

Ten Gods

Ten Gods:
A New Approach to Defining the Mythological
Structures of the Indo-Europeans

By

Emily Lyle

**CAMBRIDGE
SCHOLARS**

P U B L I S H I N G

Ten Gods:
A New Approach to Defining the Mythological Structures of the Indo-Europeans,
by Emily Lyle

This book first published 2012

Cambridge Scholars Publishing

12 Back Chapman Street, Newcastle upon Tyne, NE6 2XX, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Copyright © 2012 by Emily Lyle

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright owner.

ISBN (10): 1-4438-4156-0, ISBN (13): 978-1-4438-4156-6

TABLE OF CONTENTS

List of Tables.....	vii
List of Figures.....	ix
Acknowledgements	xi
Introduction	1
Chapter One.....	9
Memory Storage without Writing	
Chapter Two.....	21
The Categories of an Age-Grade System	
Chapter Three.....	29
Alternate Kingship and the Accession of Pelops	
Chapter Four.....	39
The Four-Generation Capsule and Royal Succession	
Chapter Five.....	47
The World Ages and the Spatiotemporal Places of the Gods	
Chapter Six.....	59
Birth from the Primal Goddess and a Celtic Pantheon	
Chapter Seven.....	75
Royal Descent and Succession and a Germanic Pantheon	
Chapter Eight.....	87
The Recovery of the Young Goddess and an Indian Pantheon	
Chapter Nine.....	101
The Linked Castration and Birth Theme and a Greek Pantheon	

Chapter Ten	115
The Value of an Approach through Structure and Stories	
Notes.....	123
Bibliography.....	127
Index.....	145

LIST OF TABLES

2-1.	Parallel sequences showing the four male grades and the incorporation of the female in relation to the third grade.	25
2-2.	An age-grade system containing four classes with half-class intakes every six years.	26
2-3.	The colour categorization of the four generations and two alternations.	28
5-1.	The places of women and the ancestors in relation to the age-grade system and the seasons.	54
8-1.	The Indian epic characters corresponding to the six young gods.	95
10-1.	The foundational sequence containing the four cosmic gods of the vertical series.	116
10-2.	The family of ten gods shown in relation to space, the year cycle, and the age-grade system.	117

LIST OF FIGURES

1-1.	The year and the diurnal equivalent. .	17
1-2.	The division of the seasons into dark and light halves.	19
2-1.	The three stages and four equal grades. The second-function period is shown with dots (indicating red) and the third-function period with diagonal lines (indicating black).	24
4-1.	The four-generation capsule showing the ten people who correspond to gods. Males are represented by triangles and females by circles. Sibling relationships are indicated by horizontal lines above and marriage relationships by horizontal lines below.	45
5-1.	The course of the year including a spiralling down by stages from the top to the bottom, and a complementary movement directly upwards.	49
5-2.	The death period in the year, with the rest of the year divided among the functions in the ratio 1:2:3.	53
6-1.	The Zeus and Lugaid sets, centred on the young king.	62
6-2.	A offers a primal goddess and four generations, while B offers three old males and distinctions by function.	64
6-3.	The blend and the Horus set.	65
6-4.	The blend and the Horus set with husbands distinguished as raised triangles.	66
6-5.	The blend and the Lleu set, which reinforces the pattern of three males and one female, and distinguishes one male as husband.	67
6-6.	A offers the Zeus addition to the blend of an older brother of the king who is king of the dead, while B offers an older brother of the king.	68
6-7.	A paired representation of a set of gods in the Fourth Branch of the <i>Mabinogi</i> . In this and similar representations, light grey indicates the old gods, dark grey indicates the young god of death, and white indicates the other young gods. Each old god is paired with a young god and the god of death is paired with the king. The series follows the temporal order and begins at new year, half-way through winter.	70

6-8.	A paired representation of an Irish pantheon.	71
7-1.	The primal female as mother and mate of the three old gods and mother of the six young gods including the queen (Q) and king (K).	78
7-2.	The two patriline of royal gods in a Germanic pantheon in relation to the four-generation capsule.	81
8-1.	A paired representation of an Indian pantheon.	97
8-2.	An Indian pantheon in relation to the year.	98
9-1.	The succession series showing the act of separation (a) as in known narratives, and (b) as in the base form.	106
9-2.	A paired representation of a Greek pantheon.	113

ACKNOWLEDGEMENTS

Sections of the following chapters are indebted to the earlier publications listed below and I am grateful to the editors and publishers of these journals for permission to reprint.

Chapter 1

1993. "Internal-External Memory." *Cosmos* 9:63–73.

Chapter 2

1997. "Age Grades, Age Classes and Alternate Succession: A Restatement of the Basis at the Societal Level of Indo-European Symbolic Partition." *Emania* 16:63–71.

Chapter 3

1990. "Winning and Losing in Seasonal Contests." *Cosmos* 6:161–71.

2008. "The Luck Contest in the Ritual Year." *The Ritual Year* 3:101–105.

Chapter 4

2006. "The Importance of the Prehistory of Indo-European Structures for Indo-European Studies." *Journal of Indo-European Studies* 34:99–110.

Chapter 6

2007. "Narrative Form and the Structure of Myth." *Folklore: Electronic Journal of Folklore* 33:59–70.

Chapter 7

2010. "The Divine Descent of Kings and the Germanic Pantheon." *Cosmos* 26:23–35.

Chapter 8

2008. "The Marriage and Recovery of the Young Goddess: Story and Structure." *Journal of Indo-European Studies* 36:357–70.

Since I have been working on developing the ideas expressed in this book for many years, my life debts and my scholarly debts coincide, and I can only most warmly thank all those who have enabled me to continue this research and have taken an interest in it. I have enjoyed an attachment to The University of Edinburgh since 1970, initially to The School of Scottish Studies (which has had a special concern with oral culture) and latterly to the combined department of Celtic and Scottish Studies. I have also enjoyed repeated contacts with Harvard University, including Fellowships from the Radcliffe (later Bunting) Institute in 1974–75 and from the Center for the Study of World Religions in 1995.

I would like to thank the British Academy for funding visits to Croatia, Estonia, Hungary, Latvia, Lithuania, and Russia for the purpose of exploring mythological and cosmological matters. These have given me a broader base for the understanding of myth Europe-wide, and, although specific study of Slavic, Baltic, and Finno-Ugrian mythologies has been held over for the present, they can be expected to come into play in a second wave of developing the topics introduced here. Similarly, I would like to thank The Royal Society of Edinburgh for funding a research visit to Slovenia, and The School of Literatures, Languages and Cultures at The University of Edinburgh for supporting my attendance at recent conferences in Slovenia and Bulgaria, which were held under the auspices of The Ritual Year Working Group of SIEF (*Société Internationale d'Ethnologie et de Folklore*). This working group has provided a stimulus and forum for research in this area, as has the recently formed International Association for Comparative Mythology. I have appreciated being able to attend conferences of the latter and am grateful for the provision of travel and subsistence support from the Harvard Asia Center for the inaugural meeting held in Beijing, and from the organizers of the second conference held in 2008 at Ravenstein, The Netherlands.

I am extremely grateful to Duygu Maus for preparing the text of this book for publication, and to Colin Gateley for supplying the images.

INTRODUCTION

A “new approach” requires some introductory comment. Why is a new approach called for? What are its special features? What results can it offer?

Previous approaches have regarded language and archaeology as the secure and well-tested ways to knowledge in the Indo-European field and have added myth after conclusions have been reached on other grounds. It has not been sufficiently appreciated that mythic narratives can offer a solid knowledge base about themselves when they are approached with an understanding of the way stories work. It has also not been sufficiently appreciated that the social and cosmic structure in which myths are embedded offers another dimension that has the capability of suggesting interpretations or supplying validation.

The new approach treats the myths themselves as embodied stories that had a life in relation to the society in which they were conceived. This was obviously in a long-ago time. It was so long ago that linguistic comparison cannot immediately reach it, although there will be semantic fields that can usefully be explored in connection with the new ideas that emerge when myth is studied in its own terms and not simply as an auxiliary. When a community values knowledge and ritual, as the Indo-European community clearly did, myths are the story lines that run in association with other components of society and of space and time in an all-encompassing interconnected world. Myths matter, and it is not enough to say that this or that branch of the Indo-European linguistic group has these really amusing and intriguing tales which make great literature, or that it has tales that reflect the period when they were written down or a time some centuries before that. These points are interesting and valid, but they are insufficient. If we really want to understand the myths, there is no evading the issue that we have to go back to the time of the common ground of myth. The results offered by the new approach are considerable, even in the short term, and can be expected to produce an avalanche of new ideas and adjustments when its implications have had time to sink in. The approach points the way to a revision of history that will pay due attention to its past in oral culture.

But that is for the future. In the immediate present we can look at the structures in which the myths were embedded and consider primarily the

creation myth—the story of how it all began. The structures have to be built up from indications in the surviving record. They are hypothetical, and so are the originating myths—and so is the concept of “a single parent language as the historical source of all the known I-E languages,” as M. L. West has pointed out (2007, 1). We are in an area of speculation where components become more and more solid as scholarship reflects upon them and offers commentary and, with a new approach, it is necessary to wait for the responses to come in. However, a model has been created with interconnected aspects of story, social structure, and space and time. The model definitely exists, and so it is possible to refer without dubiety to features within the model. It is the relationship between the model and the reality in the remote past that is speculative and open to question.

I shall not keep you, reader, in suspense. The creation myth that emerges from comparative study is such a simple story that we can quite understand why story-tellers would want to elaborate it and weave their own fantasies around elements of it once it had lost its place as sacred narrative embedded in a total cosmology. It explains how the world came into being in the beginning and also explains how this intensive programme of creation came to an end.

There is first the totality, a goddess who bears male potential within her and gives birth to a son. The son is above her as sky and copulates with her and she bears two sons, and these four initial gods are the four levels of the vertical universe. The goddess is now earth alone, and one of the recently born sons, sea, lies below her. The other recently born son causes a crisis since he is immediately above her and is between her and his father. It is he who is now in a position to copulate with the goddess, and he monopolizes her. The other two gods would like to copulate with her also and manage by a trick to get their way and she becomes pregnant by all three. This first part of the creation story paves the way for the birth of three young gods each of whom resembles one of the three fathers and of a young goddess who resembles her mother, and also of the king of the young gods who has the properties of all three fathers, and of a counter-king of death. Thus are nine gods born from the primal mother, but the myth has also to explain the cessation of the divine births, and it does this through having earth separated from the above so that she can no longer conceive.

This myth reflects in its own terms a human reality where a king corresponds to the king of the gods and has as his temporal background three previous generations containing his father and uncle, his grandfather, and an ancestress of them all. The king is joined in his generation by the woman who becomes his queen, by three men who stand his friends, and

by his opponent, the counter-king. In terms of cyclical time, as expressed through the calendar, the two kings mark beginning and end points while each of the other eight gods has a specific place in the sequence of the seasons.

The study of myth has suffered in the past from being broken up among a variety of disciplines and national and regional groupings. When we pool our resources and examine the vast range of Indo-European materials available, it seems that we can enter into a total cosmology that related to the pantheon, to space and time, and to the prehistoric society that operated in terms of the system. Often the clues lie in relatively neglected materials such as those concerning alternate kingship. Since the approach taken is extra-linguistic, it can apply whether the people in the postulated prehistoric society were already speaking a language that could be called Proto-Indo-European or whether they had a language which was a source of other linguistic strands as well as the Indo-European one.

The system discussed is referred to as “Indo-European” in the sense that it is the common property of the speakers of the descendant Indo-European languages. The situation here is different from that of language where one is positing Pre-Indo-European or Proto-Indo-European forms behind attested Indo-European languages. The posited Indo-European schema is not attached to any date, since study of the mythological information in itself does not yield this information.

It is not part of the argument that the structures examined are exclusively Indo-European, for it seems likely that they were shared by other cultures. Once the structures have been scrutinized within the Indo-European field, their place relative to the structures of other cultures can be explored with an open mind on the question of borrowing or common origin. The Indo-European material, because of the diverse nature of the descendant cultures, allows us to go deeply into the past and this makes it valuable for study of conditions outside the Indo-European area as well as within it. It should be noted, however, that there is no possibility that the complete structure is a cultural universal, since it involves the existence of kingship, and this institution, although compatible with a society operating on a small scale, is by definition not compatible with the acephalous societies that are found in many parts of the world.

The myth of creation outlined above is not the only myth, of course, but it is the key one that opens the way to further study. It will receive attention in the later chapters of the book after the social and spatiotemporal structures have been discussed. As nothing at all can be culturally transmitted in a prehistoric society without the operation of memory, this forms the subject of the opening chapter. Before moving on

to this topic, I shall sketch in the scholarship that forms the historical background to my approach and consider the new methodology that is now required.

Cosmologies in tribal societies rest on, or incorporate, aspects of their social organization, and both the study by Durkheim and Mauss on “primitive classification” and the work of Granet influenced the thinking of Georges Dumézil in this respect (Allen 2000, 10, 40–1). Dumézil has been the major figure in Indo-European comparative mythology during the last century, and it is important to relate to his work. It was through his awareness of discussion of the cosmological mode of thought that Dumézil was initially led to see the concepts (that he called “functions”) of the sacred, physical force, and prosperity and fertility embodied in the social classes of priests, warriors, and cultivators/herders, as in the specific cases of the Indian *varṇa* and the Iranian *pištra* that were the subject of pioneering studies by Benveniste and himself in the 1930s.¹ By about 1950, Dumézil had decided that the “tripartite ideology” was not necessarily accompanied by the actual tripartite division of the society, but could be “an ideal” (Dubuisson 1991, 123–40), and this revision meets the objection voiced by some scholars that Dumézil’s idea of the functions could not be soundly based since social classes would not have existed in the Proto-Indo-European period.²

Another way of meeting the same objection is to entertain the idea that the functions did not initially relate to social classes. Terence Turner (1984, 360) suggested that the Dumézilian functions might be associated with “status-role categories of various kinds that can potentially be fulfilled by any member of society”, and this formulation would make them independent of the late-arriving separation into social classes, and is compatible with the idea of an actual partitioned society in remote prehistory operating in terms of the functional triad. Status-role categories exist in age-grade societies, and Kim McCone in 1986 and 1987 drew attention to a number of pieces of evidence in the written records of the Indo-European area that indicate the former existence of an age-grade system with old men, young men, and mature men corresponding to the Dumézilian three functions. This idea of status-role categories in an age-grade society opened up entirely new possibilities which I began to explore in an article on age-grading and the societal level of Indo-European symbolic partition that was published in 1997.

N. J. Allen (1987) has shown that Dumézil’s three functions were probably survivals into the historical period of a prehistoric system including kinship bonds which rested on four, rather than three, with a system of equal exchange, and he has also sketched out how the

classification system would have broken down, leaving a residue in the historical record (2000, 39–60). Having raised these matters, which seem clearly to point to the desirability of looking into the prehistory of the system and positing what kind of society could have given rise to the historically attested material, Allen has preferred in the Indo-European context to continue to draw exclusively on the linguistic and literary evidence, and has not offered a model in this case even though he has elsewhere offered a model of the earliest form of human kinship (1986 and 2008). In fact, it would probably have been difficult to come up with a viable model in terms of kinship alone without the necessary complement of succession which helps to define the structure.

Allen (2001) has also taken Dumézil's schema and related it to space (the four quarters and the centre) and to time (a cyclical pentadic system). Alwyn and Brinley Rees in their book, *Celtic Heritage* (1961), were forerunners working with these ideas, as Allen acknowledges, and F. B. J. Kuiper, in a response to Dumézil's triadic theory from the perspective of Sanskrit studies (1961), had argued that any full view of the religious system would have to take account of the Indo-European organization of space. For Allen, the addition of what he calls a "fourth function" is sufficient to complete the totality, the fivefold system he uses being arrived at by the splitting of the concept of otherness (F4) into a positive half (F4+, roughly equivalent to the king) and a negative half (F4-, roughly equivalent to the counter-king).³ His structure is less complex and subtle than the one that emerges on closer examination, but it is worth noting that the setting of the social relationships within an overall scheme of space and time, as in this book, is not new in Indo-European scholarship but can be regarded as an established base that has been worked with independently.

Although the identifications of age-grading and kinship patterns by McCone and Allen have been available for some time, there has not up to the present been sufficient recognition of the fundamental difference that they can make for our study methods. We can now posit an origin point and work forwards through history to illuminate the changes that would have resulted in the situations we find in our sources. This approach opens the way to both synchronic studies relating to the modelled cosmology and diachronic studies of the stages of revision. A. J. Greimas spoke appreciatively of Dumézil's discovery of the code of the gods embedded in social organization (1992, 3), and it is now possible to understand that code much more fully.

While Dumézil's identification of the triad of the sacred, physical force, and fertility, remains fruitful (and I have continued to use his term

“functions” in this connection), his ideas on the structure of the pantheon lacked a solid foundation and are misleading (Lyle 2004), and so are largely omitted from the current discussion.⁴ For the approach taken throughout this book, it has been especially valuable to explore the traditions that had strong indications of a creation sequence that included old and young gods, and so only the Germanic, Celtic, Indian, and Greek pantheons are studied here, while it is expected that the overall tenfold structure can be used in future to help articulate materials from other Indo-European culture areas as well.

We have sufficient information among our widely scattered Indo-European materials to elicit at least “the bare bones of the Common Indo-European pantheon” as Jaan Puhvel put it; and, back in 1964, he could already see the fresh possibilities that were opening up (1981, 160, 159, 162):

Basic to the new insights is the assumption that Proto-Indo-European culture possessed a structured ideology, a set of beliefs and traditions which served as a charter for social and supernatural organization alike. Names are less important than concepts and functions. ... I hope I have conveyed some feeling of the great and exciting discoveries that are being made and remain to be made in the areas of Indo-European prehistory and myth. Herein lie the ultimate origins of European civilization, which were only secondarily covered with non-Indo-European overlays of Mediterranean and Near Eastern origin.

The way ahead did not prove quite as straightforward as it seemed at that time, but, with the re-assessment of earlier work that is now possible, and the establishment of a fresh methodology relevant to the new phase of enquiry, we can hope to continue the line of “great and exciting discoveries” that Puhvel spoke of.

While the methodology of Indo-European studies in the past has been a “ground-up” one, which has made steady advances by working back in time to elicit what can be said with some probability about what lay behind the earliest records, the methodology that is required by the cosmological approach taken here is a “roof-down” one, that offers an entire integrated system from which the fragmented forms of myth and structure that are known in the records could have come. It has a good deal in common with the other method, since it deals with a “grammar”, but linguistic grammar has to work exclusively within language, whereas this grammar works with culturally constructed space and time and a variety of social structures as well as with verbal narratives, and all these taken together form a web. Each of the registers has to be explored separately in the light, of course, of all the available evidence, and each register can

then offer a critique on the other registers. If they do not “fit together” harmoniously (Burkert 1972, 399), it is probably a sign that there has been a misunderstanding and that some adjustment will have to be made in order to set things to rights. It would be quite impossible to work effectively in this way unless there were some guarantee that the source culture had a concern with cosmology, and we do have this in the intense attention paid to ritual in the historically known cultures.

It has to be assumed, as a working premise, that the cosmology was an integrated one. This book offers the model of an integrated cosmology in which ten gods have their distinctive places. If it is a true representation, scholars will find it valuable in the course of time in ways besides those envisaged when the model was built. Even if it is not eventually validated by the research of others, it can have an interim usefulness in allowing possible connections to be explored with a fresh eye. When the “ground-up” and “roof-down” methodologies are combined, diachronic study can be undertaken in the area between the posited source cosmology and the historical record of each of the descendant cultures.

CHAPTER ONE

MEMORY STORAGE WITHOUT WRITING

For a society without writing which placed a high value on the accumulation, retention and transmission of knowledge, the creation of a structured cosmology was a cognitive necessity, and, since all knowledge had to be held in the memory and passed on orally, it is important to be aware of the capabilities as well as the limitations of this method of storing and transferring knowledge. In this chapter I first explore what I have called “internal-external memory” and the practice of using places for memory storage, and go on to propose the eightfold conceptual framework that supplied places for eight of the ten gods. For the approach taken here, it is essential to keep in mind the means by which materials could potentially be transmitted through very many generations in an oral society.

Internal-external memory

According to a story told by Socrates in Plato’s *Phaedrus*, when Theuth (the Egyptian god Thoth) introduces his invention of writing to Thamus (the god Amun), claiming that he has discovered “an elixir of memory and wisdom”, Thamus replies that, on the contrary, the invention will “produce forgetfulness in the minds of those who learn to use it”, and adds:

Their trust in writing, produced by external characters which are no part of themselves, will discourage the use of their own memory within them. You have invented an elixir not of memory, but of reminding ...⁵

In the modern context, Merlin Donald, in *Origins of the Modern Mind*, speaks of our bank of information arrived at through writing as external symbolic storage, and comments that nowadays the “major locus of stored knowledge is *out there*”, and that we carry around in biological memory a code rather than a mass of detailed information (1991, 314). If reminding is a means of entering the total system, Donald can be said to agree with Thamus when he comments that many of the skills being taught today are

memory-management ones concerned with how to find, scan, and assess (322). This is an end result of the spread of the art of writing.

Donald postulates three stages in the evolution of culture and cognition between the time of the ape/human transition and the present: (1) the mimetic, (2) the mythic, and (3) the theoretic, and he gives a strong sense of a developing symbolic capacity pushing back the frontiers to arrive first at language and then at writing. He argues that the primary human adaptation was not language in itself, but rather “integrative, initially mythical, thought” which created the pressure to improve the conceptual apparatus, and that similarly the invention of writing was driven by conceptual needs (215, 333). Donald argues that a new system of memory representation underlay each of the three key transitions in the course of human development and that, while the transitions to mimetic and mythic culture were dependent on new *biological* hardware in the nervous system, the third transition was “dependent on an equivalent change in *technological* hardware, specifically, on external memory devices” (274). The capacity for memory expanded first within the brain, and then externally through writing.

What developments in the direction of external symbolic storage were possible before writing? Donald (296–97) speaks interestingly of an external memory field with a limited storage capacity which is “a cognitive workspace external to biological memory”, and we can take it as likely that the use of an external field which was compatible with the fullest use of internal human memory reached a peak in the absence of writing. When people were still dependent on the ability that was part of themselves, as Plato says, there was a symbiotic relationship between internal memory and external representations that can be called internal-external memory. With the introduction of writing, full use of this mode of thought became obsolete, since writing was in many ways superior.

Donald notes (284) that the first pictorial images were already representations that existed outside of the individual, and that therefore “a technological bridge was under construction that would eventually connect the biological individual with an external memory architecture”. He draws particular attention to the role of early devices that were analogue in nature, and mentions (336) the case of the Walbiri in Australia who draw accompanying graphs in the sand when telling stories, so that, for example, in a narrative about the travels of an ancestor, places may be shown by circles and connected with lines to indicate their paths, an arrangement that “might be regarded as a prototypical map”. Nancy Munn, in the article on the Walbiri quoted by Donald, points out that circle and line carry a heavy load of symbolism, and that visual perception of the

circle-line configuration is only one aspect of a total process that articulates the relationship between the individual and the world order (1973, 216). The “map” is not a simple one, but is heavily charged with meaning.

Shapes may be given external visual form in drawings and ceremonial objects which have the potential for remaining as permanencies or they may be expressed in dance or gestures which do not last beyond the moment. In any case, they do not exist independently of the inner concepts of such shapes, which have as part of their content the journeys of imaginary ancestors moving from place to place. The places are all held together invisibly in the mind as a journey is imagined, but the places themselves are real and visible. And here we need to develop what Donald has said considerably in order to understand the operation of internal-external memory in its cultural context. In particular, we have to keep in mind the point that humans can make use of pre-existing shapes and objects on which no trace is left of human use. The situation has something in common with the discovery of an *objet trouvé* in art: if you can find something, there may be no need to make it. This is probably rather obvious in the case of a map when the route travelled is experienced or “found”. If you have taken a journey, you retain a mental representation of it in memory—a mental map which you may or may not choose to express by an external diagram which is an analogue of the journey. The same thing may happen in reverse, as it were: if you have concepts (like those of the Walbiri ancestors and their activities) that you wish to externalize, you can do this by using real places without using a drawing.

The drawing, of course, has certain advantages. It is compact, and may make the whole journey of the ancestor powerfully present in the small area of a ceremonial ground where people are assembled, and it is an aid to communication which is particularly useful as a teaching device in association with oral commentary when conveying knowledge to novices. Donald comments (338) that, once visual analogue symbols like the Walbiri circle-line configuration had been created, “the opportunity arose to use them as memory storage media”. This use is interesting, but it is worth stressing in addition that the real world, unmediated by a drawing or chart, can also serve for memory storage. The real world may be a *carte trouvée*, where the human input is in the selection, not in the creation, of physical marks or objects.

One culture where the real world, diagrams, and internal concepts are all in active use in a memory system is that of Puluwat in the Caroline Islands.⁶ Micronesia is well known for the feats of its navigators (Hutchins 1983), whose traditional training enables them not only to make extended

voyages in the open sea, but also to move through conceptual worlds not exclusively concerned with the practicalities of navigation. We have the real world of the ocean, and we have what the navigator carries around inside his brain. His chart, as he goes on voyages, is a mental one, and the mind is responding to physical places on the earth or sea or to stars in the sky without an intermediary. Nevertheless, the Micronesians employ humanly produced systems which can be laid out with pebbles on the ground or on a mat, as is done during the teaching process (Gladwin 1970, 129–30). These systems are maps of the real world, but also incorporate imaginary places. In one type of system, the trigger fish is used as a model, and this real fish gives an outline of a shape that is conceptualized in a particular way. Saul Riesenberg explores the use of the model as explained to him by a Puluwat navigator as follows (1972, 32):

In learning each Trigger Fish diagram, according to Tawuweru, you imagine yourself sailing west to the tail, under the setting of Altair, back to the centre (the backbone) and then due east to the head, then back to the centre and south under the Southern Cross to the ventral fin, back to the centre and north under the North Star to the dorsal fin, and finally back to the centre again.

In the system called “trigger fishes tied together”, eleven of the places are islands, reefs, and a bank (fixed items such as would appear on standard maps), while Apilú is the personal name of a frigate bird seen in rough water, Kafeoor is a mythical vanishing island, Nalikáp and Nókitikiit are big waves, Máfipeřip (which means “small pieces”) is a very large, destructive whale, and Fanuankuwel is the place of a whale with two tails.

Per Hage (1978, 86–87) comments on systems like this that they are not just maps for getting about but are “mnemonic devices for the storage and retrieval of other kinds of cultural information—myths, spells, ceremonies, chants, recitations, etc.” He adds:

Each location in a sequence is a cue for an item of information and each sequence contains some homogeneous, ordered set of items. This type of device is not unique to the Puluwatase but is well known from the classical literature on rhetoric as the method of loci or the artificial memory ...

The use of places

We can turn now to look at this method of loci or “places” as discussed in three Latin works—the anonymous treatise on rhetoric addressed to Herennius dated c. 86–82 BCE referred to as *Ad Herennium*, Cicero’s *De*

oratore dated 55 BCE, and Quintilian's *Institutio oratoria* of the first century CE. Although these treatises come from a literate society, they are concerned with a process that dispensed with writing, since the orator delivered his speech without written notes. Instruction in memory was intended to help him to recall the sequence of topics in his speech (the *res* or "things"), with the option of also recalling words if he chose to incorporate this in his learning.

Quintilian gives the most detailed account of how the system was set up:

Some place is chosen of the largest possible extent and characterised by the utmost possible variety, such as a spacious house divided into a number of rooms. Everything of note therein is carefully committed to the memory, in order that the thought may be enabled to run through all the details without let or hindrance. ... The next step is to distinguish something which has been written down or merely thought of by some particular symbol which will serve to jog the memory; this symbol may have reference to the subject as a whole, it may, for example, be drawn from navigation, warfare, etc., or it may, on the other hand, be found in some particular word. ... However, let us suppose that the symbol is drawn from navigation, as, for instance, an anchor; or from warfare, as, for example, some weapon. These symbols are then arranged as follows. The first thought is placed, as it were, in the forecourt; the second, let us say, in the living-room; the remainder are placed in due order all round the *impluvium* and entrusted not merely to bedrooms and parlours, but even to the care of statues and the like. This done, as soon as the memory of the facts requires to be revived, all these places are visited in turn and the various deposits are demanded from their custodians, as the sight of each recalls the respective details. Consequently, however large the number of these which it is required to remember, all are linked one to the other like dancers hand in hand, and there can be no mistake since they join what precedes to what follows, no trouble being required except the preliminary labour of committing the various points to memory.⁷

This account of Quintilian's is still referred to in memory studies today, for the point is that the system works. What we need is a fixed grid with a set order of succession laid down in advance, and to this we can attach single items to be remembered which we can then pluck out of the system at will.

The single line of the imagined journey discussed above relates points in that journey in a fixed sequence, and this provides the syntagmatic axis. At each of the points there can be an accumulation of items which are not in a fixed sequence, and they are on the paradigmatic axis. These two aspects of thought and articulation are particularly familiar in linguistics,

and the “two relationships between linguistic items” have been defined in this way (Johnson and Johnson 1999, 312–13):

When viewed as a linear sequence, an item holds syntagmatic relations with those preceding and following it. ... Paradigmatic relations hold between an item and similar ones that can appear in the same position in a sequence. ... Both these types of relationship are useful at various levels of linguistic study.

These types of relationship are also present in cosmological systems. The fourfold series that incorporates the Dumézilian triad forms a syntagmatic sequence that offers positions which can contain many items that are connected paradigmatically.

It is of some interest to determine what is internal and what is external, and it has to be understood that Quintilian is speaking of the actual practice of a Roman rhetorician and not of the total range of possibilities in the system. As Edward S. Casey (1991, 127) stresses in a study of memory, “both the grid and its content are present as images”. When the orator gives his speech, he envisages within himself both the grid of places and the things he has put in the places. This point needs to be made explicitly, since the Latin words used are *loci* (places) for the grid and *imagines* (images) for the deposits. However, the Romans evidently recognized that both could have the status of images, as is made clear by Quintilian’s added remark, “What I have spoken of as being done in a house, can equally well be done in connexion with public buildings, a long journey, the ramparts of a city, or even pictures. *Or we may even imagine such places to ourselves.*”⁸

Although visual images seem to play a major part in this imagining, it seems that there may also be a system within the mind which is not brought into visibility even introspectively. Casey first speaks of images in contrast to external reality, but, as he develops his discussion, it becomes apparent that there can be imageless concepts also. He remarks (1991, 129–30) that “the spatiality which is operative in memory imagery cannot be reduced to strictly visual properties alone; it is not pictographic in nature, since it may include items not pictured at all”. Alfred Binet, in a study of people playing blindfold chess,⁹ found that there were varying degrees of use of mental imagery, and that the more expert players made less use of imaging than novices. The expert user of a memory system may have employed skills comparable to those of a chess-master.

The Indo-European framework

The Indo-European grid is a spatiotemporal one that could have worked effectively in a wide range of geographical contexts and in different latitudes, and it will be useful to approach its possibilities as regards time by considering one memory expert from antiquity who is mentioned in connection with the method of places by the Romans. Cicero says that he had met “people with almost superhuman powers of memory”, including Metrodorus of Scepsis, who was a rhetorician at the court of Mithradates Eupator, King of Pontus,¹⁰ and Quintilian expresses wonder that Metrodorus should have found three hundred and sixty places in the twelve signs through which the sun moves.¹¹ L. A. Post has suggested, by way of explanation of this feat in relation to the year cycle, that Metrodorus was familiar with the astrological practice of dividing the zodiac not only into twelve signs but also into thirty-six decans with associated figures, each covering ten degrees, and that he probably grouped ten places under each decan figure (1931–32, 109).

The practice of grouping is clearly attested in *Ad Herennium*, where the author advises marking each fifth place and explains how this can be done: “For example, if in the fifth we should set a golden hand, and in the tenth some acquaintance whose first name is Decimus, it will then be easy to station like marks in each successive fifth place.”¹² The psychologist Allan Paivio comments that this passage illustrates the process of chunking or unitization by which subjects remember material where the number of elementary units exceeds memory span by chunking them into higher-order units that can function as the memorial elements (1979, 159, 212, 419).

He notes that G. A. Miller (1956) “found that the immediate memory span was relatively constant at ‘seven plus or minus two’ units over a wide range of materials and situations”. Accordingly, a set of ten, as in the places of the ten gods that are explored in this book, would be too large for optimum use as a memory system and would have to be broken up for ease of recall, and it is interesting in this connection to see that the set falls into smaller groupings of various kinds, including the triad already extensively explored by Dumézil. It will be seen in what follows that three old gods are duplicated by three young gods, so giving a coherent set of six, and that two goddesses are similarly paired as old and young. The king and the counter-king also form a pair, but break the pattern of the old and the young and occur instead as brothers.

A cosmology is a work of imagination which builds on properties in the real world, and it seems that, in order to enter into the Indo-European

one, we must patiently try to unravel the various strands that were of importance in the prehistoric society and draw together their connections with the external features of space and time.

As regards space, there is evidence of an Indo-European fourfold system of the world quarters related to the body quarters (Mallory and Adams 2006, 293–94). Attention is also paid to a vertical division of the cosmos into three or four levels which were seen to relate to sections of the upright human body, starting from the head, which corresponded to the sky (Lincoln 1986, 141–46). The problems raised by the apparent conflict between three-part and four-part divisions are discussed at various points in this book.

The commonly found equation of the cosmic level of earth with the female is accepted here, and the gender difference between it and the remaining components in the otherwise all-male system of cosmic levels appears to be one of the factors that has led to the varying treatment of the sequences. The colour triad of white, red, and black tied to Dumézil's three functions has been well established (Allen 1998, 165–66), and a fourth colour, yellow, clearly present in the Indian materials, can be related to the female.

As regards time, we can say that this cosmology is unlike that of equatorial peoples who note the passage of the sun overhead. It takes account of the solstices and, to a lesser degree, of the equinoctial points that lie between them, which gives a fourfold system; and there is another way of dividing the year into four, which is particularly prominent in the Celtic calendar, with divisions falling at the half-way points between those in the solstice series, so creating an overall division into eight (Lyle 2009). The calendar is one of the victims of the dispersal of information and an overall view of the Indo-European structure does not seem to have been offered in recent years. From the point of view of this study, the main importance of the calendar is as a mnemonic device, and this has determined the features to be discussed.

It is useful to look at formulations from both Indian and Celtic traditions, since each of these cultures has retained a strong awareness of a part of the calendrical heritage. The annual course of the sun is a dominant idea in India. Taking the winter solstice as a starting-point, sunrise and sunset can be seen each day occurring on the horizon farther and farther north in the northern hemisphere, reaching their farthest points at the summer solstice. The reverse process takes place between the summer solstice and the winter solstice. These two halves of the year are defined in India by terms that refer to this movement of the sun, the *uttara ayana* ("northern passage") which runs from the winter solstice to the summer

solstice and the *dakṣiṇa ayana* (“southern passage”) which runs from the summer solstice to the winter solstice (Smith 1994, 173; González Reimann 1988, 43). This clearly defines the solstices as important turning points, and it will be seen that the winter solstice marks the close of the period of death and the opening of the period of life.

The Celtic calendar is more valuable for an understanding of the concept of darkness (García Quintela 2006, 93–94). The year falls into four strongly marked seasons, and it seems important for an understanding of the system to recognize that it is a quarter, not a half, that is especially dark, and that the winter quarter is homologous, within the diurnal cycle, with the time of total darkness between last light and first light (dawn). These diurnal transition points are distinct from sunrise and sunset, which relate to the visibility of the sun and are homologous with the spring and autumn equinoxes. The winter quarter encloses, and has as its central point, the time of the winter solstice which corresponds to midnight. This quarter is the first of the two quarters that make up the winter half of the year, which is strongly indicated in the Celtic calendar as running, in terms of the current lunisolar year, from Samhain (1 November and its eve) to Beltaine (1 May and its eve). A representation of the system is given in Figure 1-1 which shows the winter half correlated with the above.¹⁵

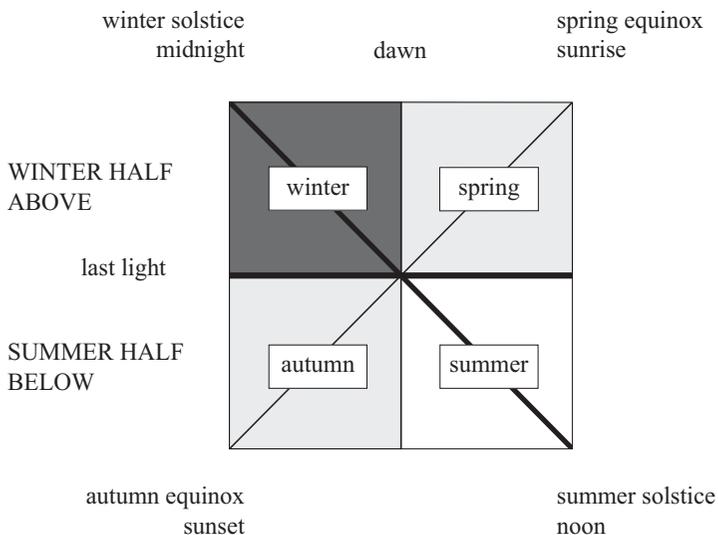


Figure 1-1. The year and the diurnal equivalent.

The year in the modern calendar is a solar one of 365 or 366 days, but the Indo-Europeans had a lunar year of 354 or 355 days with months of 29 or 30 days (with intercalation as required to keep the year approximately in step with the annual movement of the sun). Important for the overall cosmology is the stress on the period of the half-month, as can be seen, for example, in the Celtic Coligny calendar with its count up to fourteen or fifteen for the days of each half-month (Rees and Rees 1961, 87). It should be noted that the modern way of viewing the “half” of a totality such as the month or the year is misleading. The concept is rather that there are two distinct entities with their own qualities that come together to form a pair, as Kirsten Hastrup (1993) has shown in relation to the year.

The Indo-European half-month could be either light or dark, the light half being the waxing time from new to full moon and the dark half being the waning time from full to old moon. The two periods are referred to in India as the light wing and the dark wing, and there are twenty-four wings in a lunar year (Smith 1994, 173–74). In the schema used here (Fig. 1-2), the seasons also fall into “light” and “dark” halves that receive these qualities from correlation with the observed waxing and waning halves of the moon, with the light half-season in each case coming second in keeping with the strong idea of returning light at the solstice half-way through the winter quarter.

The human life cycle is another member of the homologous temporal sets and, in the age-grade system explored in the next chapter, there are four equal periods of life corresponding to the seasons, each of which is composed of “right-hand” and “left-hand” halves that correspond to the light and dark half-seasons. Since the proposed system was not just a spatiotemporal one, but had a social dimension as well, storage of information would have been secured at the level of the groups of people who enacted their parts in the overall ritual pattern.

Space can readily be divided into portions, and we need not wonder how people could create complex external memory systems without the aid of technology. The relationships that can be represented today by diagrams drawn or printed on paper or shown on a computer screen could equally well be represented by spatial relationships on the ground in a house or sacred enclosure, or a village or territory, or by the placement of groups of people on ritual occasions.