation practices in different cultural settings, both ancient and modern? The singer of tales was no scribe. The bias is evident already in the introduction where Gnanadesikan points to the ephemeral nature of the spoken word (4). By contrast, written texts are deemed to convey their message more precisely, giving way to the notion that writing is more valuable than speech (5).

The world we live in has been indelibly marked by the written word, shaped by the technology of writing over

¹⁰In this regard, I am afraid that figure 1.1 on page 8 is misleading as it uses the orthographic representation of the word <undesirable> instead of its phonetic (say IPA) representation: [ʌndɪˈzɑɪəbəl]. As a consequence, the syllable count /un-de-si-ra-ble/ is at least imprecise, if not incorrect.

thousands of years. Ancient kings proclaimed their authority and promulgated their laws in writing. Scribes administered great empires by writing, their knowledge of recording and retrieving information essential to governing complex societies. Religious traditions were passed on through the generations, and spread to others, in writing. (1)

From the reviewer's point of view, Gnanadesikan underestimates the important role that oral traditions play in ancient and medieval society, both Eastern and Western. Law traditions in Scandinavia, for instance, have been basically oral until the early Middle Ages, and the rune ring from Forsa, roughly datable to the late 9th or 10th century, is probably our oldest written law text in a North Germanic language (see Brink 2008: 28-29: "The Forsa rune ring: The earliest law in Scandinavia"). Brink therefore highlights the importance of this runic artefact with reminiscences to oral texts, e.g. alliteration, oral-formulaic diction, paratactic rather than hypotactic construction:

This statement [on the Forsa ring; M.S.] is unique for Viking Age Scandinavia, to my knowledge, and it actually supports the statement by Snorri Sturluson, that different people had different laws in early Scandinavia. The Forsa ring must be looked upon as one of the most important artefacts of the early Viking Age, and for shedding light on early Scandinavian society. (Brink 2008: 29)

What is more, traditions of memorized verbatim recall did exist both in Eastern and Western culture — compare Indian Vedic texts and Old Norse skaldic verse (see Schulte 2008). The point is that these verbatim practices exceed oral-formulaic techniques and achieve rigid transmission of smaller and larger text units over long periods of time. This represents the exact opposite of Gnanadesikan's paradigm: "oral tradition maintains a text in extremely fixed form, whereas a purely written text is evanescent, and if it survives at all, will be subject to thorough changes in form" (Kiparsky 1976: 101; for detailed discussion, see Schulte 2008: 185-191, with canonical references). Under this focus, Vedic literacy can be construed as a counter-literacy challenging the current 'literacy hypothesis' with its marked focus on alphabet literacy (e.g. Havelock 1982).

To be honest, Gnanadesikan notices this issue when

discussing the unchallenged status of Sanskrit in relation to the diverging calligraphic traditions and writing systems in India:

This lax attitude toward scripts may have been due to the respect that continued to be accorded to the oral tradition and to oral performance of literary texts. [...] The continuing pre-eminence of the spoken word may also account for why there has never been a strong calligraphic tradition in India [...]. The script was merely a vehicle for the text, and a well-educated person was expected to read many scripts. (179)

According to Gnanadesikan, this is one factor that explains the absence of a standard writing system in ancient India and the emergence of today's Devanāgarī, Bengali, Gujarati, Gurmukhi (Punjabi), Oriya, Tibetan and minor scripts such as Meitei-Mayak from the northern form of Brāhmī (178-181). The diversity of regional scripts in southern Asia is diametrically opposed to the dominance of one written language, Sanskrit, while due to their lower status India's diverse languages went almost unrecorded and unwritten. Gnanadesikan stresses that modern languages such as Thai and Lao have chosen different trajectories: "Thai still feels the pull of the first-millennium, unified Sanskrit world, while Lao has chosen modernity, simplicity, and regional individuality" (187).

Acrophony and runic writing

Gnanadesikan highlights the 'acrophonic exercise' as a constitutional principle of Egyptian hieroglyphic and Semitic writing both of which were consonantal systems (39, 145-146). Here it would prove useful to include runic writing somewhat more extensively as the rune names rely on the acrophonic principle, e.g. the first rune \mathfrak{F} *f* stands for **fehu* 'cattle, wealth' (e.g. Polomé 1991, with references). The use of ideographs is attested for instance in the Blekinge inscriptions of what now belongs to Lister parish in Sweden (NB: The word spaces are introduced by the reviewer):

Gummarp, KJ 95: **hApuwolAfA sAte stAbA prią fff**
 'Hapuwolaf[R] set three staves: fff'
 (triple \mathfrak{F} = **fehu* n. 'cattle, wealth')
 Stentofen, KJ 96: [line III] **hApuwolAfR gAf j**
 'HapuwolafR gave good harvest (good year)'
 (old shape of the *j*-rune = \mathfrak{J} = **jāra* n. 'year')

This elucidates a crucial aspect of runic traditions. Rune names could be deliberately altered in the *scriptoria* (as with the Anglo-Frisian *futhorc*), or the relation between rune names and the sound values of the runes could be distorted by a series of sound changes (which determined the fate of the Viking-Age sixteen-grapheme *futhork*). Consider, for instance, the rune name **wunju* (G *Wonne* ‘joy, delight’), which underwent *w*-loss and later was dispensed with in the sixteen-character Viking *futhork*. Succinctly, Gnanadesikan suggests that the Anglo-Saxon *futhorc* — like the Ogham alphabet — was “probably inspired by the Roman alphabet” (244). This is certainly correct, and her account would have further profited from a glance at the Latin *scriptoria* that enabled the systematic augmentation of the Anglo-Frisian rune row — hence an interaction of two writing systems. Besides, this input must have been largely absent in the Viking society of early Scandinavia (cf. Schulte 2009). As Tineke Looijenga puts it,

England became closely connected with the Latin *scriptoria*, demonstrated by ecclesiastical runic monuments and an abundant use of runes in manuscripts (Looijenga 2003: 273-274)

Moreover, it must be stressed that there was neither a standard Anglo-Saxon *futhorc*, nor a standard Viking *futhork*. Illustration 13.2 on the Anglo-Saxon runes (containing 31 characters) is an abstraction at best (244). The reference points of our handbooks are merely idealizations that highlight individual inscriptions or — what is worse — take a reconstructed system as their point of departure (see Schulte 2010). Obviously, both the Anglo-Frisian and the Nordic systems were in a state of flux. Prominent examples of the Anglo-Frisian *futhorc* include the Thames scramasax, an iron sword inscribed with a twenty-eight-rune *futhorc*, and the Vienna Codex also containing twenty-eight runes (cf. Page 1999: 80-81). Moreover, Looijenga (2003) points to the extension of the rune row to over thirty-three characters which means that she includes the manuscript traditions as well. Another issue worth mentioning is that runic traditions in Scandinavia survived even after the Reformation (Nordby 2001), whereas the fate of the Anglo-Saxon *futhorc* was sealed with the Norman invasion of 1066 CE (244).

Greek serendipity

Havelock (1982: 9) had claimed that the evolution of Greek alphabet literacy was a decisive step that set Greek culture off from other written cultures in the Near East. His ‘literary revolution’ hinges on the systematic introduction of vowel symbols in the Greek alphabet. It is positive that Gnanadesikan is aware of Havelock’s oneness as he is “strangely dismissive of Near Eastern scripts, literacy, and literature” (293). What might be regarded as a writing revolution or a paradigm shift in the sense of Kuhn (1962), is merely one step in a long-term development — whether being a conscious invention or a serendipitous discovery.¹¹ To exemplify this, Gnanadesikan fancies a meeting between a Phoenician and a Greek:

The Greek, not knowing Phoenician, missed the glottal stop [in ‘*alef*; M.S.] entirely. As in English, it made no difference to a Greek word whether it started with a glottal stop or not. It was the [a] which the Greek perceived to be the first sound of the letter’s name. As he copied the scratchings, he struggled to pronounce the strange word. The aspirated Greek [p^h] was as close as he could get to [f], but he had trouble to ending [sic] a word in a plosive consonant. What he finally managed, and what he remembered later, was something like [alp^ha]. (210)

Indeed this ‘fanciful tale’ (214) is both insightful and didactic. Gnanadesikan suspects that “the voweled Greek alphabet — a new form of writing at the time — was to some extent an accident caused by misconception” (214). I believe that the author ignores the cognitive dimension of the entire process which is likely to be a long-term restructuring below the threshold of consciousness. Also, she disregards the fact that already in the early times of the Semitic alphabet, experiments began with methods for writing vowels by adding small extra letters, or else dots, lines or hooks sprinkled over the consonantal letters to indicate selected vowels (cf. Diamond

¹¹The adaption of writing systems, it seems to me, allows for both conscious and subconscious transformation processes. As I have argued elsewhere, the rise of the sixteen-grapheme Viking *fupark* constitutes a usage-based, collective change below the threshold of consciousness, whereas the Anglo-Frisian augmented *fuporc* involves deliberate intent due to Latin ecclesiastic learning and scribal exercise. See Schulte (2009, 2010).

1997: 227). To be fair, Gnanadesikan concedes that “semivowels and laryngeals are easily elided or used for vowels in many languages, as witness the Aramaic invention and subsequent widespread use of *matres lectiones*” (293). In an evolutionary typology, I hazard to say that we are dealing with a systematic restructuring over time rather than a single event, viz. “the misunderstanding of a foreigner” (293). Compare the type of change represented by the transformation of the Scandinavian *fupark* (see above).

Finally, Gnanadesikan discusses Gutenberg’s printing press and the ‘Gutenberg galaxy’ — a coinage by Marshall McLuhan (1968) to whom the author does not refer (249-272). All in all, the book under review is a valuable contribution to the history of writing. Despite some simplifications, Gnanadesikan highlights crucial aspects of the history of writing technology and written culture. It is my guess that the book will find its way into the curriculums of historical linguistics and related disciplines.

References

- Brink, Stefan
 2008 Law and society: Politics and customs in Viking Scandinavia. In: Stefan Brink and Neil Price (eds.) *The Viking World*, 23-31. New York: Routledge.
- Diamond, Jared
 1997 *Guns, Germs and Steel. The Fates of Human Societies*. New York: Jonathan Cape.
- Havelock, Eric A.
 1982 *The Literate Revolution in Greece and its Cultural Consequences*. Princeton, New Jersey: Princeton University Press.
- Kiparsky, Paul
 1976 Oral poetry: Some linguistic and typological considerations. In: Benjamin A. Stolz and Richard Stoll Shannon, III. (eds.) *Oral Literature and the Formula*, 73-106. Ann Arbor: University of Michigan.
- KJ = Krause, Wolfgang, with Herbert Jankuhn
 1966 *Die Runeninschriften im älteren Fupark*. Göttingen: Vandenhoeck and Ruprecht.
- Kluge, Friedrich
 1995 *Etymologisches Wörterbuch der deutschen Sprache*. 23rd ed., revised by Elmar Seebold. Berlin and New York: De Gruyter.

- Kuhn, Thomas S.
1962 *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Looijenga, Tineke
2003 *Texts & Contexts of the Oldest Runic Inscriptions*. Leiden: Brill.
- McLuhan, Marshall
1968 *The Gutenberg Galaxy. The Making of Typographic Man*. London: Routledge and Kegan.
- Nordby, K. Jonas
2001 *Etterreformatoriske runeinnskrifter i Norge: opphav og tradisjon* [Post-reformation Runic Inscriptions in Norway: Origin and Tradition; Norwegian original]. MA thesis, University of Oslo.
- Page, Raymond I.
1999 *An Introduction to English Runes*. 2nd ed. Woodbridge: Boydell.
- Polomé, Edgar C.
1991 The names of the runes. In: Alfred Bammesberger (ed.) *Old English Runes and their Continental Background*, 421-438. Heidelberg: C. Winter.
- Postgate, Nicholas, Tao Wang, and Toby Wilkinson
1995 The evidence for early writing: utilitarian or ceremonial? *Antiquity* 69: 459-480.
- Sampson, Geoffrey
1985 *Writing Systems. A Linguistic Introduction*. Stanford, California: Stanford University Press.
- Schulte, Michael
2008 Literacy in the looking glass: Vedic and skaldic verse and the two modes of oral transmission. *Scripta Islandica* 59: 181-199.
2009 Neue Überlegungen zum Aufkommen des jüngeren *Fuparks*. Ein Beitrag zur Schriftgeschichte 'von unten'. *Beiträge zur Geschichte der deutschen Sprache und Literatur (PBB)* 131.2: 1-23
2010 The rise of the younger *fupark*. The invisible hand of change. *NOWELE* 60 [in press].

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Frederik Kortlandt, *Italo-Celtic origins and prehistoric development of the Irish language*. Amsterdam & New York: Rodopi 2007, s.215. ISBN - 13: 978-90-420-2177-8

This volume, the 14th in the Leiden Studies in Indo-
The Journal of Indo-European Studies

European Series, comprises a collection of important essays on Celtic studies by Frederik Kortlandt, the well-rounded Dutch Indo-Europeanist and expert in Armenian, Slavic, Baltic, Germanic, and Celtic languages. This publication, which its author dedicated to his friend, outstanding Celtologist David Greene, contains 17 articles dealing mostly with Celtic sound changes, the morphology of the Old Irish verb, the relative chronology of Irish innovations, and commentary on Italo-Celtic affinity. In addition, Kortlandt has attached an appendix of Old Irish verbal paradigms with a reconstruction of Insular Celtic endings.

The earliest article was written in 1978, the two most recent are dated 2006. These last two are published here for the first time, while all of the others have already been published, largely in *Ériu* or *Études Celtiques*. At first sight, the topics of the articles might seem non-unified. Kortlandt deals with Lachmann's law (in 2 articles: "Lachmann's law", pp. 87-89 and "Lachmann's law again", pp. 121-123), as well as with Old Irish mutations ("Phonemicization and rephonemicization of the Old Irish mutations", pp. 51-64), and with specific phonetic features of Insular Celtic, as in "The alleged early apocope of *-i in Celtic" (pp. 99-106) and "Posttonic *w in Old Irish" (pp. 75-79). Then, seemingly with no link, he discusses Old Irish expressions *ol* and *fedá* ("Old Irish *ol* 'inquit'", pp. 113-115, and "Old Irish *fedá*, gen. *fedot* 'Lord' and the 1st sg. absolute ending -a in subjunctives and futures" pp. 129-132). He then turns to the broad issue of the Old Irish verb, as represented in a number of articles: "The Old Irish absolute and conjunct endings and questions of relative chronology" (pp 1-23), "Old Irish subjunctives and futures and their Proto-Indo-European origins" (pp 65-74), "Absolute and conjunct again" (pp 91-97), "Thematic and athematic verb forms in Old Irish" (pp 107-111), "Three notes on the Old Irish verb" (pp 125-128), and "More on the Celtic verb" (pp. 133-147). One is surprised by the unexpected inclusion of "The origin of the Slavic imperfect" (pp 81-85) in this collection of works on Italo-Celtic and early Irish. The mosaic of articles is completed by the more germane contributions to the question of a common origin for Celtic and Italic languages ("More evidence for Italo-Celtic", pp 25-50 and "Italo-Celtic", pp 149-157); both articles on Lachmann's law also pertain to this question.

But the careful reader will certainly not miss Kortlandt's

underlying theme that can be traced as an unmistakable line from the first article presented here from 1978 up to his most recent essays. It is the issue of the relative chronology of sound changes, mostly Proto-Celtic and Old Irish. In his early work, he establishes a scenario with 22 points, a plan of scholarly inquiry which has been elaborated, specified, and revised in all his later work on Celtic. During this same period, Kortlandt has also been reacting to the objections or proposed variant chronologies of other scholars. Thus, we can follow, for example, his polemic with his colleagues Peter Schrijver and Kim McCone (pp. 99-106). The article "On the relative chronology of Celtic sound changes" (pp. 117-120) is a direct reaction to McCone's rival chronology and offers a comparison of these two systems. Another of Kortlandt's major concerns, mentioned above, is an examination of the Old Irish verb, an interpretation of its forms, and an analysis of their relation to other Indo-European counterparts. This perspective justifies an inclusion of the essay "The origin of the Slavic imperfect" in the present volume; the analysis presented there is important for an interpretation of the Old Irish *ā*-preterit. On this issue, he balances his opinion mostly against the great American Indo-European linguist Warren Cowgill (e.g. pp 91-97); later, he reacts, for example, to Stefan Schumacher and his monograph on the Celtic verb (pp 137-140). Nevertheless, Kortlandt can still turn a critical eye upon himself: he is able to admit his errors and sometimes change his previous standpoint. He gives us a summary of such revisions on pages 146-7.

The last but not least sphere of Kortlandt's interest is verification of the Italo-Celtic hypothesis. He adopts Cowgill's (1970) propositions and assumes a "relatively short period of common development followed by a long period of divergence" (p. 25) of Celtic and Italic languages. Concerning shared features, he focuses his attention mostly on the shortening of Indo-European long vowels and resonants in Italic, Celtic, and partly also in Germanic and Balto-Slavic, as opposed to Greek and Indo-Iranian (pp 25-44). Thus, Kortlandt presents to western scholars at that time (his article was written in 1980) practically unknown results from Russian linguists V.A. Dybo and V.M. Illič-Svityč. He adds his own comments to their observations and further (on pages 44-50) he offers an explanation of the transitive middle forms of the

Italic and Celtic verb (with due consideration to the interesting parallel in Old Irish and Armenian). In later years, Kortlandt set Italo-Celtic issues aside, but he had never forgotten about them, as can be seen in both notes to Lachmann’s law (pp 87-89 and 121-123). He returns to this subject again after a quarter century and analyzes primarily verbal forms to state that “Italo-Celtic represents an archaic branch of Indo-European which did not take part in major innovations of the central dialects such as the creation of an elaborate middle voice. Though specific Italo-Celtic innovations are few, the languages of this branch developed along parallel lines and preserved important traces of an original linguistic system (p. 157).” Therefore, he supports the marginal theory.

Frederik Kortlandt is known as a very productive researcher who is able to start with an exhaustive analysis of seemingly partial features and finish with an important generalization. In the present volume, this fact is well-illustrated in the Appendix (pp 159-178), which presents Kortlandt’s reconstructions of the Old Irish verbal system and his projections for Proto-Insular Celtic. Consider, for example, the present tense forms of *berid* “carries” (p. 160, see also pp. 13-14):

	absolute	Proto-Insular Celtic	Late Indo-European	conjunct	Proto-Insular Celtic	Late Indo-European
1 sg.	<i>biru</i>	*berōs	*b ^h erō+est	-biur	*berō	*b ^h erō
2 sg.	<i>birī</i>	*berēis	*b ^h erēi+est	-bir	*berēi	*b ^h erēi
3 sg.	<i>berid</i> ¹⁾	*berē[ti]s ¹⁾	*b ^h erēt+est	-beir	*berē	*b ^h erē
rel.	<i>beres</i>	*berē[s]so	*b ^h erēt+est+so			
1 pl.	<i>bermai</i>	*beromos[i]s	*b ^h eromos+est	-beram	*beromos	*b ^h eromos
rel.	<i>bermae</i>	*beromoses	*b ^h eromos+est+so			
2 pl.	<i>beirthe</i>	*bereteses	*b ^h eretes+est	-berid	*beretes	*b ^h eretes
3 pl.	<i>berait</i>	*berontes	*b ^h eront+est	-berat	*beront[o]	*b ^h eronto
rel.	<i>bertae</i>	*beronteso	*b ^h eront+est+so			

Notes: 1) The prospective Goidelic form **berēh* was rejected by paradigmatic analogy in favor of the form **berēih*.

Kortlandt accepts Cowgill’s idea that the sigmatic extension of the absolute forms are derived from the Indo-European primary forms by adding of the particle **(e)s < *est* according to Wackernagel’s Law. Considering the relative forms, Kortlandt identifies the relative particle with the PIE anaphoric pronoun **so*, fem. **sā*, as he shows in Old Irish *in fer tête* “the man he

goes" < **sindos wiros steikti so* (p. 21).

Concluding, we can state with pleasure that the present book provides a concentrated and focused collection of Kortlandt's contributions to the field of Celtic linguistics, works which were previously distributed, in fragmented fashion, across a range of periodicals and memorial volumes. It serves as an impressive illustration of Frederik Kortlandt's linguistic insight and erudition.

References

Cowgill, Warren.

- 1970 Italic and Celtic superlatives and the dialects of Indo-European. In: G. Cardona, H. Hoenigswald, A. Senn (eds.). *Indo-European and Indo-Europeans: Papers*. Philadelphia: University of Pennsylvania Press. 113-153

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