THE ANCIENT LANGUAGES OF ASIA MINOR

EDITED BY ROGER D. WOODARD

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This book, derived from the acclaimed *Cambridge Encyclopedia of the World's Ancient Languages*, describes the ancient languages of Asia Minor, for the convenience of students and specialists working in that area. Each chapter of the work focuses on an individual language or, in some instances, a set of closely related varieties of a language. Providing a full descriptive presentation, each of these chapters examines the writing system(s), phonology, morphology, syntax, and lexicon of that language, and places the language within its proper linguistic and historical context. The volume brings together an international array of scholars, each a leading specialist in ancient language study. While designed primarily for scholars and students of linguistics, this work will prove invaluable to all whose studies take them into the realm of ancient language.

Roger D. Woodard is the Andrew Van Vranken Raymond Professor of the Classics at the University of Buffalo. His chief research interests lie generally within the areas of Greek and Roman myth and religion, Indo-European culture and linguistics, the origin and development of writing among the Greeks, and the interaction between Greece and the ancient Near East. His other books include *The Cambridge Companion to Greek Mythology* (2007), *Indo-European Sacred Space* (2006), *The Cambridge Encyclopedia of the World's Ancient Languages* (2004), *Ovid's Fasti* (with A. J. Boyle, 2000), *Greek Writing from Knossos to Homer: A Linguistic Interpretation of the Origins of the Greek Alphabet* (1997), and *On Interpreting Morphological Change* (1990). He has also published numerous articles and served as President of the Society for the Study of Greek and Latin Language and Linguistics from 1992 to 2001.

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ROGER D. WOODARD

CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK
Published in the United States of America by Cambridge University Press, New York
www.cambridge.org
Information on this title: www.cambridge.org/9780521684965

First published in print format 2008

ISBN-13 978-0-511-39494-2 eBook (NetLibrary)

ISBN-13 978-0-521-68496-5 paperback

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Notes on numbering and cross-referencing

This volume is one of five paperbacks derived from *The Cambridge Encyclopedia of the World's Ancient Languages* (*WAL*), with the content now organized by region for the convenience of students and specialists wishing to focus on a given area of the ancient world.

Cross-references to material within this volume use its own internal chapter numbers. Any cross-references to other chapters of the original *WAL* refer to the chapter numbers in that work, and are prefixed by *WAL*. The contents list of *WAL* is reproduced at the back of this volume, as are the contents of the respective volumes of the paperback series derived from it.

Abbreviations

Any abbreviation that deviates from the form given below is noted within the text of the individual chapter or within a chapter-specific list.

Linguistic terms

abl.	ablative
abs.	absolutive
acc.	accusative
act.	active
adj.	adjective
adv.	adverb (adverbial)
all.	allative
anim.	animate
aor.	aorist
art.	article
asp.	aspirated
aux.	auxiliary (verb)
caus.	causative
cl.	clause
coll.	collective
com.	common
comp.	comparative
comt.	comitative
conj.	conjunction
conjv.	conjunctive
conn.	connective
cons.	consonant
constr.	construct (state)
cont.	continuant
cop.	copula
dat.	dative
def. art.	definite article
dem.	demonstrative
det.	determinate
detv.	determinative
dial.	dialect
dir.	directive
dir. obj.	direct object
disj.	disjunctive
du.	dual
dur.	durative
emph.-pcl.	emphatic particle
encl.	enclitic
eq.	equative
erg.	ergative
ext.	extended
fem.	feminine
final-pcl.	final-particle
fut.	future
gdve.	gerundive
gen.	genitive
ger.	gerund
impf.	imperfect
impftv.	imperfective
impv.	imperative
inan.	inanimate
inc.	inclusive
indef. art.	indefinite article
indet.	indeterminate
indic.	indicative
inf.	infinitive
instr.	instrumental
interr.	interrogative
intr.	intransitive
iter.	iterative
juss.	jussive
loc.	locative
mediopass.	mediopassive
mid.	middle

N.	noun
neg.	negative
neut.	neuter
nom.	nominative
NP	noun phrase
num.	number
obj.	object
obl.	oblique
opt.	optative
part.	participle
pass.	passive
pcl.	particle
per.	person
perf.	perfect
perfv.	perfective
perfvz.	perfectivizer
pert.	pertinentive
pl.	plural
pluperf.	pluperfect
poss. suff.	possessive suffix
postp.	postposition
PP	prepositional phrase
prec.	precative
preC.	preconsonantal
pref.	prefix
prep.	preposition
pres.	present
pret.	preterite
preV.	prevocalic
pro.	pronoun
prosp.	prospective
quot.	quotative particle
refl.	reflexive
rel. pro.	relative (pronoun)
rel./connec.	relative/connective
sg.	singular
soc.	sociative case
SOV	Subject–Object–Verb (word order)
spec.	specifier
splv.	superlative
stat.	stative
subj.	subject
subjunc.	subjunctive
subord.	subordinate/subordinator/subordination marker
subord.-pcl.	subordinating particle
suff.	suffix
s.v.	*sub voce*
top.	topicalizer
tr.	transitive
V.	verb
var.	variant
vent.	ventive
voc.	vocative
vow.	vowel
VP	verbal phrase

Languages

Akk.	Akkadian
Ar.	Arabic
Ass.	Assyrian
Av.	Avestan
Bab.	Babylonian
Cis. Gaul.	Cisalpine Gaulish
Eg.	Egyptian (Old, Late, Earlier)
Eng.	English
Etr.	Etruscan
Gk.	Greek
Gmc.	Germanic
Go.	Gothic
Hisp.-Celt.	Hispano-Celtic
Hitt.	Hittite
IE	Indo-European
Lat.	Latin
Lep.	Lepontic
Luv.	Luvian
Lyc.	Lycian
MA	Middle Assyrian
MB	Middle Babylonian
NA	Neo-Assyrian
NB	Neo-Babylonian
OA	Old Assyrian
O. Akk.	Old Akkadian
O. Av.	Old Avestan
OB	Old Babylonian
OHG	Old High German
OP	Old Persian
PG	Proto-Greek
PGmc.	Proto-Germanic
PIE	Proto-Indo-European
PIIr.	Proto-Indo-Iranian
PIr.	Proto-Iranian
PMS	Proto-Mije-Sokean
PS	Proto-Semitic
PSo.	Proto-Sokean
SB	Standard Babylonian

Skt.	Sanskrit
Sum.	Sumerian
Y. Av.	Young Avestan

Other

abbr.	abbreviation
dict.	dictionary
intro.	introduction
lit.	literally
NA	not applicable
NS	new series
trad.	traditional
translit.	transliteration

Preface

Preliminary remarks

What makes a language ancient? The term conjures up images, often romantic, of archeologists feverishly copying hieroglyphs by torchlight in a freshly discovered burial chamber; of philologists dangling over a precipice in some remote corner of the earth, taking impressions of an inscription carved in a cliff-face; of a solitary scholar working far into the night, puzzling out some ancient secret, long forgotten by humankind, from a brittle-leafed manuscript or patina-encrusted tablet. The allure is undeniable, and the literary and film worlds have made full use of it.

An ancient language is indeed a thing of wonder – but so is every other language, all remarkable systems of conveying thoughts and ideas across time and space. And ancient languages, as far back as the very earliest attested, operate just like those to which the linguist has more immediate access, all with the same familiar elements – phonological, morphological, syntactic – and no perceptible vestiges of Neanderthal oddities. If there was a time when human language was characterized by features and strategies fundamentally unlike those we presently know, it was a time prior to the development of any attested or reconstructed language of antiquity. Perhaps, then, what makes an ancient language different is our awareness that it has outlived those for whom it was an intimate element of the psyche, not so unlike those rays of light now reaching our eyes that were emitted by their long-extinguished source when dinosaurs still roamed across the earth (or earlier) – both phantasms of energy flying to our senses from distant sources, long gone out.

That being said, and rightly enough, we must return to the question of what counts as an ancient language. As *ancient* the editor chose the upward delimitation of the fifth century AD. This *terminus ante quem* is one which is admittedly "traditional"; the fifth is the century of the fall of the western Roman Empire (AD 476), a benchmark which has been commonly (though certainly not unanimously) identified as marking the end of the historical period of *antiquity*. Any such chronological demarcation is of necessity arbitrary – far too arbitrary – as linguists accustomed to making such diachronic distinctions as *Old English*, *Middle English*, *Modern English* or *Old Hittite*, *Middle Hittite*, *Neo-Hittite* are keenly aware. Linguistic divisions of this sort are commonly based upon significant political events and clearly perceptible cultural shifts rather than upon language phenomena (though they are surely not without linguistic import as every historical linguist knows). The choice of the boundary in the present concern – the ancient-language boundary – is, likewise (as has already been confessed), not mandated by linguistic features and characteristics of the languages concerned.

However, this arbitrary choice, establishing a *terminus ante quem* of the fifth century, is somewhat buttressed by quite pragmatic linguistic considerations (themselves consequent

to the whim of historical accident), namely the co-occurrence of a watershed in language documentation. Several early languages first make a significant appearance in the historical record in the fourth/fifth century: thus, Gothic (fourth century; see *WAL* Ch. 36), Ge'ez (fourth/fifth century; see *WAL* Ch. 14, §1.3.1), Classical Armenian (fifth century; see Ch. 11), Early Old Georgian (fifth century; see Ch. 12). What newly comes into clear light in the sixth century is a bit more meager – Tocharian and perhaps the very earliest Old Kannada and Old Telegu from the end of the century. Moreover, the dating of these languages to the sixth century cannot be made precisely (not to suggest this is an especially unusual state of affairs) and it is equally possible that the earliest attestation of all three should be dated to the seventh century. Beginning with the seventh century the pace of language attestation begins to accelerate, with languages documented such as Old English, Old Khmer, and Classical Arabic (though a few earlier inscriptions preserving a "transitional" form of Arabic are known; see *WAL* Ch. 16, §1.1.1). The ensuing centuries bring an avalanche of medieval European languages and their Asian contemporaries into view. Aside from the matter of a culturally dependent analytic scheme of historical periodization, there are thus considerations of language history that motivate the upper boundary of the fifth century.

On the other hand, identifying a *terminus post quem* for the inclusion of a language in the present volume was a completely straightforward and noncontroversial procedure. The low boundary is determined by the appearance of writing in human society, a graphic means for recording human speech. A system of writing appears to have been first developed by the Sumerians of southern Mesopotamia in the late fourth millennium BC (see *WAL* Ch. 2, §§1.2; 2). Not much later (beginning in about 3100 BC), a people of ancient Iran began to record their still undeciphered language of Proto-Elamite on clay tablets (see *WAL* Ch. 3, §2.1). From roughly the same period, the Egyptian hieroglyphic writing system emerges in the historical record (see *WAL* Ch. 7, §2). Hence, Sumerian and Egyptian are the earliest attested, understood languages and, *ipso facto*, the earliest languages treated in this volume.

It is conjectured that humans have been speaking and understanding language for at least 100,000 years. If in the great gulf of time which separates the advent of language and the appearance of Sumerian, Proto-Elamite, and Egyptian societies, there were any people giving written expression to their spoken language, all evidence of such records and the language or languages they record has fallen victim to the decay of time. Or the evidence has at least eluded the archeologists.

Format and conventions

Each chapter, with only the occasional exception, adheres to a common format. The chapter begins with an overview of the history (including prehistory) of the language, at least up to the latest stage of the language treated in the chapter, and of those peoples who spoke the language (§1, HISTORICAL AND CULTURAL CONTEXTS). Then follows a discussion of the development and use of the script(s) in which the language is recorded (§2, WRITING SYSTEMS); note that the complex Mesopotamian cuneiform script, which is utilized for several languages of the ancient Near East – Sumerian (*WAL* Ch. 2), Elamite (*WAL* Ch. 3), Hurrian (Ch. 9), Urartian (Ch. 10), Akkadian and Eblaite (*WAL* Ch. 8), Hittite (Ch. 2), Luvian (Ch. 3) – and which provides the inspiration and graphic raw materials for others – Ugaritic (*WAL* Ch. 9) and Old Persian (*WAL* Ch. 28) – is treated in most detail in *WAL* Chapter 8, §2. The next section presents a discussion of phonological elements of the language (§3, PHONOLOGY), identifying consonant and vowel phonemes, and treating matters such as allophonic and morphophonemic variation, syllable structure and phonotaxis, segmental length, accent (pitch and stress), and synchronic and diachronic phonological processes.

Following next is discussion of morphological phenomena (§4, MORPHOLOGY), focusing on topics such as word structure, nominal and pronominal categories and systems, the categories and systems of finite verbs and other verbal elements (for explanation of the system of classifying Semitic verb stems – G stem, etc. – see *WAL* Ch. 6, §3.3.5.2), compounds, diachronic morphology, and the system of numerals. Treatment of syntactic matters then follows (§5, SYNTAX), presenting discussion of word order and coordinate and subordinate clause structure, and phenomena such as agreement, cliticism and various other syntactic processes, both synchronic and diachronic. The description of the grammar closes with a consideration of the lexical component (§6, LEXICON); and the chapter comes to an end with a list of references cited in the chapter and of other pertinent works (BIBLIOGRAPHY).

To a great extent, the linguistic presentations in the ensuing chapters have remained faithful to the grammatical conventions of the various language disciplines. From discipline to discipline, the most obvious variation lies in the methods of transcribing sounds. Thus, for example, the symbols *ś*, *ṣ*, and *ṭ* in the traditional orthography of Indic language scholarship represent, respectively, a voiceless palatal (palato-alveolar) fricative, a voiceless retroflex fricative, and a voiceless retroflex stop. In Semitic studies, however, the same symbols are used to denote very different phonetic realities: *ś* represents a voiceless lateral fricative while *ṣ* and *ṭ* transcribe two of the so-called emphatic consonants – the latter a voiceless stop produced with a secondary articulation (velarization, pharyngealization, or glottalization), the former either a voiceless fricative or affricate, also with a secondary articulation. Such conventional symbols are employed herein, but for any given language, the reader can readily determine phonetic values of these symbols by consulting the discussion of consonant and vowel sounds in the relevant phonology section.

Broad phonetic transcription is accomplished by means of a slightly modified form of the International Phonetic Alphabet (IPA). Most notably, the IPA symbols for the palato-alveolar fricatives and affricates, voiceless [ʃ] and [tʃ] and voiced [ʒ] and [dʒ], have been replaced by the more familiar [š], [č], [ž], and [ǰ] respectively. Similarly, [y] is used for the palatal glide rather than [j]. Long vowels are marked by either a macron or a colon.

In the phonology sections, phonemic transcription, in keeping with standard phonological practice, is placed within slashes (e.g., /p/) and phonetic transcription within square brackets (e.g., [p]; note that square brackets are also used to fill out the meaning of a gloss and are employed as an element of the transcription and transliteration conventions for certain languages, such as Elamite [*WAL* Ch. 3] and Pahlavi [*WAL* Ch. 30]). The general treatment adopted in phonological discussions has been to present transcriptions as phonetic rather than phonemic, except in those instances in which explicit reference is made to the phonemic level. Outside of the phonological sections, transcriptions are usually presented using the conventional orthography of the pertinent language discipline. When potential for confusion would seem to exist, transcriptions are enclosed within angled brackets (e.g., <p>) to make clear to the reader that what is being specified is the *spelling* of a word and not its *pronunciation.*

Further acknowledgments

The enthusiastic reception of the first edition of this work – and the broad interest in the ancient languages of humankind that it demonstrates – has been and remains immensely gratifying to both editor and contributors. The editor would like to take this opportunity, on behalf of all the contributors, to express his deepest appreciation to all who have had a hand in the success of the first edition. We wish too to acknowledge our debt of gratitude to Cambridge University Press and to Dr. Kate Brett for continued support of this project

and for making possible the publication of this new multivolume edition and the increased accessibility to the work that it will inevitably provide. Thanks also go to the many kind readers who have provided positive and helpful feedback since the publication of the first edition, and to the editors of *CHOICE* for bestowing upon the work the designation of Outstanding Academic Title of 2006.

Roger D. Woodard
Vernal Equinox 2007

Preface to the first edition

In the following pages, the reader will discover what is, in effect, a linguistic description of all known ancient languages. Never before in the history of language study has such a collection appeared within the covers of a single work. This volume brings to student and to scholar convenient, systematic presentations of grammars which, in the best of cases, were heretofore accessible only by consulting multiple sources, and which in all too many instances could only be retrieved from scattered, out-of-the-way, disparate treatments. For some languages, the only existing comprehensive grammatical description is to be found herein.

This work has come to fruition through the efforts and encouragement of many, to all of whom the editor wishes to express his heartfelt gratitude. To attempt to list all – colleagues, students, friends – would, however, certainly result in the unintentional and unhappy neglect of some, and so only a much more modest attempt at acknowledgments will be made. Among those to whom special thanks are due are first and foremost the contributors to this volume, scholars who have devoted their lives to the study of the languages of ancient humanity, without whose expertise and dedication this work would still be only a *desideratum*. Very special thanks also go to Dr. Kate Brett of Cambridge University Press for her professionalism, her wise and expert guidance, and her unending patience, also to her predecessor, Judith Ayling, for permitting me to persuade her of the project's importance. I cannot neglect mentioning my former colleague, Professor Bernard Comrie, now of the Max Planck Institute, for his unflagging friendship and support. Kudos to those who masterfully translated the chapters that were written in languages other than English: Karine Megardoomian for Phrygian, Dr. Margaret Whatmough for Etruscan, Professor John Huehnergard for Ancient South Arabian. Last of all, but not least of all, I wish to thank Katherine and Paul – my inspiration, my joy.

Roger D. Woodard
Christmas Eve 2002

CHAPTER 1

Language in ancient Asia Minor: an introduction

ROGER D. WOODARD

In his discussion of the philosopher Cleobulus from the Rhodian city of Lindus – at times identified as one of the Seven Sages of ancient Greece – Diogenes Laertius, chronicler of the philosophers, rehearses for his readers the inscription that was carved upon the tomb of the Phrygian King Midas – reported to have been composed by the wise and riddling Cleobulus (though some say it was Homer's work, commissioned by Midas' sons after Homer had lost a poetic contest to Hesiod):

> I am a maid of bronze, and upon the tomb of Midas do I lie.
> As long as water flows and tall trees bloom and leaf,
> And the sun shall rise and shine, and moon so bright,
> And rivers run, and the sea shall surge upon the shore,
> Remaining here upon his tomb, washed with many tears,
> I shall declare to those who pass that here does Midas buried lie.
> (*Lives of Eminent Philosophers* 1.89–90)

If Midas' tomb and its inscription shall stand forever, resisting the onslaught of time and testifying to the Phrygian king's existence upon this earth, until earth no longer is, the people over whom this monarch reigned and the language that they spoke would seem to occupy a no less transcendent place in the unwinding of time – at least to judge from Herodotus' report of a discovery that was made in the reign of the Egyptian Pharaoh Psammetichus:

> The Egyptians – before Psammetichus ruled over them – considered themselves to be the first of all peoples. But when Psammetichus became king he wanted to find out who was actually the first to exist; and since that time, they have believed the Phrygians to be earlier than themselves, but the Egyptians to be earlier than all others. Since he was not able by inquiry to discover anything at all concerning who among humankind existed first, he designed an experiment. He took two newborn babies from some random people and gave them to a shepherd to rear among his flocks, commanding that no one should speak a sound in their presence, that they were to lie by themselves in an out-of-the-way spot, and that at appropriate times the shepherd should bring goats to them, give them as much milk as they wanted, and do whatever else needed to be done. Psammetichus did this and gave these instructions because he wanted to hear what language the children would first speak, after they had moved beyond the stage of unintelligible babbling. And it happened – when the shepherd had followed the king's orders for two years, he one day opened the door, and both children came running to him, holding out their hands, saying *bekos*. When he first heard this, the shepherd mentioned nothing about it. But making regular trips, he noticed the repetition of this word; and so reporting it to the Pharaoh, the shepherd was commanded to bring the children into his presence. When Psammetichus heard it for himself, he made inquiries to find who it was among humankind that called something *bekos*; and having inquired, he discovered that it is what the Phrygians call bread. And so, on the weight of this evidence, the Egyptians conceded that the Phrygians are older than themselves. (*Histories* 2.1–2)

The tale that the fifth-century BC Greek historian relates is a remarkable one on several counts, not least of which are Psammetichus' application of something approaching the scientific method (chilling, and not sufficiently unfamiliar, in its disregard for the lives affected), and the Egyptians' willingness to concede existential priority to the Phrygians on the basis of the outcome of Psammetichus' experiment.

Phrygian is but one of the numerous languages known from ancient Anatolia (Asia Minor) – chiefly Indo-European languages – and certainly not the earliest indigenous language to be *attested* in that locale. Pride of place in that regard goes to Hurrian, about which we will have more to say below, and Hittite (see Ch. 2) – the latter being the earliest attested of *all* Indo-European languages (first texts dated to *c.* seventeenth century BC), not only of those of Anatolia.

Somewhat paradoxically, this most anciently documented Indo-European linguistic form, Hittite, was one of the most recently "discovered": fragments of Hittite texts were found in the Turkish village of Boğazköy – location of the ancient Hittite capital of Hattusas (or Hattuša; see Güterbock 1997) – in the last decade of the nineteenth century, leading to excavation of the site – beginning in 1906 and continuing to the present day – and the unearthing of many thousand Hittite documents. By 1917 the language of the documents had been deciphered – chiefly the work of a Czech scholar, Friedrich Hrozný – to reveal, to the astonishment of many, a language having an archaic Indo-European grammar and familiar Indo-European vocabulary such as *wa-a-tar* 'water' and *gi-e-nu* 'knee'.

Yet the Hittites are not the earliest speakers of central Asia Minor of whom we have knowledge. They were preceded in that place by a non-Indo-European people who lent their name to the Hittite state – the "land of *Hatti*" – and provided the nomenclature by which we identify their Indo-European successors, the *Hittites*. These were the Hattians; episodic traces of their language, Hattic, are preserved in Hittite texts, chiefly religious texts, in which the language appears to serve a liturgical function.

The chief graphic medium by which Hittite language is preserved is the clay tablet impregnated with cuneiform script. The writing system, like the materials for writing, was acquired from Akkadian-speaking peoples of Mesopotamia, perhaps by way of Syria (see Ch. 2, §2 and, on Akkadian cuneiform, Ch. 4, §2 in *The Ancient Languages of Mesopotamia, Egypt, and Aksum*). The cuneiform archives from Hattusas preserve not only Hittite but other, related, Indo-European languages – namely Luvian (see Ch. 3) and Palaic (see Ch. 4), the latter perhaps already an extinct liturgical language by the time it first appears in cuneiform documents of the sixteenth century BC – as well as non-Indo-European languages: Sumerian and Akkadian, hailing from Mesopotamia (see Chs. 2 and 4 in *The Ancient Languages of Mesopotamia, Egypt and Aksum*), and Hurrian, indigenous to southeastern Anatolia and contiguous areas (see Ch. 9).

Cuneiform, while far and away the principal script of Hittite documentation, is not the only mode of writing utilized for recording that earliest-evidenced Indo-European language. Use was also made of a syllabo-logographic hieroglyphic script (see Ch. 2, §2 and Fig. 2.1) – labeled "hieroglyphic" because of the pictorial nature of its symbols. Like cuneiform, the hieroglyphic script was acquired for – and not devised for – writing Hittite; it appears to have been designed for spelling Luvian, and it is this language that predominantly evidences the script (see Ch. 3, §2.2). Several of the Anatolian hieroglyphs bear similarity to symbols of the undeciphered pictographic script of Minoan Crete (see the Introduction to the companion volume entitled *The Ancient Languages of Europe*), but the nature of the "relationship" of the two is perhaps more likely of an indirect nature rather than direct, though the presence of Luvian (or "Luvoid") speakers in pre-Greek Crete has long been speculated.

The above-mentioned Anatolian language of Hurrian (see Ch. 9) – with texts recovered from numerous sites across the Near East – is not only non-Indo-European, but has no known linguistic relative at all, other than the somewhat later attested Urartian – also spoken in eastern Anatolia and certainly sharing a common origin with Hurrian (see Ch. 10, §1.1). The antiquity of Hurrian eclipses even that of the far more copiously attested Hittite, with the earliest known Hurrian text dating to *c.* 2000 BC. Hurrian, as already noted, and the closely related Urartian are both written with Mesopotamian cuneiform syllabaries (see Ch. 9, §2.1; Ch. 10, §2.1); a few Hurrian texts from Ugarit in Syria utilize the Ugaritic cuneiform consonantal script (see Ch. 9, §2.2; *WAL* Ch. 9, §2), while a small number of Urartian inscriptions are recorded with pictographic characters (see Ch. 10, §2.2).

With the appearance of Urartian, we have arrived in the Anatolia of the first millennium BC – the language is attested from the ninth to the seventh centuries before the Christian era. The Hurrian civilization had been overwhelmed by Hittites and Assyrians, and the Hittite Empire had subsequently collapsed – part of a general conflagration that seems to have swept across the eastern Mediterranean beginning *c.* 1200 BC in conjunction with the appearance of so-called "Sea Peoples," mentioned in Egyptian and Akkadian documents, ushering in a dark age.

In the wake of the disappearance of Hittite and Hurrian language, there surface in the historical record not only Urartian, but several Indo-European Anatolian languages. Luvian reappears in southern Anatolia and northern Syria early in the first millennium, written with the hieroglyphic script (see Ch. 3, §§1–2), and the closely related language of Lycian (see Ch. 5) emerges in the middle of the millennium in southwestern Anatolia. Inscriptions in Lydian (see Ch. 6), a language spoken in western coastal Anatolia, appear *c.* 700 BC. The less-well attested Carian (see Ch. 7), whose speakers were sandwiched between Lycian and Lydian areas along the western coast of Anatolia, is evidenced as early as about the seventh century BC; according to Diogenes Laertius, Cleobulus, the philosopher and reported composer of the Midas tomb inscription, was claimed by some to be from Caria (rather than Rhodes, the Greek island lying off the southwest coast of Lycia). Each of these three western Anatolian languages – Lycian, Lydian, Carian – was written with its own alphabetic script – all adapted from the Greek alphabet. To this list of first-millennium BC Anatolian languages can be appended Pisidian and Sidetic, even more meagerly attested than Carian (see Ch. 2, §1; Ch. 6, §4.1).

And so we come again to Phrygian. While, like Hieroglyphic Luvian, Lycian, Lydian, and Carian, Phrygian (see Ch. 8) is an Indo-European language of Anatolia of the first millennium BC, it is not a member of that Indo-European subfamily dubbed "Anatolian" – i.e. that group to which Hittite, Luvian, Lycian, and so forth belong. Psammetichus' experiment may have demonstrated to the Egyptians' satisfaction that the Phrygians, and their language, enjoy existential primacy, but exactly where the speakers of that language were prior to their appearance in the historical record in central Anatolia in the eighth century BC (often in former Hittite areas) is a matter of uncertainty. The ancestors of the documented Phrygians are perhaps to be identified with the people called the Mushki, mentioned in Assyrian documents from the end of the second millennium BC.

Among Indo-European languages, Phrygian is most closely related to Greek (see Ch. 8, §1.5), and, in concord with this linguistic similarity, the Phrygians appear to have entered Anatolia from the Balkans (see Ch. 8, §1). An early Phrygian (that is, Paleo-Phrygian) inscription from a "Tomb of Midas" reads "Ates . . . has dedicated [me] to Midas, *lavagatas* and *vanax*" (see Ch. 8, §6). The Phrygian terms *lavagates* and *vanax* are matched by the Mycenaean Greek (on which, see *WAL* Ch. 25, §§1.2 and 2.1) forms *lāwāgetās* and *wanax* – titles

denoting respectively the "leader of the people" (apparently the commander of military forces) and the king, who alone seems to outrank the *lāwāgetās*, to judge by Mycenaean inscriptions in which the two terms co-occur. The older Phrygian documents, those preserving Paleo-Phrygian, are written with the Phrygian alphabet, an adaptation of the Greek alphabet; Neo-Phrygian, attested in the first centuries AD, is written with the Greek alphabet.

The Indo-European language of Armenian (see Ch. 11) first makes its appearance in eastern Anatolian regions formerly inhabited by the non-Indo-European Urartians. A group of the aforementioned Mushki has likewise been injected into discussions of Armenian origins. While the term *Armenia* (which is not the Armenian idiom of self-designation) is first attested in a Persian inscription of the late sixth century BC, documentation of the Armenian language is virtually non-existent for almost another thousand years (see Ch. 11, §1). In the early fifth century AD, an Armenian cleric named Mesrop is said to have devised an alphabet for spelling Armenian, with which an Armenian – Classical Armenian – translation of the Bible was produced (see Ch. 11, §§1–2). Armenian forms its own subgroup within the Indo-European family; its closest linguistic relatives are Greek (see *WAL* Chs. 24–25; on this relationship, see especially Clackson 1994) and Indo-Iranian (see *WAL* Chs. 26–30).

North of Armenia, on the northeastern lip of Anatolia, extending up into the highlands of Transcaucasia, Georgian, a Kartvelian language, is spoken. Early Georgian is attested in late antiquity, first documented at about the same time that Classical Armenian appears. The non-Indo-European Georgian shares distinct phonological features with the Indo-European Armenian (see Ch. 11, §1), revealing a prolonged period of Georgian–Armenian interaction; and Armenian speakers may well have provided the conduit by which Persian and Syriac vocabulary entered Georgian (see Ch. 12, §6). According to tradition, St. Mesrop, the cleric credited with creating the Armenian script, also devised the Georgian alphabet in the fifth century AD. "Nevertheless," writes David Braund in his *Georgia in Antiquity* (p. 216):

> . . . the Georgian language must have been current in Georgia centuries before it was written down in the fifth century, since it is not Indo-European and is undoubtedly indigenous . . . A neglected passage of Fronto [Marcus Cornelius Fronto, tutor to the Roman emperor Marcus Aurelius, in the second century AD] may be the earliest allusion to spoken Georgian: Fronto imagines the Iberians [of eastern Transcaucasia] addressing the emperor Marcus in their own incomprehensible tongue. In Iberia, several languages might be used: there may be some substance to the medieval Georgian tradition that the kings of Iberia were fluent in six languages. In antiquity, as today, Transcaucasia was very much a multilingual region, as our sources regularly observe.

Colchis, in western Georgia, was colonized by the Greeks beginning in at least the sixth century BC, and possibly earlier (on the difficulty of identifying when "colonization" *per se* begins, see Braund 1994:87–118). The region is well known in Greek myth as the legendary locale to which the hero Jason and his Argonaut companions sailed in search of the Golden Fleece. Among the Greeks, Colchis enjoyed the reputation of being a place of great natural wealth; Strabo, the Greek geographer of the first centuries BC and AD, knows Colchis as a region rich in quality produce – "except for its honey, which tends to be bitter" – and famed for its manufacture of linen (*Geography* 11.2.17). It is Colchian linen, in fact, that Herodotus adduces as one piece of evidence – along with physical and cultural similarities – to support his claim that in origin "the Colchians are Egyptians" – a view that he reports to be held by both Colchians and Egyptians themselves ("when I began to reflect on this, I questioned both groups"; *Histories* 2.104). And concerning linen, the historian reports: "They [the Colchians] and the Egyptians alone work linen in their own particular way; and

they resemble each other in both overall lifestyle and in language. Colchian linen has been called 'Sardonian' by the Greeks, and, naturally, the linen that comes from Egypt is called 'Egyptian'" (*Histories* 2.105). And so it seems that, again courtesy of Herodotus, we have come to the Egyptians, passing from Phrygians to Georgians, ending as we began.

But what of the tomb of the Phrygian king Midas – that one bearing the inscription by the Greek sage Cleobulus of Lindus – with its claims of a permanence coequal with that of the earth as humankind has known it from earliest ages? Where are that tomb, its inscription, and the bronze maid proclaiming her message to all who pass by? Where is the *language* of the king who lay buried in that tear-washed tomb – the first of all languages for Psamettichus? One is reminded of lines from Auden that seem to frame a response to such ponderings:

> Time will say nothing but I told you so,
> Time only knows the price we have to pay;
> If I could tell you I would let you know.
> . . .
> The winds must come from somewhere when they blow,
> There must be reasons why the leaves decay;
> Time will say nothing but I told you so.
> from W. H Auden, "If I Could Tell You"

Simonides of Ceos, the Greek lyric poet of the sixth and fifth centuries BC, is more direct about the rash romanticism of the Rhodian sage (fragment 581):

> What one, trusting in his wits, would commend Lindus-dwelling Cleobulus,
> Who against ever-flowing streams and flowers of spring
> And fiery sun and golden moon
> And swirling seas would set a gravestone's might?
> All things pale before the gods. And stone
> Even mortals' hands do break and split.
> That judgment was a fool's.

Bibliography

Auden, W. 2006. *W. H. Auden: Collected Shorter Poems 1927–1957*. London: The Folio Society.
Braund, D. 1994. *Georgia in Antiquity*. Oxford: Oxford University Press.
Clackson, J. 1994. *The Linguistic Relationship Between Armenian and Greek*. Oxford: Blackwell.
Güterbock, H. 1997. "Boğazköy." In Meyers 1997, vol. I, pp. 333–335.
Meyers, E. (ed.). 1997. *The Oxford Encyclopedia of Archaeology in the Near East* (5 vols.). Oxford: Oxford University Press.

CHAPTER 2

Hittite

CALVERT WATKINS

1. HISTORICAL AND CULTURAL CONTEXTS

Hittite is a member of the Anatolian branch of the Indo-European family, and the earliest attested Indo-European language. Anatolian is generally regarded as the first branch to have separated from the other Indo-European languages. Aside from Hittite it includes Luvian (Cuneiform and Hieroglyphic) and Palaic, all from the second millennium BC, and Hieroglyphic Luvian, Lycian, Lydian, and the scantily attested Carian, Pisidian, and Sidetic in the first millennium BC.

The speakers of Hittite were in place in Central Anatolia by the nineteenth–eighteenth century BC, since a few words of the language (notably *išḫiul-* "contract") appear in Old Assyrian documents from the merchant colonies like *Kārum Kaneš*, Hittite *Nešaš*, modern Kültepe. As an Old Hittite origin legend shows (Otten 1973), the Hittites regarded this city as their original home; it is the base of their designation of their own language, ^{URU}*nišili, nešumnili* "in Hittite," literally "in the language of (the inhabitants of) Nešaš." With the beginning of our documentation of the language proper we distinguish Old Hittite (seventeenth or early sixteenth century–*c.* 1500), Middle Hittite (*c.* 1500–*c.* 1375), and Neo-Hittite (*c.* 1375–*c.* 1200). Adherents of the "short chronology" would lower these dates somewhat, particularly at the upper end.

Speakers of what was to be the Anatolian branch of the Indo-European family apparently migrated into Asia Minor, probably from the Balkans across the Bosporus, in the course of the third millennium BC. It is not unlikely, though not susceptible of proof, that these immigrating future Anatolians were already dialectally differentiated into (at least) Pre-Hittites, Pre-Palaites, and Pre-Luvians. On the Central Anatolian plateau Pre-Hittites came in contact with the autochthonous Anatolian Hattic speakers, from whose self-designation (KUR ^{URU}*Ḫatti* "land of Hatti," cf. *ḫattīli* "in Hattic") the Hittites took their name, as well as many aspects of their culture and religion.

The earliest Hittite history is one of warring petty kingdoms, described in our earliest Hittite text, that of Anittas (Neu 1974), eighteenth/seventeenth century BC. These city-states were subsequently united to form the Old Kingdom under Hattusilis I and his adopted son Mursilis I (seventeenth/sixteenth century), a period of rapid Hittite expansion into Syria, Hurrian Mittani, and Western Anatolia, "making the sea the boundaries." Internal dissension and pressure from the hostile nomadic Kaska people to the north brought about retraction of Hittite hegemony during the succeeding Middle Kingdom, *c.* 1500–1375. The New Kingdom or Empire was founded by Suppiluliumas I, *c.* 1375 (he spoke late Middle Hittite; his son Mursilis III spoke classical Neo-Hittite). This was the period of greatest expansion of the Hittites and their role on the international scene. The Hittite Empire

came to an abrupt end shortly after 1200, during the reign of Suppiluliumas II, with the destruction of Hattusas by an unknown people, in all likelihood part of the general upheaval in the Eastern Mediterranean area caused by the "Peoples of the Sea," the "*Šikalayū* who live in ships," the people from the land of *Šikila*, as Suppiluliumas II referred to them in a letter to a prefect of Ugarit (Dietrich and Loretz 1978).

The Hittite language is preserved for us on clay tablets written in a cuneiform syllabary, the archives of the palace or central authority in the capital city of Hattusas (Boğazköy, now Boğazkale), and a few other urban centers like Maşat, Ortaköy, and Kuşaklı, the tablets themselves written over the period from the seventeenth/sixteenth to the end of the thirteenth century. One of the important functions of the Hittite "state" was to assure the regular performance of ritual, and the correct preservation of the appropriate words and actions of ritual procedure. The great majority of our texts deal with religion and the administration of cult, festivals, and both public and private rituals, as well as magic, oracles, and divination. Our texts also include the Hittite political archives, treaties, political and some personal correspondence, land grants, as well as historical texts and annals (by regnal year) of individual rulers (see Beckman 1996). We find also "instructions" for religious and secular administrations and military personnel, all – like the treaties with foreign powers – regarded as engagements of personal fealty and labeled simply *išḫiul-* "contract." We have a highly original law "code" composed and written down originally in the Old Kingdom, together with later copies (Hoffner 1997), but only a few documents dealing with the administration of public or private justice. Literary texts are primarily mythological (Hoffner 1990) in character, and both native compositions and translations from Hattic, Hurrian, and Sumero-Akkadian sources. The archives also include foreign-language cultic material, sometimes with Hittite translation, in Hattic, Hurrian, Sumerian and Akkadian, Cuneiform Luvian, and Palaic, attesting the significant cultural influence of all of these. For a catalogue of the Hittite texts then known see Laroche 1971 and supplement.

Hittite was clearly the language of the ruling classes, of public and private administration, and of the army, as our texts show. The changes over the four or five hundred years of our documentation of Hittite are entirely consistent with the development of a spoken language. At the same time, the extensive Luvian elements in Hittite personal names, the practice in the later empire of setting up large public inscriptions in Hieroglyphic script and in the Luvian language, and the frequency of Luvian loanwords in Hittite texts, often marked as foreign by the prefixation of the *Glossenkeil* (𒹨), would point to widespread use of Luvian and bilingualism.

Dialectal variation is virtually nonexistent in Hittite, not surprisingly since our texts are probably all produced in the same tradition of professional scribes. One or two texts like KUB 48.69 point to genuine dialect variation, but by and large they are remarkably homogeneous, as is to be expected in a literary language.

2. WRITING SYSTEMS

Our preserved Hittite texts were written by professional scribes on clay tablets, impressed with a stylus and then baked (plus one bronze tablet with signs hammered in). The writing system is the Mesopotamian cuneiform syllabary of the second millennium, borrowed probably in Northern Syria from a Peripheral Akkadian (see *WAL* Ch. 8 §1.1) scribal school source, in the seventeenth century at the beginning of the Old Kingdom period. The signs in use in Boğazköy most closely resemble the Old Babylonian variants (Labat 1976).

The Old Assyrian variety of the merchant colonies in central Anatolia at an earlier period left no trace on Hittite literacy.

In addition to the cuneiform written by professional scribes on clay tablets, the Hittites also made use of another syllabary, the hieroglyphic. This syllabary, which made extensive use of logograms as well, was used for monumental carved rock inscriptions in the Luvian language in the empire (and continued in Southeastern Anatolia and Syria to *c.* 750 BC), and from the time of the Old Kingdom on, for names and titles on seals. The latter were doubtless logographic and not "in" any language, but read in Hittite context as Hittite, like numerals in modern scripts. The same may have been true for the monumental public inscriptions in the Empire, and for the wooden tablets inscribed with hieroglyphs the existence of which is evidenced in text references. For discussion of the hieroglyphic script see Chapter 3.

The cuneiform syllabary notes syllables of the structure V (the vowels *a*, *e*, *i*, *u*), CV (i.e., consonant + vowel), VC, and some CVC. The sets of CV and VC signs are incomplete for inherent *e*, and CVC signs distinguish only the vowels *a*, *i*, *u*, and these not always. For the cuneiform script, see Appendix 1.

The writing system also makes use of a number of logograms from Sumerian (*Sumerograms*) and Akkadian (*Akkadograms*, written syllabically). The Hittitological convention is to transliterate syllables, writing Hittite in lower case, Sumerograms in roman capitals, and Akkadograms in italic capitals: *at-ta-aš* "father," *e-eš-zi* "is," LÚ "man," LUGAL "king," *BI-IB-RU* "rhyton," *QA-TAM-MA* "as follows." *Narrow transcription* separates each sign of a word by a hyphen, as in *at-ta-aš*, *e-eš-zi*; *broad transcription* (with greater phonetic accuracy) erases the hyphens and deletes one of the identical vowels of CV–VC sign sequence, as in *attaš*, and if two vowels remain, marks a macron, as in *ēšzi*.

Akkadograms and Sumerograms sometimes alternate with syllabic Hittite spellings in duplicate texts, which shows that they functioned as rebus writing, purely graphic variants of the Hittite words actually pronounced, just as the Sumerograms were read and pronounced as Akkadian in the source script of the Hittite writing system. The same conclusion is indicated by the common practice of following a Sumerogram with a phonetic complement which may serve to indicate grammatical endings. Thus, for example, the Sumerogram DINGIR "god" may be followed by the Akkadian phonetic complement *LIM*, conventionally transliterated superscript DINGIR^{LIM}, to write the (Old) Akkadian genitive singular *ILIM*. So read in Akkadian, the whole in Hittite may receive a further phonetic complement written syllabically, DINGIR^{LIM}*-na-aš*, to write the genitive singular of the word for "god" in Hittite, *šiunaš*.

A Sumerian scribal practice, continued as graphic convention in Akkadian and then in Hittite, is the use of *determiners* prefixed to words and names to classify them by semantic category. These are conventionally transliterated superscript, and were doubtless not pronounced in Hittite (or Akkadian). They indicate categories like male person (^{m} or ^{I}), female person (^{f}), god/goddess (^{D} abbreviated for ^{DINGIR}), city (^{URU}), stone (^{NA_4}), wooden object (^{GIŠ}), and the like.

A further, specifically Hittite graphic convention is to mark grammatical cases of nouns or names written as logograms by preceding them with an Akkadogram. Thus, *ŠA* (Akk. "the one of") marks genitive; *I-NA* (Akk. "in") indicates dative-locative, and "allative" with inanimates; *A-NA* (Akk. "to") indicates dative with animates; *IŠ-TU* (Akk. "from, by") marks both ablative and instrumental. Proper names preceded by determiner or Akkadographic case-marker are frequently, though not always, unmarked for case and thus function by graphic convention as quasi-logograms.

We may illustrate these spelling conventions with Figure 2.1 (Bo 91/1314), a seal of the founder of the empire (from Otten 1995). The outer and inner ring legends are cuneiform:

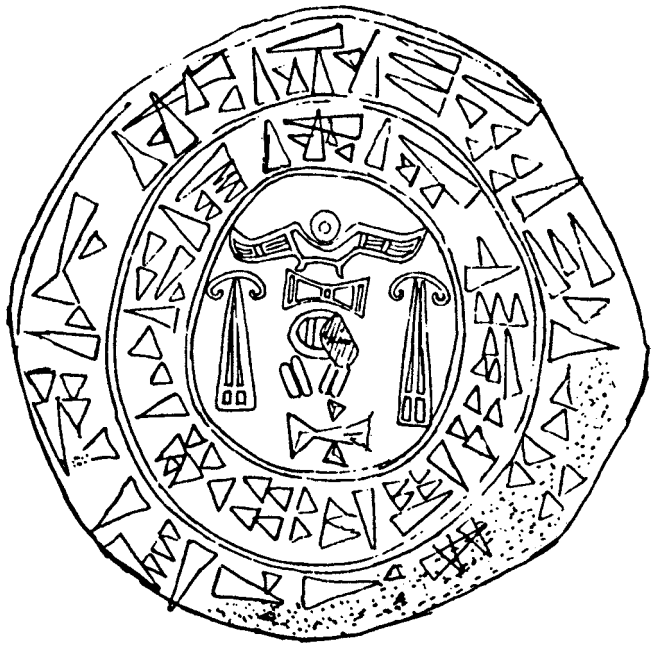


Figure 2.1 The seal of Suppiluliumas I
^{NA_4}KIŠIB ^{m}Šu-up-pí-lu-li-u-ma LUGAL GAL UR.SAG
DUMU ^{m}Du-ut-ḫa-li-ya LUGAL GAL UR.SAG
Seal (of) Suppiliuliumas, great king, hero,
Son (of) Dutḫaliyas, great king, hero.

The inner field in hieroglyphs shows the royal emblem of the winged sun, corresponding to the title ^{D}UTU^{ŠI} for ^{D}*ŠAMŠI* "my sun," over the signs right and left MAGNUS REX "great king" (hieroglyphs are conventionally transcribed in Latin) flanking the three signs of the name: PURUS.FONS-*ma/i* for Suppi-luli-(u)ma (PURUS = Hittite *šuppi-* "pure, sacred," FONS = Hittite *luli-* "pond, spring," with phonetic complement). Under the name as space-filler is the (cuneiform) Sumerogram TI "life," upside down.

In the four to five hundred years of its documented history the Hittite cuneiform writing system and scribal practices did not undergo any massive or dramatic changes. But small changes in the shapes of certain signs and the general appearance of the tablets and their *ductus* over this period have enabled scholars to date the tablets fairly precisely to the early or late Old, Middle, and Neo-Hittite periods respectively. The original impetus was given by the discovery in the early 1950s of a tablet fragment (the Zukraši-text, Laroche CTH 15) in a stratigraphically certain Old Kingdom archeological context; its characteristic *ductus* was found to recur on many of the tablets already unearthed from the palace archives. Those tablets exhibiting the old *ductus* were then seen to preserve certain characteristic features of language and orthography which could be identified as archaic. The periodization of our corpus of texts and the attendant conclusions about the history of the Hittite language have been the subject of intense investigation by philologists and linguists in the latter part of the twentieth century, and the results are by now generally accepted. We can distinguish paleographically Old, Middle, and New Script (OS, MS, NS); original compositions from these periods are in Old, Middle, and Neo-Hittite (OH, MH, NH). Documents were often recopied later than their composition, such that we can classify the tablets, following the

convention of *The Chicago Hittite Dictionary*, as early or late OH/OS, OH/MS, OH/NS, MH/MS, MH/NS, NH/NS.

At the time of the German archeological excavations at Boğazköy under Hugo Winckler beginning in 1906, which unearthed the initial collection of tablets, the Akkadian cuneiform writing system had already been deciphered. The Hittite tablets could therefore be "read," i.e., transliterated, but not understood. The actual decipherment of the language and its identification as Indo-European was the work of a young Czech Assyriologist, Bedřich (Frédéric) Hrozný, during World War I. His first-hand account of his decipherment can be found in the article "Hittite language" of *The Encyclopaedia Brittanica* (14th edition).

3. PHONOLOGY

3.1 Graphic considerations

Any discussion of the phonological system of Hittite must begin with consideration of the distinctions made by the cuneiform writing system. The phonological structure of Hittite was clearly different from that of the Semitic language from which the cuneiform was first borrowed. For the details of what follows see Melchert 1994.

Using the symbols V = vowel, C = consonant, we may state that the cuneiform syllabary had signs of the structure V, CV, VC, and CVC (see the above discussion of the Hittite writing systems). The vowels were *a*, *e*, *i*, *u*, and the consonants of the CV series *p*, *t*, *k*, *q*, *b*, *d*, *g*, *ḫ*, *š*, *s*, *z* (an affricate *ṯs*, Semitic *ṣ* and *z*), *m*, *n*, *r*, *l*, *w*, *y*. CV signs with inherent vowel distinguish *a*, *i*, *u*, but not all possibilities with inherent *e* are present: thus *ta*, *da*, *ti*, *di*, *tu*, *du*, and *te* but not **de*, and only *ya*, *wa* (and secondarily acrophonic wi_5 after GEŠTIN "wine," Hitt. *wiyana-*). The VC series made fewer distinctions, merging voice (*at* = *ad*) and often ignoring inherent *e* (*iš* vs. *eš*, but only *im*, for example), and the CVC series was less systematic (e.g., *šap* but no **šak*). For writing, Hittite *ka* and the rarer *qa* (ka_4) are treated as equivalent, and with few exceptions *š* (*a*, etc.) is used exclusively for writing the single Hittite sibilant, to the exclusion of *s* (*a*, etc.).

The Hittites did not utilize the Semitic orthographic opposition of voiced : voiceless (*da* : *ta*, *ga* : *ka*, etc.), but rather, most clearly in intervocalic position, opposed simple versus geminate (double) consonants, thus *a-ta* (or *a-da*) versus *at-ta* (or *ad-da*), *a-ḫa* versus *aḫ-ḫa*, etc., probably pointing to a phonological contrast of lax : tense (lenis : fortis) respectively. In the case of *š* and the liquids and nasals simple versus double consonants likewise contrasted: *a-na* versus *an-na*, *a-ša* versus *aš-ša*. In initial position the same word could in principle be written with either the voiced or the voiceless sign, the choice governed by scribal convention, for example, third singular *da-a-i* "puts" but third plural *ti-ya-an-zi* "they put." Previously regarded as arbitrary, this fact has now been explained as indicating a merger of inherited voiced : voiceless (lax : tense) stops in initial position, with generalization of the voiceless or tense stop. Word-finally, the voiced or lax stops were generalized, as is clear from spellings with simple stop before enclitic: *pait* = *as* [paydas] "went he," *natid* = *a* [nadīda] "but with an arrow."

3.2 Consonants

The Hittite inventory of phonemic consonantal segments distinguishes four places of articulation (labial, apico-dental, velar, and labiovelar, the last-named usually written with the *ku* sign before a vowel or consonant, but occasionally *uk* before a consonant), five

manners of articulation (stop, affricate, fricative, nasal, liquid, and glide), and two glottal modes (tense/voiceless and lax/voiced). Here and below, the symbols <> enclose spelling (orthographic) forms.

(1) Hittite consonantal phonemes

p	t		k	k^w
b	d		g	g^w
	ʦ <z>			
	s			H <-ḫḫ->
				h <-ḫ->
m	n			
	l	r		
w		y		

3.3 Vowels

The inventory of vowels has four members and a correlation of length. Long vowels are noted (inconsistently) by so-called *scriptio plena* or plene-writing, C*a*-*a* versus C*a*, C*a*-*a*-*a*C versus C*a*-*a*C, i.e., [Cā] versus [Ca], [CāC] versus [CaC]:

(2) Hittite vowel phonemes

i	u	ī	ū
e	a	ē	ā

Diphthongal combination like that of *ă* and the glides *w* and *y*, noted (*a*-)*a*-*i*, (*a*-)*a*-*u*, are also permitted.

3.4 Phonological variation

Morphophonemic variants are not numerous. A *w* adjacent to *u* is replaced by *m*. This involves the sequence *uw*V, in part generated from *w*V after a heavy syllable by the inherited feature known as Sievers' Law, in part from *u*+*w*V across morpheme boundary, as well as the mirror image V*w* (+)*u*. Compare first plural *tar-weni* "we say" but *šarr-umeni* "we break," *tepnu-meni* "we belittle," or nominative plural *idālaw-eš* "bad" but accusative plural *idālam-uš*.

The original inherited sequence *V*ns*V became in Hittite V*šš*V, as in **densu-* > *daššu-* "massive." This treatment was generalized across morpheme boundary in *accusative singular* + *enclitic possessive*, for example, *annan*+*šan* > *annaššan* "his/her mother."

The enclitic conjunction -*a* "and" (cf. Luvian -*ḫa* "and") causes gemination of a preceding consonant – *ūk* "I," *ūkka* (*ūgga*) "and I" – and thus can be distinguished from enclitic -*a* "but, however": *ūka* (*ūga*) "I, however."

Hittite, like other Anatolian languages, shows the effects of correlation of vowel length (see §3.6) and the inherited Indo-European accent (see §3.7). In particular, unaccented long vowels were shortened. Short vowels were lengthened (originally, at least, allophonically) in accented open syllables, and the mid and low vowels *e* and *a* in accented closed syllables as well: **pédom* (cf. Greek πέδον) > *pe-e-da-an* [pḗdan] "place," **h*$_1$*ésti* (cf. Greek ἔστι) > *e-eš-zi* [éśʦi] "is." To what degree these are synchronic rules in Hittite is controversial; see Melchert 1994 for discussion.

3.5 Consonant clusters

The cuneiform syllabary does not permit the unambiguous notation of clusters of two or more consonants in word-initial or word-final position, nor clusters of more than two consonants word-medially. Spelling variation indicates that at least some consonant clusters were real, and involved an "empty" vowel, e.g., *ma-li-it-tu-* and *mi-li-it-tu-* "sweet" for [mlitu-]. Inherited initial **sT-* clusters (where T = stop) are usually noted *iš-*TV-; whether the prothetic vowel is real or not is much debated. A number of examples point to the existence of real anaptyctic vowels breaking up clusters, like *akkiš* "died," *lakkiš* "knocked over" < **aks*, **laks* with voicing assimilation, from etymological **og-s(-)*, **log^{h}-s(-)*. Their interpretation remains controversial.

3.6 Vowel length

Hittite inherited the Common Anatolian and Indo-European opposition of long and short vowels. The subsequent lengthening of accented short vowels in open and in some cases closed syllables, and the shortening of unaccented long vowels (see §3.4), affected the distribution of long and short vowels but not the opposition per se. The correlation of stress and vowel length is very uncommon in Indo-European languages of this antiquity (but compare the similar phenomenon in Middle English), and the lengthening of accented vowels in closed as well as open syllables is typologically rare cross-linguistically.

3.7 Accent

Hittite likewise inherited from Common Anatolian the Indo-European *accent*, traditionally described in terms of pitch but clearly including a stress component as well. The secondary effects of the Hittite accent or its absence, lengthening and shortening of vowels respectively (see §3.4), are those typical of a stress accent cross-linguistically.

Hittite normally preserved the place of the Indo-European accent, including mobile accent in some paradigms: compare 3rd sg. *ēszi*, 3rd pl. *ašanzi* "is, are," pple. *ašānt-*, probably from earlier **és-ti*, *(a)s-énti*, *(a)s-ónt-*; or *tēkan* "earth" [tḗgan], loc. sg. *taknī* [tagnḗ]. In some cases, the position of the accent has shifted: nom.-acc. pl. *widār* "waters" [widā́r], PIE **wédōr*, gen. sg. *kūnaš* "dog" [kṹnas], PIE *k̂unós* (cf. Greek κυνός but Vedic *śúnas*). The question awaits a systematic solution.

3.8 Diachronic developments

3.8.1 Stops

The Proto-Indo-European stop system is usually reconstructed as follows (Cowgill and Mayrhofer 1986):

(3)

p	t	k̂	k	k^{w}
b	d	ĝ	g	g^{w}
b^{h}	d^{h}	ĝ^{h}	g^{h}	g^{wh}

The plain voiced and voiced aspirate series merged in Proto-Anatolian, yielding

(4)

p	t	k̂	k	k^{w}
b	d	ĝ	g	g^{w}

The phonological contrast of voiceless : voiced was probably revalued to tense : lax, with the tense member longer in duration than the lax. For the need to recognize three dorsal points of articulation – palatal, plain velar, labiovelar – see Melchert 1994 with earlier literature. Common Anatolian further affricated *t before *y to *[ʦ′], originally allophonically. In the dialect(s) ancestral to Luvian and Lycian, Proto-Anatolian *$\hat{k}$ apparently merged with this *[ʦ′] (<z>) and gave it phonemic status (see Ch. 3, §3.1). In the dialect ancestral to Hittite, *$\hat{k}$ and *$\hat{g}$ merged completely with *k and *g, while the affrication of *t to *[ʦ] before *i and further developments led to its phonemic status as <z> = [ʦ]. As a result, both dialects of late Proto-Anatolian showed the same inventory,

(5)

tense (long):	p	t	z	k	k^w
lax (short):	b	d		g	g^w

but with differing distribution. The distribution is further altered by the "lenition" rules in Proto-Anatolian, by which tense (long, i.e., inherited voiceless) stops become the corresponding lax (short, i.e., inherited voiced) stop after accented long vowel or diphthong and between unaccented vowels. For these rules see Eichner 1973:79ff. and 100, fn. 86 and (more clearly) Morpurgo Davies 1982–1983, especially for Luvian and Lycian, as well as Melchert 1994:60 *et passim*. The effects of this rule are most palpable in the endings originally beginning with dental in the Luvian languages, where, for example, depending on accent and quantity the third singular is active -(*t*)*ti* or -*di*, middle -(*t*)*ta*- or -*da*-. In Hittite the effects of the rule have been largely leveled out (Melchert 1994:61), save for a handful of isolated instances, and it is unclear how the effects of the rule were eliminated in this language.

Typologically, the Anatolian reduction of the Indo-European stop system to a tense : lax opposition, and that only in medial position, with neutralization to [+ tense] in initial position, [− tense] finally, is unique in the Indo-European family. It seems to be an areal feature in second-millennium Anatolia. The neutralization to [+ tense] in initial position is controversial but plausible for Hittite and the other second-millennium cuneiform languages; it is certain for the alphabetically written languages of the first millennium, Lycian and Lydian.

The above consonant treatments as well as the prosodic developments discussed earlier (see §3.4) began as synchronic developments, and to a certain extent may still be so analyzed. They represent challenging problems for linguistic typology.

3.8.2 Laryngeals

Hittite and the Anatolian family are noted for preserving two of the three Indo-European "laryngeal" consonants in initial position, the "*a*-coloring" h_2 and the "*o*-coloring" h_3: *ḫarki*- "white," PIE *$h_2arĝi$- < $h_2erĝ$-*i*- (cf. Latin *arg-entum* "silver"); *palḫi*- "broad," PIE *$pl̥h_2$-*i*-; *šalli*- "large," PIE *$solh_2$-*i*-; *ḫāppar* "transaction," PIE *h_3op- < *h_3ep- (cf. Latin *ops* "wealth"); *ḫāran*- "eagle," PIE *h_3or-*n*- < *h_3er-*n*- (cf. Greek ὄρν-ις, English *erne*); *ḫarra*- "crush," PIE *h_2arh_3-*o*- < *h_2erh_3-*o*- (cf. Greek ἄρο-τρον "plough").

3.8.3 Sonorants

The difference in preforms between "broad" (*$pl̥h_2$-*i*-) and "large" (*$solh_2$-*i*-) or "crush" (*h_2arh_3-*o*-) shows that Proto-Anatolian still preserved the Indo-European syllabic sonorants *$r̥$, *$l̥$, *$m̥$, *$n̥$, and their replacement by *ar*, *al*, *un*, *an*, occurred not long before the historical period. The special reflex *un* of word-final *$m̥$ is controversial, but plausible.

4. MORPHOLOGY

Hittite as the earliest attested member of the Indo-European family of languages shows the familiar Indo-European pattern of morphological type known as *fusional*: a single inflexional morpheme regularly expresses a combination of grammatical categories, for example, *-s* marks nominative case, singular number, animate gender. The language shows a fairly rich inflexion of nominal, pronominal, and verbal categories.

4.1 Word formation

Words in Hittite are either inflected or uninflected. The *structure* of the Hittite inflected *word* is R(oot) + S(uffix or suffixes) + E(nding). The *root* gives the basic lexical semantic content, and the *suffix* or suffixes add derivational and grammatical meaning, as well as specifying the part of speech. Root + Suffix(es) together are termed the *stem*, and constitute a lexical or dictionary entry, an inflected word in the language. Thus, the noun *kartimmiyatt-* "anger" is built by the nominalizing action noun suffix *-att-* on the verb-stem *kartimmiya-*, with denominative verbal suffix *-iya-*, itself formed from a probable nominal stem **kartim*(*m*)*a-* with suffix -(*i*)*ma-*. The double *m* is probably just due to the usual spelling with the sign *tim* (*kar-tim-mi-*), Akkadian also *tì*, di_{11}, without final *m*. The stem **kartima-* in turn is built (via a probable denominative verbal stem **kart-ai/iya-*, cf. *šallakartāi-* "behave arrogantly toward") on the noun stem *kart-* = *kard-* of the body part "heart," PIE **ḱr̥d-*.

Uninflected words are either frozen inflectible (R+S+E) stems, for example, the adverb *karū* "formerly" (with suffix and zero ending), or they are particles (on which see §5, Syntax). Though the evidence is only indirect, Hittite probably inherited from Indo-European the property that the numerals 1 to 4 were inflected adjectives while 5 to 10 were uninflected "particles."

4.2 Nominal morphology

The Hittite nominal system includes the substantive, the adjective, and the lower numbers. Its *inflectional categories* are gender, number, and case.

4.2.1 Gender

Hittite has two genders, animate (frequently termed common) and inanimate (frequently termed neuter). Comparative evidence, notably Lycian, shows that Proto-Anatolian had the traditional Indo-European three-gender system of masculine (Lycian nom. *-e*, acc. *-ẽ* < **-os*, **-om*), feminine (Lycian nom. *-a*, acc. *ã* < **-ā*, **-ām* < **-ah*$_2$, and underlying **-ah*$_2$*m* by Stang's Law), and neuter (see Ch. 5, §4.1). Compare also the Luvian abstract suffix *-aḫ-id-* from **-ah*$_2$*-*, with the same suffix as the Greek abstract type τομή "cutting." Hittite as well as the other cuneiform Anatolian languages of the second millennium (see §1) has innovated by eliminating the feminine gender by merger, as a consequence of certain phonological developments. Thus, Indo-European feminine **-ah*$_2$ (underlying **-eh*$_2$) lost its final laryngeal by rule, and the undercharacterized nominative **-a*, like the **-a* resulting from unstressed nominative **-ō* of the *n*-stems, was further marked by nominative *-s*, and the resulting *-aš* rendered identical to *-aš* from masculine thematic **-os*. Thus, Hittite

nominative *ḫāššaš* "hearth" (cf. Latin *āra*, fem.) like *ḫāraš* "eagle" (cf. Old High German *aro* < *$h_3$órō*).

4.2.2 Number

Hittite has two numbers, singular and plural. Some scholars have seen a trace of the Indo-European dual in such forms as *šākuwa* "eyes" (and Luvian *tawa* "eyes," *īššara* "hands," GÌR^{MEŠ}-*ta* = *pāta* "feet"), comparing either Vedic dual *pā́dā* or Mycenean Greek (*tiri*)*pode*, but the Anatolian ending is indistinguishable from the neuter plural. The latter is frequently used to form a collective plural opposed to an individual (count) plural of animate nouns: *alpāš* "cloud," individual accusative plural *alpuš*, collective *alpa*$^{HI.A}$.

4.2.3 Case

The Old Hittite noun shows nine cases. These are nominative, vocative, accusative, genitive, dative-locative, directive (also termed allative), ablative, instrumental, and ergative. The function of most of these cases is the one that is familiar in an older Indo-European language, largely self-explanatory. The dative-locative marks both location and the indirect object, and may represent a syncretism of two earlier distinct cases. Directive (allative) and ablative mark motion to or from. Hittite and the other Anatolian languages show a *split-ergative* system, in which neuter nouns functioning as agents, subjects of transitive verbs, are marked by a special ergative case ending (see Garrett 1990, 1996). The development of the system of split ergativity is an important common innovation of the Anatolian branch of the Indo-European family. It is closely connected with another important morpho-syntactic innovation of Common Anatolian, the development of enclitic subject pronouns with "unaccusative" intransitive verbs (Garrett, ibid.). See further the sections on voice, on the pronominal system, and on diachronic syntax.

The distribution of the Old Hittite cases between the two numbers, with their usual formal exponents, is as follows (commas separate variants):

Table 2.1 Old Hittite noun inflection

	Singular		Plural	
	Animate	Inanimate	Animate	Inanimate
Nominative	-aš, -š, -Ø	-an, -Ø	-eš	-a
Vocative	-i, -Ø	-an, -Ø	-eš	-a
Accusative	-an	-an, -Ø	-uš	-a
Genitive	-aš		-an	
Dative-locative	-i, -Ø		-aš	
Directive	-a		-aš	
Ablative	-az		-az	
Instrumental	-it		-it	
Ergative	-anz(a)		-anteš	

By Neo-Hittite this system had undergone a number of changes. The separate vocative is disused, and the directive is lost by merger with the dative-locative; the genitive plural

merges with the dative-locative, and ablative and instrumental become noncontrastive, as do nominative and accusative animate plurals. The result is as follows:

Table 2.2 Neo-Hittite noun inflection

	Singular		Plural	
	Animate	Inanimate	Animate	Inanimate
Nominative	-aš, -š	-an, -Ø	-eš, -uš	-a
Accusative	-an	-an, -Ø	-eš, -uš	-a
Genitive	-aš		-aš	
Dative-locative	-i		-aš	
Abl.-instr.	-az,-it		-az,-it	
Ergative	-anz(a)		-anteš	

4.2.4 Adjectives

Hittite adjectives show agreement in gender and number with nouns. The endings are the same as for the nouns. Adjectives are not inflected for degrees of comparison; comparative and superlative are expressed by syntactic means alone, positive plus dative-locative or ablative, and positive plus genitive plural (dative-locative plural?) respectively: *iškiši šalli* "big to the (other's) back" = "bigger than the (other's) back," *šallayaš=kan* DINGIR^{MEŠ}*-aš kuiš šallis* "who of the great gods (is the) great(est)." This syntactic pattern is found marginally in other ancient Indo-European languages as well, like Vedic *yé devā́nām yajñíyā yajñíyānam* "who of the worshipworthy gods is (the most) worshipworthy," or Homeric Greek δῖα γυναικῶν "(the most) divine of women."

4.2.5 Nominal stem-classes

The stem-classes or declensions of the Hittite nominal are as follows; the case endings themselves have been given above. We distinguish first *athematic* and *thematic* formations, which differ only in the nominative singular: athematic animate *-š* (combining with stem-final dental to yield *-z*, spelled *-za*; *ašānt-* "being, real, true," nom. sg. *ašānza*), Ø (OH *keššar* "hand"); inanimate *-Ø* (*milit* "honey"). Compare thematic animate *-aš* (*ḫartaggaš* "bear"), inanimate *-an* (*yugan* "yoke"). Athematic stems are *consonant stems* (see below); it is convenient, on the basis of the nominative singular, to term *vocalic stems* both the thematic stems (nom. *-a-š*, *ḫartagg-a-š* "bear"; *-a-n*, *pēd-a-n* "place") and *i-* and *u*-stems (nom. *-i-š*, *-u-š*). The latter show the ending *-Ø* for the inanimate nominative-accusative singular (*ēšri* "form," *gēnu* "knee"). Diphthongal stems in *-ai-*, *-au-*, *-e*(*i*)*-* are also found, again with the inanimate nominative-accusative singular *-Ø*. The thematic stem is invariant; *i-* and *u*-stems may show ablaut of the predesinential element: *-a[y]-/-i-*, *-aw-/-u-*, *e*(*i*)*-/-i-*. The *-u-* and *-i-* before *a* appear as *-uw-*, *-iy-*. Intervocalic *y* in *-a*[*y*]*-* is subject to deletion, with coalescence of like vowels, but is sometimes analogically restored. Ablaut is characteristic of adjectival stems (*āššu-/āššaw-* "good" vs. *āššu-/āššu-* "good(s)") but many substantives show it as well. We may illustrate typical vocalic stems (stem-vowel + case ending) of animate nouns and adjectives; it will be sufficient to give nominative, accusative, and genitive since the remaining case endings are added to the stem as it appears in the genitive:

(6)

	Thematic stem	*i-stem*	*i-stem adjective*	*u-stem*
Nom.	-aš	-iš	-iš	-uš
Acc.	-an	-in	-in	-un
Gen.	-aš	-iyaš	-a[y]aš	-uwaš

	Diphthongal i-stem	*Diphthongal u-stem*	*u-stem adjective*
Nom.	-aiš	-auš	-uš
Acc.	-ain	-aun	-un
Gen.	-iyaš	-uwaš	-awaš

Note also the inanimate nom.-acc. *utnē* "land" (underlyingly *-ēi*), gen. *utniyaš*.

Consonantal stems of both genders are found ending in obstruents (anim. *kašt-* "hunger," nom. sg. *kašza*; inan. *šeppitt-* a cereal, "wheat"?, nom. sg. *šeppit*; inan. *nēpiš-* "heaven") and sonorants (anim. *ḫašter-* "star," nom. sg. *ḫašterza*; inan. *lāman-* "name"). Many show paradigmatic ablaut, often with accent shift: nom.-acc. *tēkan* "earth," dat.-loc. and directive (allative) *taknī*, *taknā*, suffixless *dagān*; nom. *keššar* "hand," acc. *kiššeran*, gen. *kišraš*, dat.-loc. *kiš(ša)rī*, instr. (OH) *kiššarta*, *kiššarat* ([kés(s)ard] or [kis(s)árd]). Very common in Hittite and Anatolian, though residual elsewhere in Indo-European, are *r/n*-stem inanimates with nominative-accusative singular and plural in *-r* and remaining cases in *-n-*: *ḫaršar* "head," gen. *ḫaršanaš*, pl. nom.-acc. *ḫaršār*. Compare Old Avestan *aiiarə* "day," stem *aiian-*, nom.-acc. pl. *aiiārə*.

4.3 Pronouns

The Hittite pronominal system includes the personal pronouns, the demonstratives, and the interrogative-relative-indefinite pronouns. These differ in inflection from the nominal system in a number of ways, as they do in other old Indo-European languages. The *personal pronouns* distinguish stressed (tonic) and enclitic forms. Hittite is a "PRO-drop" language, incorporating the subject into finite verb forms, and the stressed pronouns of the first and second persons both subject and other, oblique arguments are used only for emphasis or contrast. The normal expression of pronominal objects is by enclitics. The usual Old Hittite forms are as follows; note that direct and indirect object (accusative, dative-locative) in the personal pronoun proper (first and second persons) are not distinguished, and the instrumental is not found:

Table 2.3 First- and second-person pronouns

	Singular			
	First person		Second person	
	Tonic	Enclitic	Tonic	Enclitic
Nom.	ūk		zīk	
Obl.	ammuk	=mu	tuk	=ta (=du=za)
Gen.	ammēl		tuēl	
Abl.	ammēdaz		tuēdaz	
	Plural			
	First person		Second person	
	Tonic	Enclitic	Tonic	Enclitic
Nom.	wēš		šumēš	
Obl.	anzāš	=naš	šumāš	=šmaš
Gen.	anzēl		šumenzan	
Abl.	anzēdaz		šumēdaz	

For the third person, only enclitic forms occur, in three cases: nominative, accusative, dative-locative. The third-person nominative (subject) pronouns are found, as noted above, only with the "unaccusative" subset of intransitive verbs. The Old Hittite forms are:

(7)

	Singular		*Plural*	
	Animate	*Inanimate*	*Animate*	*Inanimate*
Nom.	-aš	-at	-e (NH -at)	-e (NH -at)
Acc.	-an	-at	-uš (NH -aš)	-e (NH -at)
Dat.-loc.	-ši		-šmaš	

If more than one third-person object enclitic is present, accusative precedes dative-locative; third person usually precedes other persons, but first and second plural dative-locative precedes third singular accusative (Friedrich 1960, §288).

Old Hittite marks possession by a set of enclitic pronouns of all three persons singular and plural, suffixed directly to the possessed noun, and agreeing with it in gender. They show the stem-vowels *-i-*/*-e-* for the nominative animate and inanimate before the pronominal endings *-š* and *-t*, otherwise the thematic vowel *-a-*:

(8)

	First		*Second*		*Third*	
Singular						
Nom.	-miš	-met	-tiš	-tet	-šiš	-šet
Acc.	-man		-tan		šan	
Gen.	-maš		-taš		-šaš	
Dat.-loc.	-mi		etc.		etc.	
Dir.	-ma					
Abl.-instr.	-mit					
Plural						
Nom.	-meš	-met				
Acc.	-muš					
Gen.	-man					

A possessed noun may appear anywhere in the sentence, but if it comes first, any other enclitics present follow the possessive suffix. Old Hittite also commonly employs the pleonastic possessive construction NOUN/PRONOUN$_{gen}$ NOUN + poss. suff., "of X its Y" = "the Y of X."

Hittite has two demonstrative pronouns of "here" and "there" deixis, *kāš* (inan. *kī*) "this" and *apāš* (inan. *apāt*) "that," which outside the nominative singular inflect alike: acc. *kūn* (*apūn*, etc.), gen *kēl*, dat.-loc. *kēdani*, abl. *kēz*, instr. *kēt*. The stems are respectively **Ĥkó-* and **ob^{h}ó-*; while the former has numerous cognates elsewhere in Indo-European (like the Germanic family of English *he*, *him*, *her*, dialectal *hit*), the latter is apparently found only in the Anatolian branch (Luv. *apā-* Lyc. *ebe-* "this").

The interrogative and relative "WH" pronoun is *kuiš*, inan. *kuit*, gen. *kuēl*, dat.-loc. *kuēdani*, abl. *kuēz*. The indefinite pronoun "someone" is *kuiški*, inan. *kuitki*, gen. *kuēlka*, with suffixed particle. Another suffixed particle, geminating *-a* "and," appears in *kuišša* "each," inan. *kuitta*; compare Latin *quisque* "each," with suffixed particle *-que* "and."

4.4 Verbal morphology

The inflectional categories of the Hittite finite verb are person, number, voice, tense, aspect, and mood.

4.4.1 Person

The persons are the familiar Indo-European first [+ personal, + subjective], second [+ personal, − subjective], third [− personal]: the third person is the zero-person.

4.4.2 Number

As in the noun, only two *numbers* are recognized: singular and plural. The Hittite (and Common Anatolian) first-person plural endings, however, with their characteristic *-w-* (*-weni*, *-wen*) resemble Indo-European first-person dual endings, like Vedic *-vas*, *-va*, Lithuanian *-va*, rather than the first-person plural endings in *-m-* like Vedic *-mas*(*i*), *-ma*, Greek -μεν, Lithuanian *-me*. Anatolian may thus have originally had a dual in the verb, which was generalized for the first-person plural, on the basis of the discourse-prominent first dual = "you (sg.) and I."

4.4.3 Voice

Indo-European languages characteristically show a semantic opposition between active and middle; the latter, the marked member, indicates the subject as "internal to" the action. Similar semantics are exhibited by some reflexive verbs in many modern Romance, Germanic, and Slavic languages. Hittite distinguishes active and middle endings in the verb, with the latter also marking the syntactic category of passive as well as subject-internality, reciprocity, and impersonal-hood, as in active *akkiškizzi* "(s)he is dying" versus middle *akkiškittari* "people are dying." Most verbs in Hittite are inflected as either active or middle only.

The expression of reflexivity and its relation to voice in Hittite is complex. The language has a particle *-za*/*-az* [-ts], Common Anatolian **-ti* of unknown origin, commonly termed "reflexive," though it has other functions as well. With some transitive active verbs *-za* can express benefit of the subject: -za . . . *dāi* "takes for himself." For some others it appears to mark a real reflexive object: *nu-za apez arri* "he washes (*arri* active transitive) himself (*-za*) with this." But some verbs in the language also show an intransitive "middle reflexive" (Garrett 1996) with middle endings, enclitic subject pronoun, and the reflexive particle *-za*: *n=aš=za ārškitta* "he (=*aš*) is washing (imperfective middle third singular) himself (=*za*)"; *ŠA* KASKAL-*NI=za* A-*az ārraḫḫut* "wash (imperative middle second singular) yourself (=*za*) with water of the road!"

4.4.4 Ergativity

As noted earlier, the semantic category of *voice* in the Hittite verb is complicated by its interaction with the syntactic and semantic category of *transitivity*. Neuter nouns functioning as agents, subjects of transitive verbs, must go into the ergative case. The counterpart of this is that the class of third-person enclitic subject pronouns – a class which has no counterpart in any other older Indo-European language – occur only with intransitive verbs, but not with all of these. Specifically, subject clitics occur only with one of the two types of intransitive verb recognized in current syntactic theory: "unaccusative" verbs, with subjects that are less "agentive" and are notionally equivalent to the object of their corresponding transitive counterparts. The other type of intransitive verb is the "unergative," which has subjects that are more "agentive," and are notionally identical to the subject of their corresponding transitive counterparts. The repartition is lexically conditioned: in Hittite *šarra-* "break," "burn," "hide," "die," "go" are unaccusative and take subject clitics, while *tuwarni-* "break,"

"look," "open," "speak," "clean" are unergative and do not. For the contrast between the two intransitive types in the selection of auxiliary, "be" and "have" respectively, in the formation of the periphrastic perfect see further below. For all these questions see Garrett 1990 and 1996, with earlier literature.

4.4.5 Tense-aspect

The Hittite tense-aspect system is relatively simple by comparison with that of Greek or Indo-Iranian. The fundamental tense opposition, expressed by the endings (primary : secondary), is *past* (preterite), the marked member : *non-past* (present, also functioning as future, prospective, and historical present in past narrative), the unmarked member. The stem is the same: past *kuen-ta* "he killed," non-past *kuen-zi* present "he kills," future "he will kill." For the prospective, compare *kuenzi=ma-an* LUGAL-*uš ḫuišnuzi=ya=an* LUGAL-*uš* "The king can kill him [or] the king can let him live." For the narrative present in past time compare: "The Queen thereupon gave birth (pret. *ḫāšta*) to 30 daughters and she raised (pret. *šallanušket*) them herself. (Meanwhile) the sons were going back (pres. *āppa yanzi*) to Nesa and driving (pres. *nanniyanzi*) a donkey. When they arrived (pret. *arer*) in Tamarmara, they said (pres. *taršikanzi*) . . ."

The fundamental aspectual opposition in Hittite is *imperfective*, the marked member, versus the *nonimperfective* base form, root or stem. The primary exponent of the imperfective, usually termed "iterative," is the suffix *-ške/a-*; sporadic instances of suffixes *-anna/i-* and *-išš(a)-* in similar function are found sometimes marking a particular mode of action or *Aktionsart*. Virtually all Hittite verbs except *eš-* "be" form an imperfective. The imperfective is inflected for tense like the base verb. The tense/aspect opposition can be illustrated by the third singular of the derived (causative) verb *parkunu-* "cleanse, purify":

(9) pres. *parkunuzzi* "purifies" — pret. *parkunut* "purified"
impftv. pres. *parkunuškizzi* "is purifying" — pret. *parkunuškit* "was purifying"

Hittite further shows a periphrastic verbal formation usually termed "perfect," with the past participle and the verbs "have, hold" *ḫar(k)-* and "be" *eš-*. Transitive and unergative intransitive verbs select "have," and unaccusative intransitives select "be" in the *perfect active*; with "have," the participle is invariant nominative-accusative neuter, with "be" it agrees with the surface subject: tr. *piyan ḫarta* "had given," intr. *ḫarkanza ēšta* "had perished." The value is that of an attained state: *taraḫḫan ḫarta* "held conquered." Transitive verbs select "be" for the *perfect passive*: *piyanteš ešer* "had been given," *parkunanteš ešer* "had been purified." The transitive can also form an impersonal, subjectless construction with a direct object: *išḫēniuš=šmaš=kan dān ēšdu* "hairs [acc.]=to them=part. let it be taken," in other words, "let their hair have been cut."

4.4.6 Mood

Of the traditional moods the Hittite verb has only indicative and imperative. The Indo-European modal categories of subjunctive and optative, with their respective morphemes **-e/o-* and **-yeh$_1$-/-ih$_1$-*, are simply not present. Contrafactual, volitional, and other notions are expressed by the use of the particles *mān*, *man*, with the past or present indicative tense, or by other syntactic means.

The imperative usually shows the bare stem in the fundamental second singular, with traces of the Proto-Indo-European particle **-d^{h}i* in *īt* "go!" = Greek ἴθι, as well as a particle **h$_2$u* with full grade of the same root in the quasi-interjection *eḫu* "come!" Both particles

are suffixed to form the imperative middle second singular: *ārraḫḫut* "wash yourself!" The third-person imperatives replace indicative *-i* with *-u*, agreeing with Vedic Sanskrit: *ēštu* = Vedic *ástu* "let him/her/it be." The first person expresses volition, the wish of the subject: *ēšlit* "I'd like to be," "let me be," with a particle of obscure origin. It has variants *ēšlut*, but *-lit* recurs in one other verb, *talit* "I'd like to take, let me take." A first singular imperative ending *-allu*, of somewhat different shape and perhaps origin, is also found: *ašallu* "may I be," *akkallu* "may I die."

4.4.7 Verb conjugation

The conjugation of the Hittite finite verb is dominated by two sets of endings in the active singular, with no functional difference; they are termed after the first singular present the *mi*-conjugation and the *ḫi*-conjugation. The basic endings are as follows:

(10)

	Present		*Preterite*	
Sg. 1	-mi	-(ḫ)ḫi (OH -ḫḫe)	-(n)un	-(ḫ)ḫun
2	-ši	-ti	-š (-ta)	-(š)ta
3	-zi	-i (OH -e)	-t(a)	-š
Pl. 1	-weni		-wen	
2	-teni		-ten	
3	-anzi		-er/-ir	

We find a single set of endings of the middle voice, save that some verbs show a third singular in *-a* while others show *-ta*:

(11)

	Present	*Preterite*
Sg. 1	-ḫḫa(ḫa)	-ḫḫa(ḫa)t
2	-ta	-tat
3	-a or -ta	-at or -tat
Pl. 1	-wašta	-waštat
2	-dduma	-ddumat
3	-anta	-antat

The endings of the present may show a further suffixed optional particle *-ri*; those of the preterite may end in *-ti* rather than the usual (apocopated) *-t*.

Middle verbs show then a present third singular in *-a*(*ri*) or in *-ta*(*ri*); the endings are not correlated with *ḫi*- or *mi*-conjugation actives if the latter are present (most primary middles are inflected in that voice only, and show no active forms): compare *ki-tta*(*ri*) "lies," *kīš-a*(*ri*) "occurs." Some verbs show *scriptio plena* (repeating the vowel of a CV or VC sign with the matching V sign) in the third singular ending *-āri*, and here the particle *-ri* is obligatory: *tukkāri* "is prescribed, important." The ending *-ta*(*ri*) never shows *scriptio plena*. Originally *-ór* → *-ár+i* but unaccented *-*(*t*)*or* → *-*(*t*)*a* by phonological rule, whence analogical *-*(*t*)*a+ri*, which spreads during attested Hittite history (see Yoshida 1990). Secondary thematic middles show only the ending *-ta*(*ri*), not *-a*(*ri*): *-ietta*(*ri*), *-iyatta*(*ri*), *-škitta*(*ri*).

The special endings of the imperative were given above in section 4.4.6.

4.4.8 Verbal stem-classes

A number of different stem-classes of the Hittite verb may be recognized; to distinguish all or even most of them would exceed the limits of this presentation. Important variables

include stems in final consonant (*ēdmi* "I eat," *ārḫi* "I arrive") and in final vowel (*ḫariemi* "I bury," *tepnumi* "I belittle," *ḫalziḫḫi* "I call," *munnaḫḫi* "I conceal"), as well as stems with various types of ablaut (*kuenzi* "kills," 3rd pl. *kunanzi*; *ēpzi* "takes," 3rd pl. *appanzi*; *wēkzi* "asks for," 3rd pl. *wekkanzi*; *ārḫi* "I arrive" 3rd pl. *aranzi*; *dākki* "fits, corresponds," 3rd pl. *takkanzi*; *sākki* "knows," 3rd pl. *šekkanzi*), and reduplicated stems (*nanakkušzi* "gets dark," *lelḫuw(a)i* "pours"). A complete descriptive analysis according to the chronological strata of the language remains a desideratum; the best to date is Oettinger 1979, supplement 1992.

It is noteworthy that while inherited primary athematic *mi*-verbs are common in Hittite, the Indo-European thematic conjugation is found only in active and middle secondary, derived verbs (*-ške/a-* < **sḱe/o-*, *-ie/iya-* < **ye/o-*). The primary thematic types of Latin *agō*, Greek ἄγω, Vedic *ájāmi*, Latin *uehō*, Greek dial. 3rd sg. impv. ϝεχετω, Vedic *váhāmi* are not represented at all, and the Hittite thematic first singular active is *-škimi*, *-ie/iyami* rather than the ending of Latin *-scō*, *-iō*, etc. The fact is significant; see Jasanoff 1994.

Historically, within the *mi*-conjugation, we have a number of inherited primary formations, derived from the root: athematic presents with ablaut *é* : Ø (*kuen-* : *kun-*, remade in *ēš-* : *aš-*, *ēp-* : *app-*); acrostatic ("Narten") presents with ablaut *ḗ* : *é* (*ēdmi* : *edwani*, remade in *adweni*); nasal-infix presents (*ḫarni(n)k-* "destroy" beside *ḫark-* "perish") with probably innovated transitivizing value. Of secondary formations, derived from synchronically coexisting stems, we have imperfectives in *-ške/a-* (**-sḱé/ó-*); deverbative causatives in *-nu-* and in **-éye/o-* (Hittite *-e/a-*, *waššezzi* "dresses (someone)"); deverbative and denominative **-ye/o-* (*karpiya-*, *karpizzi* "lifts" beside root present *karapzi*; *lamniya-* from the noun *lāman-* "name"); statives in *-ē-* (**-eh$_1$-*) and inchoatives in *-ēš-* (**-eh$_1$-s-*), for example, *marše-*, *maršeš-* "be, become false" from the adjective *maršant-* "false," and the very common derivatives in *-ai-/-ā-* from **-ah$_2$-ye/o-*, for example, *par(a)šnāizzi* "squats" (cf. Latin *perna* "ham").

Stem-classes of the Hittite *ḫi*-conjugation are numerous and varied. Primary formations show stems in both final consonant (*ār-ḫi* "I arrive," 3rd sg. *ār-i*; reduplicated *wewakk-i* "requests") and final vowel (*tarna-ḫḫi* "I leave," 3rd sg. *tarna-i*, also *tarn-i*; reduplicated *mimma-i* "refuses" < **mi-mnV-*). Several old monosyllabic long vowel or diphthongal stems are found: *dāḫḫi* "I take," 3rd sg. *dāi*; *teḫḫi* (<**daiḫḫi*) "I place," 3rd sg. *dāi*; *neḫḫi* "I lead," 3rd sg. *nāi*; *peḫḫi* "I give," 3rd sg. *pāi*. Secondary *ḫi*-conjugation classes (built on existing stems) are considerably less frequent than *mi*-forms. Note the factitives in *-aḫḫ-* built on adjectives (*šuppiy-aḫḫ-i* "makes pure" from *šuppi-*); the iterative-imperfectives in *-šš(a)-* (*ḫalzi-šša-i* "calls" from *ḫalzi/a-*; *īšša-i* "does" but athematic 2nd pl. *īštēni* from *iē-/iya-*); and the "duratives" in *-anna-i* (*iyanna-i* "starts walking" from *ie-/iya-* "walk").

4.4.9 Origin of the *ḫi*-conjugation

The origins of the *ḫi*-conjugation are surely the most hotly debated in the whole Hittite verb. The endings of the singular are basically those of the classical Indo-European perfect: Greek -α, -θα, -ε; compare Latin *-ī* < *-ai*, *-(is)tī* < **-tai*, *-it* < *-īt* < **-ei(t)*. But while a very few *ḫi*-verbs agree in meaning but not in form with some Indo-European perfects (*šākki* "knows" like Greek οἶδε, Vedic *veda*), and while a very few look formally like Indo-European perfects (reduplicated *wewakk-i* "requests" beside *wēk-zi* in the same meaning) it has proven impossible to derive the whole *ḫi*-class from such an origin. It is likelier that the *ḫi*-conjugation of Hittite (and the other Anatolian languages) is a reflex of a distinct

present type in Proto-Indo-European originally with affinities to the (proto-)middle voice and singular endings *-h_2e, *-th_2e, *-e (with Jasanoff 1994). In Anatolian, this formation then developed into the active *ḫi*-conjugation, and subsequently in most of the other branches into both the "classical Indo-European" perfect and in part the "classical Indo-European" simple thematic present. This explanation remains controversial, however plausible; for other earlier views compare Cowgill 1979, Kuryłowicz 1979, Eichner 1975, Oettinger 1979 and 1992.

4.4.10 Nonfinite verbals

The nonfinite forms of the Hittite verb include a single adjective or participle, with the suffix *-ant-*, the function of which is to mark the accomplishment of the semantic notion of the verb. With transitive verbs the value is past passive: *ēp-zi* "takes," *app-ant-* "taken, captive"; with intransitives it denotes an attained state: *ak-i* "dies," *akk-ant-* "dead." The suffix is commonly written plene, *ap-pa-a-an-t-* = *appānt-*.

Hittite has an infinitive, which functions as a complement of another verb. The infinitive has two forms. Infinitive I *-anna* (var. *-ānna*), to the weak grade of ablauting *-mi*-verbs: *ēp-zi* "takes," *app-ānna*; Infinitive II *-wanzi* (*-manzi* after stem in *-u-*), to all other verbs: *išḫamai* "sings," *išḫamiya-wanzi zinnizzi* "stops singing."

In addition, the imperfective in *-ške-* forms a *supine*, as it is conventionally termed, functioning as complement of the verbs *dai-* "set" and *tiya-* "step, proceed" in the meaning "begin X-ing": *akkiškiwan dāir* "they began dying."

The verb can be nominalized to form a neuter verbal noun, in *-war*, with genitive *-waš*: *ganeš-zi* "recognizes," *kanešš-uwar* "recognition." Some verbs, including but not limited to ablauting *mi*-verbs, form a verbal noun in *-atar* (*-ātar*), genitive *-annaš*: *app-atar* "taking, seizure," *akk-atar* "dying, plague."

The verbal noun *-war*, genitive *-waš* reflects an Indo-European heteroclite *-*wr̥*, *-*wen-s* (with "closed" inflection), and the infinitive *-wanzi* is a frozen case form (ablative or instrumental) of the same suffix. That in *-atar*, genitive *-annaš* is from *(-*ā*)-*tr̥*, *-*tn-os*, and the infinitive in *-anna* must be a case form (directive) from the same suffix.

Two isolated instances of a *gerundive* in *-la* are found in a single text: *dalugnula* and *parganula*, "to be lengthened" and "to be made high."

4.5 Derivational morphology

The wealth of secondary *verbal derivational* processes, both inherited and innovated, may be illustrated with forms made from the root/stem *luk*(*k*)- of athematic *luk-ta* "it grows light" (PIE **leuk-*/*louk-*): *lukk-izzi*, 3rd pl. *lukk-anzi* "set on fire" (**louk-éye*/*o-* in Vedic *rocáyati*, Old Latin *lūcent*), *lukkeš-* "become bright" (cf. Latin *lūcēscere* "grow light"), reduplicated *lalukke-* "be(come) bright, luminous," *lalukkeš-* "become bright, luminous," with causative *lalukkešnu-* "give light, illuminate," and its imperfective *lalukkešnuške/a-* "keep shining." *Nominal derivatives* from the same root include *lalukkima-* "source of light, radiance," *lalukkiwant-* "resplendent." Compare also the set of derivatives underlying *kartimmiyatt-* "anger" given in §4.1.

Other illustrative sets are (from PIE **leg*^{h}-, English *lie*, *lay*) active *ḫi*-verb *lāki* "knocks out (tooth); turns (ear)," middle *lag-āri* "totters," reduplicated active *ḫi*-verb *lilakk-i* "causes (a tree) to fall," and *n*-stem neuter noun *lag-an* "bent, disposition" in *aliyaš laganaš* "of

the disposition of a deer"; (from PIE *lah_2- in Greek λᾶϝος "the people under arms") *laḫḫ-iy-āizzi* "goes on campaign, to war," verbal noun *laḫḫ-iya-war* in genitive *laḫḫiyawaš išḫiul* "the obligation of going to war," abstract *laḫḫ-iy-atar* "campaign," *laḫḫ-e-ma-* "errand" in *laḫḫemuš ḫueškizzi* "he is always running errands" (*ḫuwai/iya-* "run"). Note the imperfective *laḫḫ-e-ški-ši* "you go to war, too," and the unique Neo-Hittite doubly specified iterative-durative creation *laḫḫ-iy-anni-ška-weni* "we shall always go to war," which shows how freely these morphemes could be manipulated.

4.6 Compounds

Hittite makes considerable use of *semantic compounding* of sentential adverb ("preverb") and verb, while maintaining the phonological independence and separability of the two elements: *anda paizzi* "goes in," *āppa paizzi* "goes back, returns," *āppan paizzi* "goes after, behind," always written with a space between the two. Two preverbs are frequent: *āppan arḫa paizzi* "passes behind," *piran arḫa uizzi* "passes in front of." The first preverb may be fronted and separated from the verb: *āppa=ma=aš kuwapi uizzi* "but when he returns." Such semantic compounding occurs also in the nominalization of verb phrases of object and verb: *kurur ēpzi* "makes/begins hostility/hostile action," whence *kurur appatar* "making hostility, declaring war." But the phonological composition of two lexical elements to form a single phonological word is extremely rare in Hittite. The case of *šallakard-* "arrogant, arrogance" (*šalli-* "great," *kard-* "heart") underlying several verbal derivatives has been noted; the example of *pattarpalḫi* "kind of bird observed in divination" (*pattar* "wing," *palḫi-* "broad") was shown to be a loan-translation (calque) on Akkadian *kappu-rapaš* "id." (*Chicago Hittite Dictionary* s.v., with references). Occasional geographic names like *ḫarašḫapaš* "Eagle River" (*ḫaraš* "eagle," *ḫapaš* "river") are juxtapositions, not true compounds with first member in stem form. Negative composition with the *-ant-* participle is found in *ă̄m(m)iyant-* "immature" from *$\acute{\mathring{n}}$-mih_1-ont-*, probably a (frozen?) archaism, cf. Vedic *ásant-* "untrue, false" from *$\acute{\mathring{n}}$-h_1s-ent-*. Otherwise Hittite (with other Anatolian languages) has a very few negative compounds in *ni-* (*niwalla-* "weak"), apparently from the old sentence negation **ne* or **nei*. A unique numerical compound is *dā-yugaš* "two-year-old" (see §4.7).

4.7 Numerals

The numerals in Hittite texts are virtually always written in cuneiform ciphers, and almost never written out. We are left with inferences from a few forms and derivatives. See on all these Eichner 1992.

1. The very occasional writing of a stem *a-a-(ant-)*, which may be the stem of "one," **a[y]-ant-*, **oy-(ónt-)*, cf. Old Latin *oi-nos*, Vedic *éka-* < **ói-ko-*, Avestan *aēuua-* < **oi-wo-*. For the ordinal "first" *ḫantezzi(ya)š* is used, derivative of the adverb *ḫantī* "apart, in front," from *ḫant-* "front, forehead."

2. The numerical adverb *tān* (*dān*) "second(ly)," juxtaposed in such expressions as *dān pedaš* (gen. sg.) "of second place, rank" and prefixed (with loss of *n* before *y*) in the compound (?) *tā-yugaš* "two-year-old" (of animals) is apparently from PIE **dwo-yo-m*. The military term ^{LÚ}*duyanalliš* "man (officer) of the second rank" from **dwi-yo-* is probably from its phonology a Luvian loanword.

3. The numeral "three" is exceptionally written out in *teriyaš* UD-*aš* (gen. pl.) "of three days." The Hittite stem *teri-* shows a real anaptyctic vowel, from IE **tri-*; its Luvian

counterpart *tarri-* (in ^{LÚ}*tarriyanalliš* "man of the third rank," etc.) shows a special Luvian development of the same vowel.

4. Hittite and the Luvian languages, thus perhaps already Common Anatolian, apparently replaced the Indo-European word for "four" by a neologism of disputed inflection and origin, occasionally written out as *mēuw* (*-aš* dat. pl.), *meu-*, and in Luvian *māuw* (*-ati* abl.-instr.). It may go back to a **meyu-*/*myeu-* (simplified to *meu-*?) and originally have meant "little" hand (minus the thumb).

The remaining numerals are never written out, and can only be guessed at, with the exception of the ritual libation drink *šiptamiya*/ 7*-miya* (beside *teriyalla*/ 3*-yalla*), which doubtless contains a reflex of PIE **septm̥* "seven" (beside *teri-* "three") in cardinal, ordinal, or fractional function.

The formation of ordinals is not clear. For other suffixed forms, like the distributive *-anki* "*n*-times" see Eichner 1992, as well as the several dictionaries (under Sumerograms).

5. SYNTAX

5.1 Word order and clause structure

Hittite in its ordinary unmarked word order is by and large regularly verb-final (OV [Object–Verb] in the case of transitive verbs), with the possibility of emphatic initial position of the verb (VO in the case of transitive verbs) as special or marked order. In fact, we can distinguish a number of different syntactic constituents in the Hittite sentence which show a fairly fixed order relative to each other. These include the *sentence connective particles* (symbol N) *nu* (OH also *ta*, *šu*) which regularly begin most clauses. The virtually obligatory use of overt markers, sentence-initial or enclitic, to connect all but the first sentence in a discourse is one of the three defining syntactic isoglosses of Common Anatolian (Melchert 1994).

Sentence-initial particles or other words may be followed by one or more (up to six) *enclitics* (symbol E), which thus occupy second, *Wackernagel's Law*, position. The enclitic chain of particles and anaphoric pronouns is one of the most striking and salient features of Hittite syntax, and indeed another defining syntactic isogloss of Common Anatolian. The enclitic chain may include members of each of six ordered classes: (i) connectives *=a* (geminating), *=ya* "and," *=a* (nongeminating) "but, however," correlative focus *=ma*, weakly adversative adding new information; (ii) quotative particle *=wa*(*r*) marking direct speech; (iii) pronominal third-person object accusative (of transitive verbs) or subject nominative (cf. certain intransitive verbs); (iv) pronominal third-person dative-locative or first-/second-person oblique; (v) reflexive particle *=za*(*=-z*); (vi) local (/aspectual?) sentential particles *=kan*, *=šan*, *=ašta*, OH *=*(*a*)*p*(*a*), *=an*. While usually no more than three of these are present, up to five are not uncommon, for example, *=ma=war=an=z=šan*.

Conjunctions like *mān* "when, if," OH *takku* "if," *mān* "as, how, when" occupy the C(omplementizer) slot, following optional connective and enclitic(s) (X indicates the rest of the sentence):

(12) ## (N) (E) *C* X ##

If no N is present, the C slot becomes sentence-initial, and E follows if present. E always occupies sentence second position. Thus:

(13) A. *n=aš māḫḫan* . . . "when he . . . "
N E C
B. *māḫḫann=a=kan* . . . "and when . . . "
C E_1 E_2
C. *n=ašta mān* . . . "(then) if . . . "
N E C
D. *mān=a=šta* . . . "but if . . . "
C E_1 E_2

When conjunctions *mān* and *takku* are initial and followed by optional enclitics, the enclitic *=ma* is in Old Hittite and Middle Hittite delayed to the second word in its clause: *mān* ^{URU}*Ḫattuša=ma* "but when to Hattusas . . . ," *mān āppa=ma* ^{URU}*Nēsa* "but when back to Nesas . . . ' This rule is no longer observed in Neo-Hittite (*mān=ma passim*); we have a diachronic syntactic change.

Any sentence element can be fronted, by moving into a TOP(icalization) Phrase to the left of C, thus

(14) ## (N) (E) *TOP* (*C*) X ##
n=ašta ^{D}IM-*unni-ma mān* "and when to the Stormgod . . . "

If no N is present, as often for C and usually for TOP, we have

(15) ## *TOP* (E) *C* X ##
kinun=a=wa mān "but now how . . . ?"

Coordinated clauses of the type "if X, (then) Y," "when X, (then) Y," "because X, (then) Y," are almost always in that order (X,Y). Similarly in "subordinate" clauses the R(elative) C(lause) virtually always precedes the M(ain) or M(atrix) C(lause). The basic rule for *indefinite* RC ("whoever") is "Move *kui-* ("*wh-*") to C(omplementizer)":

(16) ## (N) (E) *kui-* X V ##

That for definite RC ("s/he who") is the above rule, followed by a fronting rule, "Move something else to TOP(icalizer), to the left of *kui-* in C":

(17) ## (N) (E) ___ *kui-* X V ##

Compare, with connective, *nu kuiš MEŠEDI* "whichever guard" beside *nu* 1 *MEŠEDI kuiš* "The one guard who." In the absence of connective and other elements save V, we have just two-word sentences: *kuiš paprezzi* "Whoever is unclean" beside *paprezzi kuiš* "He who is unclean."

These movement rules are complex. In the following example, the interrogative *wh-* has been fronted around the RC, even though its domain is actually the MC:

(18)

kuwat=wa	URUDU-*an*	*kuin*	*lāḫun*	*nu=wa=mu*	*āppa*	*ḫūrzakizi*
Why=quot.	copper	which	I cast	N=quot.=me	back	is cursing

"Why is the copper which I cast cursing me back?"

In the following example the whole of the RC has fronted to precede the *wh*-word "because" in C:

(19) *nu* ^{m}*Aparruš* LÚ ^{URU}*Kalašma* *kūruriaḫta* *kuit*
N Aparrus the Kalasmean had begun hostilities because
nu=za 3 *LIM* KASKAL *ninikta*
N=refl. 3,000 army he raised
"Because Aparrus the Kalasmean had begun hostilities he raised an army of 3,000"

Note also that the antecedent of the relative clause commonly appears in both the RC and the MC:

(20) *ḫaššikkitten* *kuedani* *šiwatti* *nu=wa* *kāša* *apēl* *šiwattaš* *laleš*
you quarreled on which day N=quot. behold of that day the tongues
"Behold the tongues of the day on which you quarreled"

5.2 Agreement

In Hittite and other Anatolian languages agreement is generally like that of other old Indo-European languages: attributive adjectives, participles, and pronouns agree in gender, case, and number. In conformity to their origin as collectives, neuter plurals take a singular verb, as in some other old Indo-European languages. Agreement in predicates, nominal and verbal, frequently shows *constructio ad sensum*, especially in number: *n=an* GIM-*an* KUR-*eanza aušta n=at naḫšariyandari* "When the land (erg. sg.) saw him, they (nom. pl.) were afraid (3rd pl.)." In a single sentence the animate plural and collective (neuter plural or singular) may shift back and forth freely: *nu=mu* MUŠEN$^{Ḫl.A}$ *kue uppešta n=at arḫa ḫarranteš ešir n=aš edunn=a ŪL ūḫḫunn=a=aš ŪL man=at* SIG$_5$*-anteš man=at ŪL* "the birds (neut. pl. acc. coll.) which (neut. pl. acc.) you sent, they (anim. pl. nom.) were spoiled (3rd pl.), and I neither ate them (anim. pl. acc.) nor did I see them (anim. pl. acc.) whether they (anim. pl. nom.) [were] good (anim. pl. nom.) [or] whether they (anim. pl. nom.) [were] not." The sentence is a good example of Hittite complex clauses; notice the right dislocation of the two negatives, and the respective positions of the coordinated verbs *n=aš edunn=a* and fronted *ūḫḫunn=a=aš* vis-à-vis their enclitic objects. The underlying presence of enclitic *=a* "and" in the latter is guaranteed by the gemination of the final *n* of the first singular preterite *-un* in both verbs. Historically, *=a* "and" developed from **h*$_2$*o* (Luv. *=ḫa*), and the gemination reflects generalization to all consonants of a phonetic rule -VRHV- → -VRRV-. Compare *kuišša* "each," acc. *kuinna*, with Luvian *kuišḫa* "some/any(one)," acc. *kuinḫa*.

5.3 Syntactic innovation

The most interesting and striking syntactic innovations of Hittite and the other Anatolian languages are doubtless the system of split ergativity and the related development of enclitic subject pronouns with certain ("unaccusative") intransitive verbs, both of which (with references) have been discussed above. Both are illustrated in the sentences cited in the preceding paragraph. Likewise striking is the enclitic chain of Hittite and the other Anatolian languages, also discussed above (see §§4.2.3, 4.4.4). As the incorporation into the chain of the innovated subject pronouns would suggest, the elaboration of these lengthy chains of enclitic elements, particles, and pronouns is itself a syntactic innovation built on much smaller inherited beginnings. Given the presence of such apparent chains in the unrelated Hattic, and to some extent Hurrian, languages it is likely that we are in the presence of an Anatolian areal feature.

6. LEXICON

The core grammatical structure of Hittite in nominal, pronominal, and verbal morphology is clearly Indo-European, with a few innovations like the loss of the categories of subjunctive and optative mood, the comparative *-*yos*- (but not contrastive *-*tero*-) and superlative, and the feminine gender. Features like the *ḫi*-conjugation are now seen to be archaisms, and the perfect and thematic conjugation of later Indo-European are innovations posterior to the separation of Anatolian. The former view, current early in this century, that the Hittite lexicon was largely of "foreign" non-Indo-European provenience, has proved incorrect. That false impression was due to the technical character of the vocabulary of a large number of texts dealing with public and private ritual, cult, augury, and the like, on the one hand, and details of social and military organization, on the other, all of which reflect the culture of Asia Minor and the Near Eastern world of the second millennium BC. On the level of basic core vocabulary, Hittite (and the rest of the Anatolian family) is firmly Indo-European. The existence of two large and ongoing etymological dictionaries or glossaries (Tischler 1977–, Puhvel 1984–) and a monumental Anatolian historical phonology (Melchert 1994) is ample testimony to the mine of information now available on the Indo-European origins of the Hittite lexicon. About half of the 230-odd Indo-European roots cited in Watkins 2000a, 2000b are represented in Hittite, and studies of selected semantic fields like body parts show a high percentage with Indo-European etymology. "Foot" (*pad*-) agrees with English and Greek, and "hand" (*keššar*-) with Greek; if "tooth" (*kaga*-) is cognate with English "hook," we need only recall that the Slavic and Tocharian words for "tooth" are cognate with English "comb." Sometimes the Hittite facts require revision of accepted semantic views: thus the usual Indo-European verb "drink" (*$p\bar{o}$-, *poh_3-) means "take a swallow" in Hittite (*pāš*-), and the usual Hittite verb "drink" (*eg^w*-, *eku*-) has a cognate in Tocharian, and otherwise survives only residually in the Greek verb for "go without drink" and the Latin for "drunk" (*eb-rius*).

The Hittites settled in their homeland of central Anatolia when it was already populated by urbanized non-Indo-European Hattic speakers, and they borrowed or absorbed many features of Hattic culture, especially in the sphere of religion and cult. Our documents include many bilingual Hattic-Hittite texts, and the continued use of Hattic as a cultic language in the Old Kingdom accounts for numerous lexical and onomastic borrowings in this cultural area. The existence of a Hattic substratum of speakers having given up Hattic for Hittite (or dialects related to each) in the early centuries of the second millennium or earlier may also be ultimately responsible for such apparently areal syntactic features as the clitic chain in Hittite and other Indo-European languages, or such areal phonological features as the preservation as *ḫ*, *ḫḫ* of two of the three Proto-Indo-European laryngeals.

Already in the nineteenth century BC the Hittites in Kaneš (Nešaš) were in contact with the Semitic world, with the Old Assyrian merchant colonies. The cuneiform documents of the latter attest intermarriage and far-reaching cultural and economic contact between Assyrians and Anatolians, many of whom were Hittite-speaking. The use of writing in cuneiform on clay tablets came to the Hittites only later, from contacts with Peripheral Akkadian speakers and scribal schools in Northern Syria writing a form of Akkadian similiar to Old Babylonian. Akkadian was, at the beginning of the historical period, the language of Hittite literary productions like the Siege of Uršu, and of bilinguals conceived in Hittite and then translated into Akkadian; it continued in use for ceremonial purposes in Middle Hittite, witness the inscription on an Aegean sword by Duṯḫaliyaš II commemorating his destruction of the Aššuwa coalition, and throughout the Middle Kingdom and empire as the language of some treaties and international correspondence.

The Hittites were in contact with the non-Indo-European Hurrians from at least the time of the Old Kingdom on, and the early hostilities were succeeded in Middle Hittite times by a period of intense cultural symbiosis, particularly in religion and cult. The translation of some Hurrian texts and the composition of others on Hurrian models was a major factor in the flowering of Hittite culture, and the Hurrian linguistic legacy in the technical terminology of ritual as well as the onomastics of the new pantheon was immense.

The Hittites were also in continual contact since the Old Kingdom with other Indo-European languages of Anatolia. Palaic, the language of Palā to the northeast (classical Paphlagonia) was preserved as the language of local cults in a few tablets in Hattusas; the language appears to have died during the time of the Old Kingdom. Luvian, the language of Arzawa to the west and Kizzuwatna to the south, is attested in a number of rituals of Kizzuwatnan provenience in Hattusas from the Old Kingdom on. Both onomastics and prosopography attest a growing Luvian presence throughout Hittite history, and with the establishment of the empire and probably long before we may assume widespread Luvian–Hittite, bilingualism. Already at the end of the Old Kingdom or the beginning of Middle Hittite one text describes some orders to the palace guard to be given in Hittite, and others in Luvian. The use of the Hieroglyphic Luvian script and language for monumental and identificational (glyptic) purposes surely contributed to this linguistically cosmopolitan atmosphere which is so characteristic of Hittite culture. From the last recorded Hittite king, Suppiluliumas II, we have not only Hittite cuneiform texts, but two Hieroglyphic Luvian monuments setting forth his manly deeds, as well as the pathetic letter in Akkadian inquiring after the *šikalāyu*, the Sea Peoples who brought about his own and his empire's downfall.

Bibliography and further reading

References

Beckman, G. 1996. *Hittite Diplomatic Texts.* SBL Writings from the Ancient World Series. Atlanta: Scholars Press.

Cowgill, W. 1979. "Anatolian *ḫi*-conjugation and Indo-European perfect: Installment II." In E. Neu and W. Meid (eds.), *Hethitisch und Indogermanisch.* Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.

Cowgill, W. and M. Mayrhofes. 1986. *Indogermanische Grammatik*, vol. I. Heidelberg: Carl Winter.

Dietrich, M. and O. Loretz. 1978. "Das 'seefahrende Volk' von Šikila (RS 34.129)." *Ugarit Forschungen* 10:53–56.

Eichner, H. 1973. "Die Etymologie von heth. *mēḫur*." Münchener Studien zur Sprachwissenschaft 31:53–107.

_____. 1975. "Die Vorgeschichte des hethitischen Verbalsystems." In H. Rix (ed.), *Flexion und Wortbildung*, pp. 71–103. Wiesbaden: Dr. Ludwig Reichert.

_____. 1992. "Anatolian." In J. Gvozdanović (ed.), *Indo-European Numerals*, pp. 29–96. Berlin/New York: Mouton de Gruyter.

Garrett, A. 1990. "The origin of NP split ergativity." *Language* 66:261–296.

_____. 1996. "Wackernagel's law and unaccusativity." In A. L. Halpern and A. M. Zwicky (eds.), *Approaching Second: Second Position Clitics and Related Phenomena*, pp. 85–133. Stanford: CSLI Publications.

Hoffner, H. A., Jr. 1990. *Hittite Myths.* SBL Writings from the Ancient World Series. Atlanta: Scholars Press.

_____. 1997. *The Laws of the Hittites. A Critical Edition.* Leiden: Brill.

Jasanoff, J. 1994. "Aspects of the internal history of the PIE verbal system." In G. Dunkel, G. Meyer, S. Scarlata, *et al.* (eds.), *Früh-, Mittel-, und Spätindogermanisch*, pp. 149–167. Wiesbaden: Otto Harrassowitz.

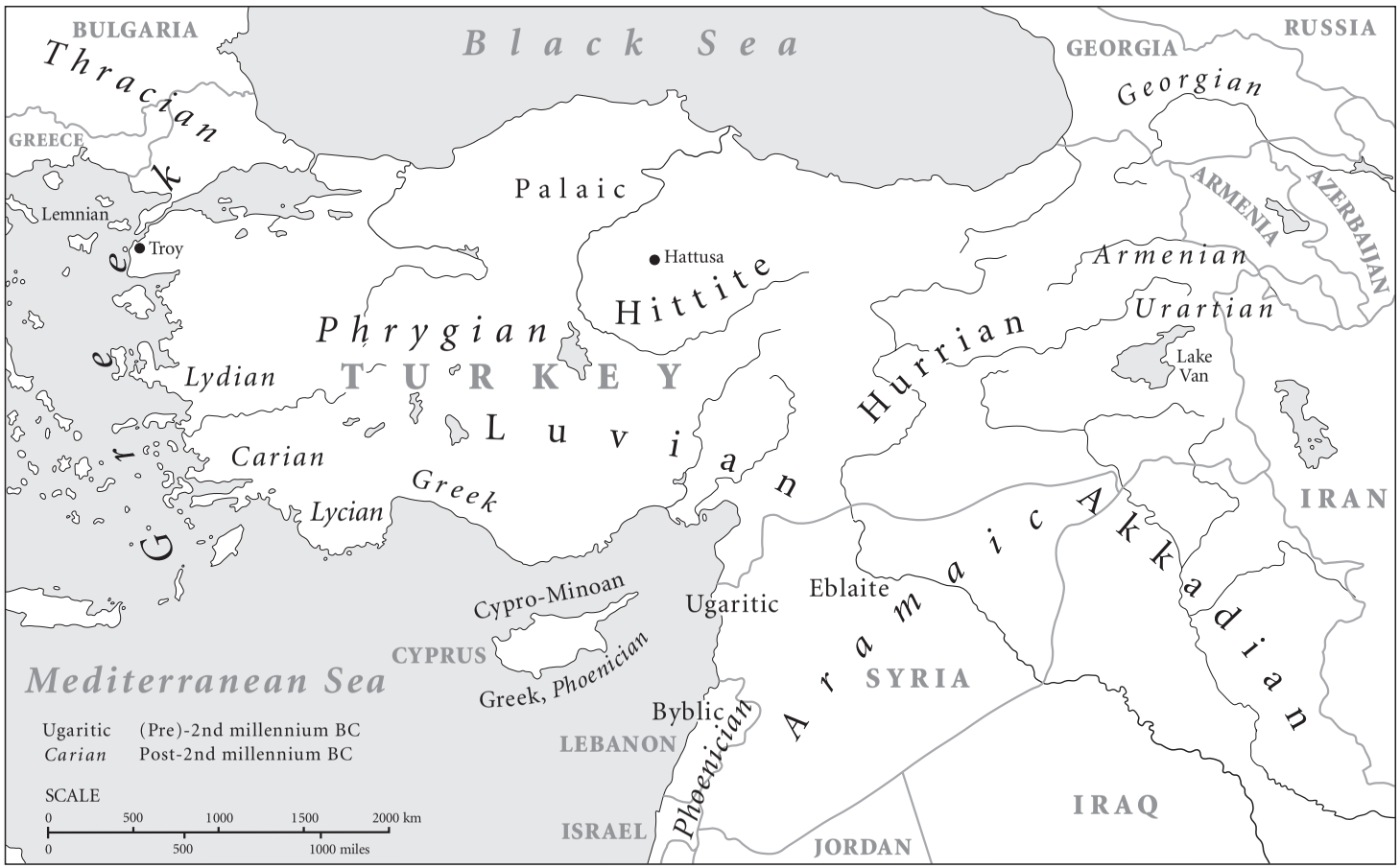
_____. Forthcoming. *Hittite and the Indo-European Verb*. Oxford: Oxford University Press.
Kuryłowicz, J. 1979. "Die hethitische *ḫi*-Konjugation." In E. Neu and W. Meid (eds.), *Hethitisch und Indogermanisch*, Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
Labat, R. 1976. *Manuel d'épigraphie akkadienne* (5th edition). Paris: Imprimerie Nationale.
Laroche, E. 1971. *Catalogue des textes hittites*. Supplements RHA 30, 33. Paris: Klincksieck.
Melchert, H. C. 1994. *Anatolian Historical Phonology*. Leiden Studies in Indo-European 3. Amsterdam/Atlanta, GA: Rodopi.
Morpurgo Davies, A. 1982–1983. "Dentals, rhotacism, and verbal endings in the Luwian languages." *KZ* 96:245–270.
Neu, E. 1974. *Der Anitta-Text*. Studien zu den Boğazköy-Texten 18. Wiesbaden: Otto Harrassowitz.
Oettinger, N. 1979. *Die Stammbildung des hethitischen Verbums*. Nürnberg: Carl.
_____. 1992. "Die hethitischen Verbalstämme." In O. Carruba (ed.), *Per una grammatica ittita*, pp. 213–249. Pavia: Uculano.
Otten, H. 1973. *Eine althethitische Erzählung um die Stedt Zalpa*. StBoT 17 Wiesbaden: Otto Harrassowitz.
_____. 1995. *Die hethitischen Königssiegel der frühen Grossreichszeit*. Stuttgart: Steiner.
Puhvel, J. 1984–. *Hittite Etymological Dictionary*. Berlin: Mouton de Gruyter.
Rüster, C. and E. Neu. 1989. *Hethitisches Zeichenlexikon*. StBoT, Suppl. 2. Wiesbaden: Otto Harrassowitz.
Tischler, J. 1977–. *Hethitisches etymologisches Glossar*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
Watkins, C. 2000a. *Indo-European and the Indo-Europeans. The American Heritage Dictionary of Indo-European Roots* (2nd, revised edition), pp. vii–xxxv. Boston: Houghton Mifflin.
_____. 2000b. *Indo-European and Indo-Europeans. The American Heritage Dictionary of the English Language* (4th, revised edition). Boston: Houghton Mifflin.
Yoshida, K. 1990. *The Hittite Mediopassive Endings in -ri*. Berlin: de Gruyter.

Further reading

Grammar:
Friedrich, J. 1960. *Hethitisches Elementarbuch I*^{2}. Heidelberg: Carl Winter.

Dictionaries:
Friedrich, J. 1952. *Hethitisches Wörterbuch, mit Ergänzungshefte* (3 vols.). Heidelberg: Carl Winter.
Friedrich, J. and A. Kammenhuber. 1975–. *Hethitisches Wörterbuch* (2nd edition). Heidelberg: Carl Winter.
Güterbock, H. G. and H. A. Hoffner, Jr. 1980–. *The Chicago Hittite Dictionary*. Chicago: Oriental Institute.

Texts:
See the two series Studien zu den Boğazköy-Texten (StBoT) and Texte der Hethiter. Representative texts are translated by A. Goetze in Prichard, James. 1955. *Ancient Near Eastern Texts relating to the Old Testament*. Princeton: Princeton University Press. See also Hoffner 1990 and Beckman 1996.



Map 1. The ancient languages of Anatolia and surrounding regions (languages which are first attested in the first millennium BC or later are marked in italics)

CHAPTER 3

Luvian

H. CRAIG MELCHERT

1. HISTORICAL AND CULTURAL CONTEXTS

Luvian (or Luwian) was arguably the most widely spoken member of the Anatolian subgroup of Indo-European. Evidence for the language is twofold. First, the cuneiform archives of the Hittite capital Hattuša in central Anatolia contain a number of texts with passages in a language designated *luwili*; that is, of the land *Luwiya*, which the Old Hittite Laws list as one of three major divisions of the Hittite state.

Starke (1985) has shown in his excellent edition of the Cuneiform Luvian (CLuvian) corpus that the apparently extensive texts actually represent variations on scarcely a dozen distinct compositions (aside from a few fragments). With one or two exceptions, the texts are rituals, some of a private, therapeutic nature, others belonging to the state cult. The CLuvian manuscripts, like the Hittite, date from the sixteenth to thirteenth centuries BC, including a few from the Old Hittite period (see Ch. 2, §1). Beyond this highly restricted material, there are also many isolated Luvianisms scattered throughout the Hittite texts, both as foreign words and as genuine loanwords adapted to Hittite inflection. Starke (1990 and elsewhere) has demonstrated that Luvian influence on Hittite was both earlier (including prehistoric) and more extensive than previously acknowledged. However, the fact that the two languages are very closely related makes it difficult to distinguish with certainty Luvian loanwords into Hittite from native Hittite cognates of Luvian lexemes, and not all of Starke's claims are equally persuasive (see Melchert 1992).

The second source for Luvian consists of texts written in a system of Anatolian hieroglyphs. Aside from a few letters and economic documents on soft lead strips, the vast majority are monumental inscriptions on stone, both natural rock-faces and man-made structures. A few date from the fourteenth and thirteenth centuries BC, the later period of the Hittite Empire, and most of these are attributable to known Hittite kings. Most Hieroglyphic Luvian (HLuvian) texts, however, date from the tenth to seventh centuries, after the fall of the Hittite Empire itself, and describe the activities of local rulers and their subordinates in the various newly independent small states of southern Anatolia and northern Syria. These inscriptions on stone are generally dedicatory in content, but often contain lengthy historical sections.

Both references in the Hittite texts and the geographical distribution of the extant HLuvian inscriptions suggest that the Luvian "heartland" lay in southern and southwestern Anatolia, penetrating into what is now northern Syria. However, inscriptions have also been found in western and central Anatolia (including at Hattuša itself). The status of Luvian as a spoken language in the latter areas is quite unclear. The influence of Luvian on Hittite, particularly in the Late Empire period, has led to suggestions that by this time Luvian was the spoken

language in Hattuša, with Hittite preserved only as a written "chancellery" language. This possibility must be taken seriously, but it should be regarded as merely one of several hypotheses.

Also problematic is the precise relationship between CLuvian and HLuvian. There is nothing to recommend the view that CLuvian is in any sense the "Hattuša dialect" of Luvian. The highly restricted nature of the CLuvian evidence and limited understanding of the contemporary HLuvian inscriptions of the second millennium preclude any definitive statements at present. The prudent current consensus is to treat the two as closely related but independent coequal dialects of a single language with no further presumptions. A last complication to be mentioned is the chance that one set of CLuvian texts, the so-called "Istanuvian songs," represents a dialect distinct from the rest of CLuvian (and HLuvian). The evidence is suggestive (see the references in Melchert 1994a:11), but the Istanuvian texts are too poorly understood to assert anything with confidence. Radical revision of the readings of many basic HLuvian signs by Hawkins, Morpurgo Davies, and Neumann (1974) has shown that differences between CLuvian and HLuvian are minimal. The single description which follows is meant to apply to both unless stated otherwise.

2. WRITING SYSTEMS

2.1 Cuneiform Luvian

CLuvian was written by Hittite scribes, using the same version of the Old Babylonian syllabary that they used to write Hittite, and the writing conventions are mostly the same (see Ch. 2, §2). Word spacing and paragraph dividers are used consistently. Logograms are less frequent than in Hittite, but more common than in Palaic. One should certainly regard *scriptio plena* (repeating the V of a VC or CV sign with the matching V sign) as a marker of vowel length (Melchert 1994a:27, extending the claims of Kimball and Eichner for Hittite). The contrast of intervocalic single and geminate consonants is significant as in Hittite, however one interprets this in phonetic terms (see the lengthy discussion with references in Melchert 1994a:13ff.). The most striking spelling habit is the free use of word-initial *scriptio plena*, almost nonexistent in Hittite: CLuvian *i-i-ti* for /īdi/ "goes," *a-an-ta* for /ānda/ "in(to)." Since it is virtually certain that Luvian does not distinguish /i/ and /e/, the sporadic use of cuneiform signs with *e*-vocalism for /i/ is surely insignificant.

Emil Forrer in 1919 already established CLuvian as a distinct language with close affinities to Hittite. Further significant progress came following World War II with the publication of a large number of texts and analyses by Bernhard Rosenkranz, Heinrich Otten, and Emmanuel Laroche. A new era in CLuvian studies began with the publication of the radically reorganized corpus by Starke (1985).

2.2 Hieroglyphic Luvian

The Anatolian hieroglyphs are first attested on Hittite personal seals dating from the fifteenth and fourteenth centuries. These inscriptions, consisting of names, titles, and good luck signs, can hardly be said to represent texts in a given language. Except for a few isolated cases (Urartean glosses on pithoi, Hurrian divine names in the pantheon at Yazilikaya), all genuine texts in the hieroglyphs discovered thus far are in Luvian. That the system was invented for writing Luvian is supported by evidence from acrophony (secondary use of a logogram as a phonetic sign based on the initial sequence of the word represented): e.g., the

Table 3.1 Examples of Hieroglyphic Luvian logograms

Character	Value	Character	Value	Character	Value
	"head"		"god"		"offer"
	"I"		"moon"		"put"
	"speak"		"sun"		"below"
	"anger"		"boundary"		"above"
	"king"		"scribe"		"after"
	"kingdom"		"Aleppo"		"before"
	"camp"		"give"		

sign *tara/i-* clearly is based on Luvian /tarri-/ "three" (vs. Hittite *tēri-*). The precise time and place of development of the hieroglyphs and the relationship of their use on seals to that for writing texts remain to be elucidated: see Hawkins 1986 for further discussion.

The HLuvian system is mixed logographic-syllabic. A word may be written as a logogram (particularly common in the second-millennium texts), entirely phonetically, or as a logogram with phonetic complements. The logogram may also stand before the complete phonetic word as a determinative (semantic marker). The nominative singular of "cow" may thus be written in four ways: (i) BOS (by a now widely accepted convention, logograms are with a few exceptions represented by capitalized Latin equivalents); (ii) *wa/i-wa/i-sa*; (iii) BOS-*wa/i-sa*; or (iv) (BOS)*wa/i-wa/i-sa* (where BOS is used as a determinative). The phonetic portion of the system includes only signs for V and CV sequences (and rarely CVCV). This fact means that neither word-final consonants nor any consonant clusters may be directly represented: see *wa/i-wa/i-sa* for /wawīs/ above. One should note in particular the failure to indicate preconsonantal nasals: the animate nominative plural ending /-intsi/ is spelled *-Ci-zi*. For a provisional list of logograms and phonetic signs see Hawkins 1975:153ff.

The system does not distinguish simple from geminate consonants nor a possible voicing contrast in stops. Repetition of the vowel of a CV sign by a V sign does **not** indicate vowel length, but is regulated by aesthetic principles (there is a strong tendency to fill available space evenly). The syllabary only gradually and imperfectly developed separate CV signs for /a/ and /i/ vocalism, hence the rather awkward use of spellings like *wa/i-wa/i-sa*. For more on the system see Melchert 1996.

It had long been surmised that the monumental inscriptions in Anatolian hieroglyphs were associated with the Hittite Empire, but it was only the discovery of the cuneiform Hittite documents at Hattuša/Boğazköy in the early twentieth century that permitted serious work on deciphering the hieroglyphs. Emil Forrer, Bedřich Hrozný, Piero Meriggi, and Ignace Gelb all made important pioneering contributions, and by 1940 a partial decipherment of the script and basic understanding of many texts had been achieved. It was also clear that "Hieroglyphic Hittite" was closely related to cuneiform Hittite and Luvian, but the precise relationship remained uncertain. The discovery of an extensive Hieroglyphic–Phoenician

bilingual at Karatepe in 1947, published in stages by Helmut Bossert, promised to revolutionize study of the hieroglyphs, but it was not until the mid-seventies that David Hawkins, Anna Morpurgo Davies, and Günter Neumann, building on work of Bossert, could demonstrate that the phonetic readings of a number of basic signs required radical revision. The major reassessment demanded by these changes confirmed the early claim of Meriggi that the language of the hieroglyphs is a form of Luvian, and indeed one very closely related to CLuvian.

The multiple ambiguities of the HLuvian syllabary mean that analysis of Luvian phonology is based primarily on CLuvian data. In compensation, the much more varied content of the HLuvian texts tends to give a broader picture of Luvian morphology.

3. PHONOLOGY

3.1 Consonants

The Luvian phonemic inventory consists of at least the following consonants:

(1) Luwian consonantal phonemes

p	t		k	
b	d		g	
	ts			
	s			ħ
				ʕ
m	n			
	l	r		
w		y		

The absence of positive evidence for a unitary labiovelar /k^{w}/ as in Hittite may be accidental, and words like *ku-i-* "who, which" from *$k^{w}i$- may still contain /k^{w}/. It is certain that there is no corresponding voiced stop, because inherited *g^{w} merges with *w: recall /wawī-/ "cow" from *$g^{w}ow$- above. As already noted, the orthography of stops in CLuvian follows the same principles as in Hittite (intervocalic contrast of simple vs. geminate; see Ch. 2, §3.1), although the specific distribution diverges due to different prehistoric changes. Interpretation of this orthography remains controversial. HLuvian obviously can render no assistance, but the restriction of rhotacism (see below) to the voiced dental stop confirms that some kind of phonemic contrast remained between inherited voiceless and voiced stops, whatever its precise synchronic realization.

The sound conventionally transliterated *z* represents sequences of /t/ + /s/, as well as the result of prehistoric assibilation of *t before *y and Proto-Indo-European palatal *$\hat{k}$ (for the last see Melchert 1987 and 1989). While there is no reason to assume more than one synchronic phoneme, it is quite possible that /ts/ includes a palatal or palatalized allophone. Despite the hesitation of Melchert (1994a:274), there is good reason to suspect that graphic *z* also in some cases represents a voiced dental fricative /z/ (cf. the same possibility for Lycian *z*). The transliteration of the voiceless coronal sibilant as *š* in CLuvian is merely conventional, as in Hittite, and there is no reason to suppose that the sound is anything other than a dental-alveolar /s/. As in the case of Hittite and Palaic, the characterization of the sounds spelled -*ḫḫ*- and -*ḫ*- in CLuvian as pharyngeals is by no means assured, and velar fricatives /x/ and /γ/ are quite viable alternatives.

3.1.1 Diachronic variation

Two diachronic developments affecting Luvian consonants are worthy of mention. The first is *Čop's Law*, by which a prehistoric sequence $^{*}\breve{e}.C_1$ becomes Luvian $aC_1.C_1$: for example, $^{*}r\breve{e}\,b(^{h})es$- > CLuvian *tappaš*- "heaven"; $^{*}n\breve{e}lid$- > CLuvian *mallit*- "honey" (see Čop 1970 and Melchert 1994b:305 for further details). The second is *rhotacism*, a sporadic change by which *d*, *l*, and rarely *n* become *r* in HLuvian: for example, HLuvian /īri/ beside /īdi/ "goes," /wara-/ beside /wala-/ "die" (see Morpurgo Davies 1982–1983 for details).

3.2 Vowels

Luvian has only three vowels, /a/, /i/, and /u/, in contrasting short and long varieties. While there are some underlying long vowels, most phonetic length is due to synchronic rules which lengthen underlying short vowels under the accent: contrast sentence-initial conjunction *pā* < /pá/ versus enclitic *-pa* < /-pa/, or adverb *ānnan* "under" < /ánnan/ versus *annān pātanza* "under the feet" < /annán/ with accent shift in a prepositional phrase (see Melchert 1994a:247 for further discussion). There are clearly falling diphthongs /a:y/ and /a:w/. Corresponding short /ay/ and /aw/ are likely, but difficult to prove.

Certain facts about the placement of the accent may be inferred from the prehistoric and synchronic rules cited in the preceding two paragraphs, but the evidence is limited, and the risk of circularity of argument is high.

3.3 Synchronic variation

In addition to the vowel-lengthening rules referred to above, synchronic rules include the loss of word-final /-d/ in certain noun paradigms and the insertion of /-s/ between dental stops (*aztūwari* "you (pl.) eat" < /ad-tuwari/), the latter rule inherited from Proto-Indo-European.

3.4 Phonotaxis

Phonotactic restrictions apply chiefly to initial and final consonants. Only /s/, /l/, /r/, and /n/ appear word-finally, with /-(n)ts/ the only final cluster. All consonants appear regularly word-initially except /r/, for which HLuvian shows a single example. For the possibility that only voiceless obstruents appear word-initially see Melchert 1994a:18ff. The very limited evidence regarding consonant clusters is summarized by Melchert 1994a:248ff. Vowels occur freely in all positions. There are no assured cases of hiatus.

4. MORPHOLOGY

4.1 Nominal morphology

Luvian is a typical older Indo-European language with a well-developed, almost exclusively suffixing derivational and inflectional morphology. The noun inflects for two numbers, singular and plural. Some animate nouns have a collective beside a count plural: *dušduma* "(set of) vouchers" beside unattested **dušduminzi* "vouchers" to *dušduma/i*-. Reference to more than one collective set requires a special "individualizing" suffix *-ant*-: for example, /tawa/ (collective plural) "eyes" (of one person), but /tawanta/ "sets of eyes." There are

two genders, animate and inanimate. The former is in most stem-classes marked not only by a distinct set of endings, but also by an obligatory /-ī-/ inserted between stem and ending just in the nominative and accusative cases (see Starke 1990:59ff.). The origin of this latter feature is a matter of lively debate. CLuvian has five cases: nominative, vocative, accusative, dative-locative, and ablative-instrumental. The vocative is rare and restricted to the singular. The inanimate gender expectedly has a single nominative and accusative, and the ablative-instrumental does not distinguish number. HLuvian merges the animate nominative and accusative plural. CLuvian replaces the genitive entirely with a "relational adjective" modifying the head noun: "divine favor" for "favor of the god(s)." HLuvian uses both the modifying adjective and a true nominal genitive case, sometimes combining them in remarkable ways (see the examples cited in Melchert 1990:202ff.). Both dialects permit use of the relational adjective even when a noun phrase includes a second genitive dependent on another ("the son of the lord of the country"), in which case both genitives are expressed by adjectives agreeing in case and number with the head noun (see Neumann 1982).

A disadvantage of the relational adjective is that it cannot express the number of the possessor. CLuvian has partially remedied this situation by developing a marker *-anz-* which is inserted between the stem and nondirect case endings in the relational adjective to mark the possessor as plural: *waššaraḫitati maššanaššanzati* "by the favor of the gods" (see Melchert 2000).

In HLuvian the inanimate nominative-accusative singular of nouns is obligatorily marked by a postposed particle *-sa/-za*. This marker is also frequent in CLuvian, where some trace of an original anaphoric or deictic function seems visible (see Arbeitman 1992:22ff. for discussion).

The suffixes marking number, gender, and case are mostly recognizable as inherited from Proto-Indo-European: for example, animate nominative singular /-s/ and accusative singular /-n/ < *-*m*. However, Luvian has innovated significantly in the plural, building a new system apparently based on the old animate accusative plural *-*ons*: animate nominative plural /-Vntsi/, animate accusative plural /-Vnts/, dative-locative plural /-ants/.

4.2 Pronouns

The personal pronouns, as far as attested, are recognizable as inherited from Proto-Indo-European, with the peculiar Anatolian *u*-vocalism in the first person singular: HLuvian *amu* "I, me." Luvian also shows the characteristic Anatolian demonstratives *apā-* "that" and *za/i-* "this" (the latter equaling Hittite *ka/i-*) and the inherited relative-interrogative *kui-*. Inflection appears to follow that of the noun more closely than in Hittite, but evidence for the nondirect cases is sparse.

4.3 Verbal morphology

The verb has the expected three persons and two numbers. There are only two moods, indicative and imperative. Evidence for a medio-passive beside the active voice is limited, but use of the middle of *a(ya)-* "make, do" effectively as a passive ("be made, become") suggests that the functions of the medio-passive are of the expected sort. Tenses are limited to a present-future and a preterite. The basic verb-stem is unmarked for aspect, but there is also an imperfective marked with the suffixes *-sa-* and *-za-*. Luvian shows the same division into *mi-* and *ḫi-* conjugations as Hittite (see Ch. 2, §§4.4.7, 4.4.9; Morpurgo Davies 1979). The verbal endings are mostly clearly inherited, but there may have been a noteworthy

replacement of the preterite third-person active endings by the medial endings (see Yoshida 1993).

Luvian has a single participle formed with the suffix *-a(i)mma-*, with a past passive value for transitive verbs and a stative one for intransitives, and an infinitive in *-una*.

4.4 Derivational morphology

Luvian shows a rich set of derivational suffixes in both the noun and verb. Even the massive study of Starke (1990) covers systematically only the consonant stems in the noun.

4.5 Compounds

There are no assured compounds among appellatives, but examples in personal names suggest that further analysis and additional evidence will reveal some.

4.6 Numerals

Knowledge of numerals in Luvian is limited by their frequent spelling with logograms. See Eichner 1992 for what is known.

5. SYNTAX

5.1 Word order and clause structure

The functionally unmarked word order is SOV (Subject–Object–Verb), but any major constitutent may be fronted to initial position for emphasis, and elements may also be extraposed to the right of the verb for the same purpose. Relative clauses typically precede the main clause with a resumptive pronoun, but postposed relatives also occur. Luvian has several subordinating conjunctions marking temporal or conditional clauses. There are no coordinated clauses in the strict sense, but the enclitic conjunction *-ha* which conjoins noun phrases can be used to mean "also." Like Hittite (see Ch. 2, §5.1), Luvian links sentences in narration with prosecutive conjunctions, *a-* (functionally = Hittite *nu-*) or *pā/-pa* (= Hittite *-ma*, marking change of topic, lightly adversative). Adjectives, including demonstratives and relational adjectives, typically precede their head noun. Luvian appears to have both prepositions and postpositions, as well as local adverbs which occur independently and as preverbs.

As in the other Indo-European Anatolian languages, anaphoric pronouns, conjunctions, and various particles regularly appear in Luvian as enclitics, attached to the first accented element in a clause by *Wackernagel's Law*. The conjunction *-ha* "and" which conjoins noun phrases is also an enclitic (like Latin *-que*), and note the particle *-sa/-za* cited above (§4.1).

5.2 Syntactic miscellanea

HLuvian shows at least one example of the Anatolian construction in which the direct object of an infinitive is unexpectedly in the dative: *za-ti CASTRUM-si AEDIFICARE+MI-na* "this (dat.) fort (dat.) to build" = "to build this fort." This usage is comparable to the "double dative" of Sanskrit. Examples with the expected accusative also occur in HLuvian.

The syntax of cardinal numerals is complex. They may occur as adjectives agreeing with nouns in number and case, but one also finds singular nouns with numbers above one (see Eichner 1992, *passim*).

6. LEXICON

Luvian core vocabulary appears to be for the most part inherited from Proto-Indo-European, but evidence is limited: of the fifty-one words from the Swadesh-Voegelin hundred-word list which are known, thirty-nine or 80 percent are of Proto-Indo-European origin. The only major source of loanwords is Hurrian, from which many terms in various technical fields such as divination passed into Luvian and then into Hittite.

7. READING LIST

Marazzi 1990 offers a thorough bibliography for HLuvian along with a grammatical sketch which is mostly valid also for CLuvian, and a partial lexicon. Werner 1991 is also useful and reliable. HLuvian text editions are currently scattered through secondary works. A complete new edition of the HLuvian texts of the first millennium is now available in Hawkins 2000. The older standard works by Meriggi and Laroche (cited in Marazzi) are now rendered almost useless by the outdated phonetic values of several crucial signs. Starke 1985 gives the available CLuvian texts in transliteration. Melchert 1993 offers a complete lexicon for Starke 1985 plus selected Luvianisms in Hittite contexts. The lexicon and grammatical sketch of Laroche 1959 are still useful, but must be read in conjunction with the works cited above.

Bibliography

Arbeitman, Y. 1992. "Luwian *za-* and *-sa* (/*-za*): how I have changed my mind (with ruminations on Palaic)." *Linguistique balkanique* 35:3–58.

Čop, B. 1970. "Eine luwische orthographisch-phonetische Regel." *Indogermanische Forschungen* 75:85–96.

Eichner, H. 1992. "Anatolian." In J. Gvozdanović (ed.), *Indo-European Numerals*, pp. 29–96. Berlin/New York: Mouton de Gruyter.

Hawkins, D. 1975. "The negatives in Hieroglyphic Luwian." *Anatolian Studies* 25:119–156.

_____. 1986. "Writing in Anatolia: imported and indigenous systems." *World Archaeology* 17:364–376.

_____. 2000. *Corpus of Hieroglyphic Luwian Inscriptions. Volume I. Inscriptions of the Iron Age*. Berlin/New York: de Gruyter.

Hawkins, D., A. Morpurgo Davies, and G. Neumann. 1974. *Hittite Hieroglyphs and Luwian: New Evidence for the Connection*. Göttingen: Vandenhoeck and Ruprecht.

Laroche, E. 1959. *Dictionnaire de la langue louvite*. Paris: Adrien-Maisonneuve.

Marazzi, M. 1990. *Il geroglifico anatolico. Problemi di analisi e prospettive di ricerca*. Rome: Università "Sapienza."

Melchert, H. C. 1987. "PIE velars in Luvian." In C. Watkins (ed.), *Studies in Memory of Warren Cowgill*, Berlin/New York: de Gruyter.

_____. 1989. "New Luvo-Lycian isoglosses." *Historische Sprachforschung* 102:23–45.

_____. 1990. "Adjective stems in **-iyo-* in Anatolian." *Historische Sprachforschung* 103:198–207.

_____. 1992. Review of *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens*, by Frank Starke. *Historische Sprachforschung* 105:309–312.

_____. 1993. *Cuneiform Luvian Lexicon*. Chapel Hill: self-published.

_____. 1994a. *Anatolian Historical Phonology*. Leiden Studies in Indo-European 3. Amsterdam: Rodopi.
_____. 1994b. "'Čop's Law' in Common Anatolian." In J. Rasmussen (ed.), *In honorem Holger Pedersen*, pp. 297–306. Wiesbaden: Dr. Ludwig Reichert.
_____. 1996. "Anatolian Hieroglyphs." In P. Daniels and W. Bright (eds.), *The World's Writing Systems*, pp. 120–124. New York/Oxford: Oxford University Press.
_____. 2000. "Aspects of Cuneiform Luvian nominal inflection." In Y. Arbeitman (ed.), *The Asia Minor Connexion: Studies on the Pre-Greek Languages in Memory of Charles Carter*, pp. 173–183. Louvain-la-Neuve: Peeters.
Morpurgo Davies, A. 1979. "The Luwian languages and the Hittite *-ḫi* conjugation." In B. Brogyanyi (ed.), *Studies in Diachronic, Synchronic and Typological Linguistics. Festschrift for Oswald Szemerényi on the Occasion of his 65th Birthday*, pp. 577–610. Amsterdam: John Benjamins.
_____. 1982–1983. "Dentals, rhotacism, and verbal endings in the Luwian languages." *Zeitschrift für Vergleichende Sprachforschung* 96:245–270.
Neumann, G. 1982. "Die Konstruktionen mit Adiectiva genitivalia in den luwischen Sprachen." In E. Neu (ed.), *Investigationes philologicae et comparativae: Gedenkschrift für Heinz Kronasser*, pp. 149–161. Wiesbaden: Otto Harrassowitz.
Starke, F. 1985. *Die keilschrift-luwischen Texte in Umschrift*. Studien zu den Boğazköy-Texten 30. Wiesbaden: Otto Harrassowitz.
_____. 1990. *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens*. Studien zu den Boğazköy-Texten 31. Wiesbaden: Otto Harrassowitz.
Werner, R. 1991. *Kleine Einführung in das Hieroglyphen-Luwische*. Göttingen: Vandenhoeck and Ruprecht.
Yoshida, K. 1993. "Notes on the prehistory of preterite verbal endings in Anatolian." *Historische Sprachforschung* 106:26–35.

CHAPTER 4

Palaic

H. CRAIG MELCHERT

1. HISTORICAL AND CULTURAL CONTEXTS

Palaic was once the spoken language of the land of Palā, generally agreed to have been located to the northwest of Hittite territory across the Halys River (modern Kızıl Irmak) in what is now north central Turkey. The country name is surely reflected in the later classical Blaëne and Paphlagonia. Palaic is attested in scarcely a dozen ritual fragments from the cuneiform archives of the ancient Hittite capital Hattuša (modern Boğazköy). The documents are contemporary with the Hittite (sixteenth to thirteenth centuries BC), including a couple of manuscripts from the Old Hittite period.

What little Palaic we have owes its preservation to liturgical use by the Hittites, chiefly for the cult of the Hattic god Za/iparfa. Palā, mentioned in the Old Hittite Laws as one of the three divisions of the Hittite state along with Hatti and Luwiya, appears only rarely in later texts. Its decline in importance is sometimes attributed to the depredations of the Kaskeans, a people of the northern mountains who caused serious problems for the Hittites throughout their history. It is likely that Palaic was extinct as a spoken language by the thirteenth century, and it may well have been so by the time of our earliest texts in the sixteenth. The extremely sparse documentation makes all aspects of the following description provisional. Palaic is interpreted largely in light of the much better attested Hittite so far as the facts permit. This is a reasonable and necessary procedure, but its obvious risks should constantly be borne in mind.

2. WRITING SYSTEM

Palaic was written by Hittite scribes, using the same version of the Old Babylonian cuneiform syllabary they employed for writing Hittite. The spelling conventions are the same as for Hittite (see Ch. 2, §2), with very few exceptions, the most notable being the use of special signs for a phoneme /f/ absent in Hittite (see below) and the near-total absence of logograms. The syllabary has V, CV, VC, and some CVC signs. It thus can indicate initial and final consonant clusters (and internal clusters of more than two) only by the use of "empty" vowels. Such sequences are interpreted largely on comparative and etymological grounds. There is no longer any reason to doubt that the use of *scriptio plena* (repeating the vowel of a CV or VC sign with the matching V sign) marks synchronic vowel length (see for Hittite, Kimball 1983 *passim*, *et al.*). The system uses both word spacing and paragraph-dividers.

Emil Forrer in 1919 already recognized Palaic as one of the eight distinct languages of the Boğazköy archives, and after a brief false start tentatively identified it as an Indo-European language closely related to Hittite. It was not until 1944, however, that Heinrich Otten was

able firmly to establish the status of Palaic on the basis of further documentation. Important further contributions to understanding the language were made by Kammenhuber (1959) and Carruba (1970). There have been no new textual finds since Carruba's work.

3. PHONOLOGY

3.1 Consonants

The phonemic inventory includes at least the following consonants:

(1) Palaic consonantal phonemes

p		t		k	
b		d		g	
		ts			
	f	s	ʒ		ħ
					ʕ
m		n			
		l	r		
w			y		

The absence of positive evidence, as in Hittite, for unitary labiovelars may easily be accidental, and there is a good chance that we should also assume a voiceless labiovelar stop /k^{w}/ in words such as *kui-* "who, which." Owing to a prehistoric change, there likely is no corresponding voiced stop, but there may be a labialized /ʕ^{w}/ in cases like *aḫu-* "drink."

3.1.1 Stops

Characterization of the Palaic stop series as voiceless versus voiced is based on their etymological value. The synchronic phonetic status of the stops in the three cuneiform languages Hittite, Palaic, and Cuneiform Luvian is a vexing and controversial problem: see Melchert 1994:13–21 for an extensive discussion with references. What is clear is that etymological voiceless stops appear as graphic and probably linguistically real geminates in intervocalic position, while inherited voiced stops appear as single stops (so-called *Sturtevant's Law*): in Palaic contrast particle *-ppa* < **-pe* (cf. Latin *nem-pe* "surely") with *apā-* "that" < **ob(^{h})ó-*. It is tolerably certain that voiced stops have been generalized in word-final position (*šarkut=at* "__ed them," with preterite third singular -t [d] < **-t*), while it is likely but not assured that voiceless stops and fricatives have been generalized word-initially (see Melchert 1994:18–20, *et al.*). This partial neutralization of the voicing distinction may have contributed to a reanalysis of the stop contrast as one of fortis versus lenis, but this analysis cannot be regarded as proven.

3.1.2 Fricatives

The phoneme /f/ appears in Hattic loanwords into Palaic such as *wu$_{ú}$/pu-la-a-ši-na-* (a kind of bread). As the cited example shows, the fricative /f/ is indicated by a special series of cuneiform signs, consisting of *wa* plus a *mater lectionis* marking vowel quality, transliterated *wV$_{V}$* (sometimes alternately with graphic *p*). It cannot be excluded that in some or all cases the fricative is a voiced /v/ rather than /f/.

The voiceless coronal fricative is spelled with the cuneiform series which indicates a palatal sibilant in Akkadian, whence the conventional transliteration as š, as in Hittite. There is no reason, however, to think that the sound represented is anything other than a dental/alveolar /s/. The sound transliterated as *z* is in most cases a voiceless affricate /ts/, but it cannot be ruled out that in some instances it indicates a voiced sibilant /z/ instead.

The phoneme rendered above as /ʒ/ represents a weak palatal fricative, the result of a prehistoric sequence of $*h_2y$ (the Proto-Indo-European "second laryngeal" plus $*y$), spelled alternately with -g- and zero (see Watkins 1975:373 for the derivation and Carruba 1970:39 for the spelling). The phonetic definition of this sound obviously is merely an approximation, and one may entertain other possibilities.

Palaic shows both the regular and "lenited" reflexes of the Proto-Indo-European "second laryngeal" $*h_2$, spelled intervocalically with geminate -*ḫḫ*- and simple -*ḫ*- respectively (for Proto-Anatolian "lenition" see Eichner 1973:79ff.). The characterization above as pharyngeals is nonbinding, and a pair of velar fricatives /x/ and /ɣ/ is equally possible.

3.2 Vowels

There are at least three vowel phonemes /a/, /i/, and /u/ and contrasting long /a:/, /i:/, and /u:/. It is very likely that there are also /e/ and /e:/, but the phonemic status of the latter is controversial (see Melchert 1994:198f., but also Carruba 1970:9, and Wallace 1983). While there are a few nonpredictable and thus contrastive long vowels, most surface vowel length is allophonic, due to synchronic rules of lengthening under the accent: for examples see the next paragraph. The vowel /a(:)/ combines with /y/ to form a falling diphthong /a(:)i/. The absence in our data of a corresponding /a(:)u/ is probably accidental.

3.3 Synchronic variation

There is limited but solid evidence for a synchronic rule in Palaic whereby the word accent shifts one syllable to the right with the addition of an enclitic (cf. the similar rule in Latin): underlying /ħáran-/ "eagle" appears as regular [ħá:ranas] in the genitive singular *ḫāranaš*, but compare nominative singular [ħará:s] in the phrase *ḫarāš=kuwar*. The fact that the length of the *a* in both syllables of "eagle" depends on the accent argues that the vowel in each case is underlyingly short, with the long [a:] a conditioned allophone. There are actually two such synchronic lengthening rules, one applying to all accented vowels in open syllables, the other to /a/ and /e/ in accented closed syllables (see Melchert 1994:204f. for further discussion).

Word-final -*n* is sporadically assimilated to an initial labial of a following clitic: *=am=pi* beside *=an=pa=ti*. The sibilant /s/ appears occasionally as *z* next to a sonorant (*=kuwar=zi* for *=kuwar=ši*) and rarely other consonants. This may or may not represent voicing to [z].

3.4 Phonotaxis

Phonotactic restrictions are unremarkable, so far as the extremely limited evidence permits a judgment. Final consonants are highly restricted: voiced stops (only /d/ is actually attested), /s/, /ʕ/, /n/, /r/, and /l/. The only attested final cluster is /-(n)ts/. As indicated above, probably only voiceless obstruents are permitted word-initially, along with /m/, /n/, /l/, and /w/. The absence of examples of initial /y/ is surely accidental, but the lack of initial /r/ is systematic, as elsewhere in the ancient Anatolian languages. Initial clusters are mostly limited to biconsonantal sequences of rising sonority, but there may be some cases of fricative plus stop. Medial clusters are predictably more varied and complex: for an exhaustive list of examples, see Melchert 1994:206f. All vowels occur freely in initial, medial, and final

position. Sequences with hiatus are rare, but *iu* "come!" (cf. Hittite *eḫu*) certainly represents [í_u] historically and probably also synchronically.

4. MORPHOLOGY

Palaic is a typical ancient Indo-European language in its morphological typology: that is, fusional, with a well-developed system of derivation and inflection, the latter exclusively suffixing, the former nearly so. However, it is also characteristically Anatolian in having a relatively limited set of inflectional categories in the nominal and verbal systems in comparison to Sanskrit or Ancient Greek.

4.1 Nominal morphology

The noun distinguishes two numbers, singular and plural, and two genders, animate and inanimate. There is no evidence for a separate dual or a feminine gender. There are at least six cases in the singular: nominative, vocative, accusative, genitive, dative, and locative. The last two cases are not distinguished in the plural, and as expected the nominative plural serves also for the vocative. It seems extremely likely that Palaic also has an ablative-instrumental corresponding to that of the other Anatolian languages, but no examples have yet been found. As usual in Indo-European, the nominative and accusative are not distinguished in the inanimate gender. In addition to the genitive case, Palaic also expresses possession by means of a relational adjective ("paternal house" for "father's house"), but this usage does not seem to be as widely developed as in the western Anatolian languages. It is impossible to tell whether there is any functional distinction between the two constructions.

The case endings are mostly recognizable as Indo-European: animate nominative singular /-s/, vocative singular zero, animate accusative singular /-n/, inanimate nominative-accusative singular zero or /-an/, genitive singular /-as/, dative singular /-i/ or /-ai/, animate nominative plural /-es/ (or /-as/ < *-*ōs*), inanimate nominative-accusative plural /-a/. The animate accusative plural is not securely attested. The locative ending /-a/ is cognate with the allative of Hittite continuing Proto-Indo-European *-h_2e and *-oh_2 (cf. for the latter Latin *quō* "whither"). The dative-locative plural /-as/ matches the endings of Hittite and Lycian, reflecting Proto-Indo-European *-*os* (cf. Latin -*bus*, etc. minus the initial labial).

4.2 Pronouns

The only reasonably well-attested pronominal stem is the relative-interrogative *kui*-, but the existence of the characteristic Anatolian demonstratives *kā*- "this" and *apā*- "that" is at least assured. For the few other extant pronominal forms see Carruba 1970:44.

4.3 Verbal morphology

The verb is inflected for singular and plural and the expected three persons. There are two moods, indicative and imperative, and two tenses, present (also used for the future) and preterite. Beside the active voice there is a medio-passive, surely with the usual range of functions, although the few attested examples happen to be *media tantum* with intransitive meaning ("lie" and "be warm"). The basic verbal stem may express various aspectual nuances according to context, but imperfective aspect may also be overtly marked by suffixes cognate with those which serve the same function in Hittite: *pī-ša* "give!" (distributive, with multiple objects) or *i-škā* "be!" (durative, in a construction indicating possession). The verbal endings formally are cognate with those of the other Anatolian languages, but the limited evidence suggests that the distribution in Palaic does not quite match that of Hittite or Luvian.

There is an infintive in *-una* (e.g., *aḫuna* "to drink") cognate with that in Luvian. Palaic interestingly appears to employ both *-ant-* and *-amma-* as suffixes to form participles (*takkuwānteš* and *patamman*), but the meaning of the latter example is quite uncertain, and it may be a lexicalized relic. It is likely that there is a single functional category expressing an attained state (passive for transitive verbs), as in Hittite (see Ch. 2, §4.4.5).

4.4 Morphological miscellanea

Palaic has a range of nominal stem-classes (at least *-a-*, *-i-*, *-u-*, *-(n)t-*, *-n-*, and *-r-*) and probably two verbal conjugations corresponding to the *mi-* and *ḫi*-conjugations of Hittite (see Ch. 2, §§4.4.7; 4.4.9), although evidence for the latter is arguable. It is not clear to what extent Palaic shows the phenomenon of "i-mutation" so characteristic of the western Anatolian languages (see Starke 1990:71ff.). Several well-known Indo-European nominal and verbal derivational suffixes are attested, and further data would undoubtedly yield further examples.

4.5 Compounds

There is one assured compound: *aš=kummawa-*, literally "mouth-pure," i.e., "sacralized and fit for the gods to eat" (see Watkins 1987:399f., after Szemerényi). The absence of additional examples is undoubtedly due to chance.

5. SYNTAX

5.1 Word order and clause structure

As an inflected language, Palaic predictably has rather free word order. The unmarked order is SOV (Subject–Object–Verb), but others are by no means rare. Essentially any major constituent may be placed in clause-initial position for emphasis: verb, direct or indirect object, adverb, and preverb are all attested besides subject.

There are no assured cases of coordinated clauses. Probably not by accident there are also no clear examples of coordinated noun phrases, while asyndeton is common. Palaic has the enclitic conjunctions *-ku* and *-ḫa*, but the latter certainly means "also," and probably so does the former. Neither is a simple connective "and." The only certain subordinating conjunction is *mān* "when(ever), if," cognate with Hittite *mān*. Relative clauses preceding the main clause with a resumptive pronoun are assured (*kuiš=a . . . =apan* "whichever . . . that one"), and there likely is at least one example of a postposed relative clause.

5.2 Agreement

Gender and number agreement is mostly of a standard sort, but Palaic does preserve the Proto-Indo-European construction whereby a neuter plural (actually an old collective) as subject takes a singular verb: *tilila ḫāri* "the t. (a food) are warm" (lit. "is warm"). As in other Anatolian languages, one also finds in Palaic a singular verb apparently agreeing with the first of multiple subjects: *lukīt=ku tabarnaš tawannannaš* "The king (and) queen have also distributed" (*lukīt* is preterite third singular).

5.3 Clitics

The Indo-European Anatolian languages are famous for their use of clitics, and Palaic is no exception. There is ample evidence for the appearance of subject and object pronouns and various sentence particles (often ill-defined) as enclitics to the first accented word in the clause (so-called *Wackernagel's Law*): *arūn=am=pi witeši* "tall=him=particle you shall build," that is, "You shall build him tall." In addition, however, Palaic shows sporadic cliticism of words which are normally accented: *nū=wašu* (sentence conjunction plus "good") versus normal *wāšu* (note the loss of length on the first vowel of the noun, as per the rule mentioned above). The conditioning and function of this usage are unclear. There is also evidence for enclitic use of the demonstrative (see Melchert 1984:28ff.). The apparent restriction of this usage to the neuter singular seems strange, but is probably paralleled in Luvian.

6. LEXICON

The severely restricted corpus precludes definitive statements about the lexicon: only twenty-two of the words in the Swadesh-Voegelin hundred-word core vocabulary list are attested and identified. One cannot place too much weight on the fact that 87 percent of these are inherited. The facts of Hittite suggest, however, that the nature of our evidence presents a misleading picture. The apparent heavy influence of Hattic is probably due simply to the fact that our texts nearly all deal with the cult of the Hattic pantheon. Palaic has also borrowed at least the title for the Hittite king, *tabarna-*, from Luvian (not from Hattic), and this is likely for the queen's title, *tawananna-*, as well.

7. READING LIST

Carruba (1970) provides a convenient and excellent vade mecum: all texts in transliteration (but without translation), grammar, and lexicon, plus bibliography to that date.

Bibliography

Carruba, O. 1970. *Das Palaische. Texte, Grammatik, Lexikon.* Studien zu den Boğazköy-Texten 10. Wiesbaden: Otto Harrassowitz.

Eichner, H. 1973. "Die Etymologie von heth. *mēḫur*." *Münchener Studien zur Sprachwissenschaft* 31:53–107.

Kammenhuber, A. 1959. "Das Palaische: Texte und Wortschatz." *Revue hittite et asianique* 14: 1–21.

Kimball, S. 1983. "Hittite Plene Writing." Ph.D. dissertation, University of Pennsylvania.

Melchert, H. C. 1984. "Notes on Palaic." *Zeitschrift für Vergleichende Sprachforschung* 97: 22–43.

_____. 1994. *Anatolian Historical Phonology.* Amsterdam: Rodopi.

Starke, F. 1990. *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens.* Studien zu den Boğazköy-Texten, 31. Wiesbaden: Otto Harrassowitz.

Wallace, R. 1983. "The development of PIE **ē* in Palaic." *Die Sprache* 29:159–173.

Watkins, C. 1975. "Die Vertretung der Laryngale in gewissen morphologischen Kategorien in den indogermanischen Sprachen Anatoliens." In H. Rix (ed.), *Flexion und Wortbildung*, pp. 358–378. Wiesbaden: Dr. Ludwig Reichert.

_____. 1987. "Two Anatolian forms: Palaic *aškummāuwa*, Cuneiform Luvian *wārša*." In G. Cardona and N. H. Zide (eds.), *Festschrift for Henry Hoenigswald*, pp. 399–404. Tübingen: Narr.

CHAPTER 5

Lycian

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1. HISTORICAL AND CULTURAL CONTEXTS

Lycian was the autochthonous language of the land of Lycia at least during the middle and late first millennium BC. Recent evidence from the Hieroglyphic Luvian inscription of Yalburt – specifically, forms of the place names for Tlos, Pinara, and Xanthos – has now proven that the "Lukka-Lands" of the second-millennium Hittite cuneiform texts do refer to historical Lycia, that is, roughly the mountainous peninsula on the southwest coast of Anatolia lying between the Gulf of Telmessos and the Bay of Attaleia (modern Gulf of Fethiye and Gulf of Antalya; see Poetto 1993). Obviously, without direct textual evidence from Lycia itself during the second millennium it is quite impossible to characterize with any precision the language of "Lukka" in that era.

Lycian shares a number of specific features, including innovations, with Luvian, and it is widely held that Lycian and Luvian form a subgroup within the Anatolian family; in other words, that they reflect a prehistoric "Proto-Luvian" language which had developed out of Proto-Anatolian along different lines from Hittite, Palaic, and Lydian, the other assured members of the Anatolian group (see, *inter alios*, Oettinger 1978). One may even read that Lycian is a later form of Luvian, though not necessarily of that form of Luvian which is directly attested in the second millennium. The shared features of Lycian and Luvian are undeniable, but several of these are also common to Lydian, while there are also crucial divergences between Lycian and Luvian (see Gusmani 1960 and Melchert 1992a). These divergences make it impossible to reconstruct a coherent Proto-Luvian language distinct from Proto-Anatolian. One should rather view the common features of Luvian and Lycian in terms of dialect geography. As the individual languages began to diverge in their development from Proto-Anatolian, they remained in contact, and innovations which arose in various places spread in the typical irregular fashion. Luvian, which occupied a geographically central position, unsurprisingly shares some isoglosses with Lycian (and to a lesser extent Lydian) to the west, and others with Hittite and Palaic to the east.

The extant Lycian corpus includes more than 150 inscriptions on stone, over 200 on coins (many not yet published), and a handful on other objects. The overwhelming majority of those on stone are sepulchral texts, with highly stereotyped content. Apart from several poorly preserved decrees, the most important exceptions are the inscribed stele of Xanthos, which describes the military exploits and building activities of a local dynasty, and the Lycian–Greek–Aramaic trilingual of the *Létôon*, which records the founding of a cult for the goddess Leto by the citizens of Xanthos at a temple a few miles south of the city. The latter text of some forty-one lines has predictably proven to be of immense importance in

advancing understanding of Lycian. Much of the text of the Xanthos stele remains opaque due to problems of vocabulary which result from the nearly unique subject matter.

Two of the Lycian texts (one of which is the last portion of the Xanthos stele) are written in a distinct dialect known either as *Lycian B* (vs. ordinary *Lycian A*) or as *Milyan*. The relationship of the two dialects is indeterminate. Milyan is more archaic than ordinary Lycian in certain features, and it is noteworthy that both Milyan texts are in verse (see Eichner 1993 with references). However, it would be dangerous to conclude from these limited facts that Milyan is merely an older stage of Lycian preserved for special literary purposes. This is only one of several viable possibilities: see Gusmani (1989–1990) for a useful discussion of the problem. Unless stated otherwise, the description which follows applies to both forms of Lycian, but the bulk of the evidence comes from Lycian (A). Extrapolation of the description to Milyan is often based on very limited evidence and should be viewed as highly provisional. Special features of Milyan will be explicitly noted where appropriate.

Thanks to the Létôon Trilingual and exploitation of the features shared with Luvian, understanding of Lycian has improved dramatically in the last two decades (with the notable exception of the Xanthos stele and Milyan). However, certain features of morphology and syntax cited below impose some quite serious limitations. One should regard the following description as intermediate in completeness and reliability between those for Palaic and Lydian on the one hand, and that for Luvian on the other.

2. WRITING SYSTEM

Lycian is written in an alphabet derived from or closely related to that of Greek. The details of the relationship remain unclear: for discussion see Carruba 1978a. The direction of writing is left to right. Use of word-dividers is frequent, but by no means absolutely consistent. This fact means that the status of certain morphemes as clitics is, strictly speaking, a matter of interpretation, which can be supported but not proven by the mode of writing. Problems involving individual letters will be dealt with below in the phonology.

3. PHONOLOGY

3.1 Consonants

The Lycian segmental inventory includes the following consonantal phonemes:

(1) Lycian consonantal phonemes

p		t	c	k<	k	k>	k^w	
		ts						
	θ	s						h
β	ð				γ			
m		n						
		l	r					
w			y					

Of the phonemes listed, /c/, /θ/, and /h/ occur only in Lycian (A), not in Milyan, due to different prehistoric sound changes. The sound very tentatively identified as /k^w/ is attested only in Milyan and in personal names. Its absence in Lycian (A) may or may not be due to chance.

Table 5.1 The Lycian alphabet

Character	Transcription
𐊀	a
𐊁	e
𐊂 𐊃	b (/β/)
𐊄	β (/k^{w}/?)
𐊅 𐊆	g (/γ/)
𐊇	d (/ð/)
𐊈	i
𐊉	w
𐊊	z (/t^{s}/)
𐊋	θ
𐊌	y
𐊍	k (/k</)
𐊎	q (/k/)
𐊏	l
𐊐	m
𐊑	n
𐊒	m̃ (/m$^{\neg}$/)
𐊓	ñ (/n$^{\neg}$/)
𐊔	u
𐊕	P
𐊖	(≈ /k</?)
𐊗	r
𐊘	s
𐊙	t
𐊚	τ(/c/)
𐊛 𐊜 𐊝 𐊞 𐊟	ã
𐊠 𐊡 𐊢 𐊣 𐊤	ẽ
𐊥	h
𐊦 𐊧 𐊨 𐊩	x (/k>/)

3.1.1 Stops

The stop phonemes given here as /p/, /t/, /k</, /k/, and /k>/ are spelled respectively *p*, *t*, *k*, *q*, and *x* according to the current standard transliteration (but one must be prepared to find *c* for *k* and *k* for *x* respectively in older works). There is a consensus that these stop phonemes have voiceless and voiced allophones. The conditioning is also straightforward: the voiced allophones occur after nasals (including nasalized vowels), the voiceless allophones elsewhere. Note, for example, *trqqñt-* (name of the Storm-god) for [tərkənd-], rendered in Greek as Τροκονδος/Τερκανδας.

There is on the contrary a decided absence of agreement concerning the further features of the stops aside from labial /p/ and dental/alveolar /t/. The rare sound defined here as /c/ (transliterated as τ) alternates with /t/ in all cases. We know that prehistoric $^{*}k^{w}$ becomes Lycian (A) *t* before *i* (e.g., *ti-* < $^{*}k^{w}i$- "who, which"), and several plausible, but not entirely

compelling etymologies have been adduced for t/ τ < *k^w before *e (see Carruba 1978b: 165ff.). If we accept this derivation, a palatal stop /c/ seems a plausible transition sound, since the development includes fronting and delabialization (the value /t^w/ suggested in Melchert 1994a:282 was an unfortunate lapsus). Note that in Milyan the result of a labiovelar before front vowel is *k* (*ki-* "who, which"), which will be argued below to be a front velar /k</. The development in Lycian (A) may be viewed as a further fronting to a palatal and eventually dental stop.

The characterization of the dorsal stops *k*, *q*, and *x* as front, mid, and back velar /k</, /k/, and /k>/ respectively represents a personal point of view, and one should compare the in part very different opinions of Rasmussen (1974:53ff.), Laroche (1979:84), van den Hout (1995), and Hajnal (1995:26ff.). Evidence for a relatively front value for *k* (formerly transliterated *c*) consists of its strong tendency to occur before (often between) front vowels and its rendering in Greek alternatively by *sigma* (*Tikeukepre-* = Τισευσεμβραν) and by *kappa* or *gamma* (Sbikasa = Σπιγασα). The predilection of *x* (formerly *k*) for appearing before back vowels suggests a relatively back consonant. The major point of dispute is whether it is an ordinary stop or instead an aspirated stop or even fricative. The only basis for the last assumption (hence the now standard transliteration *x*) is etymological: Lycian *x* in most cases corresponds to a cuneiform *ḫ*, both in names (*Xãkbi* = *Ḫinduwa*) and in inherited words reflecting the Proto-Indo-European second laryngeal (preterite first singular ending *-xa* < *-h_2e*). There is, however, not a shred of evidence for anything but a plain stop synchronically: Greek rendering of Lycian *x* in names is consistently either with *kappa* or *qoppa*, never *chi* (the single exception Μοσχᾶς for *Musxxah* [cited by van den Hout 1995:134, correcting Melchert 1993:105] says nothing, since the aspirate may be a Greek phenomenon conditioned by the preceding *s*).

The question of whether *q* is an ordinary velar stop /k/ as given here or is labialized depends on etymological considerations which cannot be treated here: see Melchert (1994a:306) for a discussion with references to other opinions. Even more problematic is the status of the sound represented by the rare letter 𐊼. The Létôon Trilingual assures that it is some kind of dorsal stop (personal name ArKKazuma = Greek Αρκεσιμα), but the tentative analysis as a labiovelar /k^w/ is based on etymological and distributional arguments which are merely suggestive, not compelling (see Hajnal 1995:25f. and Eichner 1993:145, among others).

3.1.2 Affricate and fricatives

Lycian *z* in at least some cases represents a voiceless affricate /ts/ (e.g., *hr-zze/i-* "upper" with suffix *-zze-* < Proto-Anatolian *-*tsyo-* < PIE *-*tyo-*). In other cases, however, a plausible case has been made for a voiced fricative /z/: see Melchert 1994a:314f. (with reference to Gusmani) and Hajnal 1995:21ff.

Lycian (A) *θ* is clearly the reflex of prehistoric **d*+*h*. Since **d* is spirantized to voiced [ð], it seems reasonable to assume that the outcome of the sequence is a voiceless interdental fricative, and the Lycian version of a Persian name *Miθrapata-* appears to confirm this. Lycian (A) *h* is ignored in Greek renderings of personal names, suggesting that it is probably ordinary /h/ (generally absent from Anatolian Greek). It reflects a conditioned change of **s* > *h* in Lycian (A) which did not take place in Milyan.

There is near-universal agreement that the Lycian letters *b*, *d*, and *g* stand for voiced fricatives. Evidence cited includes Λαπαρας for *Dapara* and the Lycian rendering of Darius as *Ñtarijeus-* (recall that voiceless stops are voiced after nasals). One may compare for the latter device Modern Greek. Neither of the cited spellings makes sense if Lycian *d* were a voiced stop [d].

3.1.3 Sonorants

Cases such as *hrppi* "above" or *sñta* (a numeral) seem to indicate that liquids and nasals had syllabic allophones, and the standard view is that the special letters *ñ* and *m̃* stand for syllabic nasals. This may have been true when the graphemes were invented, but this analysis cannot account for postvocalic occurrences such as *qãñti* "they slay." The gemination in *hrppi* (see below) argues that at the phonetic level the pronunciation was [hərp.pi] with an anaptyctic vowel. If one makes the reasonable inference that the same is true for nasals (*sñta* = [sənta]), then one may make the generalization that ñ and *m̃* occur only in syllable-final position. This distribution suggests that they are unreleased allophones of the nasal consonants.

The glides /w/ and /y/ are usually spelled with the letters transliterated *w* and *j*, but when they represent the second part of falling diphthongs they are spelled with the corresponding vowels: *ai*, *ei*, *au*, and so forth. Examples such as *ebeija* "these" (neut. nom.-acc. pl.) must apparently be interpreted as [eβej.ja]. Prehistoric **w* appears as *b* after a consonant, suggesting that it has become a fricative in this position (e.g., *esbe-* "horse" < **ek̂wo-*). Since this *b* never geminates after a consonant like ordinary /β/ (e.g., *erbbe-* "battle" or "defeat"), it should probably be treated as an allophone of /w/ synchronically.

3.1.4 Consonant gemination

One of the most striking and problematic features of Lycian consonantism is the widespread gemination of consonants (at least orthographically). No entirely satisfactory explanation has yet been presented: see for attempts Melchert 1994a:295f. and 316, and van den Hout 1995. Word-initial and some internal geminates probably reflect prehistoric processes (notably syncope) and must be synchronically analyzed as present in underlying structure: for example, *ttaraha*, adjective to *tetere/i-* "city"(?) (see Heubeck 1985 and Hajnal 1995:184ff.). However, the highly regular gemination of the second members of certain consonant clusters (versus its absence in others) is surely due to a synchronic rule in which syllable structure plays a crucial if not yet fully defined role: compare, for example, *hrppi* "above" (probably [hərp.pi]) versus *epre/i-* "back-, rear-" (probably [e.pre/i-]).

3.2 Vowels

Lycian has eight vowel phonemes: /i/, /u/, /e/, and /a/ and corresponding contrastive nasalized varieties of each. There are separate letters for /ã/ and /ẽ/, but not for the nasalized high vowels. Their likely existence is inferred from cases like Iμβρος for Lycian *Ipre-* ([ībre-]). The non-high vowels form several falling diphthongs with the glides: *ai*, *ei*, *ãi*, *ei*, *au*, *eu*. There is no evidence that Lycian has synchronic contrastive vowel length.

3.2.1 Vowel assimilation

The most important process affecting Lycian vowels is a pervasive vowel assimilation rule which may be stated in its simplest form as: V [-high] > V [α back] /__C_0V [α back]. The rule applies iteratively from right to left within the phonological word (including sequences with proclitics): for example, *tese-* "oath" but collective plural *tasa*; personal name */Armanani-/ attested as *Erm̃menēni*. There are many exceptions to the rule as just formulated: thus, dative singular *ladi* (not **ledi*) to *lada-* "wife." Some of these may be attributed to paradigmatic analogy, but it is not clear what such a description means in synchronic terms. Furthermore, Hajnal (1995:80ff.), in the most thorough discussion of the phenomenon to the present,

rightly points out that not all exceptions may be attributed to "analogy" in any case. The existence of Lycian umlaut is assured, but a rigorous account of its diachronic and synchronic status requires further study.

3.2.2 Syncope

Lycian shows widespread prehistoric syncope. For two independent attempts at a comprehensive description see Melchert 1994a:318ff. and Hajnal 1995:175ff. The broad agreement between the two accounts, despite differences in detail, suggests that their general thrust is correct. Nevertheless, since our knowledge of Lycian accent is indirect, being based almost entirely on the effects of the syncope, the risk of circularity of argument is high, and neither analysis should be taken as remotely definitive.

3.3 Phonotaxis

The most noteworthy features of Lycian phonotaxis are the restrictions on initial and final consonants. Inherited word-initial voiced stops were devoiced prehistorically, so that neither /β/ nor /γ/ occurs initially. Initial *dd-* (virtually always spelled as a geminate) does unexpectedly occur. Its source remains unknown. Initial /r-/ occurs in Lycian (A) only rarely, as the result of aphaeresis, and the few examples in Milyan probably should be attributed to the same process. The absence of initial /y-/ may be accidental or systematic. Aside from a handful of cases with unexplained final (unreleased) nasal, Lycian permits only /-s/ in word-final position. Milyan adds *-z*. Initial consonant clusters are common, including stop plus stop (at least at the phonemic level). The limited number of medial clusters probably is due merely to the very restricted attested lexicon (for a list see Melchert 1994a:297ff.). No final consonant clusters are permitted. Vowels occur freely in all positions in the word. There are no assured examples of heterosyllabic vowel sequences.

4. MORPHOLOGY

Lycian inflectional and derivational morphology seems upon first examination to be rather impoverished in comparison with that of other ancient Indo-European languages, Anatolian and non-Anatolian. Closer scrutiny shows that this probably is a misleading impression, an artifact of the relatively limited corpus and the crucial absence of distinct signs for nasalized high vowels.

4.1 Nominal morphology

The noun inflects for two numbers (singular and plural), and two genders (animate and inanimate). Animate nouns may have a collective plural beside a count plural (e.g., *wawa/uwa* "cattle" beside anim. acc. sg. *wawã* and unattested nom. and acc. pl. *wawãi*/wawas** "cows"). Synchronically, there is evidence only for two genders. However, the contrast between animate nouns with nominative singular **-e*, accusative singular **-ẽ* < **-os*, **-om* (respectively), animate nouns with nominative singular *-a*, accusative singular *-ã* < **-eh*$_2$, **-eh*$_2$*m* (respectively), and collective *pluralia tantum* in *-a* < **-eh*$_2$ argues that Lycian (and hence Proto-Anatolian) did inherit from Proto-Indo-European a feminine gender distinct from the masculine and neuter (see Melchert 1992a). There are at least five cases and perhaps six: nominative, accusative, genitive, dative-locative, and ablative-instrumental.

In some noun classes there may be a locative singular distinct from the dative (cf. *a*-stem *ladi* "for/to the wife" vs. *xupa* "in the grave"). The inanimate gender predictably has a single nominative-accusative, and the ablative-instrumental does not distinguish singular and plural, as elsewhere in Anatolian. While there is a genitive plural case, a corresponding genitive singular is found only in a handful of personal names. Possession is normally expressed by means of a relational adjective which agrees in number and case with the head noun and does not indicate the number of the possessor: *mahanahe/i-* "divine; of the god(s)." This usage is inherited from Proto-Indo-European, but its nearly complete replacement of the genitive case is a characteristic feature of the western Anatolian languages. The Lycian case endings are inherited or built on inherited material, but the loss of nearly all final consonants (especially postvocalic *-*s*) leads to a serious degree of homonymy between case forms.

An important feature of Lycian nominal inflection, shared at least with Luvian and Lydian, is *i-Motion* (better *i-mutation*), as established by Starke (1990:59ff.): many, indeed, most animate nouns and animate forms of adjectives obligatorily add a suffix *-i-* to the stem just in the (animate) nominative and accusative, singular and plural. When the base stem ends in *-e-* (< PIE *-*o*-), the suffix *-i-* replaces the stem-final *-e-*: for example, *hrzze-* "upper" inflects as anim. nom. sg. *hrzzi**, anim. acc. sg. *hrzzi* [hərt.tsĩ], anim. nom. pl. *hrzzi**, anim. acc. pl. *hrzzis**, but inan. nom.-acc. sg. *hrzzẽ*, nom.-acc. pl. *hrzza**, dat.-loc. pl. *hrzze**. The origin of this phenomenon is a matter of serious debate (see Melchert 1994b and Oettinger 1987), but its existence as a synchronic feature of the western Anatolian languages is beyond doubt. The effective inflection of most Lycian nominal stems as *i*-stems in the nominative and accusative has very serious consequences for understanding the Lycian texts. The *i*-stems happen to have the most genuine homonymy of any stem-class: anim. nom. sg., dat. sg., and anim. nom. pl. *-i*. The spelling of anim. acc. sg. [-ĩ] as *-i* as well completes the confusion.

There are clear reflexes of several Proto-Indo-European derivational suffixes, and absence of others is surely due to the restricted corpus.

4.2 Pronouns

Lycian attests typical Anatolian features in the first-person singular pronoun *e/amu* "I, me" with *u*-vocalism, in the demonstrative stem *ebe-* "this" (formally matching *apā-* "that" of Hittite, Palaic, and Luvian), and in the interrogative-relative *ti-* < *k^wi-*. The enclitic "reflexive" particle *-ti* also is clearly cognate with Luvian *-ti* and Hittite *-z(a)*, but the function of this morpheme in all these languages requires much further study. Evidence for the rest of the pronominal system is almost entirely lacking.

4.3 Verbal morphology

The very incomplete picture of the Lycian verb provided by the limited data agrees in most respects with that of the other Anatolian languages: the expected three persons, two numbers (singular and plural), two moods (indicative and imperative), two voices (active and mediopassive), and two tenses (present-future and preterite). There is very limited evidence for a *ḫi-conjugation* alongside the *mi-conjugation*, as in Hittite (see Ch. 2, §§4.4.7; 4.4.9). The inflectional endings, to the extent that they are known, are comparable to those of Hittite or Luvian, with the exception of medial endings with a nasal: for example, *sijẽni* "lies" (see Melchert 1992b for the Lycian, but a convincing account of the prehistory is lacking). One unique feature of Lycian is the morphosyntactic alternation between nasalized and non-nasalized finite verbs: for example, *ade/adẽ* "he/she did/made." For a persuasive analysis of

this phenomenon see Garrett 1991. The most important of PIE verbal derivational suffixes are securely attested.

There is an infinitive in *-ne/a* which most likely is cognate with Luvian and Palaic *-una*, as per Laroche 1960:172f., contra Melchert 1992a:47, fn. 15. For the source of the final vowel alternation see Hajnal 1995:98. There is a single synchronic participle, with a past passive value for transitive verbs and a stative one for intransitives, as in the other Indo-European Anatolian languages. The suffix is *-Vime/i-*, matching Luvian *-V(i)mma/i-* < **-(o)mno-*. All examples of the suffix *-ãt-/-ēt(i)-* < **-e/ont-* are lexicalized relics: for example, *lãta-* "dead" (a noun).

4.4 Compounds

Attested compounds are not frequent, but they do occur. Neumann (1993:37f.) has convincingly explained *tidere/i-* as "collacteus" < "teat-companion": compare Hittite *tēda-* "teat" and *arā-* "companion."

5. SYNTAX

5.1 Word order and clause structure

Lycian is unique among the Indo-European Anatolian languages in its configurational syntax. There are good reasons to assume an unmarked VSO (Verb–Subject–Object) word order, but two preposing rules which affect the direct object as well as other constituents lead to a surface OVS order. The particular diction of much of the extant corpus happens to make the latter the most frequently attested order. See Garrett 1994 for a discussion of both the synchrony and diachrony of this phenomenon; the same article analyzes in detail the syntax of Lycian relative clauses. Demonstratives and most adjectives typically precede the noun they modify, but the order noun plus adjective is not infrequent and indeed seems to be regular for the relational adjective in *-ahe/i-*. Lycian has several prepositions, but no postpositions. Local adverbs occur both as independent elements and as preverbs.

Lycian is also unique in Anatolian in having true coordinated clauses, marked with *se* "and" (also used to conjoin noun phrases). The conjunction *me* marks prosecutive clauses. There are subordinating temporal and conditional conjunctions, but fronting is also used to mark conditions: *hrppi=ije me tadi*... "On-it conj. puts," in other words, "If one puts thereon" versus *me=ije hrppi=tadi* "conj.-it on-puts," that is "And (then) one puts thereon" (cf. English "Were I," equivalent to "If I were").

5.2 Clitics

Lycian employs enclitic pronouns chiefly in clitic doubling in conjunction with topicalization (see Garrett 1992). Conjunctions in Lycian are proclitic (*se* and *me*), not enclitic as in the related Anatolian languages. Lycian does have a few "local particles" which appear as enclitics to the first word in a clause, corresponding to those of Luvian or Hittite.

5.3 Syntactic miscellanea

Lycian has at least one example of the Anatolian construction with the direct object of an infinitive in the dative: *esedeñnewi epttehi ñtepi=tane* "collateral descendance (dat. sg.)

their in-to put," in other words, "to put in their collateral descendants." Examples with the expected accusative also occur.

6. LEXICON

The peculiar nature of the extant corpus restricts the known lexicon to an extent which makes statistics about core vocabulary meaningless. However, there is no positive reason to think that the inherited portion of the lexicon is significantly less than the 75–80 percent demonstrated for Hittite. The few identifiable loanwords are predictably from Greek and Iranian and mostly in the expected spheres of government and "high culture": for example, *sstala-* "stele," *trijere-* "trireme," and undoubtedly *sttrat[ ]* "general" from Greek; *xssadrapa-* "satrap" and *sixla-* "shekel" from Iranian (the last of these being ultimately a Semitic word). The only exception to this pattern known to me is *stta-* "stand, be placed standing," the phonology of which argues that it is a Greek loanword rather than an inheritance.

7. READING LIST

The standard edition of Lycian texts discovered by the turn of the century is Kalinka 1901, but these are available in more convenient and often more accurate form in Friedrich 1932. More recent texts are found in Neumann 1979, Laroche 1979 – the Létôon Trilingual – and Bousquet 1992. For inscriptions on coins see Mørkholm-Neumann 1978, but many remain unpublished. The most thorough discussion of the alphabet is found in Carruba 1978a. The best description of the synchronic grammar remains that of Neumann 1969, although it is now dated in several respects. For all aspects of Lycian grammar, synchronic and diachronic, global reference should be made to Hajnal 1995. A complete lexicon is available in Melchert 1993. Bryce 1986 offers the best account of the historical and cultural setting.

Bibliography

Bousquet, J. 1992. "Les inscriptions gréco-lyciennes." In H. Metzger (ed.), *Fouilles de Xanthos IX*, pp. 147–199. Paris: Klincksieck.

Bryce, T. 1986. *The Lycians I. The Lycians in Literary and Epigraphic Sources.* Copenhagen: Museum Tusculanum Press.

Carruba, O. 1978a. "La scrittura licia." *Annali della scuola normale superiore di Pisa, classe di lettere e filosofia*, 3rd series, 8:849–867.

_____. 1978b. "Il relativo e gli indefiniti in licio." *Sprache* 24:163–179.

Eichner, H. 1993. "Probleme von Vers und Metrum in epichorischer Dichtung Altkleinasiens." In G. Dobesch and G. Rehrenböck (eds.), *Hundert Jahre Kleinasiatische Kommision der Österreichischen Akademie der Wissenschaften*, Vienna: Österreichische Akademie der Wissenschaften.

Friedrich, J. 1932. *Kleinasiatische Sprachdenkmäler.* Berlin: de Gruyter.

Garrett, A. 1991. "The Lycian nasalized preterite." *Münchener Studien zur Sprachwissenschaft* 52:15–26.

_____. 1992. "Topics in Lycian syntax." *Historische Sprachforschung* 105:200–212.

_____. 1994. "Relative clause syntax in Lycian and Hittite." *Sprache* 36:29–69.

Gusmani, R. 1960. "Concordanze e discordanze nella flessione nominale del licio e del luvio." *Rendiconti del Instituto Lombardo di Scienze e Lettere. Classe di lettere e scienze morali e storiche* 94:497–512.

_____. 1989–1990. "Lo stato delle ricerche sul milíaco." *Incontri linguistici* 13:69–78.

Hajnal, Ivo. 1995. *Der lykische Vokalismus.* Graz: Leykam.

Heubeck, Alfred. 1985. "Konsonantische Geminaten im lykischen Wortanlaut." *Zeitschrift für Vergleichende Sprachforschung* 98:36–46.
Kalinka, E. 1901. *Tituli Lyciae, lingua lycia conscripti.* Vienna: Hoelder-Pichler-Tempsky.
Laroche, E. 1960. "Comparaison du louvite et du lycien." *Bulletin de la Société Linguistique de Paris* 55:155–185.
_____. 1979. "L'inscription lycienne." In H. Metzger (ed.), *Fouilles de Xanthos VI*, pp. 49–127. Paris: Klincksieck.
Melchert, H. C. 1992a. "Relative chronology and Anatolian: the vowel system." In R. Beekes, A. Lubotsky, J. Weitenberg, *et al.*, *Rekonstruktion und relative Chronologie. Akten der VIII. Fachtagung der Indogermanischen Gesellschaft, Leiden, 31. August–4. September, 1987*, (eds.) pp. 41–53. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
_____. 1992b. "The middle voice in Lycian." *Historische Sprachforschung* 105:189–199.
_____. 1993. *Lycian Lexicon* (2nd fully revised edition). Chapel Hill: self-published.
_____. 1994a. *Anatolian Historical Phonology.* Amsterdam: Rodopi.
_____. 1994b. "The feminine gender in Anatolian." In G. Dunkel, G. Meyer, S. Scarlata, *et al.* (eds.), *Früh-, Mittel-, Spätindogermanisch*, pp. 231–244. Wiesbaden: Dr. Ludwig Reichert.
Mørkholm, O. and G. Neumann. 1978. *Lykische Münzlegenden.* Göttingen: Vandenhoeck and Ruprecht.
Neumann, G. 1969. "Lykisch." In B. Spuler (ed.), *Altkleinasiatische Sprachen*, pp. 358–396. *Handbuch der Orientalistik.* Leiden: Brill.
_____. 1979. *Neufunde lykischer Inschriften seit 1901.* Vienna: Österreichische Akademie der Wissenschaften.
_____. 1993. "Neue Erkenntnisse zur lykischen Sprache. Appositionen zu Personennamen." In J. Borchhardt and G. Dobesch (eds.), *Akten des II. Internationalen Lykien-Symposions. Wien, 6.-12. Mai, 1990*, vol. I, pp. 35–38. Vienna: Österreichische Akademie der Wissenschaften.
Oettinger, N. 1978. "Die Gliederung des anatolischen Sprachgebietes." *Zeitschrift für Vergleichende Sprachforschung* 92:74–92.
_____. 1987. "Bemerkungen zur anatolischen *i*-motion und Genusfrage." *Zeitschrift für Vergleichende Sprachforschung* 100:35–43.
Poetto, M. 1993. *L'iscrizione luvio-geroglifica di Yalburt.* Studia Mediterranea 8. Pavia: Iuculano.
Rasmussen, J. 1974. *Haeretica Indogermanica.* Copenhagen: Munksgaard.
Starke, Frank. 1990. *Untersuchung zur Stammbildung des Keilschriftluwischen Nomens.* Wiesbaden: Otto Harrassowitz.
Van den Hout, T. 1995. "Lycian consonantal orthography and some of its consequences for Lycian phonology." In T. van den Hout and J. de Roos (eds.), *Studio Historiae Ardens*, pp. 105–141. Istanbul: Nederlands Historisch-Archaeologisch Instituut.

CHAPTER 6

Lydian

H. CRAIG MELCHERT

1. HISTORICAL AND CULTURAL CONTEXTS

The land called Lydia in Greek sources lay during the first millennium BC on the west central coast of Anatolia, centering on the River Hermos (modern Gediz), with its capital at Sardis (near modern Turgutlu). The indigenous language is attested in graffiti and on coins from the end of the eighth or beginning of the seventh century down to the third, but well-preserved inscriptions of significant length are presently limited to the fifth and fourth centuries, during the period of Persian domination. Lydian texts are thus effectively contemporaneous with those in Lycian.

Extant Lydian texts now number slightly over one hundred, but fewer than thirty of these consist of more than a few words and are reasonably complete. Aside from coins, graffiti, and very short inscriptions on various objects, the overwhelming majority of the inscriptions are on stone. The bulk of these are sepulchral in content, but several of the texts are decrees of one sort or another. Some half-dozen texts are in verse, with a stress-based meter and vowel assonance at line end (see Eichner 1986a and 1993:114ff., with references). All but a handful of the Lydian texts have been found in or near Sardis. For several isolated finds much farther afield see Gusmani 1995:9f. One short Lydian–Aramaic bilingual text helped establish the rudiments of Lydian grammar, but no extensive Lydian–Greek bilingual comparable to the Létôon Trilingual for Lycian (see Ch. 5, §1) has yet come to light.

Lydian shares several characterizing innovations with Hittite and related languages and definitely belongs to the Anatolian subgroup of Indo-European as narrowly defined (see Meriggi 1936, and Melchert 1994a:6f.). Lydian is thus to be derived from an intermediate prehistoric stage we may call Proto-Anatolian. Earlier suggestions that the resemblances between Lydian and the other Anatolian languages are due to convergence are no longer tenable. Nevertheless, the position of Lydian within the Anatolian group is unique and problematic, for at least two reasons.

First, understanding of Lydian remains very limited, comparable to that of Palaic and markedly inferior to that of Luvian or Lycian. The basic grammatical structure of most sentences is clear (aside from some in the verse texts, where unusual word order retards analysis). With rare exceptions, however, grasp of the semantic content ranges from approximate at best to zero at worst. All aspects of the following description should thus be viewed as representing mere hypotheses, of varying degrees of plausibility, not as established facts.

A second difficulty is that Lydian undeniably shows a number of features which are not shared by any other language of the Anatolian group. The limited evidence makes assessment of this fact difficult: are these unique features archaisms preserved only in Lydian, or do

they result from a series of peculiarly pre-Lydian developments? Until a more satisfactory answer to this question is available, the status of Lydian within Anatolian will remain a "special" one.

2. WRITING SYSTEM

The Lydian writing system, which is strictly alphabetic, is related to or derived from that of Greek. The exact relationship remains unclear (see Gusmani 1978 and 1995:12). The direction of writing in the older texts is either left to right or right to left. Later texts show exclusively the latter. Use of word-dividers is variable. Values of individual letters are discussed below in the phonology.

Table 6.1 The Lydian alphabet

Character	Transcription
	a
	b
	g
	d (/ð/)
	e
	v
	i
	y
	k
	l
	m
	n
	o
	r
	ś (/s/)
	t
	u
	F
	q (/k^w/)
	s (/ç/)
	τ (/t^s/)
	ã
	ẽ
	λ
	ν
	c (/d^z/?)

3. PHONOLOGY

3.1 Consonants

The Lydian phonemic inventory consists of the following consonants:

(1) Lydian consonantal phonemes

p		t		k	k^w
		ts			
		dz			
f		s	ç		
v	ð				
m		n	*ν*		
		l	r	ʎ	

The nasal conventionally transliterated as *ν* (Greek *nu*) is of indeterminate value (see §3.1.3).

3.1.1 Stops

Lydian has a single set of stop phonemes which are probably underlyingly voiceless (for Lydian graphic *b* as /p/ see Gusmani 1965:204ff.). It is very likely that they are realized as voiced allophones in favorable environments, regularly so after nasals (including nasalized vowels), as in Lycian. The name *Alexander* appears as *Aλiksãntru-*, while **éndo* "in(to)" results in [ẽd-] spelled *ēt-*. There is at least a strong tendency to voicing also next to /r/: note the names *Srkaśtu-* and *Atraśta-* rendered in Greek as Συργάστης and Αδραστης respectively. In rare cases the voiced allophone of the velar /k/ is spelled with a separate letter *g* (e.g., the hapax *qig* for normal *qik* "whatever"), but the allophonic variation is, as expected, not normally indicated in the spelling. Since there is no voicing contrast, there may well be some free variation (note the Greek equivalents of intervocalic /t/ in personal names cited by Gusmani 1988a:191ff.). The place of articulation of /p/ (letter *b*), /t/, and /k/ is undisputed. For arguments that *q* represents a synchronic as well as etymological labiovelar /k^w/ (e.g., in *qi-* "who, which") see Heubeck 1959:1–50 and especially Gusmani 1964:33f.

3.1.2 Fricatives and affricates

The letter transliterated as τ (Greek tau) is certainly a voiceless coronal affricate: see Gusmani 1969 with references to Shevoroshkin and others. The definition as a dental alveolar is based on etymological considerations, and a palatal or palatalized articulation cannot be excluded. Characterization of the letter conventionally transliterated *c* as the corresponding voiced affricate is merely an educated guess, and almost any **voiced** coronal affricate or fricative is possible. The one assured source of the sound is an assibilated **d*: *civ-* "god" < **diw-*.

The synchronic status of the fricatives /f/, /v/, /s/, and /ç/ is clear. The last is the result of prehistoric palatalization of **s*, and obviously a palatalized [s] instead of an alveo-palatal or pure palatal is quite possible. By an unfortunate convention too long established to be changed, the sibilant transliterated as *ś* is the dental-alveolar /s/, while *s* is the palatal /ç/. There is strong evidence that the sound represented by the letter *d* is not a voiced stop: the borrowing of the name *Demeter* as *Lamẽtru-* and internal evidence suggest that Lydian had

no word-initial voiced stops, but *d-* occurs word-initially. The likeliest possibility is a voiced interdental fricative /ð/ (compare Lycian), for which see Melchert 1994c with references to prior works, but some other kind of voiced coronal fricative would also fit the current facts.

3.1.3 Sonorants

The nasals and liquids are mostly straightforward. Synchronic /ʎ/ (transliterated with Greek *lambda*) is the result of prehistoric palatalization of **l*, and once again a palatalized instead of palatal articulation is possible. The value of the nasal transliterated as *ν* (Greek *nu*) is problematic. Its only clear source is **original** word-final nasal (both **m* and **n*): loss of word-final vowels makes it synchronically contrastive with the other nasals. This and other distributional facts point to some kind of weakly articulated nasal consonant, but a precise definition is elusive: see Gusmani 1978:842ff. and Melchert 1994a:339 for discussion. The presence of special letters for nasalized vowels (see below) makes it unlikely that the letter *ν* merely indicates nasalization of the preceding vowel. It seems reasonably certain that the sonorants could function as syllabic peaks in Lydian when occurring between other consonants (or alternatively that such sequences were realized phonetically with inserted [ə]): for /m/ note the sentence-initial sequence *fa=k=m=ś=ad*, for /r/ *caqrla-* and so forth, and for /ʎ/ *bλtarvod*. Examples such as *kśbλta-* and *dctdid* suggest that even fricatives could form syllabic peaks, at least phonologically (see Eichner 1986a:8).

It is noteworthy that Lydian has no glides, unlike all the other ancient Indo-European Anatolian languages.

3.2 Vowels

Lydian probably has a standard five-vowel system /i/, /u/, /e/, /o/, and /a/ plus two contrastive nasalized vowels, though the precise place of articulation of these vowels is open to debate. The vowel transliterated as *y* is in all likelihood merely an unstressed allophone of /i/ (see Gusmani 1983:57ff. and Melchert 1994a:342). Evidence of Greek transliterations of Lydian names and etymological considerations suggest that the mid vowels /e/ and /o/ were relatively high and long phonetically. It is unlikely that vowel length was synchronically contrastive in Lydian. While the status of occasional spellings in *aa* has not been fully clarified, the existence of other inconsistent attempts to indicate allophonic variation (note *g* and *y* above) makes it likely that the length of the /a/ in such cases is likewise merely conditioned lengthening under the accent (see Eichner 1986b:215f., and below).

Eichner (1986b, especially 211, n. 21) has presented compelling arguments that the vowels transliterated as *ã* and *ẽ* represent nasalized vowels, confirming a long-held but occasionally doubted interpretation. The transliteration of *ẽ* is misleading, however, in that it alternates morphophonemically with /a/ (never with /e/): compare *cẽqra-* and derivative *caqrla-*. Etymological considerations (see Melchert 1994a:343) point to a phonetic contrast in length (*ã* = /ã:/, *ẽ* = /ã/), but this is anything but assured, and one may entertain several other possibilities. As there are no glides, there are no diphthongs.

3.3 Accent

Eichner (1986a and 1986b) has convincingly established the essentials of the Lydian accent. While certain details of his analysis may require revision, the skepticism of Gusmani (1988b and elsewhere) of the overall scheme is wholly unjustified. As Eichner demonstrates, the Lydian vowels /e/, /o/, /ã/, and /ẽ/ regularly occur only under the accent. Using this and other

evidence (syncope and meter), he concludes that all simplex Lydian words are marked by a single accent, which is free to appear on any syllable. Aside from obscure and unanalyzable sequences, the only exceptions to this rule are univerbations of preverb and verb, and indeed, virtually all cases involve specifically the preverbs *ẽn-* and *ẽt-* "in(to)." Since metrical evidence suggests that in preverb–verb combinations the accent falls on the verb, the irregular appearance of *ẽ* in these cases is probably due to the influence of the associated free-standing adverb *ẽn*.

3.4 Synchronic variation

Various cases of allophonic variation have already been cited above. Aside from "sandhi-rules" simplifying certain consonant clusters at morpheme boundary (see Melchert 1994a:351), the only known morphophonemic rule is that by which the nasalized vowels *ã* and *ẽ* become *a* when unaccented: note again *cέqra-* versus *caqrlá-* cited above and see Eichner 1986b:211ff.

3.5 Phonotaxis

Lydian phonotactic restrictions differ markedly from those of the other Anatolian languages – in fact, this is superficially perhaps the most striking feature of the language from a comparative point of view. Prehistoric syncope at least as massive as that in Lycian plus regular apocope of original final short vowels combine to produce consonant clusters more typical of Caucasian languages than Indo-European: recall *dctdid* or *kśbλtok-*. For a very preliminary first attempt to describe the syncope see Melchert 1994a:373ff. All Lydian consonants occur word-initially except /ʎ/ and /ν/. Initial /r-/ is rare and surely secondary. Unlike its immediate Anatolian relatives, Lydian permits a wide range of final consonants, including several clusters. As the extreme examples cited above indicate, initial and medial clusters are frequent: for an exhaustive list see Melchert 1994a:352ff.

4. MORPHOLOGY

Lydian inflectional morphology is significantly reduced in comparison with other Anatolian languages or older Indo-European languages in general, but typologically it must still be regarded as belonging to the traditional *inflectional* class. The near-absence of demonstrable derivational morphology is surely also due to our limited understanding of the language.

4.1 Nominal morphology

The Lydian noun and adjective inflect for the expected two numbers (singular and plural) and two genders (animate and inanimate). Alleged examples of a separate feminine gender have conclusively been shown to be instead collective *pluralia tantum* (see Carruba 1969:44ff.). Assured cases include only nominative, accusative, and dative-locative. The inanimate gender naturally does not distinguish nominative and accusative in either singular or plural. One or two examples of the dative-locative plural (which formally represents the PIE genitive plural **-om*) appear to function as an adnominal genitive (*artimuλibśimvav* "(to) Artemis of the Ephesians"), but this fact hardly justifies positing a distinct genitive case. Possession and appurtenance are regularly expressed in Lydian by a relational adjective which agrees with the head noun in gender, number, and case: for example, *siuvala/i-* "divine, of the

god(s)." This virtually complete replacement of the genitive case by a relational adjective is a characterizing feature of western Anatolian, shared with Luvian, Lycian, and surely also the poorly attested Carian, Pisidian, and Sidetic. The one or two alleged examples of an ablative-instrumental are almost surely false. The absence of evidence for such a case could be accidental, but one must seriously consider the possibility that Lydian expresses such relationships by the use of adpositions with the dative: note *artimuλdãv* probably "from Artemis." The formal markers for number, gender, and case are mostly recognizable as inherited, with the notable exception of the dative-locative singular in *-λ*, the origin of which is disputed. Noteworthy is the spread of the Proto-Indo-European pronominal neuter nominative-accusative singular ending in **-d* to the noun and adjective: for example, *śfarvad* "oath."

Lydian shares the feature of "*i*-mutation" described above for Luvian and Lycian (see §4.1), but the phenomenon does not appear to be as widespread: see Starke 1990:82ff. and Melchert 1994b:232ff.

4.2 Pronouns

Lydian *amu* "I, me" shows the peculiar Anatolian *u*-vocalism of the first-person singular pronoun. The only assured deictic pronoun is *es-* "this," of uncertain origin. Decidedly less certain are *os-* "that" (see Eichner 1988) or *ãna-* "this" and *ẽna-* "that" (see Melchert 1991:137f.). The stem *bi-*, cognate with the deictic stem *apā-* "that" of Hittite, Palaic, and Luvian, functions in Lydian only as the stressed third-person pronoun "he, she, it, they." Lydian also has as expected enclitic personal pronouns, some formally straightforward (*-av* "him, her, it," acc. sg. < **-om*), others much less so (*-mλ* "to/for him, her," dat. sg.).

4.3 Verbal morphology

The verb has the expected three persons, and two tenses (present-future and preterite). Evidence for a mediopassive beside the active is uncertain, as are possible examples of an imperative contrasting with the indicative. It is tolerably certain that there is a distinction between singular and plural (preterite first singular *-ν* vs. preterite first plural *-νν*), but there clearly is no number distinction in the third person, either in the present or in the preterite (respectively *-t/d* and *-l*). An infinitive in *-l* seems reasonably assured, but the status of various proposed participial formations remains uncertain: see for all of this Gusmani 1964:42f.

5. SYNTAX

5.1 Word order and clause structure

The unmarked word order is SOV (Subject–Object–Verb), but fronting of the verb and other elements for emphasis is not uncommon, and one also finds extraposing of constituents to the right of the verb. These phenomena are by no means limited to the texts in verse. Relative clauses typically precede, with a resumptive pronoun in the main clause, but there are likely examples of postposed relative clauses. Adjectives, including demonstratives and relational adjectives, usually precede their head noun. At least one postposition, *dãv* "from," seems assured, and others are likely. Lydian cognates of the local adverbs found in other Anatolian languages appear to be limited to use as preverbs, and indeed only univerbated with the verb.

The conjunction *ak-* apparently links Lydian clauses prosecutively (cf. Luvian *a-* and functionally Hittite *nu*). The disjunctive conjunction *buk* "or" conjoins both clauses and noun phrases, while *-k* "also, and" apparently links only noun phrases. Putative subordinating conjunctions are all uncertain.

5.2 Clitics

Lydian shows the typical Anatolian use of anaphoric pronouns and sentential "particles" as enclitics to the first accented word in the clause. The function of the various particles is poorly understood, but see Melchert 1991 for the reflexive *-ś/is.*

5.3 Syntactic miscellanea

Lydian attests at least one example of the Anatolian usage of the dative for the direct object of an infinitive: *karola(v)=ś śfẽndav arvol*, literally, "of Karos (dat. pl.)-emphatic particle property (dat. pl.) to steal"; in other words, "to steal the property of **Karos**." The expected accusative is also found.

6. LEXICON

For reasons cited in §1 above, it is impossible to say anything useful concerning the Lydian lexicon.

7. READING LIST

Gusmani 1964 with supplements (1980, 1982, 1986) furnishes grammar, texts in transliteration, and lexicon combined, along with extensive bibliography. The most thorough discussion of the writing system is Gusmani (1978).

Bibliography

Carruba, O. 1969. "Zur Grammatik des Lydischen." *Athenaeum* NS 47:39–83.
Eichner, H. 1986a. "Die Akzentuation des Lydischen." *Sprache* 32:7–21.
_____. 1986b. "Neue Wege im Lydischen I: Vokalnasalität vor Nasalkonsonanten." *Zeitschrift für Vergleichende Sprachforschung* 99:203–219.
_____. 1988. "*os-*, eine sidetisch-lydische Wortgleichung?" *Kadmos* 27:44–56.
_____. 1993. *Probleme von Vers und Metrum in epichorischer Dichtung Altkleinasiens. Hundert Jahre Kleinasiatische Kommission der Österreichischen Akademie der Wissenschaften*, pp. 97–169. Vienna: Österreichische Akademie der Wissenschaften.
Gusmani, R. 1964. *Lydisches Wörterbuch.* Heidelberg: Carl Winter.
_____. 1965. "Sulle consonanti del lidio." *Oriens Antiquus* 4:203–210.
_____. 1969. "Sul samekh lidio." *Athenaeum* NS 47:136–143.
_____. 1978. "La scrittura lidia." *Annali della Scuola Normale Superiore di Pisa, classe di lettere e filosofia*, 3rd series, 8:833–847.
_____. 1980, 1982, 1986. *Lydisches Wörterbuch, Ergänzungsband*, Heidelberg: Carl Winter.
_____. 1983. "Ein Weihrauchbrenner mit lydischer Inschrift im Metropolitan Museum." *Kadmos* 22:56–60.
_____. 1988a. "Anthroponomie in den lydischen Inschriften." In Y. Arbeitman (ed.), *A Linguistic Happening in Memory of Ben Schwartz*, pp. 179–196. Louvain-la-Neuve: Peeters.
_____. 1988b. "Zur lydischen Betonung." *Historische Sprachforschung* 101:244–248.

_____. 1995. "Zum Stand der Erforschung der lydischen Sprache." In E. Schwertheim (ed.), *Forschungen in Lydien*, pp. 9–19. Bonn: Dr. Rudolf Habelt.
Heubeck, A. 1959. *Lydiaka.* Erlangen: Universitätsbund Erlangen.
Melchert, C. 1991. "The Lydian emphasizing and reflexive particle *-ś/-is*." *Kadmos* 30:131–142.
_____. 1994a. *Anatolian Historical Phonology*. Leiden Studies in Indo-European 3. Amsterdam: Rodopi.
_____. 1994b. "The feminine gender in Anatolian." In G. Dunkel, G. Meyer, S. Scarlata, *et al.* (eds.), Früh-, Mittel-, Spätindogermanisch, pp. 231–244. Wiesbaden: Dr. Ludwig Reichert.
_____. 1994c. "PIE **y* > Lydian *d*." In P. Vavroušek (ed.), *Iranian and Indo-European Studies. Memorial Volume of Otakar Klíma*, pp. 181–187. Prague: Enigma Press.
Meriggi, P. 1936. "Der Indogermanische Charakter des Lydischen." In H. Arntz (ed.), *Germanen und Indogermanen: Volkstum, Sprache, Heimat, Kultur. Festschrift für Hermann Hirt*, vol. II, pp. 283–290. Heidelberg: Carl Winter.
Starke, F. 1990. *Untersuchung zur Stammbildung des keilschrift-luwischen Nomens.* Studien zu den Boğazköy-Texten 31. Wiesbaden: Otto Harrassowitz.

CHAPTER 7

Carian

H. CRAIG MELCHERT

1. HISTORICAL AND CULTURAL CONTEXTS

The land of Caria lay during the first millennium BC in the southwest of Anatolia between Lydia and Lycia. A few dozen texts in the epichoric language, mostly very short or fragmentary, have been found in Caria itself or on objects likely to have originated there. These are dated very approximately to the fourth to third centuries BC. There is also a very fragmentary Carian–Greek bilingual from Athens, dated to the sixth century. By far the largest number of Carian texts consists of tomb inscriptions and graffiti left by Carian mercenaries in Egypt, dating from the seventh to fifth centuries BC. A new epoch in Carian studies has now begun with the dramatic discovery in 1996 of an extensive Carian–Greek bilingual by Turkish excavators in Kaunos and its remarkably swift publication by Frei and Marek (1997).

2. WRITING SYSTEM

The Carian script surely stands in some relationship to the Greek alphabet. The direction of writing is predominantly right to left in texts from Egypt, and left to right in those from Caria. *Scriptio continua* is frequent, and use of word-dividers is sporadic.

Decipherment of the Carian script has been a long and arduous task. Pioneering efforts by A. H. Sayce at the end of the nineteenth century were followed by several false steps based on the erroneous assumption of a syllabic or semisyllabic system and a long period of relative neglect. It was the merit of V. Shevoroshkin (1965) to have shown that the Carian script is an alphabet. However, the specific values he and others assigned to individual letters led to no breakthrough in our understanding of the language. Particularly striking was the virtually complete absence of any matches between Carian personal names, as attested in Greek sources, and putative examples in the native alphabet.

A new era began in 1981 when John Ray first successfully exploited the evidence of the Carian–Egyptian bilingual tomb inscriptions to establish radically new values for several Carian letters, as well as to confirm the values of others. Additional investigation, notably by Ray, Ignacio-Javier Adiego, and Diether Schürr, has led to further revisions and refinements of the new system. The basic validity of this approach was shown by its correct prediction of Carian personal names which have subsequently appeared in Greek sources. Nevertheless, many uncertainties and unsolved problems remained, and several reputable experts were skeptical of the new interpretation of the Carian alphabet. One can

conveniently gain a sense of the state of Carian studies prior to 1997 from Giannotta *et al.* 1994.

The new Carian–Greek bilingual from Kaunos has shown conclusively the essential validity of the Ray–Adiego–Schürr system, while also confirming the suspicion of local variation in the use of the Carian alphabet. While some rarer signs remain to be elucidated, the question of the Carian alphabet may be viewed as decided. The new bilingual has not led to immediate equally dramatic progress in our grasp of the language. One reason for this is that the Greek text of the Kaunos Bilingual is a formulaic proxenia decree, while the corresponding Carian is manifestly quite independent in its phrasing of what must be essentially the same contents. The Kaunos Bilingual has provided welcome confirmation of the view that Carian is an Indo-European Anatolian language, and indeed, of the western type of Luvian, Lycian, and Lydian. However, one cannot speak of a complete decipherment until there are generally accepted interpretations of a substantial body of texts – a stage not yet fully attained. This remark applies even to the new bilingual, as one can easily confirm by reading the competing linguistic analyses in Blümel, Frei, and Marek 1998. The following very sketchy description of the language must therefore be taken as highly provisional!

Table 7.1 A subset of characters of the Carian alphabet

Character	Transcription
𐊠	a
𐊢	d
𐊣	l
𐊤	ù
𐊥	r
𐊦	λ
𐊧	q
𐊨	b
𐊩	m
𐊪	o
𐊫	t
𐊬	š
𐊭	s
𐊮	u
𐊯	x
𐊰	n
𐊱	p
𐊲	ś
𐊳	i
𐊴	e
𐊵	w
𐊶	k
𐊷	ú
𐊸	í
𐊹	τ
𐊺	w

3. PHONOLOGY

3.1 Consonants

3.1.1 Obstruents

Carian certainly has a series of voiceless stops /p/, /t/, and /k/. There are actually three letters for dorsal stops: *k*, *q*, and *x*. It is quite unclear whether this orthographic distinction reflects a linguistic contrast, phonetic or phonemic, and if so, of what nature. There are also letters for *b* and *d* the basic value of which is assured by Greek renderings of Carian names. Whether these sounds are voiced stops or fricatives cannot yet be determined. Several indications point to the latter: the existence of separate signs for [mb] and [nd] (Schürr, 1991–1993: 169ff.); the absence or extreme rarity of a corresponding velar; and the apparent lack of voicing contrast in the velar stop(s) as suggested by Greek correspondences. Compare for the first and last points the situation in Lycian. One should, however, avoid premature conclusions.

There are three contrasting sibilant phonemes. Carian *š* is palatal or palatalized, based on Egyptian correspondences in personal names and etymological considerations (*šr-* "up(per)" or similar < **ser-*; cf. Lydian *serli-* "supreme" likewise with palatal(ized) sibilant). Carian *ś* reflects Proto-Anatolian **-ss-* in the relational adjective suffix *-ś-*. The nature of the contrast with the third sibilant *s* remains to be defined. The Carian sound transliterated as *τ* is some kind of coronal obstruent, probably an affricate, but its source and hence its precise value is unknown.

3.1.2 Sonorants

Carian sonorants include /m/, /n/, /r/, and /l/. There is a second lateral transliterated λ, which definitely contrasts with ordinary *l* (/l/). The former is rendered consistently in Greek as geminate λλ or λδ and probably continues prehistoric geminate **-ll-*. It is reasonably certain that the sonorants have syllabic allophones.

There are no certain distinct signs for glides, but there are undoubtedly nonsyllabic correspondents of the high vowels /i/ and /u/. Their phonemic status is indeterminate.

3.2 Vowels

Carian appears to have a standard five-vowel system: /i/, /u/, /e/, /o/, and /a/. That the mid-vowels /e/ and /o/ are relatively close and long is suggested by both their likely historical sources and by Greek renderings (Adiego 1994:48ff.). A synchronic contrast in vowel length is unlikely. There is an apparent surfeit of letters for /u/ (*u*, *ú*, *ù*, *ü*, *w*), and additional linguistically real contrasts may eventually emerge, but the possibility of multiple graphemes for a single phoneme must also be taken seriously. Diphthongs /ai/ and /au/ seem assured.

4. MORPHOLOGY

4.1 Nominal morphology

Only fragments of Carian morphology are as yet recoverable. In the noun one may identify an animate accusative singular ending /-n/ contrasting with animate nominative singular

ending zero (for the first see Melchert 1993: 79, and now the confirmatory evidence of the Kaunos Bilingual). Possession or appurtenance is indicated by a suffix which appears as *-ś* in the frequent patronymics and ethnica of the sepulchral inscriptions. Identification by Schürr (1992:138) of an animate accusative form in *-śñ* argues that the examples in *-ś* represent the corresponding animate nominative singular of a relational adjective (thus also Adiego 1994:54), rather than a nominal genitive case-marker. The equation of this relational adjective suffix *-ś-* with that of Luvian and Lycian is one of the strongest arguments for the status of Carian as an Indo-European Anatolian language. The Kaunos Bilingual has now also given us *kbdun-* "Caunian," where the *-un-* clearly is cognate with the Luvian suffix *-wann(i)-* which also derives adjectives from place names.

4.2 Pronouns

Adiego (1992:32f.) and Melchert (1993:79) have identified a demonstrative stem *s(a)n-* "this." Hajnal (1997) has now fully confirmed the earlier suspicion that Carian enclitic *-xi* represents the Proto-Indo-European relative pronoun $*k^{w}i$-.

4.3 Verbal morphology

Melchert (1993:78f.) has argued that *wbt* represents a preterite third singular verb "has dedicated" (matching Lycian *ubete*). Janda (1994:178) proposes that the verb of the sentence in question is rather *pídl* "has given," corresponding to Lydian *bil(l)* (< **bidl*). A choice between these alternatives depends on finding further convincing examples of one or the other. The lack thus far of any other persuasive identifications of finite verb forms, due in part to the nature of the available corpus, is the most serious obstacle to a complete decipherment of the language. The Kaunos Bilingual has not yet remedied this situation.

5. SYNTAX

Hajnal (1997) has compellingly analyzed the enclitic *-xi* as functioning in some instances as a relative pronoun, but in most cases as an invariant particle marking a definite noun phrase. Also noteworthy is the coordinating conjunction *sb* "and," first correctly identified by Neumann (comparing Milyan *sebe*).

6. LEXICON

In addition to various lexemes cited above, one should note the recent identification of *ted* "father" and *en* "mother" (Schürr 1996). Important also is the stem *otr-* "oneself" of the Kaunos Bilingual, independently identified by several scholars with Lycian *atra-* "oneself."

7. READING LIST

The most complete survey is Adiego 1993. One should also consult Giannotta *et al.* 1994, and Blümel, Frei, and Marek 1998.

Bibliography

Adiego, I.-J. 1992. "Recherches cariennes: essai d'amélioration du système de J. D. Ray." *Kadmos* 31:25–39.

_____. 1993. *Studia Carica. Investigaciones sobre la escritura y lengua carias.* Barcelona: PPU.

_____. 1994. "Les identifications onomastiques dans le déchiffrement du carien." In Giannotta *et al.*, pp. 27–63.

Blümel, W., P. Frei, and C. Marek 1998. *Colloquium Caricum. Akten der Internationalen Tagung über die karisch-griechische Bilingue von Kaunos. 31.10–1.11.1997 in Feusisberg bei Zürich* (= *Kadmos* 37).

Frei, P. and C. Marek 1997. "Die karisch-griechische Bilingue von Kaunos." *Kadmos* 36:1–89.

Giannotta, M. E., R. Gusmani, L. Innocente, *et al.* 1994. *La decifrazione del cario. Atti del 1. Simposio Internazionale: Roma, 2–4 maggio 1993.* Rome: Consiglio Nazionale delle Ricerche.

Hajnal, I. 1997. "Indogermanische Syntax in einer neu erschlossenen anatolischen Sprache: die karische Partikel -xi." In E. Crespo and J. L. García-Ramon (eds.), *Coloquio "Berthold Delbrück y la sintaxis indoeuropes hoy,"* pp. 193–217. Madrid/Wiesbaden: Dr. Ludwig Reichert.

Janda, M. 1994. "Beiträge zum Karischen." In Giannotta *et al.*, 171–190.

Melchert, H. C. 1993. "Some remarks on new readings in Carian." *Kadmos* 32:77–86.

Ray, J. 1981. "An approach to the Carian script." *Kadmos* 20:150–162.

Schürr, D. 1991–1993. "*Imbr-* in lykischer und karischer Schrift." *Sprache* 35:163–175.

_____. 1992. "Zur Bestimmung der Lautwerte des karischen Alphabets." *Kadmos* 31:127–156.

_____. 1996. "Karisch 'Mutter' und 'Vater'." *Sprache* 38:93–98.

Shevoroshkin, V. 1965. *Issledovanija po dešifrovke karijskix nadpisej.* Moscow: Nauka.

CHAPTER 8

Phrygian

CLAUDE BRIXHE

1. HISTORICAL AND CULTURAL CONTEXTS

When the Phrygians emerged as a political entity in the middle of the eighth century BC, they occupied the central part of Anatolia. They were often settled on sites which were previously occupied by the Hittites (Gordion, the city of Midas, Boğazköy, etc.).

Their arrival has long been associated with the collapse of the Hittite Empire (around 1200 BC). However, archeological findings more often than not reveal a hiatus on the relevant sites between the last Hittite level, generally punctuated by a catastrophe involving fire, and the first Phrygian level. In Hattusas/Boğazköy, the capital of the empire, following a fire on the citadel, Büyükkale (*c.* 1180 BC), about four centuries of abandonment seem to have preceded the Phrygian occupation (see Gunter 1991:106). In Gordion, however, where no break is observed between the end of the Bronze Age and the beginning of the Iron Age, the first traces of a "European" presence are found from the very start of the first millennium (see Sams 1994).

Even so, Tiglathpilesar I of Assur (1112–1072 BC) speaks of his battles against the Mushkis, on the upper Tigris (cf. *Der kleine Pauly*, vol. IV, col. 822, *s.v. Phryger* [G. Neumann]). And the Assyrian chronicles (Sargon II) mention the presence of Mita the Mushki king, between 717 and 709 BC, in southeast Anatolia: the monarch's name, which corresponds to that of the Phrygian sovereign at the time (Midas II), and the presence in Tyana of Paleo-Phrygian texts encourage us to consider *Mushkis* as the designation for the Phrygians (generalized from one of their constituents perhaps?) by the Easterners. In order to reconcile these conclusions and the archeological evidence, perhaps one should assume a somewhat longer time period between the first appearances of the Phrygians in Asia Minor and their settlement (see, with the bibliography, Brixhe 1995, §3.3, and 1991:44–45).

The Phrygians came from the Balkans – certain mythical accounts from Macedonia or Western Thrace recall their stay in that region (cf. the Gardens of Midas, near Mount Bermion, in Herodotus 8.138). The Greek historian Herodotus (7.73) notes their coexistence with the Macedonians, and it seems that during their migration, they left behind, from Pelagonia to the areas surrounding the Athos, several tribes known by various names (Brugoi, Briges, Brukes, etc.) which immediately evoke the designation *Phrygian*.

In their language, in fact, the Proto-Indo-European aspirates display voiced reflexes, and $*b^h$ had become *b*. The name which we give them, Φρύγες, has been transmitted to us by the Greeks, who developed p^h from PIE $*b^h$. The Phrygians must have called themselves something like *Bruges* (cf. the *Briges* of Herodotus 7. 73).

The Phrygians have left two large corpora of written documents, widely spaced in time – the earlier called Paleo-Phrygian and the later Neo-Phrygian. On evidence for a distinct Middle Phrygian form, see §1.2.

1.1 Paleo-Phrygian

The following Paleo-Phrygian inscriptions are cited from Brixhe and Lejeune 1984 (completed by Brixhe 1991 for T-03), from which work I have adopted the symbols assigned to epigraphic regions (M, W, B, etc., see below). The peripheral texts of §1.1.1 are identified according to their original site.

The Paleo-Phrygian documents, collected in 1984 by Claude Brixhe and Michel Lejeune, were spread across a vast area: (i) to the west of Great Phrygia (W in Brixhe and Lejeune 1984), with Midas City (M); (ii) in Bithynia (B) (iii) in Galatia, Gordion (G) and environs (C); (iv) in Pteria (P), a region of Boğazköy; (v) in Cappadocia, on the site of ancient Tyana (T). Two objects are of unknown origin (Dd).

Since 1984 have been discovered: (i) a seal of unknown origin (see Masson 1987); (ii) a graffito on a silver vessel (sixth century) found in a tumulus about 20 kilometers to the west of Uşak (see Brixhe 1989–1990); (iii) ten graffiti on silver vessels (late seventh to early sixth century) found in a tumulus in the plain of Elmalı (Lycia; see Varinlioğlu 1992); (iv) a "Spinnwirtel" near Thyateira (see Dinç and Innocente 1999) (v) a seal and some graffiti (sixth century?) recovered in Eskişehir-Dorylaion (see Darga 1993).

If one adds to this collection about 80 or so unpublished items from Gordion and Dorylaion, we have about 340 documents, of which several appearing on the same stone may belong to a single text. The Paleo-Phrygian inscriptions are distributed very unequally, with about 250 (including unpublished ones) being furnished by Gordion alone.

To the extent that one can judge given their contexts and our understanding of the language, the inscriptions are of various sorts: cult texts; a royal affirmation of suzerainty (?T); an apotropaic formula (G-02); seals; marks of ownership (graffiti on pottery); and perhaps notations of gift exchange.

So far as the archeology and historical cross-references (for T, for instance) allow one to judge, Paleo-Phrygian texts date from the beginning of the eighth century (e.g., G-104, G-237, G-249) down to the period immediately preceding the Macedonian conquest. After the sixth century, there probably exist only graffiti on pottery (see Brixhe 1993:21); for the high chronology of the first documents, see now Manning *et al.* 2001 and Voigt *et al.* 2001.

1.1.1 Additional evidence

The distribution of Paleo-Phrygian documentation is further extended if one takes into account several peripheral texts that belong to the same time frame (perhaps representing dialectal Phrygian):

1. A sinistroverse document, which could no doubt be attributed to the fourth century BC, found long ago at Üyücek to the south of Tavşanlı (in the far west of Phrygia) but presently lost (see Cox and Cameron 1932).

2. A bilingual sinistroverse inscription consisting of thirteen epichoric lines, preceded and followed by, respectively, five and two Greek lines discovered at Vezirhan in Bithynia (to the north of Bilecik) and belonging to the fifth–fourth centuries (see Neumann 1997).

3. A set of texts provided by the excavations in Daskyleion (the westernmost of the relevant sites, Mysia) and comprising: (i) two steles (sixth/fifth centuries; one heavily damaged) and (ii) eight graffiti on pottery (second half of the sixth century–first half

of fourth century; see Brixhe 1996; Gusmani and G. Polat 1999; Gusmani and Y. Polat 1999).

The oldest documents from Gordion (beginning of the eighth century) come from the close of the most robust period of Phrygian history. In the eighth century BC, the Phrygian Empire was the dominant power in Asia Minor, and excavations from Gordion reveal a lifestyle and architecture resembling that seen among its Greek neighbors to the west, as well as certain correspondences with the society portrayed in the Homeric poems (see De Vries 1980:42). One can see Phrygians intervening in Cappadocia (cf. the relations between Sargon II and Mita, king of Mushkis noted above), and neither Lydia nor Caria seems to have acted as a barrier between the Phrygians and the Greeks – tradition tells us about cultural and matrimonial relations with the Hellenic world in ancient times (see Brixhe 1995, §3.2).

According to tradition, the people called the Cimmerians arrive at the beginning of the seventh century BC. What then becomes of Midas's empire? It is possible that it might have been divided up into small principalities (see Brixhe 1991:45); but the Phrygians, as the spread of their monuments shows, continue to occupy a vast space and, no doubt, to exert a cultural influence over Anatolia. Towards the end of the seventh century, they fall under the yoke of first the Lydians, and later the Persians, until the Macedonian conquest.

During these dark periods, we know very little about the Phrygians. They undoubtedly continued to have relations with the Greeks to the west, through Lydia and Caria (cf. above); but to the northwest, they came into direct contact with the Ionian colonies of the Propontide. These relations, probably more intense than they seem, no doubt explain the earliness of the lexical (ἡ σορός) and anthroponymic borrowings revealed by the Dokimeion document, which will be mentioned.

1.2 Middle Phrygian?

The last Paleo-Phrygian graffiti from Gordion in all likelihood predate the time of Alexander. However, Th. Drew-Bear discovered a funerary stele in the area of Dokimeion which likely belongs to the very end of the fourth century BC; it bears a long inscription of eight dextroverse lines, apparently recording that a certain Nikostratos had the monument erected for one Kleumakhos. Not being written in the local alphabet, but already with the Classical Attic Greek alphabet, could it perhaps represent a Middle-Phrygian stage, intermediary to Paleo- and Neo-Phrygian? See Brixhe 1993:326–327, and 1994:167.

1.3 Neo-Phrygian

The Phrygians remain silent for the next several centuries – probably until the beginning of the Christian era – when their language then reappears exclusively in a funerary context. Currently, 113 documents are known (for details, see Brixhe 1994, §§1/2/3), about half of which are Greek–Phrygian bilingual and typically consist of an epitaph coupled with an imprecation against possible depredators.

The Neo-Phrygian speech area (delimited by Konya, the northern tip of Tuz Gölü, Eskşehir, Kütahya, Dinar, with the highest density on the western border and to the north/northwest of the northern tip of Tuz Gölü) was considerably smaller than that of Paleo-Phrygian. Besides the influx of Balkanic peoples which seems not to have ceased until the Roman era, but which could have affected only the northwestern part of the domain, two events had a profound repercussion on the linguistic situation of the region: the Macedonian invasion and, soon after 280 BC, the settlement of the Celtic-speaking Galatians in the northeast.

The Phrygian elite (like the Galatian) was quickly Hellenized linguistically; the Phrygian tongue was devalued and found refuge only in the countryside, in the weakly urbanized perimeter defined above. Although in the Paleo-Phrygian era it had acceded to all of the written registers, public and private, sacred and profane, in the Neo-Phrygian period the language was confined to the sacred domain, having become the language of a colonized people.

The ancient sources last speak of the Phrygian language in the fifth century AD (see Friedrich 1941, col. 868–869); but it is quite possible that it was not actually eliminated until the Arab incursions in the seventh century (Brixhe 1987:11).

1.4 Greek evidence

Apart from the documents which underpin the discussions of §§1.1–1.3, there are two additional sources for the Phrygian language:

1. A certain number of Greek glosses survive, especially in the work of the lexicographer Hesychius, but also in literary sources; see Brixhe 1982:243–244; 1990:93; Haas 1966:157–172, among others.
2. Greek inscriptions of Phrygia provide (i) various terms of Phrygian origin (e.g., τὸ βέννος "association of the believers in a god"); (ii) anthroponyms and toponyms (see Brixhe 1983:129; 1987:110–116, 157–158; 1993:342).

1.5 Phrygian within the Indo-European family

Phrygian shares several isoglosses with the Anatolian Indo-European languages: for example, the ending *-s* for the third-person singular of the preterite verb, and the middle verb ending *-r*, though neither is absolutely clear in Phrygian nor exclusively shared with the Anatolian subfamily.

One notices several similarities with Latin, such as the use of the preposition-preverb *ad(-)*, the extension of the infix *-k-* to the present stem (Neo-Phrygian αδδακετ no doubt corresponding to Latin *afficiat* "(s)he affects," subjunctive), the ending *-tor* of the middle third-person singular (Latin *-tur*).

Unquestionably, however, Phrygian is most closely linked with Greek. Non-exclusive isoglosses include: (i) the relative ponoun *yos/ios/*ιος (see §4.2); (ii) the augment (see §4.3); (iii) the stem *pant-* "all" (Paleo-Phrygian *panta*, §1.1.1, **2**, Vezirhan, l. 4 ; Middle Phrygian παντης, l. 7; Neo-Phrygian παντα, no. 35). Exclusive isoglosses include: (i) the *-s* ending of the nominative singular of *a*-stem masculine nouns (see §4.1.2); (ii) the denominative verbs in **-ye/o-* built on *o*-stems (Greek κακόω "I mistreat," Paleo-Phrygian *kakoioi/kakuioi*); (iii) the participial suffix *-meno-*; (iv) the pronoun *auto-*; (v) the stem *kako-*; (vi) the conjunction αι, having the same conditional usage as Doric and Aeolic αἰ.

These features betray very close prehistoric ties between the two languages, Phrygian and Greek, as well as the fact that they belong, no doubt, to the same dialectal subgroup of early Indo-European. The odds are that Midas' titulature in M-01a, *Midai lavagtaei vanaktei*, where appear two functions that are also found in the Mycenaean Greek documents (*lawagetas* and *wanax*), does not correspond to Greek borrowings, but rather reflects the existence of a common heritage (on the stem *wanaks-* see Brixhe 1990:73–75).

We will dismiss, at least temporarily, the idea of a Thraco-Phrygian unity. Thraco-Dacian (or Thracian and Daco-Mysian) seems to belong to the eastern (satem) group of Indo-European languages and its (their) phonetic system is far less conservative than that of Phrygian (see Brixhe and Panayotou 1994, §§3ff.).

2. WRITING SYSTEMS

2.1 Paleo-Phrygian

The Paleo-Phrygian documents are written in an alphabetic script which resembles the archaic Greek alphabets (from which it is derived for the most part), characterized by the total absence of the letters that mark the aspirated stops in Greek, and presenting several regional variations:

1. A common set of seventeen symbols (conventionally transcribed by Latin letters)*: a, b, g, d, e, v, i, k, l, m, n, o, p, r, s, t, u*, with the rectilinear *i* – as in Greek – and the splitting of the Semitic *waw* into F and ϒ.

2. Apart from a few symbols, the values of which are not evident, two letters are limited to certain regions: (i) a sign for the palatal glide /y/ (𐤥,𐤭, of variable orientation), transliterated as *y*, the usage of which is optional and which, with the rectilinear *i*, evokes the pair formed by the two Greek *iôtas* (rectilinear and serpentine); (ii) a letter which probably corresponds to an affricate /ts/ or a variant thereof (↑,𐤬; see Brixhe 1982:229–235), and which recalls the Ionian *sampi*, formally as well as functionally (cf. Woodard 1997:175–184).

A little less than one-third of the texts are sinistroverse (right to left); a few are written *boustrophedon* (alternating direction every other line). Exceptionally among the the graffiti, more often on stones, words are separated by punctuation signs (three or four superscript dots).

The "peripheral" texts of §1.1.1 use an alphabet which diverges from the above on only two points: (i) each has a distinct symbol for /y/ (that of **1** being almost identical to that of **2**), though it is likely that the graffiti of **3** use the common sign or a variant thereof; (ii) according to the editors of the texts, **1** and **2** have two symbols corresponding to voiceless sibilants: one of the two could represent /ts/ and replace the common sign (↑,𐤬) which is here absent.

2.2 Neo-Phrygian

The script used is the Greek alphabet of the period, taking into account the phonological needs of the language, with a fund of seventeen letters: Α, Β, Γ, Δ, Ε, Ζ, Ι, Κ, Λ, Μ, Ν, Ο, Π, Ρ, Σ, Τ, ϒ. The letter Ω is rare except in the formula ΔΕΩΣ/ΖΕΜΕΛΩΣ ("gods/men" or "heavenly gods / infernal gods"). Also rare is Η which often appears to be equivalent to Ε. The characters Ξ and Ψ and the "aspirated" signs, Φ, Χ, and Θ, are extremely rare or absent (on the value of the Greek characters, see *WAL* Ch. 24, §2.3).

The texts are always written without separation of words.

3. PHONOLOGY

Though nearly a thousand years separates the earliest Paleo-Phrygian and the latest Neo-Phrygian documents, the conservatism inherent in the writing and in the formulary character of the texts allows one readily to verify that these are indeed two states of a single language (see Brixhe 1993:330–333). Having been spoken over such a vast area, Phrygian must have presented some local variations, even certain dialectal differentiations (see §1.1.1),

but our ignorance of much of the language, and the formulary nature of the evidence, prevents us from reaching definite conclusions on this point (see Brixhe 1993:337–338). The reader should bear in mind that Phrygian is still far from being well understood. At present only the simple texts are relatively clear – the short Paleo-Phrygian dedications and the Neo-Phrygian imprecations for instance. Phrygian is a language which is still undergoing decipherment.

3.1 Paleo-Phrygian consonants

The consonantal inventory of Paleo-Phrygian is presented in (1):

(1) Paleo-Phrygian consonantal phonemes

p	t		k
b	d		g
		ts	
		dz	
	s		
m	n		
	l	r	
w		y	

3.1.1 Obstruents

It was long claimed that the Phrygian consonantal system was dominated by a mutation (*Lautverschiebung*) of stops – the Proto-Indo-European aspirates becoming voiced, the voiced stops becoming voiceless, and the voiceless becoming aspirates. This is, however, a highly unlikely hypothesis; see Lejeune 1979 and, especially, Brixhe 1994:171–172.

The voiceless stop phonemes /p/, /t/, and /k/ developed from the voiceless stops of Proto-Indo-European – $*p$, $*t$, and $*k$/$*k^w$ respectively (on the Proto-Indo-European stops, see *WAL* Ch. 17, §2.1.1): for example, *podas* (G-02), *matar* (e.g., W-04). The voiced stops, /b/, /d/, /g/, have two Proto-Indo-European sources: (i) the plain voiced stops $*d$, $*g$ (e.g., again, *podas*); no certain examples exist for $*b$, other than, possibly, the one that provides a *Lallname* like *Baba(s)* (*passim*); and (ii) the voiced aspirates $*b^h$, $*d^h$, $*g^h$: for example, *bagun* (G-136, if < $*b^h ago$-, cf. Neo-Phrygian (αβ)βερετ(ορ), root $*b^h er$-); *edaes* (root $*d^h eh_1$, *passim*), and so forth.

The voiceless affricate /ts/ (?), written ↑, developed from $*k$ occurring before the front vowels /i/ and /e/, and is probably matched by a voiced /dz/ which arose from $*g$ and $*g^h$ in the same context (see Brixhe 1982:229 ff.).

3.1.2 Sonorants

Paleo-Phrygian has a pair of nasals, /m/ and /n/, with a neutralization of the contrast in word-final position in favor of the dental (just as in Greek). The liquids /l/ and /r/, and the glides /w/ (traditionally transcribed as *v*) and /y/ complete the sonorant inventory.

3.2 Neo-Phrygian consonants

As far as can be determined, several consonantal changes have occurred by the Neo-Phrygian period:

1. The voiced affricate /dz/ may have become a voiced fricative /z/, supplying a voiced counterpart to /s/ (which itself might possibly have merged with the voiceless affricate, though no examples are available).
2. Word-final nasals have been eliminated. However, since they were preserved in the orthography, they at times appear by hypercorrection in unexpected positions: compare the dative of the masculine/neuter demonstrative σεμουν (the norm, < **se-me/o-*) with the feminine σαν (for σα/σαι); see Brixhe 1978b:13–14, 19–20.
3. While the palatal glide /y/ has been preserved in all positions, the labiovelar /w/ (now written ΟϒΟ) seems to have disappeared before a rounded vowel.

3.3 Paleo-Phrygian vowels

The vocalic inventory of Paleo-Phrygian consists of five short vowels, /i/, /e/, /a/, /o/, and /u/, and at least four long (not distinguished from the short ones in writing): /i:/, /a:/, /o:/, and /u:/. The inherited long mid vowel **ē* merged with **ā* (cf. *matar* from **mātēr*), a merger which is perhaps structurally linked to the appearance of a secondary /e:/ arising by monophthongization of the Proto-Indo-European diphthong **ei* (see Brixhe 1990:70–71; on vowels in general, see Brixhe 1983:115 ff.; 1990).

When occurring before another vowel, the high vowels /u(:)/ and /i(:)/ were pronounced with an off-glide, [w] and [y] respectively, either written (*kuliya*, G-101, -127; *t/guvatis*, G-133) or not (*agartioi*, G-02a; *tuaveniy*, M-01f). In addition, the mid vowel *o* was raised to *u* before the word-final nasal *-n* (e.g., *avtun*, W-01b, corresponding to Greek αὐτόν).

The language possesses both so-called "short" and "long" diphthongs: /oi/, /ai/, /au/; and /o:i/, /a:i/. It was noted above that **ei* had perhaps already yielded /e:/; and it is possible that **ou* had undergone a similar fate: **ou* > /o:/ > /u:/.

3.4 Neo-Phrygian vowels

Neo-Phrygian has only five isochronous vowels (Brixhe 1983:118–121; 1990): (i) /a/ (which arises from the /a(:)/ and /a(:)i/ of the earlier language); (ii) /e/ (from /e/); (iii) /o/ (from /o/); (iv) /u/ (from /u(:)/, /o:/ [primary or secondary], and /o:i/; see Brixhe 1990:97); and (iv) /i/ (from /i(:)/ and secondary /e:/ (< **ei*)). The Neo-Phrygian vocalic system is further characterized by a neutralization of the contrast of /e/ and /i/ in hiatus (cf. δεως/διως [*passim*]). In addition, the language exhibits a neutralization of the contrast /e/ ~ /i/ and /o/ ~ /u/ (in favor of the high vowel) in absolute-final position (bear in mind the elimination of the nasal in this position): compare, for example, κακουν (the norm) for κακον (*passim*) or the adverb κακιν (with a purely graphic nasal, no. 14) for κακε(ν) (e.g., no. 88); the inflectional ending of the Paleo-Phrygian athematic singular dative, *-ei* or *-ey*, can appear in Neo-Phrygian as *-ei* (historical), *-i* (phonetic), or *-e* (an inverse spelling related to the interchangeability, in final position, of *e* and *i*), see Brixhe 1990:78–79.

3.5 Middle Phrygian vowels

The stage I have proposed to identify as Middle Phrygian (see §1.2) perhaps preserves an intermediary phase of certain vowel changes. For example, in the phrase ε̣ṿ [σ]α̣ σοροι (ll. 2–3), the spelling [σ]α̣ (for Paleo-Phrygian **sai* or **say*) suggests that the final syllable of σοροι probably continues a historical spelling; the diphthong /-o:i/ has already lost its second element, but has not yet become /u(:)/ (cf. Neo-Phrygian σορου, no. 21).

4. MORPHOLOGY

4.1 Nominal morphology

Although we have not yet identified a complete Phrygian paradigm, it remains possible to outline the inflectional system of the language. Phrygian, being an early Indo-European language, inflects nouns for case, gender, and number. At least four morphological cases can be identified (nominative, accusative, genitive, dative), three genders (masculine, feminine, neuter), and two numbers (singular and plural). In typical Indo-European fashion, Phrygian attests thematic and athematic stems, as well as a class of nouns formed with the stem-vowel *a* (PIE **-eh$_2$*). On the Indo-European categories, see *WAL* Chapter 17, §3.5.

4.1.1 Thematic stems

Among nominals, the inflection of thematic stems is best understood (see Brixhe 1990:94–97; 1999, §5). The following sequences of thematic vowel + ending are identified (Paleo-Phrygian forms in Latin, Middle and Neo-Phrygian in Greek characters, with phonetic transcription in brackets):

(2)

	Singular	*Plural*
Nominative	-os / -ος	-oi / -οι
Accusative	-un / -ου(ν), -υ(ν) ([-u])	
Genitive	-ovo / -ου ([-u])	
Dative	-oy/-oi ([o:y/o:i]) / -ου(ν) ([-u])	-ωσ(ι)

4.1.2 *a*(:)-stems

Both masculine and feminine forms are attested in this inflectional category which corresponds to the Greek first declension. Paleo-Phrygian provides masculine singular forms: (i) a nominative in *-as* (alternating with *-a*, see below); (ii) perhaps a genitive in *-vo* (cf. *leravo* or *lelavo*, W-10); and (iii) a dative in *-ai* (*Midai*, M-01a). Feminine forms include the following: (i) a nominative singular in *-a* (*Imeneia*, G-183b); (ii) an accusative -αν ([-an]); . . . μανκαν ιαν εσταες, ". . . the m. that he erected," no. 31); (iii) a genitive in -ας ([-as]; e.g., Middle Phrygian μεκας; Neo-Phrygian σκερεδριας, no. 56); (iv) a dative in *-ay* (*avtay*, W-01b), -αι (σαι . . . μανκαι, no. 35) / -a (σα . . . μανκα, no. 82); (v) and, in the plural, a dative in *-ais* (*mekais*, G-239).

4.1.3 Athematic stems

In the case of the athematic stems, we are less well-off. Note that the lowering of **ē* to **ā* gave certain paradigms a novel character; consider, for example, the word for "mother": nominative *matar*, accusative *materan*, dative *materey*; or the man's name Ιμαν, genitive Ιμενος, in the Greek texts of the Roman era. The quantitative contrast of **ē* versus **e* was transformed into a contrast in quality and quantity (Paleo-Phrygian), and then simply into a contrast in quality (Neo-Phrygian).

4.2 Pronouns

The Phrygian documents shed some light on the phenomena of deixis and anaphora. Those Proto-Indo-European demonstrative/anaphoric stems **se/o-* and **te/o-*, which are associated in Greek with the article paradigm, may have become specialized in Phrygian:

1. **se/o-* as the demonstrative: nominative/accusative neuter singular *si* (equivalent to Latin *hoc*); accusative, genitive, and dative feminine singulars σαν, σας, σα(ι); dative masculine and neuter singular σεμουν (< **se-me/o*).
2. **te/o-* as the anaphoric: compare the correlation in Neo-Phrygian ιος νι . . . , τος νι . . . ("whoever . . . , that one . . . ," no. 6, 25); or the genitive in Paleo-Phrygian *tovo* (< **to-wo*) which became του in Neo-Phrygian (no. 87) and with which the dative merged after /o:i/ became /u/ (see §3.4).

In addition, the Proto-Indo-European reflexive stem **swe-* seems to have also provided an anaphoric – compare dative οι – and perhaps the possessive as well: Neo-Phrygian ουα (no. 2, 33, 36).

Just like Greek, Phrygian has a stem *auto-* expressing identity and used emphatically (cf. αυτος, no. 33, 36), and which likely combined with the preceding pronominal to form a reflexive (?), cf. *ven-avtun* (W-01b) and ε-αυται (no. 116, l.12).

Finally, the relative is *ios/yos/*ιος (*passim*). The Phrygian indefinite is represented by masculine κος and the neuter κιν. The indefinite relative pronouns are ιος νι or ιος κε.

On Phrygian pronouns as a whole, see Brixhe 1978b:6–22; 1990:95–97; 1997, §§5.1.1, 5.1.2, 6.1, and 6.2.

4.3 Verbal morphology

Phrygian verbs are morphologically marked for tense, voice, and mood, and by inflectional endings which encode the typical Indo-European distinction of three persons and two numbers.

In addition to present tense, the Phrygian documents provide evidence of a possible future tense stem in *-s-* (*egeseti* P-04a, εγεσιτ no. 58). Phrygian undoubtedly possesses a preterite tense formed with a prefix (the Indo-European "augment" known from Greek, Armenian, and Indo-Iranian) and having a third-person singular marked by *-s*: consider, for example, *e-daes/*ε-δαες (cognate with Latin *fecit*, < PIE**$d^h eh_1$*), and the compounds *en-e-parkes/*εν-ε-παρκες (Brixhe and Lejeune 1984: 14), ποσ-ε-κανες (no. 116, l. 7). A perfective stem characterized by reduplication also occurs: for example, τε-τικμενος (*passim*), γε-γαριτμενος (nos. 33, 36, 79).

Phrygian distinguishes a voice contrast of active versus middle: for example, αδδακετ – αδδακετορ (< **$d^h h_1$-* or** $d^h eh_1$-*); αββερετ – αββερετορ (< **$b^h er$-*); see Brixhe 1979:177ff.

In addition to the indicative, we have reason to suspect that Phrygian has alongside a subjunctive mood (? αδδακετ, αββερετ) also an optative: thus, the third-person singular *kakoioi* and *kakuioi* (G-02c, P-04b), which is a denominative of *kako-*, "make *kako-*." To the optative ending *-oi* may correspond plural *-oyen*, as in *[. . .]toyen* (W-04). In the imperative mood, only third-person forms are attested: in the active voice, a singular *-to/-*του (< **-tōd*) and a plural -νου/-(τ)τνου; in the middle, a singular *-do/-*δου (< **$d^h ō$*?); see Brixhe 1979:177–184; 1990:90–91.

The Phrygian documents preserve a single participial morpheme – the middle participle suffix *-meno-*.

5. SYNTAX

5.1 Word order

In the case of Paleo-Phrygian, as well as Neo-Phrygian, to the extent that major subject constituents can be identified, the language generally remains faithful to the Indo-European order SV (see Brixhe 1983:126).

Phrygian has both proclitics and enclitics, at times occurring in sequence, as, for example, in nos. 33 and 76

(3) ακ κε οι
proclitic preposition – enclitic conjunction – enclitic anaphoric object of the preposition ακ

Compare, however, the order found in no. 88

(4) πουρ Ουανακταν κε
prolitic preposition – object of the preposition – enclitic conjunction

On the order of the Phrygian clitics, see Brixhe 1997, §7.

5.2 Case usage

As in other ancient Indo-European languages, Phrygian prepositions (e.g., εν, αδ, ας, με, *por*/πορ/πουρ) require their nominal objects to be inflected in particular noun cases (see Brixhe 1997, §2).

The phonetic changes which occurred in the evolution of Neo-Phrygian from Paleo-Phrygian (see §§3.2, 3.4) fused final *-on* (accusative), *-owo* (genitive), and *-o:i* (dative) into /u/ and thus led to the merger of the accusative, the genitive, and the dative cases in the singular (then no doubt in the plural) for the thematic and then the other stems. Compare the feminine final -ας and -αν, where one would expect -α(ι) (see Brixhe 1978b:13–14, 19–20; 1997, §2.4).

6. LEXICON

The irregularity of the punctuation in Paleo-Phrygian and the general absence of word division in Neo-Phrygian are clearly obstacles to text segmentation. Nevertheless, it has been possible to isolate a number of lexical units, to which we are able to assign meaning when the text is straightforward: consider the famous Paleo-Phrygian dedication of the so-called Tomb of Midas (M-01a):

(5) *Ates . . . Midai lavagtaei vanaktei edaes*
"Ates . . . has dedicated [this monument] to Midas, lavagtas and vanax"

or a Neo-Phrygian protasis such as (no. 61):

(6) ιος νι σεμουν κνουμανε κακουν αδδακετορ . . .
"whoever will damage this tomb . . . "

Still, the latter translation hides our ignorance of the precise meaning of κνουμανει, the dative of the neuter κνουμαν. Similarly, we do not know the exact meaning of a series of terms relating to architecture (often funerary): for example, *iman* (appellative in G-136, etc.); *meka* (G-239, P-03, etc.), Middle Phrygian μεκα (l. 1), μανκα (Middle Phrygian l. 1; Neo-Phrygian nos. 2, 18, 26, etc.); Neo-Phrygian σκερεδρια/σκελεδρια (nos. 56, 67).

Regarding place names (toponyms), the persistence of a characteristic Phrygian suffix should be noted, which in the Greek transcriptions has the form -αειον, with variants -αιον and -αεον, for example, Κοτιαειον (the present Kütahya; cf. Zgusta 1984, §594/3).

Greek inscriptions in the Phrygian area are extremely valuable for the understanding of personal names (anthroponyms; Zgusta 1964:552–555). These seem to have remained

quite stable throughout the history of the language; though names of Hittito-Luwian origin increased in frequency. Typical Phrygian names include *Iman* (e.g., G-210), Ιμαν – Ιμενος (Zgusta 1964, §466/1); *Aladis* (G-109), *Voine(s)* (G-129, G-228), Ουεναουια/-η or Ουεναυια/-η (Zgusta 1964, §1153/1–3), Ουαναξος/Ουαναξιων/Ουαναξων (Zgusta 1964, §1138/1–3), Ξευνα/Ξευνη/Ξευνε (no. 116). Hittito-Luwian names include *Mamutas* (G-229), *tuvatis/guvatis* (G-133), Τροκονδας (Zgusta 1964, §1512/31). Also found are infantile terms such as *Ata(s)* (G-107, G-128, etc.), Γα, Δα, Να/Νη (Zgusta 1964, index), *Mama* (G-173), and so forth.

Phrygian contacts with speakers of Anatolian languages such as Hittite and Luvian brought about an interesting morphological phenomenon: as opposed to the masculine/feminine morphological contrast of Phrygian (with two forms), the Anatolian languages have only one common animate gender (with a unique form; see Ch. 2, §4.2.1; Ch. 3, §4.1). This divergence would generate a Phrygian tendency to have a single ending for the names of both men and women, hence the wavering between these two categories: for example, masculines *Ata* or *Voine* next to *Atas* and *Voines* and conversely, no doubt, feminine forms such as Ναναs next to Ναναα (see Brixhe 1983:128; 1994:176).

At a later date, the Galatian impact (see §1.3) was quite modest. These Celtic speakers perhaps provided the Neo-Phrygian personal name Βωδοριs (no. 34) and the lexeme τευτους/τευτωσι (nos. 33, 36, 116), if the latter represents a reflex of **teuta*, which provided the western Indo-European dialects (such as Celtic) with a noun meaning "people" (see Brixhe 1993:338, 340, rectified by 1997, §2.5).

It is with Greeks that Phrygian contacts would be the longest and the most intense – stretching from the second millennium BC to the Roman period. Among the linguistic manifestations of these contacts are relatively ancient lexical borrowings such as Middle Phrygian σοροι (l. 3, dative) and Neo-Phrygian σορου (no. 21, dative), from Greek ἡ σορός (a vessel hence "cinerary urn," then "Sarcophogus"); or Middle Phrygian κορο (ll. 6 and 7), Neo-Phrygian κορου (no. 92), from Greek χῶρος ("land, country"). More recent borrowings include the Neo-Phrygian θαλαμει (no. 4), from Greek ἡ θαλάμη ("den").

Bibliography

Brixhe, Cl. 1978a. "Etudes néo-phrygiennes I," *Verbum* 1 (1): 3–21.

_____. 1978b. "Etudes néo-phrygiennes II," *Verbum* 1 (2): 1–22.

_____. 1979. "Etudes néo-phrygiennes III," *Verbum* 2:177–192.

_____. 1982. "Palatalisations en grec et en phrygien." *BSL* 77:209–249.

_____. 1983. "Epigraphie et grammaire du phrygien: état présent et perspectives". In E. Vineis (ed.), *Le lingue di frammentaria attestazione* (= *Die indogermanischen Restsprachen*, Atti del Convegno della Società Italiana di Glottologia e della Indogermanische Gesellschaft, Udine 1981), pp. 109–133. Pisa: Giardini.

_____. 1987. *Essai sur le grec anatolien au début de notre ère.* 2nd ed. Nancy: Presses universitaires de Nancy.

_____. 1989–1990. " La plus occidentale des inscriptions phrygiennes," *Incontri linguistici* 13:61–67.

_____. 1990: "Comparaison et langues faiblement documentées: l'exemple du phrygien et de ses voyelles longues." In J. Kellens (ed.), *La reconstruction des laryngales*, pp. 59–99. Liège: Université de Liège.

_____. 1991. "Les inscriptions paléo-phrygiennes de Tyane: leur intérêt linguistique et historique." In Br. Le Guen-Pollet and O. Pelon (eds.), *La Cappadoce méridionale jusqu'à l'époque romaine. Etat des recherches*, pp. 37–46 and pl. I. (Actes du Colloque d'Istanbul, Institut Français d'Etudes Anatoliennes, 13–14 avril 1987). Paris: Editions Recherche sur les Civilisations.

_____. 1993. "Du paléo- au néo-phrygien." *Académie des Inscriptions et Belles-Lettres, Comptes Rendus*, pp. 323–344.

_____. 1994. "Le phrygien." In Fr. Bader (ed.), *Langues indo-européennes*, pp. 165–178. Paris: CNRS Editions.

_____. 1995. "Les Grecs, les Phrygiens et l'alphabet". In Al. Fol *et al.* (eds.), *Studia in honorem Georgii Mihailov*, 101–114. Sofia: Institute of Thracology.
_____. 1996. "Les documents phrygiens de Daskyleion et leur éventuelle signification historique," *Kadmos* 35: 125–148.
_____. 1997. "Les clitiques du néo-phrygien". In Gusmani *et al.* 1997, 41–70.
_____. 1999. "Prolégomènes au corpus néo-phrygien," *BSL* 94:285–315.
Brixhe, Cl. and Th. Drew-Bear. 1997, "Huit inscriptions néo-phrygiennes." In Gusmani *et al.* 1997, 71–113.
Brixhe, Cl. and M. Lejeune. 1984. *Corpus des inscriptions paléo-phrygiennes.* Paris: Editions Recherche sur les Civilisations.
Brixhe, Cl. and G. Neumann. 1985. "Découverte du plus long texte néo-phrygien: l'inscription de Gezler Köyü." *Kadmos* 24:161–184.
Brixhe, Cl. and A. Panayotou 1994. "Le thrace." In Fr. Bader (ed.), *Langues indo-européennes*, pp. 179–203. Paris:
Brixhe, Cl. and M. Waelkens. 1981. "Un nouveau document néo-phrygien au Musée d'Afyon." *Kadmos* 20:68–75.
Cox, C. W. M. and A. Cameron. 1932. "A native inscription from the Myso-Phrygian Borderland," *Klio* 25:34–49.
Darga, M. 1993. "Fouilles de Şarhöyük-Dorylaion (1989–1992)," *XV. Kazi sonuçları toplantısı (Anakara 1993)* I, 481–501. Ankara: Turk Ministry of Culture.
DeVries, K. 1980. *From Athens to Gordion. The Papers of a Memorial Symposium for Rodney S. Young*, pp. 33–49. University Museum Papers I. Philadelphia: University of Pennsylvania.
Diakonoff, I. and V. Neroznak. 1985. *Phrygian.* Delmar, NY: Caravan Books.
Dinç, R. and L. Innocente. 1999. "Ein Spinnwirtel mit phrygischer Inschrift," *Kadmos* 38:65–72.
Friedrich, J. 1932. *Kleinasiatische Sprachdenkmäler.* Berlin: Walter de Gruyter.
_____. 1941. *RE* XX-1, col. 868–891, *s.v. Phrygia : Sprache* et *Phrygia : Geschichte.*
Gunter, A. 1991. *Gordion Excavations. Final Reports III: The Bronze Age.* Philadelphia: University of Pennsylvania.
Gusmani, R. 1958, 1959. "Studi frigi." *Rendiconti dell' Istituto Lombardo* 92:835–928; 93:17–49.
Gusmani, R. and G. Polat. 1999. "Manes in Daskyleion," *Kadmos* 38:137–162.
Gusmani, R. and Y. Polat. 1999. "Ein neues phrygisches Graffito aus Daskyleion," *Kadmos* 38:59–64.
Gusmani, R., M. Salvini, and P. Vannicelli. 1997. *Frigi e frigio*: Atti del 1° Simposio Internazionale. Roma: Consiglio Nazionale delle Ricerche.
Haas, O. 1966. *Die phrygischen Sprachdenkmäler.* Sofia.
Laminger-Pascher, G. 1984. *Beiträge zu den griechischen Inschriften Lykaoniens* (= Ergänzungsb. zu TAM, Nr. 11 = Denksch. Wien 173). Vienna.
Lejeune, M. 1979. "Regards sur les sonores indo-européennes en vieux phrygien." In *Mélanges E. Laroche*, pp. 219–224, Paris.
Manning, St. W., B. Kromer, P. I. Kuniholm and M. W. Newton. 2001. "Anatolian tree rings and a new chronology for the east Mediterranean Bronze–Iron Ages," *Science* 294:2532–2535.
Masson. O. 1987. "Le sceau paléo-phrygien de Mane," *Kadmos*" 26:109–112.
Mitchell, S. 1993. *Anatolia. Land, Men and Gods in Asia Minor.* Oxford: Oxford University Press.
Neroznak, V. 1978. *Paleobalkanskije jazyki.* Moscow: Nauta.
Neumann, G. 1988. *Phrygisch und Griechisch* (= Sitzungsber. Wien 499). Vienna: Österr. Akad. Wissenschaften Verlag.
_____. 1997. "Die zwei Inschriften auf der Stele von Vezirhan." In Gusmani *et al.* 1997:13–32.
Orel, Vl. 1997. *The Language of Phrygians. Description and Analysis.* New York: Delmar.
Sams, G. 1994. *The Gordion Excavations. Final Reports IV: The Early Phrygian Pottery.* Philadelphia: University of Pennsylvania.
Varinlioğlu, E. 1992. "The Phrygian Inscriptions from Bayındır," *Kadmos* 31:11–20.
Voigt, M., G. K. Sams, and K. DeVries. 2001. Paper read to the Van Symposium (6.08.2001; in press).
Woodard, R. 1997. *Greek Writing from Knossos to Homer.* Oxford: Oxford University Press.
Zgusta, L. 1964. *Kleinasiatische Personennamen*, Prague: Tschechoslowakische Akademie der Wissenschaften.
_____. 1984. *Kleinasiatische Ortsnamen*, Heidelberg: Winter.

CHAPTER 9

Hurrian

GERNOT WILHELM

1. HISTORICAL AND CULTURAL CONTEXTS

1.1 History of the language and its speakers

Hurrian is an ancient Near Eastern language widely spoken in the northern parts of the Fertile Crescent (present-day northern Iraq, northern Syria, southeast Turkey) from at least the last quarter of the third millennium BC on until the end of the second millennium BC. It survived for another half millennium in small pockets in the mountainous areas north of ancient Assyria.

A cognate language of Hurrian is Urartian (see Ch. 10) which is attested in texts from the late ninth to the late seventh century BC. Apart from Urartian, Hurrian is an isolated language without a genetic relation to any other known ancient Near Eastern language. A genetic relation between (reconstructed) Proto-Urarto-Hurrian and (reconstructed) Northeast Caucasian has been argued for, but it is not generally accepted. If the connection could be demonstrated, it would be a rather distant one.

Hurrian is first attested in a few words and personal or place names mentioned in Akkadian texts of the Akkade period (twenty-third to twenty-second centuries BC). The term *Old Hurrian* (herein abbreviated OH) has been coined for the language of a royal inscription most likely to be dated to the Ur III period (twenty-first to twentieth centuries BC), but it is also used for the more archaic dialect(s) of the second millennium.

During the first half of the second millennium BC (Middle Bronze Age) there are many hundreds of Hurrian personal names attested from the northern parts of the Fertile Crescent (from the Zagros Mountains in the east to the Mediterranean coast), but only little more than a dozen Hurrian texts, still unintelligible for the most part.

By far the majority of Hurrian texts comes from the second half of the second millennium BC (Late Bronze Age). Hurrian disappeared as a result of political and ethnic shifts occurring from the late fourteenth century BC onwards. Except perhaps in remote mountainous areas east of the upper Tigris, Hurrian became extinct during the Dark Ages, beginning in the twelfth century BC.

The modern name of the language (English "Hurrian," French "hourrite," German "hurritisch") is based on the geographical term *Ḫurri* which is not very well defined (presumably denoting most of Upper Mesopotamia). On the basis of this name, Hittite forms an adjective *ḫurlili* "Hurrian" (adjective in *-li* formed from *ḫur-la-* "inhabitant of the land of Ḫurri") which qualifies Hurrian language incantations used in Hittite rituals. In the so-called "Mittani letter" (fourteenth century BC, see §1.2), the Hurrian adjective *ḫurroġe* (variant

ḫurvoġe) "Hurrian" refers to the country; it is unknown whether it could also designate the language.

Other terms for the language are obsolete – *Mitanni* (based on the name of a country in Upper Mesopotamia); *Subarian* (based on the geographical term *Subir*, *Subartu*). The earliest Hurrian attestations and the linguistic relationship with Urartian point to an origin in the most northeastern parts of the Fertile Crescent and in the mountainous areas beyond (most northeastern Syria, most northern and northeastern Iraq, southeastern Turkey). A connection with the flourishing Transcaucasian Early Bronze culture is possible, but cannot be demonstrated.

The earliest city-states with Hurrian rulers, and presumably a population which at least in part spoke Hurrian, were under strong southern (Akkadian, Sumerian) cultural influence and military pressure. Already about 1800 BC there was a solid Hurrian element in the populations that lived between the Mediterranean and the Euphrates, most likely as a result of movements at the end of the third millennium BC.

At the end of the sixteenth century BC, the kings of Mittani (conventionally also "Mitanni") in Upper Mesopotamia united most of the Hurrian-speaking countries under their control. The dynasty preserved some archaic Indo-Aryan traditions of unknown origins (dynastic names, some gods known from Vedic sources, hippological terms). During the fifteenth century Mittani struggled with Egypt for the control of Syria west of the Euphrates. A balance was reached shortly after 1400 by a peace treaty and the beginning of a series of dynastic marriages. It is in this context that King Tušratta addressed the so-called Mittani Letter to Pharaoh Amenophis III. In the middle of the fourteenth century BC, Mittanian power declined rapidly as a consequence of dynastic turmoil and the rise of Hittite and Assyrian power; the Hittites conquered Mittani's vassal states west of the Euphrates, whereas the east was annexed to Assyria, though the Mittanian dynasty was able to keep control of a part of its former empire for four more generations. Eventually, however, it disappeared in the course of Assyrian military expansion. The Assyrians removed whole population groups from former Mittani and settled Assyrians in their place in order to gain better control of the region. This policy undoubtedly accelerated the disappearance of the Hurrian language.

By about 1400 BC, the Hittite dynasty had already adopted cultural traditions from the Hurrian-speaking parts of southern Anatolia (Kizzuwatna). Consequently, Hittite kings supported Hurrian cults and introduced them into their capital of Hattuša and in several north Anatolian provincial centers (Sapinuwa, Samukha). Between 1400 and the Hittite collapse, Hurrian thus became a language of cult and learning far removed from Hurrian-speaking areas.

1.2 Sources

The oldest Hurrian text is the royal inscription of Tišatal, *endan* of Urkeš. The texts from *c.* 2000–1500 BC are mainly short incantations from places outside Hurrian-speaking areas – Babylonia (Larsam?) and the Middle Euphrates (Mari, Tuttul) – but there also exist a few texts of other, not yet identified genres (from Mari, Tigunanu).

The most important source for the study of Hurrian up to the present time has been the Mittani Letter written about 1355 BC. This diplomatic document of nearly five hundred lines was discovered in the Egyptian capital of Amarna in 1887. All the other known messages sent to Egypt by the royal court of Mittani are written in Akkadian, which at that time served as the diplomatic vernacular throughout the ancient Near East. Archeology has not yet been very successful in uncovering cuneiform tablets in Mittani proper; though recent finds from Tell Brak on the Khabur river show that Akkadian was widely used in the area, especially for

deeds (there is also a small fragment of a Hurrian letter). The thousands of texts found at Nuzi (close to Kirkuk, northern Iraq) and Alalakh (close to Antioch on the Orontes) are all written in Akkadian, but often display Hurrian influence on the levels of lexicon, grammar, and personal names (anthroponymy).

The trade center Ugarit on the Mediterranean coast has yielded a small but important and diverse number of Hurrian texts. A bilingual Sumero-Hurrian lexical list displays unusual Hurrian forms. Several other tri- or quadrilingual (Sumerian, Akkadian, Hurrian, and, optionally, Ugaritic) lists of words or divine names (theonyms) as well as a short bilingual (Akkadian, Hurrian) wisdom text have made important contributions to our understanding of the Hurrian lexicon. Some Hurrian texts are written in the Ugaritic alphabetic script. A group of Hurrian cult songs combine a (mostly unintelligible) text with musical terms (based on Akkadian ones). One single Hurrian letter suggests the use of the language also outside the sphere of cult and learning.

At Emar on the middle Euphrates omen texts and a trilingual (Sumerian, Akkadian, Hurrian) god list were found in the 1970s, but by 1999 they remained unpublished.

By far the majority of Hurrian texts come from Hittite libraries. The most important belong to a series of bilingual (Hurrian, Hittite) literary texts, including a myth, a historico-religious tale, and wisdom texts. Among other texts, Hittite rituals with Hurrian incantations or offering-lists stand out, but there are also epics, myths, prayers, and omen texts. Many Hurrian texts are reported to have been found at Sapinuwa (Ortaköy south of Çorum) beginning in 1991; they are also still unpublished.

1.3 Dialects

Despite its vast geographical distribution and its attested history of about a millennium, Hurrian is remarkably homogeneous. The two main dialects are that of the Mittani Letter and the dialect (or presumably a group of closely related dialects) called *Old Hurrian* (being much earlier attested than Mittani Hurrian). Old Hurrian is closer to Urartian, which seems to have separated from Proto-Urarto-Hurrian not later than the early second millennium BC. It is also the dialect on which the study of Hurrian proper names rests. The main features of Old Hurrian have become clearer only since 1983 when the above-mentioned Hurro-Hittite bilingual was discovered. The chief differences between the two dialects lie in the verbal system and in syntax, though the much more complicated syntax of the Mittani letter (virtually our only source for Mittani Hurrian) and its wider use of enclitics may be due to the demands of diplomacy. A few dialectal differences within Old Hurrian are discernible.

2. WRITING SYSTEMS

2.1 Syllabic cuneiform

Hurrian was mainly written in the syllabic cuneiform script of Akkadian. Departing from common Akkadian spelling practice (see *WAL* Ch. 8, §2), only a few logograms (word signs originally used to write Sumerian, hence also called *Sumerograms*) were used in writing Hurrian texts.

The scribe of the Mittani Letter used a restricted inventory of syllabic symbols (41 CV signs, 31 VC signs, and 26 CVC signs, some of which had two values – *ḫar/ḫur*, *kal/tan*). The Akkadian script adopted for writing Hurrian distinguished only partially between /e/ and /i/;

the Mittani Letter makes full use of the given oppositions (*te/ti*, *še/ši*, *me/mi*, *en/in*, *el/il*). Long vowels are rendered by *plene-spelling* (e.g., *še-e-*, *ta-a-*). The two vowel signs *u* and *ú* are strictly distinguished in the Mittani Letter and in some texts from Hattuša, indicating a phonemic distinction of /o/ versus /u/.

The syllabary of the Mittani Letter does not distinguish (at least in some cases) between voiced and voiceless stops, but utilizes one Akkadian sign out of a pair – *pa*, not *ba*; *ta*, not *da*; *du*, not *tu*; and so forth. In two instances, the script of the Mittani Letter redefines a pair of Akkadian signs: *gi* and *ki* encode a difference no longer in consonantal voicing, but in vowel quality – *gi* is used for /Ke/ and *ki* for /Ki/. Correspondingly, *gu* represents /Ku/ and *ku* /Ko/.

The sign *wa* can be used for a labiodental fricative plus any vowel; in texts from Hattuša a small vowel sign is added in order to facilitate the correct reading.

Going a step beyond Akkadian practice, Hurrian scribes repeated a vowel sign in word-initial position before a single consonant in order to represent a long vowel: for example, *u-u-mi-i-ni* for *ōmīni*.

2.2 Alphabetic cuneiform

Some of the texts from Ugarit are written in the Ugaritic cuneiform consonantal (so-called alphabetic) script, presumably by Ugaritic-speaking scribes. These yield important evidence for the phonology and phonetics of Hurrian, as the consonantal script encodes differences in consonants which are obscured by the syllabic script.

3. PHONOLOGY

3.1 Consonants

Since Hurrian was written with scripts which were designed for other languages, it is difficult – to a degree even impossible – to establish the phonemic inventory of Hurrian. In writing Hurrian words and names, non-Hurrian scribes in Babylonia and Ugarit distinguish between voiced and voiceless consonants in keeping with their own native phonologies. However, the distribution of voiced and voiceless consonants in Hurrian follows a strictly positional pattern – in other words, is allophonic. Obstruents are always perceived as voiceless (i) in word-initial position; (ii) in intervocalic position when long (doubled); and (iii) in contact with another consonant except the sonorants /m/, /n/, /l/, and /r/. Conversely, obstruents are voiced in all other positions: (i) when word-final; (ii) in intervocalic position when short (single); and (iii) in contact with /m/, /n/, /l/, and /r/. The resulting consonantal inventory would then appear to be as follows, with capital letters used noncommittally ("archiphonemically") to transcribe the obstruents displaying allophonic voicing:

(1) Hurrian consonantal phonemes

P			T		K	
				ṭs		
	F	Š	S			Ḫ
m			n			
			l	r		
w				y		

The affricate /ʦ/ (transcribed as *c*) is uncertain. Though voicing is not phonemic, it is by convention (following E. A. Speiser and I. M. Diakonoff) marked in (bound) transcriptions in order to facilitate research on loanwords into and from Hurrian (*p:b*, *t:d*, *k:g*, *f:v*, *s:z*, *š:ž*, *ḫ:ġ*). Note that also according to convention, the so-called broad transcription (transliteration) of syllabic cuneiform uses single bars (-) to separate syllabic symbols, whereas the morphemic transcription uses double bars (=).

3.1.1 Obstruents

Since the inventory of (1) is certainly too small, we have to assume that there were two or more sets of obstruents with different phonemic manners of articulation which remain unknown.

The fricative /F/ appears to be a labiodental, as the Mittani Letter distinguishes /F/ and bilabial /w/, the first one written with the sign *wa*, the second one with *ú*. The phonetic realization of /S/ and /Š/ is unknown; the latter is rendered as an interdental fricative – [ϑ] or [ð], depending on position – by Ugaritic scribes.

The texts from Hattuša often replace /P/ by a fricative, apparently in all positions. Whether this fricative is identical with the /F/ of the Mittani Letter or different (bilabial) is unknown.

3.1.2 Sonorants

The bilabial glide /w/ appears in word-internal and final position; in word-initial position it seems to be restricted to loanwords and foreign names. There is also a glide /y/ which, however, is rendered as *i*, *ī* in modern transcription, as the writing system in many cases is ambiguous.

3.2 Vowels

The Mittani Letter distinguishes five phonemic vowels – /a/, /e/, /i/, /o/, /u/ – with two quantities each. Only the Mittani Letter carefully marks vowel length. The texts from Hattuša show an instability of the opposition /e/ : /i/.

The existence of diphthongs is uncertain. At least some sequences of vowels (e.g., the suffix *-ae*, see §4.4.9, instrumental) can be shown as bisyllabic, and may be even divided by a glottal stop.

3.3 Phonotaxis

The practice of syllabic cuneiform orthography prohibits the unambiguous representation of biconsonantal clusters in word-initial or final position, and of triconsonantal clusters in word-internal position. There are no hints that such clusters actually exist in Hurrian; moreover, the appearance of anaptyctic vowels suggests that in this respect the script conforms to the language.

The liquids /l/ and /r/ do not appear in word-initial position.

In the language of the Mittani Letter, strict constraints govern final position: vowels or /n/ occur in most cases; the consonants /Š/, /w/, and /F/ or /P/ are limited to one suffix each. In Old Hurrian – especially in the case of divine and place names – /T/, /K/, /Ḫ/, /l/, /m/, and /r/ also appear in final position.

3.4 Accent

Hurrian seems to have a stress accent which falls on the penultimate syllable of words (including their suffixes), enclitics not counted. In some cases, stress causes a vocalic change (lengthening and lowering): for example, *túri* "low" versus *turḗ=na* (this is the morphemic transcription; the transliteration of the cuneiform spelling is *du-ú-re-e-na*) "the low ones."

3.5 Phonological processes

Several Hurrian phonological processes, synchronic and/or diachronic, can be identified.

3.5.1 Anaptyxis

Vowels are inserted under two conditions:

1. Presumably with the shift of stress caused by addition of a suffix: for example, (i) *évri* "lord": *evérni* "king"; (ii) *talóġli* "servant": *taloġól=la* (pl.); (iii) *ḫavúrni* "heaven": *ḫavurún= nē=ž* (erg.); (iv) *am=om=í=nni* "administrator": *am=om=i=nín=n(a)= až=í?=na* (gen. pl., double stress?).
2. With the *-n* affix of the jussive (see §4.5.12.2) and ablative (see §4.4.9) before enclitic personal pronouns, except that of the third-person singular: (i) *ḫaž=i=en* "may he listen": *ḫaž=i=en=i=ll(a)=ān* "may he listen to them"; (ii) *ed(i)=ī=dan* "because of": *ed(i)=ī=dan=i=lla=man* "by himself . . . them" (but *ed(i)=ī=da(n)=nna=man* "he . . . by himself").

3.5.2 Segment loss

The regular disappearance of sounds is seen in three contexts:

1. In the morphologically conditioned contact of two vowels, the first one is elided: for example, (i) *šēna* "brother": *šēniffu-* "my brother"; (ii) *fīradi* "nobleman": *fīradardi* "nobility" (in morphemic transcription the elided vowel is given in brackets: *šēn(a)=iffu-*, *fīr=ad(i)=ardi*). For an exception see §3.5.3.
2. The vowels /a/ and /i/ are syncopated between (simple) /n/, /r/, /l/ and (archaic?) dental stops: **kul=i=l=e* → *kulle* "I should like to say"; **ēni=na* → *ēnna* "the gods"; **kud=id=e(n)* → *kut=t=e(n)* "may they fell."
3. The consonantal segment of the genitive suffix *-ve* and the dative *-va* is lost after the plural suffix *-až* (see §4.4.9).

3.5.3 Vowel contraction

The contact of the final (short) /a/ of the enclitic pronouns (see §4.4.10.1) and the initial (short) /a/ of the enclitic connective *-an* results in a long vowel: *-tt(a)=ān* spelled *-Vt-ta-a-an*.

3.5.4 Assimilation

Hurrian shows both consonant and vowel assimilation, progressive and regressive:

1. When in the case mentioned in §3.5.2, **2**, the two consonants are different, the second one is assimilated to the first one: **avari=ne-* → *avarre* "field"; **tād=ugār=i=l= eva* → *tadugarreva* (see §4.5.12.6).

2. The consonantal segment of the genitive suffix *-ve* and dative *-va* is assimilated to a preceding /P/, /T/, or /Š/: *Tēššob* (a god), gen. *Tēššop=pe*; *Ḫebat* (a goddess), gen. *Ḫebat=te* (see, however, §3.5.5). It is partially assimilated to preceding /u/: *šēn(a)=iffu=we* "of my brother."
3. Personal names composed of a verbal form and a divine name display various assimilations at the junction: for example, *Ag=i=p-Tēššob* → *Ag=i=t-Tēššob*; *Ḫud=i=p-Šimīga* → *Ḫud=i=š-Šimīga*.
4. The vowel of the two suffixes *-Všt-* (see §4.5.2, **2**) and *-kkV* (see §4.5.7) assimilate to the preceding vowel ("vowel harmony").

3.5.5 Metathesis

Consonantal stems joined with a suffix exhibit metathesis: for example, **kik=ši* → *kiški* "third"; *Kužaḫ=fe* → *Kužap/fḫe* "of the Moongod"; *Ḫebat=fi* → *Ḫebap/fti* "of (the goddess) Ḫebat."

The dialect of the texts from Nuzi often (in some cases regularly) inverts the sequence *consonant + liquid*, especially when the initial consonant is a fricative: for example, *faġri* : *farġi*; *eġli* : *elġi*; *evri* : *ervi*; *šadna* : *šanda*.

4. MORPHOLOGY

4.1 Word classes

Hurrian grammars distinguish the following word classes: nouns, adjectives (mostly derived from nouns), pronouns, numbers, verbs, and particles (including enclitics). Nouns, numbers, and verbs may easily change their word class: for example, *eman* "ten," *eman=am=ož=aw* "I made tenfold," *eman=di* "group of ten," *eman=d=o=ġ=li* "decurio"; ḫan=i "child," *ḫan=ašt=i=kki* "she will not give birth," *ḫan=ir(i)=ra* "those who have given birth," *ḫan=o/u=mb=a=z=ḫe* "fertility"(?).

4.2 Roots

Hurrian words are composed of (i) roots, (ii) optional root-complements, and (iii) monofunctional nominal or verbal suffixes in a strictly sequential order. The root is always in initial position. Most roots are monosyllabic, but a few are reduplicated. The morphology of Hurrian is fundamentally of the agglutinating type.

4.3 Root-complements

A root can be semantically modified by one or two (possibly three) root-complements. In many cases, the semantic value of the root-complements has not yet been established. Root-complements in most cases are monosyllabic; those which traditionally have been defined as bisyllabic might well be composed of two root-complements. Root-complements are listed in (2), though the list is not exhaustive.

(2) Hurrian root-complements

A. *-aġ-* (*-aḫḫ-*?), *-iġ-*, *-oġ-*, *-uġ-*, meaning unknown: *tapš=āġ=i* "cupbearer," *pūz=iġ-* "dip into," *irn=ōġ-* "make equivalent," *šab=ūġ-* "?"

B. *-al-*, meaning unknown: *samm=al-* "tear off," *ḫež=āl-* "be naked"
C. *-am-*, factitive: *eman=ām-* "make tenfold," *šin=am-* "double," *nikkass=am-*, *nissakk=am-* "account" (Akkadian *nikkassu* "account")
D. *-an-*, *-ann-*, causative: *keb=ān-* "send," *ar=ann-* "let give," *an=an-* "please"
E. *-an-*, meaning unknown: *ḫab=an-* "go," *kil=ān-* "?"
F. *-and-*, meaning unknown (bimorphemic?): *pic=and-* "rejoice"
G. *-ang-*, meaning unknown (bimorphemic?): *pir=ang-* "flee"; *pūd=ang-* "report (to the authorities)"
H. *-apš-*, *-epš-*, meaning unknown: *šin=apš-* "change" (*šin* "two"), *kig=apš-* "change repeatedly (*kig(a)* "three"), *par=apš=i* a qualification of a field, *pur=apš=i* a priest, *taġ=apš=i* "horse blanket," *eġ=epš-* "constrict"
I. *-ar-*, iterative-frequentative: *am=ar-* "treat badly," *an=an=ar=ešk=i* "joy"(??), *ḫāž=ar-* "anoint," *ḫāž=ar=i* "oil," *pašš=ar-* "send (regularly)," *šid=ar-* "curse constantly," *šid=ar=ni* "curse" (noun), *tād=ar-* "love constantly," *fand=ar=i=nni* "cook," *urb=ar=i=nni* "butcher"
J. *-až-*, intensive(?): *ḫaž=až-* "do listen"(?)
K. *-om-*, meaning unknown: *am=om-* "supervise" (*am-* "look at something"), *am=om=i=nni* "chief administrator"
L. *-ugar-*, reciprocal (bimorphemic?, cf. *-ar-*): *ag=ugar-* "dispatch," *ašt=ugar=i* "equivalent," *Ḫub=ušt=ugar=a* name of a divine vizier, *tād=ugār-* "love one another"
M. *-up(p)-*, meaning unknown: *kad=upp-* "?" (kad- "say"), *tān=upp-* "?" (*tān-* "do, make")
N. *-ur-*, meaning unknown: *ag=ūr=ni* "chiseling," *kul=ūr-* "spell over something" (*kul-* "say, speak")

4.4 Nominal morphology

The Hurrian noun (and a small number of nonderived adjectives) consists of (i) a root, which may be semantically modified by (ii) a root-complement or two, (iii) an optional noun-formation suffix, and in most cases (iv) a thematic vowel. In addition, by attachment of (v) derivational suffixes a noun may form a derived noun or adjective. There are two numbers (singular and plural), but no grammatical genders. To a noun (derived or primary) relational, possessive, number, case, and congruence suffixes – in a strictly sequential order – may be added, which may be followed by enclitics.

4.4.1 Nominalization of the root

A root may become a noun by addition of the thematic vowel *-i* (presumably *-ə* in final position, *-ē-* before a suffix, also *-e*?, see §4.4.3): thus, *eġl=i* "salvation" (*eġl-* "save"), *fur=i* "view; eye" (*fur-* "see"), *ḫan=i* "child" (*ḫan-* "give birth"), *ḫalv=i* "enclosure" (*ḫalv-* "enclose [by wall or fence]"), *ḫezm=i* "girdle" (*ḫezm-* "gird"), *ḫāž=ar=i* "oil" (*ḫāž=ar-* "to anoint repeatedly"), *mad=i* "wisdom" (*mad-* "to be, to prove oneself wise"), *sull=i* "fetter" (*sull-* "bind").

4.4.2 Noun-formation suffixes

Each of the following suffixes can be identified:

1. *-(a)d=i*, basic meaning unknown, in some cases collective: the allomorph *-di* appears when the root ends in a vowel or single post-vocalic *l*, *m*, or *n*, otherwise *-adi*:

amm=adi "grandfather, ancestor, elder," *šaġadn=adi* "halfshekel" (*še/aḫt-* "half"), *šigl=ade* "shekel" (Akkadian *šiqlu*), *pariss=ade* a measure of capacity (Akkadian *parīsu*), *kel=di* "luck, well-being," **ḫel=di* "sublime," *kum=di* "tower" (*kum-* "erect"?), *fīr=adi* "nobleman" (**fīr-* "remove, untie"), *nakk=adi* a form of real estate (*nakk-* "release"), *eman=di* "group of ten" (*eman* "ten"), *tumn=adi* "with four spokes" (*tumni* "four").

2. *-arb*, adjectives denoting age of animals (see §4.7.2, **6**).

3. *-ardi*, collectives: *att=ardi* "forefathers" (*attai* "father"), *ēl=ardi* "female relatives" (*ēla* "sister"), *fīr=ad=ardi* "nobility," *irīn=n(i)=ardi* "class of equals," *mariyā=nn(i)=ardi* "class of chariot fighters," *pura=m(e)=ardi* "domestic staff," *šāl=ardi* "group of daughters."

4. *-aure*, patient-oriented participle: *ḫuž=aure* "someone who is bound" (i.e., "a prisoner"; see also *-iri*).

5. *-bade*, meaning unknown: *ḫir=i=bade* "fixed by a peg" (*ḫiri* "wood"?), *tid=i=bade* "counting"; compare *-o/ubade*, negative adjectives (morphology unclear, with negative suffix *-ōv-* or derivational *-o-* [see 4.4.5]?): *nir=o/ubade* "bad" (*nir-* "be good"), *faġr=o/ubade* "ugly, bad," *kul=o/ubade* "unnamed," *naḫḫ=o/ubade* "uninhabited."

6. *-danni, -denni* (*-da/e+nni* ?), OH *-dan*, terms of profession: *abul=dann-* "gatekeeper" (Akkadian *abullu* "city gate"), *ḫāž=ar=denn-* "perfume maker" (*ḫāž=ar=i* "oil"), *šellin=dann-* "administrator," *en=dan* title of a ruler (Sumerian *en*).

7. *-i(=)di*, meaning unknown: *šug=idi* "one horse carriage"(?) (from *šugi* "one"?), *tar=idi* "pot" (*tari* "fire"), *ḫub=idi* "young male calf" (from *ḫub-* "smash, break"?), presumably **paššī=idi* as base for *paššītḫe* "ambassador" (*pašš-* "send").

8. *-i(=)ri*, agent-oriented participle (cf. also *-aure*): *tab=iri* "someone who has cast (metal)," *pa=iri* "someone who has erected (a building)."

9. *-ki*, meaning unknown: *fut=ki* "son" (*p/fud-* "beget"), **katki* "utterance"(?) (*kad-* "speak"), *id=ar=gi* place for deposition of magically negative substances, *it=ki* "mortar" (*id-* "crush"), **ar=gi* "gift"(?) (*ar-* "give"). Presumably a group of nominals in *-a/e/i/oški* also contains this suffix *-ki*: *tād=ar=ašk(i)=ae* "affectionately" (?; a nominal used adverbially), *an=an=ar=eški* "joy"(?), *tād=ir=eški* "love"(?), *er=ōški* an object.

10. *-k(k)a,* meaning unknown: *Šav=oš=ka* name of goddess (older form *Ša(v)oža*, cf. *šav=ož=i* "great"), LUGAL*-ka-* "king," LÚ*-ka-* "man" (both based on Sumerograms), *aštaga* "woman" (*ašti* "woman"), *taḫḫag/kka* "man" (*taḫḫe* "man"); personal name *Ḫanakka* (*ḫan=i* "child").

11. *-li*, nouns of profession (cf. also §4.4.6 (4A)): *kēb=li* "hunter" (*kēb-* "put," presumably traps), *tab=li* "smith" (*tav/b-* "to cast metal").

12. *-m(m)e*, meaning unknown: *pura=m(m)i/e* "slave"; perhaps also in *ulme/i* "female slave," *elami* "oath," *ḫalme* "singing," *ōlmi/e* "weapon," *tažme* "gift"(??).

13. *-ni*, individualizing, basic meaning unknown: *everni* "king" (*evre* "lord"), *irīn=ni* "equal" (from **irn=i* "?," this from *irn-* "be equivalent"), *šukka=ni* "single" (*šukki* "one"), *Māžriā=ni* "Egyptian," *Mītta=ni* (from *Maitta=ni,* toponym based on personal name *Maitta*). The suffix often appears as a form, that is parallel to *a*-stems (see §4.4.3.2): *p/fabni*, *p/faba* "mountain" (note also *faban=ni* "mountain range"), *muž=ni*, *muž=a* "good order," *tiž=ni*, *tiž=a* "heart." The suffix is attached to kinship terms and then used in the formation of personal names: *šen=ni* (*šēn=a* "brother"), *el=li* (*ēl=a* "sister"), *men=ni* (*men=a* female relative, twin sister[?]), *atta=ni* (*atta=i* "father," for *-i* see §4.4.4). Often *-ni* is suffixed to bi- or trisyllabic roots, which in some cases can be analyzed as *root plus root-complement*; the basic function remains unclear: *šid=ar=ni* "curse" (*šid-* "curse," with iterative *-ar-*), *kapp=ar=ni* a vessel (*kapp-* "fill"), *ḫavur=ni* "heaven," *šuġur=ni, šeġur=ni* "life," *taržuwa=ni* "man." Compare also *-ni/-nni* as a derivational suffix (§4.4.6, **2**).

14. *-šari* (*-zari* after *n*), collectives: *en=zari* "gods" (*eni* "god"), *furul=z/šari* "temple complex"(?) (*furli* "temples"), *ḫanizari* "children"(?) (*ḫani* "child"), *mariya=n=zari* "corps of chariot owners"(?) (*mariyanni* "chariot owner"), *tip=šari* "matter" (*tivi* "word, matter").

15. *-(a)=šše, -ži, -zi*, abstracts, but in some cases concrete nouns, especially words for buildings; also used for forming ordinal numbers (see §4.7.1). The allomorphs *-ži* and *-zi* appear after single postvocalic *m*, *n*, *l*, and *r*. The abstracts in *-a=šše* are exclusively derived from words for high-ranking men or for gods, which often are stems ending in *-a* (see §4.4.3.2).

15A. *Abstract nouns*: *all=a=šše* "queenship" (*alla=i* "queen"); **att=a=šše* "position of a father" (*atta=i* "father"), *puram=ži* "slavery" (*purame* "slave"), *šarr=a=šše* "kingship" (*šarri* "king"), *taḫḫ=a=šše* "manliness" (*taḫḫe* "male," < **taḫḫai*??), *taržuwan=zi* "mankind," *ušt=a=šše* "heroism" (*ušta=i* "hero"), also *ušt=a=n(i)=zi* (*uštani* "hero"), *tamga/ir=a=šše* "gain" (from Akkadian *tamkāru* "merchant"), *itk=a=l=zi* "purity" (*itki* "pure, clean"); *tal=aġ=o=l=zi* "attraction" (in a ritual of evocation).

15B. *Concrete nouns*: *salam=ži* "statue" (from Akkadian *ṣalmu* "statue"), *pidar=ži* "stable for cattle" (*pidari* "bull"), *tibiš=ši* "strawstack" (*tibni*, from Akkadian *tibnu* "straw"), lippur=ži a building (from **nippuri*?).

16. *-umme/i*, infinitives: *itt=ummi* "go," *faġr=umme* "be in good relation," *udr=ummi* "protect"; directive in -e: *kur=ušt=umme=n(e)=e* "in order to dig."

4.4.3 Thematic stems

Hurrian nouns are classified as *thematic* or *athematic* according to the presence or absence of a thematic (stem) vowel. While stems in ancient Indo-European languages are similarly distinguished (see *WAL* Ch. 17, §3.4), the Hurrian and Indo-European processes are quite distinct and should not be confused.

4.4.3.1 i-*stems*

Most nouns have the thematic vowel *-i*. Apparently it has no specific function except to nominalize the root. In many cases it can be shown that *-i* before a suffix is lengthened and lowered to *-ē-* (see §3.4). It is not clear to what extent there exist *e*-stems distinct from the (i) *i*-stems (see e.g. *aš-ḫé* "animal skin," *šiye* "water," *ku-un-kal-le-e* "broad-tailed sheep," and the personal name *Še-iš-we-e* [*šešfe* "kid"]), and (ii) the word formation or derivational suffixes *-me*, *-šše*, and *-ġe/-ḫḫe*.

4.4.3.2 a-*stems*

The thematic vowel *-a* marks kinship terms, some divine names, and a few other words. For most *a*-stems there is a form in which *-ni* replaces *-a* (see §4.4.2, **14**). Examples are *šēna* "brother," *ēla* "sister," *šāla* "daughter," *nēra* "mother," *mēna* "twin sister(?)" (see also §4.4.5 for *a*-stem kinship terms with honorific *-i*), *tiža* "heart," *f/paba* "mountain," *muža* "good order (?)" Divine names (some attested as elements of personal names only) include: *Šimīga* (beside *Šimīge*), *Išḫara*, *Tamgina* (*Damkina*), *Tilla*, *Naja*, *Ḫamanna*, *Ḫurra*, *Nuza*. For words with the suffix *-kka* see §4.4.2, **11**.

4.4.3.3 o/u-*stems*

These stems mainly appear as names of non-Hurrian – in few cases also Hurrian – origin in the texts from Nuzi: *Marduku*, *Šelwuḫu*, *Kelžu*, *Kungu*, *Niru*, *Pendu*, *Šindu* (personal names), *Nullu* (country), *Nuzu* (city), *Šayu* (goddess[?], element in female personal names).

4.4.4 Athematic stems

Stems formed without a thematic vowel seem to occur more frequently in the earliest phase of the Hurrian language (mostly late third millennium BC). Some of the athematic stems later become thematic *i*- or *a*-stems: *šen* "brother" (cf. *šēna* and *-šenni*), *mad* "wisdom" (cf. *madi*), *adal* "strong" (also second millennium; seldom *adli*), *muž* divine name (cf. *muža*, *mužni*), *Kažiar* name of the mountain *Ṭūrᶜ Abdīn* (cf. later *Kažiari*). Several names of gods, heroes, persons, and places are athematic: Tēššob (cf. *Teššoba/i*), Ḫebat (cf. *Ḫeba*), *Kužuġ* (cf. *Kužuġa*, *Kuža*), *Nubadig*, *Tažmiž*, *Šalužˇ*, *Šeriž* (cf. *Šeri*), *Ḫurriž* (cf. *Ḫurri*); *Gilgamiž*.

4.4.5 Honorifics

Some *a*-stems which denote human beings held in respect add a suffix *-i*: *alla=i* "lady, queen," *atta=i* "father"; **umma=i* "mother"? (attested only as personal name), *ušta=i* "hero." The name of the sun-god *Šimīge* seems to be a contraction of *Šimīga=i* (cf. *Šimiga*); perhaps also *taḫḫe*/*taġe* "man" from **taḫḫa=i* (cf. *taġa* in personal names).

4.4.6 Derivational suffixes

These suffixes, which form either nouns or adjectives, follow the thematic vowel (and in rare cases also the possessive suffixes, for which see §4.4.8). Some of them (*-ni, -šše*) are identical in form with the noun-formation suffixes, but their position in the sequence of suffixes is different. In the case of thematic stems in *-i* the "derivational vowel" *-o-* or *-u-* replaces the thematic vowel, whereas stems in *-a* keep it. The derivational pattern has a parallel in the pronominal system which often shows an opposition between an absolutive ending in *-i* and oblique cases with *-o/u-* occurring before the case ending (see §§4.4.10.2 and 4.4.10.4). In very rare cases – apparently in old forms – the thematic vowel is not replaced by the derivational vowel. Moreover, some derivational suffixes follow a different pattern and do not replace *-i* by *-o/u-*.

The derivational suffixes are as follows:

1. *-ġe*, *-ḫḫe*, adjectives of appurtenance: the form *-ġe*, with the voiced initial consonant and used chiefly with geographical names, is treated in **1A–1E**, *-ḫḫe* in **1F**; both in **1G–1H**.

1A. *i-stems (-ġe)*: *ḫurr*/*ḫurv=ō=ġe* "Hurrian" (*Ḫurri*, **Ḫurvi*), *ḫatt=o=ġe* "Hittite" (*Ḫatti*), *lupt=o=ġe* "Luptian" (Lupti [a town]). When the word ends in *-ni*, *-li*, or *-ri*, the adjectives in *-ġe* are commonly formed without the derivational vowel: *kibir=ġe=n(a)=až=a* (dat. pl., *Kibri* [a town]); *ḫamar=ġe* "belonging to the *ḫamri*-sanctuary; *pabil=ġ(e)=a* "in Babylonian" (from Akkadian *Bābili*); *bidin=ġe* local form of a goddess (*Bidin* [a town]). The derivational vowel may, however, remain: *Ḫiri=ġe* "wooded"(?) (name of a country, *ḫiri* "wood"?), *atta=šši=ġe* "paternal property" (*attai* "father"), *ess=o=šši=ġe* "?" (a kind of field).

1B. *a-stems*: *ankuwa=ġe*, *ḫattarina=ġe*, *šabinuwa=ġe*, *tameninga=ġe* (all based on names of cities), *alžyġ* (Ugaritic consonantal spelling) = **alažiya=ġe* "Cyprian" (*Alažiya* "Cyprus").

1C. *Athematic nouns*: *tugriš=ḫe*; *mardaman=ġe*, *igingalliš=ḫe*, *ažuġiš=ḫe* (all based on names of cities), *mugiš=ḫe* (*Mug/kiš*, name of a country).

1D. *A special group of words*: based on roots which are all attested in verbal use and which preserve *-i* (cf. §4.4.6, **4B**): *pašš=i=ġe* "consignment" (*pašš-* "send"), *pa=i=ġe* "ready for building (a house)" (*pa-* "build"), *kunz=i=ġe* "reverence"(?) (*kunz-* "bow"), *un=i=ġe* "offering"(?) (*un-* "bring"), *na=i=ġe* "pasture" (*nav-* "graze").

1E. *Multiplicative numbers*: see §4.7.2, **4**.

1F. *i-stems (-ḫḫe)*: the form of the suffix with the initial doubled consonant, *-ḫḫe*, is used principally with *i*-stems: *ḫiyar=o=ḫḫe* "gold, golden" (*ḫiyari* "?"), *šiniber=o=ḫḫe* "of ivory" (**šinibēri* "ivory" < Akkadian *šinnipīri*), *ašt=o=ḫḫe* "female" (*ašti* "woman, wife"), *tur=o=ḫḫe* "male," *tiž=n=o=ḫḫe* "heart-shaped" (*tiž=ni* "heart"), *ḫažman=o=ḫḫe* "colored like the *ḫašmānu*-stone," *šimig=o=ḫḫe* "belonging to the sun-god" (name of a gate).

1G. *-ġe/ḫḫe*-complexes: several suffix complexes seem to contain the suffix *-ġe/ḫḫe,* such as the following: *-ašḫ-* (adjectives based on abstracts: *ašt=ašḫe* "female attributes," *aštašše* "womanliness," *ašti* "woman"); *-išḫ-* (*turišḫi* "west," *turi* "low"); *-ušḫ-* (utensils: *aġr=o=šḫi* "incense bowl," *aġri* "incense"); *-atḫ-* (mostly terms for household utensils: *kaz=o/ul=atḫ-* a large bronze pot, from *kazi* "jar"?); *-itḫ-* (*pašš=ītḫi/e* "envoy," *pašš-*, "send"; *nir=an=itḫ-* a kind of wood); *-o/utḫ-* (*naḫḫ=o/utḫi* a seat).

1H. *Nouns of profession*: such nouns can be derived from adjectives of appurtenance by addition of the suffixes *-li* (see §4.4.2, **11**) and *-ri*. For *-li* there are three patterns, presented here from least to most commonly occurring: the first (rare) preserves the suffix *-ġe* unchanged: *šina=ġe/i=l-* "crown prince; second quality" (*šina* "two"); the second shows the derivational vowel *-o/u-* before *-li*: *mardad=o=ġ=o=li* "carpet weaver" (from Akkadian *mardatu* "carpet"); and the third lacks the derivational vowel: *ḫalz=o=ġ(e)=li* "district governor" (*ḫalzi* "district"). The suffix *-ri* is seen, for example, in *am=om=i=ḫḫ(e)=o/u=ri* "administrator" (*am-* "see").

Derivational suffixes other than *-ġe/ḫḫe-* are:

2. *-ni, -nni*, adjectives and nouns: the suffix *-ni* is found, for example, in *te(yi)=ō=n=ae* "widely" (**teyi*(?) "much"), *faġr=o=n(i)=ne=n* "beautifully" (*faġr-* "be beautiful"), *pic=o=n(i)=ne=n* "happily" (*pic-* "please"). Examples of *-nni* are: *mād(i)=o=nni* "wise" (*madi* "wisdom"), *attan(i)=o=nni* "father" (*attani* "father"), the personal names *Šenn=o=nni* (*šen=ni* "brother") and *Men=o=nni* (*men=ni* female relative), *ḫaž=i=kk=o=nni* "deaf person" (*ḫaž-* "hear," *-kk-* is a negative), and terms of profession like *urb=ar=i=nni* "butcher" (*urb-* "slaughter"), *fur=o/ull=i=nni* "diviner" (*fur-* "see").

3. *-ssi,* adjectives and nouns of suitability: *šēn(a)=iffu=ssi* "suitable to my brother," *ašt=o/u=ss-* a garment (*ašti* "woman"), *paġ=o/u=ss-* a headgear (*pāġi/e* "head").

4. *-ži/-šše*:

4A. *-ži*, adjectives: *nīr(i)=o/u=ž(i)=ae* "well" (adverb in-*ae*, *nīr-* "be good"), *talāv(i)=o=ži* "great," *faġr(i)=ō=ži* "good," *šav(i)=ō=ži* "great."

4B. *-šše/i*, nouns: *itt=o/u=šš-* "garment" (*itt-* "clothe"), *suġr=o/u=šše* "meadow" (*suġri* "grass"), *nakk=o/u=šše* a military class (*nakk-* "release"). A special group of words in *-šše* are based on roots which are all attested in verbal use and which preserve the *-i*: *šar=i=šše* "desire" (*šar-* "wish, demand"), the personal name *Pašš=i=šše* "sending" (*pašš-* "send") (cf. §4.4.6, **1D**).

5. *-bur,* negative: *mānn=ō=bur* "is not" (*manni* "is; he," see also §4.4.10.2 and §4.5.11); compare also *kuld=o/ubur* "?".

6. *-o/ubade*: For this morphologically unclear formant, see §4.4.2, **5**.

4.4.7 Relational suffixes

The suffixes *-ne* (sg.) and *-na* (pl.) are anaphoric suffixes which are positioned between the noun and its case endings. They are incompatible with the possessive suffixes (except

perhaps in very rare, but still dubious cases) and they do not occur with names (except in a few cases of appellatives used as names like, e.g., *Kešše* "the one who sets (traps)," i.e., "hunter"). Singular *-ne* never occurs in the absolutive case, but *-na*, a plural marker, does. The two suffixes also precede most of the case endings which mark agreement of genitive modifiers with their head noun (*Suffixaufnahme,* see §5.2). Examples follow: *ērbi=ne=ž* "a dog" (ergative), *ōmin(i)=ne=ve allai* "the lady of the country," *tažē=nē=va ed(i)=ī=da* "concerning the gift (dative)"; *paššītḫe=na* "the envoys," *evren=n(a)=až=už* "the kings" (ergative), *ōmīn(i)=n(a)=až=a* "in the countries" (essive).

4.4.8 Possessive suffixes

These suffixes take the position after the noun-formation suffixes. They very seldom occur together with derivational suffixes; though in a few attested cases, they precede them. The pronominal element is clearly separate from the number suffix.

The possessive suffixes of the Mittani Letter – first, second and third person – are presented in (3):

(3)

	Singular	*Plural*
1st	-iffə, -iffē-, -iffu-	-iff=až
2nd	-v/b/p	*-v=až (?)
3rd	-i (Hattuša: -ia-/-iə)	-i=až

In a text from Hattuša, the second plural is attested twice: *ōlmi=šši* "your weapons"; *ede=ž=uda* "towards your body."

4.4.9 Case and number suffixes

Hurrian is an ergative language. The agent of an action with explicit patient is marked as an ergative, and the patient as an absolutive. If the patient is not explicitly mentioned, the agent is encoded as an absolutive, as is the subject of an action or a state without implication of a patient:

(4) A. šēn(a)=iffu=šš(a)=ān ašti šār=ōž=a
"My brother (*šēna*, erg., with encl. pronoun 3rd per. sg.) has asked for a wife (*ašti*, abs.)"
B. šēn(a)=iffə pašš=ož=i
"My brother (*šēna*, abs.) has sent" (patient possible, but not mentioned)
C. tažē=n itt=ōš=t=a
"The gift (*taže*, abs.) has departed"
D. ēl(a)=iffə mānē=mmaman tupp=e
"My sister (*ēla*, abs.), she herself, is present"

In contexts not yet defined, a different pattern may replace the ergative one. In this instance the agent is encoded as an absolutive and the patient as an essive:

(5) A. fandarin(n)i=nā=ma ag=i=b neġern(i)=a
"And the cooks (*fandarinni*, abs.) took up breast meat (*neġerni*, ess.)"
B. el(i)=a faġr=o=ž(i)=a tan=d=i=b
"She gave (lit. 'made') a beautiful banquet (both essive)"

In total, nine or, in a wider definition, fourteen (see [7] below) cases have been identified so far. The plural is marked by three suffixes: (i) the relator plural *-na(-)* (see §4.4.7) for most noun cases (including the absolutive, conditioned, however, by the absence of a possessive pronoun): for example, *en(i)=na* "the gods," *en(i)=n(a)=až=e* "of the gods"; (ii) the plural suffix *-až-* (not in the absolutive after *-na*): *ēn(i)=iff=až=už* "our gods" (ergative), *en(i)=n(a)=až=už* "the gods" (ergative); (iii) the enclitic personal pronoun *-lla* (third-person plural; see §4.4.10.1), only in the absolutive: *en(i)=iffa=lla* "my gods."

The nine case suffixes of Hurrian are presented in (6). The ergative suffix *-ž* is absent before the enclitic personal pronouns except that of the third-person singular:

(6)

	Singular	*Plural*
Absolutive	—	-na
	—	-lla
Ergative	-ž	-(na=)až=už
Genitive	-ve	-(na=)až=e (-(na=)aš=fe)
Dative	-va	-(na=)až=a (-(na=)aš=fa)
Directive	-da	-(na=)aš=ta
Comitative	-ra	-(na=)až=u=ra
Ablative-instrumental	-n(i)	?
Ablative	-dan(i)	-(na=)aš=tan
Directive	-ē	?

Conventionally, certain additional case suffixes have been identified. The absence of a plural in most instances and syntactic differences show their separate status.

(7)

	Singular	*Plural*
Essive	-a	-až=a
Instrumental	-ae	—
Aequative	-ož	—
Associative	-nni	—
Associative-essive	-nn(i)=a	-až=o=nn(i)=a

4.4.10 Pronouns

In addition to the possessive suffixes of §4.4.8, Hurrian has personal and deictic pronoun suffixes:

4.4.10.1 Enclitic personal pronouns

These pronoun suffixes are restricted to the absolutive. They appear in two variants the distribution of which is not yet clear: a long form ending in *-a* (more frequent in the Mittani Letter) and a short form (more frequent in the texts from Hattuša and elsewhere):

(8)

	Singular		*Plural*	
	long form	*short form*	*long form*	*short form*
1st	-tta	-d	-dilla	-dil
2nd	-mma	-m	-ffa	?
3rd	-nna	-n	-lla	-l

Only in the position after certain particles (see §4.6.1), the pronominal enclitic *-ma/e* is

used for the third-person singular. In the same position, *-lla* has an optional variant *-lle*.

4.4.10.2 Independent personal pronouns

Both these pronouns (except for the second person) and the deictic pronouns have an absolutive stem in *-e/i* and an oblique stem in *-o/u-*:

(9)

SINGULAR	*First*	*Second*	*Third*
Absolutive	ište(=n)	fe	man(n)i
Ergative	iž=až	fe=ž	manu=ž
Genitive	šo=ve	fe=ve	—
Dative	šo=va	fe=va	—
Directive	šu=da	fe=u=da	—
Comitative	šu=ra	—	manu=ra
Ablative	—	—	manu=dan
Associative	šo=nn(i)=a	—	—
PLURAL	*First*	*Second*	*Third*
Absolutive	šatti=(lla)	fe=lla	mane=l(la)
Ergative	šiye=ž	fe=ž=už(?)	man=ž=ož
Dative	—	fe=ž=a	man=z=a
Comitative	—	—	man=ž=o/u=ra

In the plural, the genitive, directive, ablative, associative, and instrumental (also singular) are unattested.

4.4.10.3 Deictic pronouns

The system of deictic pronouns distinguishes between spatial and anaphoric deixis. There is a special *alternative* pronoun (the one-"the other"); only the anaphoric and the alternative pronouns make reference to the distinction "proximity versus distance":

(10)

		Singular	*Plural*
Demonstrative	*absolutive*	anni	anni=l(la)
	ablative	annu=dan	
Anaphoric, proximity	*absolutive*	andi	andi=lla
	genitive	andu=we	
	dative	andu=wa	
	directive	anduw=ē (?)	
Anaphoric, distance	*absolutive*		ane=na/ani=lla
	dative	anu=wa	
	ablative	anū=dan	
Alternative, proximity	*absolutive*	akki akki=lla	
	ergative	akku=ž	
	ablative	akku=dan	
Alternative, distance	*absolutive*	agi	
	dative	agu=wa	
	directive	agu=da	

In addition, Old Hurrian shows an anaphoric resumptive pronoun *ʾalli*.

4.4.10.4 Interrogative and relative pronouns

This pronoun takes the form *ave-* "who." Attested is an ergative *ave=*ž=lla* "who . . . us?" (see §4.4.9).

4.5 Verbal morphology

Verbs seem to be marked for modes of action; some of the pertinent suffixes are only attested on verbal forms, whereas others modify the meaning of the root prior to the distinction of nominal or verbal inflection (see §4.3). The valence of a verb (transitive or intransitive; see §4.5.1) is indicated by the so-called class-markers. Valence may be modified either by changing the class-marker or by using a suffix which indicates intransitivity.

The verb in the Mittani Letter distinguishes three tenses (present, preterite, and future). Old Hurrian appears to distinguish aspect instead – it is not clear whether aspect is a category of the grammar of the Mittani Letter.

In ergatival verb forms, three persons (first, second, third) and two numbers (singular, plural) are distinguished. The subject of nonergatival forms in the Mittani Letter is not expressed by the verb form morphology, but only by a noun or by an enclitic pronoun (see §4.4.10.1) following the verb or any other constituent of the clause. For the subject suffixes of nonergatival forms in Old Hurrian, see §4.5.9. Two negative suffixes, which are distinguished according to ergativity and nonergativity, are incorporated into the verbal form.

4.5.1 Valence

Valence (the number of noun phrases governed by the verb) is indicated by the vowels treated in §4.5.6. Some roots are attested in both transitive and intransitive use (*un-* "come"/"bring," *faž-* "enter"; *naḫḫ-* "sit down"/"set, place," *teġ-* "grow up/raise," *an-* "be pleased/please"). Normally, however, the root is attested in *either* transitive *or* intransitive usage. A change of valence appears to be marked by the suffix *-ol-*: *ḫic=ūġ=i=vā=en* "may he not hurt [my heart]" *ḫic=ūġ=ol=(a)=l=ē=tt(a)=ān* "I will grieve."

4.5.2 Modes of action

Several suffixes which immediately follow the root-complements (see §4.3) seem to mark modes of action:

1. The suffix *-il(l)-* marks the inchoative: *šid=ar=ill=ō=m* "he began to curse."
2. The function of the two suffixes *-ol-* and *-Všt-* (see §3.5.4, **4**) is not yet clear; perhaps the first one marks duration and the second one result. In rare instances they may appear together: for example, *muž=ōl=ō=m* "he shaped [the goblet]"; *pa='ašt=o=m* "he erected [a temple]"; *tav=ašt=ō=m* "he cast [a goblet]"; t*eġ=ešt=a=b* "he grew up"; *ḫub=ušt=aw* "I shall break to pieces"; *til=ol=ōšt=aw* "I shall crush underfoot."
3. The rare verbal forms in *-uva* (*taž=ol=uva* "he made it shining") may also define a mode of action.

4.5.3 Undefined verbal suffixes

There are some more verbal suffixes occupying a position close to the root, the meaning of which has not yet been established: for example, *ešḫ-*, *-imd-*, *-upt-*, *-o/ušk-*, *-o/už-*, *upp-*).

4.5.4 Tenses

The tense suffixes are *-ož-* (*-ōž-* before *-t-*) for the preterite, and *-ēd-* (also *-ed-*) for the future. These suffixes have been explained as aspectual (perfective and imperfective respectively), but *-ož-* is never used for a complete action of the future, nor is *-ēd-* for a noncomplete action of the past. The present tense is morphologically unmarked.

4.5.5 The marker of a kind of direction(?) *-t-*

There is no agreement thus far concerning the function of the suffix *-t-* which follows the tense markers in intransitive verbs of movement, but seldom in ergatival verbs.

4.5.6 "Class-markers" (suffixes of valence)

Old Hurrian distinguishes between three so-called "class-markers": (i) *-a-*: one valence, intransitive, apparently only with verbs of motion; (ii) *-i-*: virtually two valences, but only one valence filled (see, however, the construction of §4.4.9 [5]), transitive-nonergatival; (iii) *-o-*: two valences, ergatival. In the Mittani Letter the forms in *-o-* are (nearly?) completely absent and have been replaced by forms with *-i-*. In ergatival forms, *-i-* is not compatible with the tense suffixes *-ōž-* and *-ēd-*. Except in forms with the negative suffix *-ma* (see §4.5.7), it is also absent in the present tense before the personal suffixes of the first singular and plural.

4.5.7 Negation

Nonergatival verb forms take the negative suffix *-kkV*, which follows the class-marker. The vowel agrees with the preceding vowel except before enclitic personal pronouns, where it changes to *-a-*. Intransitive negative forms replace the class-marker *-a-* by *-o-*, which, however, remains *-a-* before the enclitic personal pronouns. Ergatival forms are negated by the suffix *-va-* (also found in both ergatival and nonergatival jussives; see §4.5.12.2) or *-ma-* and, especially in the dialect of the tablets from Hattuša, *-ud-* (also lexicalized: *sul=ud-*, *ḫemz=ud-* "loosen," literally "untie").

4.5.8 Ergative person suffixes

The following forms are attested in the Mittani Letter (and partially elsewhere):

(11)

	Singular	*Plural*
1st	-aw	-aw=ž
2nd	-o	—
3rd	-a	—

At Hattuša, the suffix of the second-person plural displays the ending *-āššo/ō* (written *-°a-aš-šu(-u)*), which seems to invert that order of person and plural suffixes displayed in the first and third plural. A form of the third plural is attested at Hattuša: -a=ž.

4.5.9 Old Hurrian person suffixes

Old Hurrian has a suffix *-b* which seems to mark the third person (singular and plural) of intransitive and transitive-nonergatival verbs. For ergatival verbs, the suffix *-m* appears to mark the third-person singular of both agent and patient.

4.5.10 Indicative paradigms

Sample paradigms of verbs in the indicative mood are presented in (12)–(14):

(12) Intransitive verbs

A. *Mittani Letter:* ūn=a "he/she comes" ūn=a=lla "they come"
ūn=ōš=t=a "he/she came" ūn=o=kka=l "they do not come"
ūn=ēt=t=a "he/she will come"
B. *Old Hurrian:* naḫḫ=a=b "he sat down"

(13) Transitive-nonergatival verbs

A. *Mittani Letter:* ḫill=i "he/she says"
ḫill=ož=i=kka=tta "I did not say"
ḫill=ož=i "he/she said"
B. *Old Hurrian:* ḫill=i=b "he/she said"

(14) Ergatival verbs

A. *Mittani Letter:*
tād=aw "I love [him/her]" tād=i=a "he loves [him/her]"
ar=ōž=aw "I gave [it]" ar=ēd=a "he will give [it]"
kad=ēd=aw "I shall say [it]" kul=i=ā=ma "he does not say [it]"
ūr=aw=ž "we want [it]" tān=ōž=a "he made [it]"
ūr=i=uffu=nna "I do not want him" irn=ōġ=ož=i=â=ma "he has not made it equivalent"
ḫic=ūġ=ož=i=uffu "I have not hurt [him]"
koc=ōž=o "you retained [him]"
B. *Old Hurrian:*
šid=ar=ill=ō=m "he started to curse him" nakk=i=uffu=ž "we will not release [them]"
fur=ud=o=m "he did not care for it" tūn=id=o "they forced him"
naḫḫ=ōžo "she placed them"

4.5.11 Stative verbs

A small group of verbs expresses state: *tupp-* "be, exist"; *mann-* "be"; *irn-* "be equivalent"; *ur-* "exist." The class-marker is *-i-* (like the class-marker of transitive verbs) or *-e-*, but the negative form is the same one as that of intransitive verbs (of movement) with the class-marker *-a-*, becoming *-o-* (see §4.5.7): *tupp=e*, *tupp=o=kko*; *mann=i*, *mann=o=kko* (at Hattuša also *mann=o/ubur*).

4.5.12 Nonindicative moods

There is a rich system of nonindicative moods, which is not yet fully understood; these forms do not contain person suffixes, but markers of mood and plurality only. There is no agreement concerning the terminology of nonindicative moods; that terminology used here in most cases follows Bush (1964) and Diakonoff (1971). Only the best-established patterns are mentioned below.

4.5.12.1 *Imperative and cohortative*

The imperative and the cohortative are formed by the root and the class-marker, optionally followed by an enclitic personal pronoun; the plural is marked by -ž. Both second- and third-person imperative forms occur, as well as a first plural cohortative:

(15)

	Singular	*Plural*
1st		dilla . . . tād=ugār=i=ž "we wish to love each other" faġr=o=š=till(a)=ān "we wish to be friendly to each other"
2nd	un=a, un=a=mma "come!" ar=i 'give!' ḫaž=i=mma "listen!" kel=o, kel=o=m "be satisfied!"	sull=ud=i=ž "unbind!"
3rd	kud=o "let it be felled!" nakk=o=n(na) "let him/her be released!"	itk=o=ž "let [the temples] be purified!"

4.5.12.2 *Jussive*

The jussive expresses a request in the third person. Its suffix is *-en* (*-in*, in Hattuša also *-an* [personal correspondence from M. Giorgieri]), which in transitive forms follows the class-marker *-i-* or, in Old Hurrian, *-o-*. The final *-n* of the suffix could be a pronominal element (see §4.4.10.1), but it appears in forms of both the third singular and plural. The plural is marked by *-id-*. The negation of the jussive ("vetitive") is *-va-* (OH *-v(e)-*) after a vowel, *-ov-* after a consonant: *pašš=i=en* "he may send"; *tašp=o=in* "he shall destroy"; Hattuša *ar=i=an* "may he give"; *ḫa=i=en=i=lla* "may he take them"; *tād=ašt=id=en* "may they love us"; *itt=id=en* "may they go"; *ḫaž=āž=i=vā=en* "may he not listen [to them]"; *ur=ōv=en* "may he not exist"; *nakk=id=ōv=en* "may they not let/send."

4.5.12.3 *Modal* -l-

The modal suffix *-l-* (under undefined conditions apparently *-ll-*) combines with various mood forms and modifies their meaning in a way which, however, cannot always be well established.

4.5.12.4 *Optative*

The optative seems to be formed by the modal suffix *-l-* plus the jussive suffix (without its final *-n*). Third-person forms in texts from Hattuša often have the suffix *-ž* in a nonplural usage, presumably in an intensifying function. Forms from the Mittani Letter include: *ḫaž=î=l=e* "I wish to hear"; *kul=(*i=)l=e* "I wish to say"; *ḫaž=āž=i=va=ll=ī=lla* "I do not wish to hear them." From Hattuša come: *kad=i=l=e=ž* "may it speak," *kir=o=l=e=ž* "may it be relieved," *tag=o=l=e=ž* "may it be shining."

4.5.12.5 *Potential*

The potential is formed by the root and the suffix *-eva*: *ai . . . faž=ēva* "if [the enemy] invades"; . . . *=tta pic=ošt=ēva* "I would rejoice."

4.5.12.6 Conditional

The conditional is the potential modified by the modal suffix *-l-*; it is also used to express the contingency of an action: *kad=i=l=ēva* "[a word which somebody] might say"; *ḫill=o=l=eva* "he might say"; *ai=n ur=d=o=l=eva* "if it happened"; *ar=(*i=) r(<l)=eva=ž* "we are ready to give" (on the assimilation of *-l-*, see §3.5.4, **1**)

4.5.12.7 Desiderative

The desiderative is a strong wish which may be modified (intensified?) by the modal suffix *-l-*: *itk=id=anni* "may they purify him/her"; *id=i=l=anni* "may he beat him."

4.5.12.8 Other possible modalities

In both the Mittani dialect and the dialect(s) of the Hattuša tablets, there occur roots with the suffix *-ai*, which Hittite scribes translated by subordinate clauses. Consider the following final (purpose) clauses: *faž=ai=n* "so that he may enter"; *itt=ai=ž=a=lla* "so that they may go"; *ḫaž=āž=ill=āi=n=i=lla* "so that he may (be ready to (? – inchoative)) hear them." Forms in *-ai* occur with a preceding *-l-* or *-m-*: *šid=i=l=āi* "so that he cursed [him]"; *naḫḫ=i=l=āi* "[he is someone whom his lord] appointed"; *fur=ī=m=ai=n* "[whenever] he sees him"; *faž=o/u=m=ai* "when he entered"; *kunz=i=m=ai* "while he bows."

4.5.13 Verbal nouns

There is evidence of various Hurrian verbal nouns.

4.5.13.1 Infinitives

For the Hurrian infinitive, see §4.4.2, **16**.

4.5.13.2 Nominalized verb forms

Finite verbs may be nominalized by the suffix *-šše* and treated like other nouns: *am=om=i=a=šše* "a dignitary" (ergative third singular); *ūr=i=â=šše=na* "those which he desires"; *ar=ōž=aw=šše=nē=ve* "of that which I gave."

Several nominalized verb forms in the Mittani Letter contain an element *-mbū-* which has not yet been well defined (a state achieved as the result of an action?): *ur=i=mbū=šš(e)=o=ḫḫ(e)=a=mān* "and in the manner desired."

4.6 Particles

"Particle" will here be defined as a word which cannot take nominal or verbal suffixes but only enclitic particles (see §4.6.4) and pronouns.

4.6.1 Introductory particles

Certain particles introduce clauses: *adi* "so"; *ai* "if"; *alaže-* "whether"; *inna-* "when, as soon as"; *i/unu-* "as"; *panu-* "?"; *īa/e-* (a relative).

4.6.2 Adverbs

The following adverbial particles are identified: *anam(mi)* "in this manner"; *ḫenni* "now"; *kuro/u* "again, on the other hand"; *šukko* "once"(?); *tiššan* "very"; *undo* "now."

4.6.3 Interjections

The interjectory particles are *oia* "no!" and *au* "behold!"(?).

4.6.4 Enclitic particles

In the Mittani Letter, the enclitic particles are as follows: *-an*, *-mān* (connective for words and clauses); *-man* (emphatic, restrictive: "only"); *-mmaman* (emphatic(?)); *-nīn* (function unknown). Old Hurrian shows *-ma* (connective).

4.7 Numerals

Only the numerals 1 to 10, 13 or 30, 14(?), 17 or 70, 18 or 80, 10,000 and 30,000 are known.

4.7.1 Cardinals and ordinals

Ordinals are formed from cardinals by the suffix -šše, -ži (see §4.4.2, **15**).

(16)

	Cardinal	*Ordinal*
1	šukki, šuga(?)	?
2	šin(a)	šinzi
3	kig(a)	kiški (<*kik=ši)
4	tumni	tumušše, tumunzi
5	nariy(a)	narišše
6	šeže	?
7	šindi	šendešši
8	kira/i	?
9	tamri/a	?
10	eman	emanzi, emassi(?)
13/30	kigman(i)	
14(?)	šinašinda	
17/70	šindeman(i)	
18/80	kir(e)man	kirmanze
10,000	nubi	
30,000	kiga nubi	

4.7.2 Other numerals

Various other numeral formations are attested:

1. *Fractions*: **ša/eḫt-* "one-half"; *tumunzalli* "one-quarter of a shekel."
2. *Collectives*: *tumn=adi* "four-spoked"; *šež=adi* "six-spoked"; *eman=di* "group of ten people."
3. *Distributives* (with instrumental suffix *-ae*): *kig=ad(i)=ae* "three each" (see §4.4.2, **1**).
4. *Multiplicatives*: *šukki* "once" (see §4.4.6, **1E**).
5. *Adverbs* (number with factitive, adjective, and essive suffixes): *šug=am=ġ(e)=a* "simple"; *šin(a)=am=ġ(e)=a* "twofold"; *tamr=am=ġ(e)=a* "ninefold," *eman=am=ġ(e)=a* "tenfold"; *šinz=o=ḫḫ(e)=a* "in the second place."
6. *Expressions of age* (only attested with Akkadian case ending): *šin=arbu* "two years old"; *kig=arbu* "three years old."

5. SYNTAX

5.1 Word order

In ergatival clauses (see §4.4.9) the agent usually takes the initial position, followed by the patient and the verb (SOV):

(17) paššš=ītḫ(i)=iffu!=ž tive andi kul=ôž=a
"My messenger (*paššītḫe*, erg.) said this word (*tive*, abs.)"

Word order may be changed by topicalization, as seen in both the Mittani Letter (18A–B) and Old Hurrian (18C):

(18) A. keb=ān=ož=āw=šše=na fur=ēd=ā=ll(a)=ān šēn(a)=iffu=ž
"[The things] which I have sent (*keb=ān-*) my brother will see (*fur-*)"
B. un=ā=l=an šēn(a)=iffu=wa
"They do come (*un-*) to my brother"
C. ḫa=i=en id(i)=ia=n nir=o/ubadi erāde=ne=ž
"May the bird (*erade*) take (*ḫa-*) the evil from his body (*idi*)"

Participants in the dative or directive may follow the verb, otherwise they are positioned between the ergative subject and the absolutive object. A modifier (including a genitive) may precede or follow its head.

Hurrian has postpositions, which may govern a preceding dative or genitive. The following are found with a preceding dative: *ed=ī=da* (directive of *edi* "person, body," with a third-person singular possessive pronoun) "with reference to, concerning"; *e/ig=ī=da* "within"; *fur=ī=da* (*furi* "eye") "with regard to"; *ā(i)=ī=da* "in the presence of" (at Hattuša occurs also the preposition *ābi*). Governing a preceding genitive are: *āi=ē* (directive) "in front of"; *ed=ī=ē* "because of, about."

5.2 Agreement

A modifier agrees with its head. The case endings copied from the head are preceded by *-ne-* or *-na-* (see §4.4.7). This also applies to genitive modifiers (*Suffixaufnahme*):

(19) A. šēn(a)=iffu=we=nē=ž ašt(i)=i=ž
"My brother's (*-we* gen.) wife (*ašti*)"
B. šēn(a)=iffu=we=nē=va torub(i)=î=va
"To my brother's enemy (*torubi* 'enemy,' *-va* dat.)"
C. en(i)=n(a)=āž=(v)e=ne=da šarri=ne=da
"To the king (*šarri, -da* dir.) of the gods (*en(i)=na*)"

Likewise, nominalized ergatival verbs are constructed as modifiers which agree with their head. In this case, the head is always the patient of the nominalized verb, regardless of its case form:

(20) A. šēn(a)=iffū=ll(a)=ān ūr=i=â=šše=na tivē=na
"The things (*tive*) which my brother desires (*ūr-*)"
B. tuppe niḫār(i)=rē=ve ar=ōž=aw=šše=nē=ve
"The tablet (*tuppe*) of the dowry which I have given (*ar-*)"

5.3 Coordinate and subordinate clauses

There seem to be no special verbal forms for subordinate clauses except the verbal nouns mentioned in §4.5.13.1. Particles occurring in initial position of temporal, conditional, comparative, and other clauses have been cited in §4.6.1.

In relative clauses introduced by the particle *īa-*, *īe-*, the head of the relative clause is incorporated within the clause; the verb is nominalized and stands in agreement with the head. The main clause refers to the head of the relative clause by an anaphoric pronoun:

(21) [[īa=llā=nīn šēn(a)=iffu=ž . . . tivē=na tān=ōž=ā=šše=na]$_{\text{REL.CL.}}$ . . . andi=ll(a)=ān Šimīge=ne=ž ar=ēd=a šēn(a)=iffu=wa]
"The things which my brother has done, those the Sun-god will give to my brother"

In rare cases the verb of the main clause may be incorporated:

(22) [ia=mē=nīn ed(i)=iffə pal=āw [šēn(a)=iffu=ž . . . tād=i=â=šš(e)=a]$_{\text{REL. CL.}}$]
"I know (*pal-*, erg.) that [my brother loves (*tād-*, erg., nominalized, essive) it], my person (*ed(i)=iffə*)"

6. LEXICON

Hurrian is still only very incompletely known, especially as far as the lexicon is concerned. Since Hurrians had been in contact with the peoples of the northeastern parts of the Fertile Crescent since at least the last quarter of the third millennium BC (and presumably much earlier), one should expect a considerable stock of Sumerian as well as Akkadian and other Semitic loanwords. There are indeed some words borrowed from Sumerian in the third millennium, like *en=dan* "ruler" (from *en*); other possible Sumerian loans are disputed (*natḫi* "bed," Sumerian *ná* "bed"). Akkadian loanwords are numerous, especially in texts from the Late Bronze Age. They reflect an extended usage of Akkadian as a second language, or at least as the vernacular of written communication and documentation; examples include: *šarri* "(divine) king" (from *šarru* "king"); *šukkalli* "vizier" (from *sukkallu*); *tupšarri* "scribe" (from *tupšarru*); *tamgarašše* "profit" (from *tamkāru* "merchant"); *salamži* "statue" (from *ṣalmu*); *ḫassissi* "ear" (from *ḫasīsu*); *arni* "guilt" (from *arnu*).

The tribes who established the Mittani dynasty spoke an archaic form of Indo-Aryan, which left some traces in Hurrian: *mariyanni* "chariot owner" (cf. Sanskrit *márya-* "young man"); *pabro/unni*, *paridanni*, *pingaranni* colors of horses (cf. *babhrú-* "brown," *palitá-* "grey," *piṅgalá-* "reddish").

Though Hurrian played an important role in Anatolia as a language of learning and ritual, it appears not to have borrowed from the Anatolian Indo-European languages (Hittite, Luwian, etc.) – an appearance perhaps connected with the fact that the Hurrian tablets chiefly preserve texts of Hurrian traditions. There is little doubt, however, that Hurrian was not only a literary language, but was spoken in a court and temple milieu at least in the fourteenth century BC. This is revealed by the occurrence of adjectives based on Anatolian place names: *ḫattoġe* ("belonging to Hatti"), *šabinuvaġe* ("belonging to Šapinuwa"), and so forth.

Bibliography

There is no Hurrian grammar or dictionary which presents the present state of our knowledge of the language. The following monographs have to be corrected and supplemented in the light of the research literature of the last decades:

Bush, F. W. 1964. *A Grammar of the Hurrian Language.* Dissertation, Brandeis University. Ann Arbor: University Microfilms.
Diakonoff, I. M. 1971. *Hurrisch und Urartäisch.* Munich: Kitzinger.
Khačikjan, M. L. 1985. *Churritskij i urartskij jazyki.* Jerevan: AN Armanskoj SSR.
Laroche, E. 1980. *Glossaire de la langue hourrite.* Paris: Klincksieck.
Speiser, E. A. 1941. *Introduction to Hurrian.* New Haven: American Schools of Oriental Research.
Wilhelm, G. 1989. *The Hurrian*s. Warminster: Aris and Phillips.

After the completion of this grammatical outline (spring 1999), two grammars of Hurrian have appeard:

Giogieri, M. 2000. "Schizzo grammaticale della lingua hurrica", *La parola del passato 55*: 71–277.
Wegner, I. 2000. *Hurritisch. Eine Einführung*, Wiesbaden: Harrassowitz.

CHAPTER 10

Urartian

GERNOT WILHELM

1. HISTORICAL AND CULTURAL CONTEXTS

1.1 History of the language and its speakers

From the late ninth to the late seventh century BC, Urartian was written in the empire of the Urartian kings, stretching from present-day Armenia, Azerbaijan, Iranian Azerbaijan, and northeastern Iraq to the Euphrates. Neither its geographical origin can be conclusively determined, nor the area where Urartian was spoken by a majority of the population. It was probably dominant in the mountainous areas along the upper Zab Valley and around Lake Van. The center of Urartu is the region surrounding Lake Van with its capital of Ṭušpa (citadel of Van). We do not know when the language became extinct, but it is likely that the collapse of what had survived of the empire until the end of the seventh or the beginning of the sixth century BC caused the language to disappear.

Urartian is closely related to Hurrian (see Ch. 9, §1.1), especially to the dialect conventionally called *Old Hurrian* (see Ch. 9, §1.3). Presumably Urartian branched off from Hurrian not much later than approximately 2000 BC.

The earliest inscriptions of the Urartian kings are written in the Neo-Assyrian script and language (a dialect of Akkadian; see *WAL* Ch. 8), though after a single generation the Urartian language, for most purposes, replaced the use of Assyrian. The eighth century BC witnessed the climax of Urartian power and the greatest production of Urartian royal inscriptions (the Annals of Argišti I and Sardure II).

The term *Urartian* is based on the geographical name Urarṭu, which was used not only by the Assyrians, but by the Urartians themselves when writing in Assyrian. The Urartian equivalent is the name *Bia=i=ne=lə* "the [people] of [the land of] Bia." The Urartians' name for their own language is unknown. The terms *Vannic* or German *chaldisch* which can be found in older literature are outdated.

1.2 Sources

Nearly all of the Urartian texts occur as commemorative stone inscriptions on walls, column and pillar bases, steles, and rocks. There are a few clay tablets, which display an experienced hand, suggesting that most likely the scarcity of this medium is due to archeological accident rather than lack of use. Metal objects from the treasuries of Urartian kings are often inscribed with short proprietorial notes. Sealed clay bullae suggest that at least in the seventh century BC perishable materials like leather were also used for writing.

The earliest Urartian inscriptions can be dated to approximately 820 BC, and the latest were written during the last decades of the seventh century BC. Though there are more than five hundred inscriptions, their linguistic value is limited because of their extreme repetitiveness. There are basically two genres of inscriptions: (i) those which commemorate the building activities of the kings and (ii) those referring to their military campaigns. Apart from these there are a few texts recording cultic prescriptions, especially one long and complete text from the early period of the kingdom (Meher kapısı). Important landmarks lying close to Assyrian territories were made prominent by the erection of bilingual (Urartian and Assyrian) steles, the most famous of which is the Kelišin ("blue stone") stele. It marked a Zagros pass leading to Muṣaṣir, which was of utmost importance to the Urartians as the cult center of their supreme god Ḫaldi.

1.3 Dialects

No dialects of Urartian have been identified, though see §4.3.5.7.

2. WRITING SYSTEMS

2.1 Cuneiform script

Urartian was written in the Akkadian cuneiform script. Like its model, the Urartian writing system uses syllabograms and logograms (or *Sumerograms*, transcribed with capitals). The sign shapes of the Urartian royal inscriptions are basically those of Neo-Assyrian royal inscriptions, with one innovation: from *c.* 810 BC onwards, Urartian inscriptions on stone and metal avoid intersecting wedges. There is no convincing argument that some sign forms prove the influence of older traditions.

The syllabary is extremely restricted, with CV signs (57) prevailing over VC signs (19). Some of the VC values most common in the Assyrian cuneiform script are not used at all (*aK*, *iK*, *uK*, *iḫ*, *uḫ*, *im*, *um*, *en*, *in*, *un*, *uT*). Identifying the reason for this simplification of the Assyrian sign inventory is difficult. There are numerous hints that in some cases CV signs actually represent consonants only (in some of the oldest inscriptions the ergative suffix is written with the sign *-iš*, whereas the normal spelling is *-še*; the Hurrian equivalent ends consonantally, i.e., *-ž*). Moreover, in some cases it can be shown that CV signs are likely to represent [VC] syllables: the word *kure=l(ə)* (written *ku-re-e-li*) "feet" can be linked to Hurrian *ugri* "foot," also *ure=l* "feet" (the sign *uK* does not belong to the Urartian inventory); for inverted readings of CV signs see also §3.5.1. CVC signs are used, though much less frequently than in Assyrian royal inscriptions.

One reason for the abandonment of several VC signs may have been that the Akkadian syllabary neutralized the opposition of voiced and voiceless consonants. The use of CV signs as C signs may thus have been regarded as a means of representing this opposition at the end of syllables. Especially relevant might be the Assyrian model: the inscriptions of Assurnaṣirpal II (887–858 BC) quite often replace a final closed syllable by an open syllable (mostly with <Ci>).

The signs *mi* and *ne* do not occur in the Urartian script with syllabic values. Both of the phonetic sequences [mi] and [me] are represented by the sign *me* (transliterated as *me* or *mì*); correspondingly, the sign *ni* is used for both [ne] and [ni] (transliterated as *né* or *ni*). The sign *'a* is used as a variant of *wa* in a number of cases. A few signs are used with values not adopted from Assyrian traditions: for example, *ga*, *gi*, and *gu* used for a voiced fricative (conventionally transliterated as ya_x, yi_x and yu_x).

Graphemes representing homorganic consonants are at times used interchangeably: for example, *'a-al-tú-bi*: *'a-al-du-bi*; *su-du-qu-ú-bi*: *su-ṭu-qu-bi*.

CVC signs are used, though much less frequently than in Assyrian. Signs for five vowels are attested: *a*, *e*, *i*, *u*, *ú*. Variant spellings suggest that *u* and *ú* render one vocalic phoneme only, whereas – despite some interchangeability – *e* and *i* refer to different vowel phonemes. Only a few homophonous signs are used, namely *tu* and *tú*, *ar* and *ár*; there are sufficient variant spellings to show that these do not represent different vowel phonemes.

Plene-spelling of vowels is common, though the function of such full representation is not straightforward. There are three possibilities, and each probably actually occurs: (i) a plene-spelling may mark a long vowel; (ii) it may define the quality of the vowel of the preceding CV sign; and (iii) it may simply serve aesthetic purposes in filling a line. In addition, there seems to be ambivalent plene-spelling of vowels. Thus, the final vowel of an *i*-stem is reduced to *ə* in word-final position; its graphemic representation is the vowel inherent in a *Ce/Ci*-sign, to which the vowel sign *e* may be added: for example, *pi*-LI (LI has the values [le] and [li]) or *pi*-LI-*e* (both transcribed as *pilə*, "canal," absolutive). The same grapheme sequence *-Ce/i-e*, however, can also be used as a variant of the normal spelling *-Ce/i-i-e*: for example, *Ḫal-di-i-e* or *Ḫal-di-e* (both transcribed as *Ḫaldi=ə*, "to (the god) Ḫaldi," dative).

In letters, a word-divider is used, though not always and not systematically.

2.2 Hieroglyphic script

There are few short inscriptions written in pictographic symbols which have not yet been deciphered. Only two "hieroglyphs" often carved into the neck or body of large storage vessels have been identified, as units of capacity.

3. PHONOLOGY

3.1 Consonants

The cuneiform script distinguishes the following consonants, though not in all positions, and there is uncertainty regarding the value of some (see below). The evidence for the glides *w* and *y* is indirect (suggested by spellings such as *-ni-i-e*, *a-i-u-*, *a-ú-i*):

(1) Urartian consonants

p	t		k	ʔ
b	d		g	
	ṭ		q	
	s	š		ḫ
	z			
	ṣ			
m	n			
	l	r		
w		y		

It is unclear to what extent consonantal phonemes may exist which are not distinguished by the script; nor is there agreement concerning the phonetic interpretation of some of the graphic renderings of phonemes.

It is safe to assume a tripartite phonemic opposition between voiced, voiceless, and some third set of stops and postdental fricatives. The third set is represented by the cuneiform signs for the so-called emphatic consonants of Akkadian (*ṭ*, *q*, *ṣ*). In Urartian these perhaps represent voiceless glottalized or aspirated consonants. It is also possible that the labial stops form such a triad with a consonant /ṗ/ graphemically not distinguished from /p/ and /b/. It cannot be determined whether *g* can represent a voiced fricative in every position or only intervocalically. The *ḫ* syllabograms might represent both a voiced and a voiceless phoneme. The comparison of place names written in Urartian cuneiform and in Greek or Armenian script does not yield unambiguous results, as, especially in the case of Greek, it can hardly be ascertained through what intermediate phonemic systems these names passed.

The "sibilant" system is particularly difficult to reconstruct since even in Akkadian, and in particular Neo-Assyrian, the phonetic value of the cuneiform characters is uncertain. On the basis of Greek and Armenian renderings of Urartian place names I. M. Diakonoff has suggested interpreting *š*, *s*, *z*, *ṣ* as /s/, /š/ or /č/, /dz/ and /tṣ/ or /tṣ'/ respectively.

Consonants are (with very few exceptions) not geminated, even when the syllabary allows that possibility. It has been suggested that Urartian lost its geminate consonants (which do exist in Hurrian) before it reached the state of the language preserved in the inscriptions.

Transliterations (marked by single bars) and transcriptions (marked by double bars) in this chapter use the conventional values for the transliteration of the cuneiform signs.

3.2 Vowels

The script seems to distinguish four vowel qualities: /a/, /e/, /i/, /u/. It is uncertain whether the interchangeable signs *u* and *ú* represent not only /u/ but also /o/. Vowel length seems to be indicated by *scriptio plena* (see §2.1), and presumably it was phonemic (see also §3.5.3; in the following morphemic transcriptions vowel length is not represented because of the high degree of graphemic variation). The opposition between /e/ and /i/ seems to be neutralized in final position (realized as [ə]), as can be seen (among other places) among variants using *be* and *bi* indiscriminately (*nu-na-bi*, *nu-na-be* "he came," in morphemic transcription both rendered as *nun=a=bə*). Schwa may be represented by a plene-spelling of the vowel *e*, e.g., *pi*-LI-*e* for [pilə].

Spellings like *-ka-i*, *ba-ú-še*, *Te-i-še-ba*, *e-ú-ri*, *ú-ru-li-ia-ni*, *qi-ú-ra-i-e-di*, *ḫa-ú-li-i-e*, *si-lu-a-di*, *a-ú-e-ra-*, *ṣu-e*, *Iš-pu-i-ni* suggest the existence of the diphthongs /ai/, /au/, /ei/, /eu/, /ia/, /ie/, /iə/, /ua/, /ue/, /uə/, /ui/. It is not always clear, however, whether two adjoining graphemic vowels represent a monosyllabic diphthong; in some cases it can be shown by variant spellings that they do not: thus, *te-ra-a-i-* with variant *te-ra-y[i_x]*. Some of the diphthongs seem to be historical spellings, because there are variants with monophthongs: for example, *qi-(i-)ú-ra-*: *qi-ra-* "earth"; *al-su-i-ši-*: *al-su-ši-* "greatness"; *ka-i-ú-ke*: *ka-ú-ke* "before me."

3.3 Phonotaxis

The writing system hides many consonant clusters. Any occurring in initial and final position could not be represented orthographically; it is likely, however, that they did not in fact exist. In medial position most consonantal clusters contain a non-stop as the first consonant: [-ld-], [-lg-], [-lḫ-], [-lm-], [-ls-], [-lṣ/z-]; [-rb-], [-rd-], [-rg-], [-rḫ-], [-rm-], [-rn-], [-rq-], [-rṣ-], [-rš-], [-rt-], [-rz-]; [-mn-]; [-šd-], [-šg-], [-šḫ-], [-šm-], [-šp-], [-št-], [-šz-]. There are also clusters with initial dental and bilabial stops: for example, [-Tḫ], [-Tg-], [-Tq-]; [-Pḫ-], [-Pq-], [-Pr-], [-Pš-], [-Pt-]. There are no Urartian words with initial [r-]; the royal name *Rusa* probably was pronounced Ursa.

3.4 Accent

Urartian seems to have a stress accent on the penultimate syllable – at least in certain cases, defined by unknown conditions. It is evident that in many cases the final syllable is not stressed, as can be seen from the distribution of *Ce* (interpreted as /Cə/) symbols in word-final position versus *Ci(-i)* before suffixes: for example, *gu-nu-še* : *gu-nu-ši(-i)-ni(-)*; *pi-ṣu-(ú-)še* : *pi-ṣu-ši-ni(-)*; *ṣu-e* : *ṣu-i-ni-*.

3.5 Phonological processes

Several phonological processes can be identified for Urartian.

3.5.1 Anaptyxis

Some of the attested cases of anaptyxis are most likely graphemic only (see §2.1): *ši-di-iš-tú-ni* : *ši-di-ši-tú-ni* (*šid=išt=u=nə*); *ta-ra-ma-na* : *ta-ar-ma-ni-li* (root: *tarm-*). Other cases appear to be genuinely linguistic; though in the absence of etymologies, they could be explained either by anaptyxis or by syncope: *ni-ir-bi* : *ni-ri-bi*; *zi-il-be*, *zi-il-bi(-i)* : *zi-li-bi(-i)*; *uldə* versus *ul-ú-de-e* "vineyard."

3.5.2 Syncope

1. The vowel of the plural suffix *-it-* and that of the root-complement *-id-* are lost after [r]: *ar=t=u=me* "they gave me"; *par=t=u* "they took away"; *ter=t=u* "they put up" (compare *kuġ/y=it=u=nə* "they dedicated"); *šer=d=u=l=(e)yə* (also *šer=id=u=l=(e)yə*) "who hides [it]"; *ar=d=i=l=anə* "he shall give"; *ter=d=i=l=anə* "he shall put up." Generally the vowel is preserved elsewhere (though see below): *ab=il=id=u-*; *batq=id=u-*; *erṣ=id=u-*; *nips=id=u-*; *su=id=ul=u-*.
2. Stems ending in [d] followed by the plural suffix *-it-* drop the sequence [d=i]: for example, *za-tú-me* "they built me [a path]," from *zad-* "build" (if – contrary to §3.1 – Urartian had double consonants, the process would have to be described as syncope with assimilation). It is doubtful whether the same process occurs with stem-final [t]; the form cited in favor of this, **šid=išt=it=u=lə* → *šidištulə*, could be first-person singular *šid=išt=u=lə*.
3. After the sequence of {[lV], [rV] or [nV]} followed by the suffix *-ne-* or *-na-* (see §4.2.4), the vowel (V) is syncopated and the resulting consonant cluster undergoes progressive assimilation (in the case of [liquid + nasal]) and degemination. Thus, as Hurrian reveals, the diachronic process is as follows: **ebani=ne=lə* → **eban=ne=lə* → *ebanelə* "countries"; **ereli=ne=lə* → **erel=le=lə* → *erelelə* "kings"; **šeri=na=šə* → **šer=ra=šə* → *šerašə* "the other/previous (kings)." Note, however, that when the genitive-suffix /i/ intervenes, the changes do not occur: *ebani=i=na=we* dingir "to the gods of the country."
4. A vowel is lost when occurring between the final [r] or [l] of a root and the ensuing modal suffix [l] (see §4.3.5.3), with assimilation and degemination as in **3** above: **tur=u=l=(e)yə* → **tul=l=(e)yə* → *tul(e)yə* "[who] might destroy."

3.5.3 Vowel contraction

Contraction is difficult to determine because of the ambiguities of the writing system and because of uncertainties surrounding the phonemic system. If the spelling variants with

diphthongs and monophthongs are correctly interpreted as revealing "historical spelling," rather than accurate synchronic representations (see §3.2), then Proto-Urartian had a tendency to contract diphthongs. Such contraction even occurred across morpheme borders; for example, in the dative of *i*-stems. The well-attested traditional form is LEXEME-*i*=ə (graphemic *Ci-(i-)e*), as in *Ḫal-di-i-e* (dative: "to [the god] Ḫaldi"); but there are also forms ending in *-Ci-i* which have been interpreted as a contraction of [i + ə]: for example, *e-si-i* (dative, "to the place," from **esi*=ə). The plene-writing of the vowel points to the product of contraction being a long vowel.

3.5.4 Assimilation

In addition to those cases of consonant assimilation noted in §3.5.2, **3** and **4**, assimilation of vowels occurs in two contexts: (i) the vowel of the verbal suffix *-Všt-* (see §4.3.2, **6**) assimilates to the preceding vowel (so-called vowel harmony); and (ii) the vowel of the plural suffix *-it-* (see §4.3.4.3) in some cases (e.g., after the root-complement *-id-*) assimilates to a following vowel [u]: **še(i)r=id=it=u* → *še-i-ri-du-tú*; **su=id=it=u* → *su-ú-i-du-tú*.

3.5.5 Metathesis

Metathesis is seen in *uldu* versus *udul-* "vineyard"; see also §4.2.2, **6**.

4. MORPHOLOGY

4.1 Word structure

The basic structural characteristics of Urartian seem to be in agreement with those of Hurrian (see Ch. 9, §§ 4.1–3); however, the available data in many cases are insufficient for a functional analysis of the sort possible for Hurrian. A set of root-complements would be expected to modify the semantics of the root, regardless of whether by suffixation, the root forms a noun or verb. Among the less than one hundred semantically more or less well-defined Urartian nouns, however, there seems to be no single one which can be shown to contain the same root-complement as a verb.

4.2 Nominal morphology

The noun (and a small number of nonderived adjectives) consists of (i) a root, (ii) a thematic vowel, and (iii) optionally a derivational suffix. Root-complements (see Ch. 9, §4.3) are seldom attested (for a possible exception see below, §4.2.1); and only few word-formation suffixes (see Ch. 9, §4.4.2) can be found within the limited body of material. As in Hurrian, there are two numbers (singular and plural), but no grammatical genders. To a noun (derived or not) relational, possessive, number, case, and congruence suffixes in a strictly sequential order may be added.

4.2.1 Nominalization of the root

Roots may perhaps be nominalized by the suffixes *-i* and *-u*: *kapi* (a measure of capacity) is likely to be connected with the Hurrian root *kapp-* "fill" (cf. Hurrian *kapp=ar=ni* Ch. 9, §4.4.2, **13**). The forms *ḫa=ə* and *ašḫ=ašt=ə* (two terms for offerings, if correctly segmented) are based on *ḫa-* "take" and *ašḫ-* "sacrifice," and *urb=u* "meat offering" on *urb-* "slaughter."

4.2.2 Noun-formation and derivational suffixes

In Hurrian grammar two types of derivational formations have been distinguished: one utilizes suffixes (*word-formation suffixes*) which directly follow the root (and root-complements), and the other utilizes suffixes (*derivational suffixes*) which follow the so-called thematic vowel. In the latter case, the thematic vowel *-i* is replaced by the "derivational vowel" *-o-*. In this paragraph the two sets of suffixes are treated together in alphabetical order, as the Urartian patterns have not yet been fully examined and understood.

1. *-(a)d=ə* (see Ch. 9, §4.4.2, **1**): *ḫu-ra-(a-)de* "warrior" (also Hurrian) might be a loanword from Hurrian, perhaps via Assyrian.
2. *-ay ə,* adjectives and nouns: *ṣi-ra-ba-e* "unirrigated"(?), *du-ru-ba-i-e* "hostile," *tú-a-i-e*, *tú-a-y[i_x]* "pure," *tar=ayə* "mighty," *al=ayə* "decision" (*al-* "speak," see §4.3.4.4).
3. *-aurə*, patient-oriented participle (see Ch. 9, §4.4.2, **4**): *ag=aurə* "something (a canal) which is conducted," *šid=aurə* "something which is built"; (see also *-u(=)rə*).
4. *-(i)bə*: *atibə* "10,000," *nir(i)bə* "wild sheep," *ṭeribə* "?," *zilibə* "seed," "offspring."
5. *-ḫə* (see Ch. 9, §4.4.6, **1**): This suffix forms adjectives of appurtenance used with geographical or tribal names (*nisbe*): *Abiliane=ḫə ebanə* "the country of Abiliani" (tribal/personal name), *Diaue=ḫə* "the Diauean [king]." Without parallel in Hurrian is its usage in patronyms: *Argište=ḫə* "the son of Argišti," *Išpuine=ḫə*, *Minua=ḫə*, *Rusa=ḫə*, *Sardure=ḫə*. It forms adjectives and nouns (i) after *u*: *egur=u=ḫə/ḫu* "clean, pure" (in a cultic sense), *tar-a-i-ú-ḫe* "?" (cf. *tarayə* "strong"); (ii) after *i* (→ *e*): *qar-me-ḫe* "?," *ter=i=ḫə* "plantation" (*ter-* "plant," "establish"); and (iii) after *a*: *babanaḫə* (*babanə* "mountainous region").

   The ending *-šḫə* is presumably a suffix complex containing the abstract suffix -šə as in Hurrian (see Ch. 9, §4.4.6, **1G**): *ḫuri=šḫə* "water supply"(?), *tui=šḫə* "clean place"(?), *uri=šḫə* ("weapon," "piece of equipment").
6. *-ḫalə*, *-lḫə* (metathesized variants), ethnic terms: *mišta=ḫal[ə]* "[the land] belonging to Mišta," *meliṭi(y)alḫə* "the Meliṭian [king]," *puinialḫə* "the Puinian [king]," *išqugulḫə* "the Išqugulian," *puluadiulḫə* "the Puluadian [king]."
7. *-i(=)ptə*, meaning unknown: *mer=i(=)ptə* "?," *ušt=i=ptə* "campaign" (*ušt-* "go on a campaign").
8. *-ka*, meaning unknown (see Ch. 9, §4.4.2, **10**): *urb=i=ka=nə* "sacrificer"(?) (*urb-* "slaughter").
9. *-lə*, nouns of profession (see Ch. 9, §4.4.2, **11**): *erelə* "king," A.NIN=*lə* "prince"(?).
10. *-nə*, basic meaning unknown (see Ch. 9, §4.4.2, **13**): *ti=nə* "name" (*ti-* "speak"); additional nouns which have roots not attested in other usage, however, also end in *-nə*: *ebanə* "country," *iaranə* (a sanctuary), *qarqaranə* "armor," *sirḫanə* (a building). A functionally different suffix *-nə*, which perhaps is to be distinguished etymologically (see Ch. 9, §4.4.6, **2**), seems to form adjectives: *quldi=nə* "uninhabited"(?), "vacant"(?). Several forms which have been claimed as adjectives, however, presumably are instrumentals: *piṣuši=nə* "pleasurable" piṣušə "pleasure," *gunuši=nə* "by fight."
11. *-šə*, abstract nouns (see Ch. 9, §4.4.2, **15A**): *ušma=šə* "might," *ardi=šə* "order," *arniu=šə* "deed," "exploit," *bau=šə* "order," *gunu=šə* "fight," *piṣu=šə* "joy," *ṭelzu=šə* "(sacrificial) instruction," *ulgu=šə* "life," *alsui=šə* "greatness," *išpui=šə* (positive abstract).
12. *-umə*, infinitive? (see Ch. 9, §4.4.2, **16**): absolutive(?) *áš-ḫu-me* "offering"(?), directive *su-du-me-né-e-de* "?".
13. *-tuḫə*: LUGÁL-*tú-ḫe* "kingship," LÚ-*(ú)-tú-ḫe* "human beings," *ir-nu-tú-ḫe-e* "?".

14. *-u(=)rə*, "subject-oriented participle" with intransitive verbs (see Ch. 9, §4.4.2, **8**): *ušt=u(=)rə* "someone who went out for a campaign," *man=u(=)rə* "something which existed" (see also *-aurə*).

15. *-usə* (see Ch. 9, §4.4.6, **3**): The Hurrian equivalent suggests identifying *u* as a suffix of derivation. In only few cases can it be shown that the suffix forms nouns of suitability as in Hurrian: *urišḫ=usə* "arsenal, treasury" (*urišḫə* "weapon, piece of equipment"), *ašiḫ=usə* "building for cereals" (cf. Hurr. *až=o=ġe* "meal"), *al=usə* "ruler," *bad=usə* "perfection(?)", *pul=usə* "stela," *ṭe/ir=usə* (measure of capacity).

4.2.3 Thematic stems

(See Ch. 9, §4.4.3) All nouns end in a vowel. The most frequent vowel is *-i* or *-e*, but there is a good number of nouns in *-a* and in *-u*. No noun ends in a consonant, at least in writing (for the restrictions of the writing system see §2.1).

4.2.4 Relational suffixes *-ne-* and *-na-*

(See Ch. 9, §4.4.7) Urartian *-ne-* (sg.) and *-na-* (pl.) are anaphoric suffixes. They precede case endings which mark agreement of genitive modifiers or modifiers in *-ḫə* or *-usə* (see §4.2.2, **5**, **15**) with their head noun (*Suffixaufnahme*, see §5.2): *Minua=i=ne=i sila=i* "of the daughter of Minua"; *Ḫaldi=i=n(e)=ə patari=ə* "for the city of Ḫaldi"; *Ḫaldi=i=ne=nəušmaši=nə* "by the might of Ḫaldi." In addition to marking agreement with the head noun, *-na-* also functions generally as a plural marker, except in the absolutive case (*-na-* never occurs in the absolutive; see §4.2.6): **ereli=na=we* → *erel=la=we* "of kings"; *ḫuradi=na=we* "to the warriors"; *arniuši=na=ni* "by the deeds." In the plural, the suffix of the absolutive plural is *-ne=lə*: *ḫuradi=ne=lə* "the warriors."

4.2.5 Possessive suffixes

Only two possessive suffixes are well attested. They take the position after the thematic vowels:

1. *First-person singular -ukə*, *-uka-* (without parallel in Hurrian): *e-ú-ri-u-ke* "to my lord"; *e-ba-ni-ú-ke-e-de* "into my country"; *e-ba-ni-ú-ka-né* "from my country." The suffix also occurs with preposition: *ka-a-ú-ke* "in front of me"; for the suffix see also §4.2.7.4.

2. *Third-person singular -iye*, *-i(-)*, *iya-* (as in Hurrian): *e-ba-ni-i-e* "his country"; *ti-i-né . . . ar-mu-zi-i . . . zi-il-bi-i* "his name, his family"(?), "his seed" (cf. Akkadian NUMUN-*šú*); *e-ú-ri-i-e* "to his lord" (cf. Akkadian *ana . . .* EN-*šú*); *ulguši=ya=nə edinə* "for his life."

4.2.6 Case and number suffixes

Urartian, as far as can be determined, is a strictly ergatival language. The agent (subject) of a transitive verb appears in the ergative case; while the patient (object) of a transitive verb and the agent of an intransitive take the absolutive case. There are no hints that there exists a pattern as in Hurrian which encodes agent and patient as absolutive and essive respectively (see Ch. 9, §4.4.9). A special pattern for an action with a virtual but not explicit patient may exist, but cannot be proven.

Nine cases have been identified thus far. The principal differences vis-à-vis Hurrian (see Ch. 9, §4.4.9) are as follows: (i) the absolutive plural utilizes the suffix *-ne-* (see §4.2.4)

which in Hurrian is confined to the singular; (ii) the genitive and dative suffixes have a labial continuant only in the plural; (iii) the comitative is marked by a complex suffix (Hurrian *-ra*); (iv) the dative also has the function of the Hurrian directive in *-e*; (v) the Urartian directive is perhaps a complex suffix formed from *-e-* (cf. the Hurrian directive) plus the directive suffix *-də*, the product of Proto-Urarto-Hurrian **-da*, preserved in Hurrian and, as archaism, in Urartian; (vi) the Hurrian plural marker *-až-* is unknown to Urartian except for a few archaic forms of the directive and ablative plural.

(2)

	Singular	*Plural*
Absolutive	—	-ne=lə
Ergative	-š, -šə	-na=šə
Genitive	-i	-na=wə
Dative	-ə(ø for a-stems)	-na=wə
Directive	-edə	-na=(e/i)də
archaic	-da	-na=aš=tə
Comitative	-ranə	-na=ranə
Ablative-instrumental	-nə	-na=nə
Ablative	-danə	-na=aš=tanə
Locative	-a	-n(a)=a

4.2.7 Pronouns

Urartian is characterized by each of the following pronominal forms.

4.2.7.1 Possessive pronouns

For the possessive suffixes within the suffix chain of the noun see §4.2.5.

4.2.7.2 Pronominal suffixes

The enclitic personal pronouns of Hurrian (see Ch. 9, §4.4.10.1) are only partially attested in Urartian, and they differ in function and distribution. As in Hurrian, they only refer to the participant in the absolutive case. Contrary to Hurrian, in Urartian they cannot be repeated several times within a clause, they cannot be suffixed freely to various words within the clause, and their position is strictly determined.

The suffix *-də* of the first-person singular corresponds to Hurrian *-tta/-d*, but it only occurs as a suffix of intransitive verbal forms of the first singular (see §4.3.4.1). The suffix of the third singular, *-nə*, corresponds to Hurrian *-nna/-n*. In most cases, it is associated with an absolutive singular serving as the subject of an intransitive verb, but sometimes also with the object of a transitive verb. It can also follow an interrogative/relative pronoun (*alu=š=nə*, see §4.2.7.5). The suffix of the third plural, *-lə*, corresponds to Hurrian *-lla/-l*, but its occurrence is restricted to nouns in the absolutive plural. For *-nə* and *-lə* as verbal suffixes see §4.3.4.1 and §4.3.4.3.

A personal suffix without a morphological or functional equivalent in Hurrian is the dative suffix of the first-person singular, *-mə*: *ḫaš=i=a=l=mə* "they granted to me" (intr.); *ar=u=mə* "he gave me"; *Ḫaldi=š=mə* "(god) Ḫaldi (erg.) . . . me"; *a-šú-me* "when . . . me"; *alu=š=mə* "who . . . me."

4.2.7.3 Independent personal pronouns

Only the following forms have been identified:

1. *First-person singular*: (i) absolutive subject of an intransitive verb: *ištidə*; (ii) absolutive object of a transitive verb: *šukə*; (iii) ergative: *ieše*; (iv) possessive adjective: *šusə* "my" (with suffix *-usə*, see §4.2.2, **15**); (v) locative plural: *šusi=na=a*.
2. *Third-person singular*: (i) absolutive: *manə*; with pronominal suffix *-nə* (see §4.2.7.2): *mani=nə*; (ii) possessive adjective: *masə*; plural *masi=ne=lə* "his."

4.2.7.4 Deictic pronouns

The two most important deictic pronouns are as follows: (i) the demonstrative pronoun *i*(nə)- refers to the object which bears the inscription or which is close to it. In an often attested curse formula it is used anaphorically for actions mentioned immediately before; (ii) *ina-* seems to be restricted to an anaphoric function, possibly including a sense of distance.

(3)

		Singular	*Plural*
Demonstrative	*absolutive*	inə	i=ne=lə
	ablative-instrumental		i=na=nə (i-na-(a-)né)
	locative		i=na=a (i-na-a)
Anaphoric	*absolutive*	ina=nə	ina=ne=lə
	ablative-instrumental		ina=na=nə (i-na-na-né)

In addition, *ina-* serves as the base for other pronouns: (iii) *ina=ḫə* "such" (dative pl.: *ina=ḫe=na=wə* "for such / the aforementioned [towns]"); (iv) *in=ukə* "exactly this" (emphatic, identifying; absolutive sg.: *in=ukə* (*i-nu-ke(-e)*); ablative-instrumental: *in=uka=nə* (*i-nu-ka-(a-)né*); for the suffix cf. §4.2.5, **1**); (v) *in=uka=ḫə* (a hapax legomenon, genitive adjective: *i-nu-ka-ḫe-né-e*); (vi) *in=usə* "the said," "the aforementioned" (absolutive sg.: *in=usə*; ablative-instrumental(?): *in=usi=nə* (*i-nu-si-i-né*); for the suffix cf. §4.2.2, **15**); (vii) *ik=ukə* "the same" (attested only in the ablative-instrumental: *ik=uka=nə* "the same [year/day/road]"; for the suffix cf. §4.2.5, **1**; the root might be connected with Hurrian postposition *egi* "in"; see Ch. 9, §5.1).

4.2.7.5 Relative pronoun

The relative pronoun is attested in the forms *alə* (absolutive sg.), **ali=ne=lə* → *alelə* (absolutive pl.), and *alu=šə* (ergative). For the vowel shift *i/u* compare the Hurrian pronominal pattern (Ch. 9, §4.4.10.2–3.). The indefinite pronoun *ali=kə* "some" seems to be based on the relative pronoun *alə*; it is, however, indeclinable.

4.3 Verbal morphology

Our knowledge of the Urartian verb is particularly limited. In the stereotypical royal inscriptions, the indicative verbs (with one exception) only describe past actions in the first-person singular, and in the third-person singular and plural.

By way of a summary comparison with Hurrian verbal morphology, the following remarks are offered (see below for specific discussion of the Urartian verb). As in Hurrian, verbs may be marked for modes of action; but in comparison with Hurrian, the preserved verbal forms show far fewer root-complements (regardless of what their function may be). Most of the Hurrian root-complements which modify the meaning of the root prior to the distinction of nominal or verbal inflection are not attested at all in Urartian. Also, as in Hurrian, the valence of a verb (see §4.3.1) is indicated by the so-called class-markers (see §4.3.3); and valence may be changed by changing the class-marker. It has not yet been convincingly shown that Urartian morphologically distinguishes verbal aspects (see §4.3.2, **3**) or tenses. A verb is not negated by a suffix as in Hurrian, but by a particle which precedes it (see

§4.4.3). The subject of an intransitive verb is marked by enclitic personal pronouns which are – unlike the Hurrian condition – a constituent part of the verbal form. The transitive-ergatival verb has suffixes which mark the patient. There are, however, two different markers of the third-person singular patient, which are distributed according to agents. Apart from the pronominal suffixes which are etymologically identical with the Hurrian enclitic personal pronouns of the absolutive (see Ch. 9, §4.4.10.1), no person suffixes have been observed. It is, however, possible that the vowel *a* in the form R=*u*=*a*=*lə* (see §4.3.4.3) is a marker of the third singular agent. The Hurrian plural suffix *–až* has no counterpart in Urartian verbal inflection (as far as it is known). As in Hurrian, a wide variety of nonindicative moods occur.

4.3.1 Valence

Valence (the number of noun phrases governed by the verb) is indicated by the vowels treated in §4.3.3. As in Hurrian (see Ch. 9, §4.5.1), some roots are attested in both transitive and intransitive use: *aš-* "enter" (intr.) / "put in"; *kuṭe-* "advance" / *kuṭ-* "send, forward, extend, conquer"; *naḫ-* "sit down" / "carry away"; *ši-* "come" / "bring"; *ušt-* "go on a campaign" / "offer," "present". Normally, however, the root is attested in either transitive or intransitive usage. As in Hurrian, a change of valence can be marked by the suffix *-ul-*: *aš=u=bə* "I put in [a garrison]," *aš=ul=a=bə* "[when the country] was occupied," *aš=ul=a=l[ə]* "[the palaces] were occupied."

4.3.2 Undefined verbal suffixes

There are several verbal suffixes immediately following the root, which are morphologically identical with Hurrian suffixes. The scarcity of varying contexts, however, makes it impossible to prove functional identity.

1. *-an-* (cf. Ch. 9, §4.3 [2D]): *ašt=an=ul-* "?", *ked=an-* "send," *ušḫ=an-* "grant."
2. *-ar-* (cf. Ch. 9, §4.3 [2I]): *qapq=ar=ul-* "besiege"; compare also *ub=ar(=)d=ud-*, *ṭub=ar(=)d-*.
3. *-id-*, *-ud-*, *-d-* (on the background of Hurrian, see Ch. 9, §4.5.4), *-id-* has been interpreted as a marker of aspect, but there is little Urartian evidence for this or any other interpretation): *ab=il=id-* "rank among," *batq=id-* "restore"(?), *e/irṣ=id-* "settle," *iz=id-* "order," *ne/ik=id-* "?", *nips=id-* "sacrifice (an animal in a specific way)," *su=id-* "force back" (written with *i*, never *e*), *šer=(i)d-* "?", *wel=id-* "gather"; *kul=ud-*, *lak=ud-* "?" (both a damaging action); *ṭub=ar(=)d-* "?", *ub=ar(=)d=ud-* "order." A form *-ad-* occurs in *atq=an=ad-* "celebrate."
4. *-il-* (cf. Ch. 9, §4.5.2, **1**): *ab=il=id-* "rank among."
5. *-ul-* (cf. Ch. 9, §4.5.2, **2**): *ašt=an=ul-* "?", *qapq=ar=ul-* "besiege," *su=id=ul-* "defeat."
6. *-Všt-* (cf. Ch. 9, §4.5.2, **2**): *am=ašt-* "burn down" (tr.), *ašḫ=ašt-* "offer [an offering]," *a(y)=išt-* "jump," *šid=išt-* "build," "erect," *nul=ušt-* "devastate"(?), *sul=ušt-* "prostrate," *ul=ušt-* "march (ahead)"(?).

4.3.3 "Class-markers" (suffixes of valence)

As in Hurrian (see Ch. 9, §4.5.6), the position following the root and the optional root-complements is occupied by a vowel which is called the "class-marker." In most cases it is either *-a-* or *-u-*: *-a-* indicates single valence and intransitivity, *-u-* (the equivalent to Hurrian *-o-*) two valences and ergativity.

Some intransitive verbs have a vowel *-e-* or *-i-* of unknown function before the class-marker: *bid=i=a-* "return" (intr.), *ḫut=i=a-* "pray," *kuṭ=e=a-* "advance" (but tr. *kuṭ-* "send," etc.).

A few intransitive verbs have a class-marker *-i-*: *sul=ušt=i=bə* "I prostrated myself," *a(y)=išt=i=bə* "[the horse] jumped."

Some deviating forms (all with a consonant cluster before the class-marker) are not yet well understood: *ulḫ=u=də* "I ordered" (intr., hapax), *ul=ušt=ai=bə* "he marched [ahead]"(?) (besides regular *ul=ušt=a=bə*).

4.3.4 Person suffixes

The person suffixes of the verb follow the class-marker. Only the first singular, and the third singular and plural are well attested. Other forms are either not attested or questionable (e.g., *šid=išt=u=šə* "we built it"[?]).

4.3.4.1 Intransitive verbs

The intransitive verb is conjugated by means of pronominal suffixes (see §4.2.7.2) which correspond to the absolutive enclitic personal pronouns first singular and third singular of Hurrian (see Ch. 9, §4.4.10.1). The third singular is formed by a suffix *-bə* equivalent to the suffix *-b* of Old Hurrian. Only the following forms are attested:

(4)

	Singular	*Plural*
1st	nun=a=də "I came"	
3rd	nun=a=bə "he came"	nun=a=lə "they came"

4.3.4.2 Stative verbs

The stative verb *man-* shows a class-marker *-u-* which formally is identical with the transitive class-marker (for the parallel in Hurrian see Ch. 9, §4.5.11). Different from the intransitive verb (and in agreement with Hurrian) the third-person singular is not marked by a verbal person suffix: *man=u=də* "I stayed," *man=u* "it was" (often with adjective in *-ayə* [see §4.2.2, **2**]), *man=u=lə* "they were," *ali . . . man=u=l=ə* [-LI-*e*] "who may exist," *ali=lə . . . man=u=l=a=lə* "who (pl.) may be there," *man=u=l=i=nə* "may it exist!" See also §4.2.2, **14** and §4.3.5.1.

4.3.4.3 Transitive verbs

Of the person suffixes used with transitive verbs, only a subset is attested; agent (ergative) and patient (absolutive) suffixes are shown in (5). The etymology of the suffix of the first-person singular is still controversial.

(5)

	Abs. 3rd sg.	*Abs. 3rd pl.*
Erg. 1st sg.	R=u=bə "I . . . him"	R=u=bə / R=u=lə "I . . . them"
Erg. 3rd sg.	R=u=nə "he . . . him"	R=u=a=lə "he . . . them"
Erg. 3rd pl.	R=it=u=nə "they . . . him"	R=it=u=lə "they . . . them"

The first-person singular dative suffix *-mə* (see §4.2.7.2) displaces the absolutive suffix *-nə*: *ar=u=mə* "he gave [it] to me," **zad=it=u=mə* → *za=t=u=mə* "they built me [the road]."

The comparison with the endings of the intransitive verb shows that both paradigms make use of the same pronominal suffixes: *-bə*, *-nə*, and *-lə*. There are no special suffixes for the person of the agent except the suffix *-it-* which marks plurality of the agent (for a possible exception see §4.3). The difference between the first- and the third-person agent is encoded by the use of two different suffixes for the patient: the first person of the agent is marked

by the suffix *-bə* and the third by *-nə*. Both suffixes refer to the third person of the patient, but *-bə* – exactly as with Hurrian *-b* (see Ch. 9, §4.5.9) – is not restricted to the singular. Referring to a plural patient, *-bə* may be replaced by the pluralic *-lə*. The occurrence of the suffixes *-bə*, *-nə*, and *-lə* in both the transitive and the intransitive paradigms is related to the ergatival structure of Urartian: both the patient of the transitive verb and the subject of the intransitive verb are encoded as absolutives.

4.3.4.4 The verb al-

This verb occurs in one form only: *alə* (*a-*LI, *a-*LI*-e*), always with a noun in the ergative, but without an absolutive. It introduces direct speech in royal inscriptions and letters (e.g., LUGÁL*=šəalə* "[thus] says the king"). It has been suggested that the direct speech as a whole is the patient. The verbal status of Urartian *alə* has long been disputed, but it is confirmed by the Hurrian form *a-lu-i-ib* "he said."

4.3.5 Nonindicative moods

As in Hurrian (see Ch. 9, §4.5.12), there is a considerable variety of nonindicative modal forms. Disagreement still exists over terminology, morphology, and relationship with Hurrian modal suffixes. Only the best-established patterns are mentioned here.

4.3.5.1 Imperative

The second singular imperative, both intransitive and transitive, is formed by the root plus the suffix *-ə* (seldom *-i*): *ul=i* (*ú-*LI*-i*) "go!"; *ar=ə* (*a-ri*) "give!"; *šat=ə* (*šá-te-e*) "take!"; *ti=ə* (*ti-(i-)e*) "speak!"; *tur=ə* (*tú-*RI*-(e)*) "destroy!" Presumably the form *ma-nu-ni* "may he be/exist!" is to be interpreted as a third-person singular imperative (for the verb *man-* see §4.3.4.2). Perhaps the vowel *u* conveys a concept of state like the Hurrian imperative in *-o(=nna)* (see Ch. 9, §4.5.12.1); for the form *ma-ni-né* see §4.3.5.2.

4.3.5.2 Jussive

The jussive is a request in the third person, marked by a suffix *-in*. This suffix corresponds to the jussive suffix of Hurrian *-en*, which in the earliest Hurrian has also the form *-in* (see Ch. 9, §4.5.12.2). Transitive verbs add a pronominal suffix after an anaptyctic vowel *i*. The plurality of the agent is marked by *-it-*. Examples follow: (i) *tur=in=i=nə* (in most cases spelled *tú-ri-ni-né*, once *-ni-i-né*) "they (once 'he') may destroy him" (usually the plural is not marked; the form [*tu*]*r=ut=in=e=nə*, which is attested in the same context, might be the expected plural form with *it* → *ut*); (ii) *ar=in=i=nə* (SUM*-ni-né*) "he shall give [a cow]"; (iii) plural: *ḫa=it=in(ə)* (*ḫa-i-ti-né*) "they shall take"; (iv) *ašḫ=ašt=it=in(ə)* (*áš-ḫa-áš-ti-ti-né*) "they shall give as an offering." The form *ma-ni-né* "may he be/exist" is presumably an intransitive jussive of the verb *man-*: *man=in(ə)*; see also §4.3.5.1.

4.3.5.3 Modal -l-

The modal suffix *-l-* combines with various forms of mood and modifies their meaning in a way which, however, cannot always be well established; for the exact equivalent in Hurrian see Ch. 9, §4.5.12.3.

4.3.5.4 Optative

The optative expresses a wish or a demand. It is formed with the modal suffix *-l-* and a suffix *-ə*: These suffixes are usually spelled as -LI or, seldom, as -LI*-e*, but never as -LI*-i-e* (as is sometimes the spelling with the conditional; see §4.3.5.5). Most forms are third person,

but there is also at least one form of the first-person singular. The optative may have a pronominal suffix referring to the patient:

1. *First-person singular: qapq=ar=u=l=i=nə (qa-ap-qa-ru-li-né)* "I wanted to besiege [the city]."
2. *Third-person singular: urp=u=l=ə / urp=u=l=i=nə (ur-pu-ú-li-i-né)* "he shall slaughter [them]"; *nips=id=u=l=ə / nips=id=u=l=i=nə* "he shall sacrifice [in a specific way]"; *aš-ḫu-li-né* "they shall give as an offering"; *me-ši-i-ú-li-né* "they shall gather(?) [the grapes]." It is not yet clear whether the first of two verbs in the standard curse formula belongs here: *ú-ru-*LI*-a-né . . . ú-lu-*LI*-e* "may they . . . him [and] destroy [him]." The Urartian optative is presumed to be etymologically connected with the Hurrian form (see Ch. 9, §4.5.12.4).

The optative regularly appears in clauses introduced by *ašə*. This word is conventionally translated as the temporal conjunction "when(ever)"; it may, however, contain the ergative suffix *-šə* and thus fill the position of the agent in an agent–patient construction, which otherwise would be vacant. If this interpretation is correct, *ašə* would encode the concept of an indefinite agent ("when one/they"). Otherwise, the forms in *ašə-* clauses would have to be explained as being intransitivized by the suffix *-ul-* (see §4.3.1), which, however, is not likely: *ašə . . . ašḫ=ašt=u=l=ə* (*áš-ḫa-áš-tú-*LI) "when they make an offering" (in a strict sense: "when they are to make an offering"?); *ašə . . . nek=id=u=l=ə* (*ni-ki-du-*LI) "when they . . . (the canal)"; *ašə . . . teš=u=l=ə* (*te-šú-*LI*-e*) "when they harvest the vineyard."

4.3.5.5 Conditional

The conditional is a form with the modal suffix *-l-*, which regularly appears in relative clauses of the curse formula introduced by *alu=šə*. The verbal form ends in -LI*-e* or -LI-i-e (LI represents [li] and [le]), which we normalize here as *-l- (e)yə*: *alu=šə inə* DUB*-te tu=l=(e)yə* (**tur=u=l=(e)yə*) "who(ever) might destroy this inscription"; *a-lu-šə pi-i-tú-*LI*-i-e* "who(ever) might smash [it to pieces]."

A good morphological comparison is the Hurrian conditional in *-eva* (see Ch. 9, §4.5.12.6).

4.3.5.6 Desiderative

The desiderative expresses a strong wish. In the context of the Urartian annals this may be the wish of the royal author ("he shall . . . ") or the reported wish of an enemy ("I heard that he intended to . . . "). The desiderative is formed by the modal *-l* suffix preceded by a "class-marker" *i* (cf. Ch. 9, §4.5.6) and a suffix *-anə*. The same formation is attested in Hurrian (see Ch. 9, §4.5.12.7). Examples follow: *ar=d=i=l=anə* (*ar-di-la-né*) "he shall give [tribute]"; *ḫa-i-la-a-né* "[I heard that the country . . .] intended to conquer [the city . . .]"; *ir-bi-la-*[*né*] "[I heard that the country . . .] intended to raid [the . . .]."

4.3.5.7 Additional moods

There are more modal forms which, however, are either poorly attested or semantically difficult:

1. Formed with a complex suffix: (i) *-alanə*: *ḫa-ia-la-a-né* "[never had kings] conquered" (with a glide *y* at the morpheme border), *pa-a-ra-la-né* "[to which never a king] had brought"; (ii) *-ulanə*: *qu-du-la-a-né* "?" (cf. *ú-ru-*LI*-a-né* at §4.3.5.4).
2. The following (dialectal?) forms are only attested in one religious text from the early period (meher kapısı): *ni-ip-si-di-'a-a-le* "they shall sacrifice them [in a special way]," *qa-ap-qa-ri-li-né* "he shall carry around(??)," *urp=u=ə* (*ur-pu-ú-e*) "he shall(?) slaughter."

3. A letter from Bastam has forms which seem to be jussives (first- or third-person singular?): *a-li-le* (*al-* "speak"), *ar-di-le* (*ar-* "give").
4. The form *a-ri-a-ni* has been interpreted as nonindicative, though it could be an indicative (*ar=i=a=nə* "he does not give her back"[?]) with a perfect parallel in Hurrian (cf. Ch. 9, §4.5.8.10).
5. *mi . . . kul=it=u=nə* "they shall not let him [exist]" (cf. Hurrian *koʔl-* "let") may be a vetitive formed by the negative particle *mi* and the indicative.

4.4 Particles

"Particle" will here be defined as a word which cannot take nominal or verbal suffixes.

4.4.1 Conjunctions

The following conjunctions are identified: *ašə* "when(ever)" see §4.3.5.4; *iu* "when" (temporal clause referring to past); *e'ə* (also written *e-ú-e*, *e-a-i*) "and (also)," *e'ə . . . e'ə* "as well as"; *mi* "but"; *mi . . . mi* "neither . . . nor"; *unə* "or."

4.4.2 Adverbs

The following adverbial particles are identified: *ainey* "anyone," *gey* "anything," *ḫenə* "now," *ištinə* "there," *ištini=nə* "from there."

4.4.3 Negative particles

Negation is accomplished by the particles *ui* "not" and *mi*, *mi=kui* (prohibitive).

4.5 Numerals

The numerals are almost exclusively written with numerical symbols, rather than being spelled out phonetically. In an annalistic text, the expression meaning "in one year" alternates between *šusini* MU and 1 MU. There is, however, a plural *šusina* MU^{meš} which is translated into Assyrian by *ina libbi šanāteya* "in my years" (cf. §4.2.7.3). The cardinal 10,000 is *atibi*.

5. SYNTAX

5.1 Word order

As in Hurrian, the agent in ergatival clauses (see §4.2.6) usually takes the initial position, followed by the patient and the verb (SOV), but the sequence *absolutive–ergative–verb* (OSV) also occurs. The dative or instrumental of a god's name regularly precedes the ergative in the first clause of a text or a paragraph:

(6) A. Ḫaldi=ə . . . M.=šə . . . ini pulusə kuġ/y=u=nə
Ḫaldi=ə . . . ini pulusə M.=šə . . . kuġ/y=u=nə
"To Ḫaldi M. set up this stela"
B. Ḫaldi=i=ne=nə ušmaši=nə M.=šə I.=šə inilə tarma=ni=lə
atḫ=u=a=lə
"By the might of Ḫaldi M. [and] I. dug this well"

Otherwise the dative may follow the verb:

(7) É.GAL šid=išt=u=nə badusi=y=ə
"He built a palace up to its perfection(?)"

The verb may be placed in initial position when it is topicalized (particularly in the more vivid inscriptions about military campaigns, often forming chiasms with regular clauses):

(8) ušt=a=də Mana=idə ebanə at=u=bə
"Forth I marched towards Mana, and I consumed the land"

In nominal clauses of two absolutives the predicate noun takes the final position:

(9) Minua=nə . . . LUGÁL tarayə
"M. is the great king"

In a nominal clause indicating a possessive relation with a genitive, the latter takes the initial position:

(10) M.=i=ne=i sila=yə Tariria=i inə uldə
"This vineyard belongs to T., the wife of M."

Generally, the genitive may precede or follow its head; in names it regularly takes the initial position: for example, *Minua=i patarə* "Minua-town"; *Rusa=i ṣuə* "Rusa-reservoir." In titles the genitive follows its head, perhaps following the Akkadian model: LUGÁL *Bia=i=na=wə* "king of the [people] of Bia."

Other modifiers usually follow their head, whereas the deictic pronouns precede it: LUGÁL *tarayə* "great king"; *ina=ne=lə arniuši=ne=lə* "these exploits."

Urartian has a considerable number of postpositions, which are partially based on the same forms as the postpositions of Hurrian (especially *edi* "person, body," see Ch. 9, §5.1). Most Urartian postpositions have a suffix *-nə* which is likely to be the ablative-instrumental suffix; there is, however, one postposition which is of locative origin (*ed(i=)i=a*). In one instance (*ištini=y=ə*) the spelling suggests the presence of a third-person singular possessive suffix, as with most Hurrian postpositions. It is quite possible in fact that the majority of Urartian postpositions were formed with this suffix (hence the transcription *-(i=)i*). The noun governed by the postposition always takes a case ending (*apt(i=)i=nə* "on the side of," with abl. *-danə* or abl.-instr.*-nə*; *bed(i=)i=nə* "from the side of, on the part of," with abl.-instr. or loc.; *ed(i=)i=nə* "for," with abl.-instr.; *ed(i=)i=a* "to(wards)," with archaic gen./dat.; *ištini=y=ə* (spelled *-ni-e*, *-ni-i-e*), *ištin(i=)i=nə* "for," with loc.; *(-)kai,* seldom *(-)ka* "before, in front of" – with dat. (persons), loc. or abl.-instr. (places, objects), *kai* can take the possessive suffix *-ukə* (*kai=ukə* "before me"); *(-)kai=nə* "from (before)," with abl.-instr. or dat.(?); *(-)pei* "under," with dat. or abl.-instr; *(-)pe(i)=nə* "from under," with dat.(?); *(-)ṣə* "(with)in," "in the middle of," with loc.).

Whether or not a postposition is enclitic cannot be determined in most cases, as the inscriptions do not separate words, and the evidence of the letters which utilize a word-dividing sign is insufficient in most instances. The letters seem to confirm, however, that *-ka(i)* is enclitic, and this may be true for *(-)pei(=nə)* and *(-)ṣə* as well. Even so, the enclitic postpositions clearly have not evolved into true case endings since they are not subject to *Suffixaufnahme* (see §5.2).

A single preposition, *parə* ("to(wards)," "unto," usually with dat., sometimes with loc.) has been identified thus far.

5.2 Agreement

As in Hurrian (see Ch. 9, §5.2), a modifier (genitive modifiers and modifiers in *-ḫə* or *-usə*; see §4.2.2, **5**, **15**) agrees with its head. The case endings copied from the head are preceded by the relational suffix *-ne-* or *-na-* (see §4.2.4):

(11) A. Minua=i=ne=i urišḫusi=ne=i
"Of the storehouse of Minua" (object)
B. Ḫaldi=i=na=wə šešti=na=wə
"For the gates of Ḫaldi"
C. ^{lú}AD=si=n(e)=i esi=i
"On the paternal throne"

5.3 Coordinate and subordinate clauses

Coordinate clauses without a connective form the majority of Urartian texts. There is no pattern of nominalized verbs or verbal nouns as in Hurrian (see Ch. 9, §5.3). Subordinate clauses express a relational or a temporal connection with the main clause. The temporal clause introduced by *ašə* (see §4.3.5.4) in all attested cases displays a special modal form (optative), which, however, seems to express a wish or intention, not a special form of subordination. The relative clause may use the conditional (see §4.3.5.5); this is always the case in curse formulae which express a potential action. When the action is considered a fact, the relative clause uses the indicative:

(12) alə ab=a=də ḫaš=i(y)=a=l=mə DINGIR^{meš}
"What I requested, the gods granted to me"

Temporal clauses referring to the past are introduced by *iu* "when"; they always take the indicative:

(13) iu Ḫaldi=š=mə LUGÁL-tuḫə ar=u=nə naḫ=a=də ^{lú}AD=si=n(e)=i esi=i LUGÁL-tuḫe=i=ne=i
"When Ḫaldi gave me kingship, I sat down on the paternal throne of kingship"

6. LEXICON

The Urartian lexicon is even less well known than that of Hurrian. The meaning of less than three hundred words has been established, with varying degrees of exactness. For the less than one hundred roots used in verbal forms, approximately 20 percent are also known in Hurrian. This figure obscures the actual close proximity of the two languages: a considerable part of the Urartian corpus is formed by accounts of military campaigns, a genre absent in Hurrian literature; whereas the majority of Hurrian linguistic material is either related to religious ritual or to diplomacy, which are only poorly reflected in the Urartian corpus.

Aside from the basic phonological differences between Urartian and Hurrian (lack of double consonants in Urartian, lack of phonemic voicing in Hurrian), and the open questions concerning vowel length and opposition of /o/ and /u/ in Urartian, the following roots of Urartian and Hurrian (with one exception: *nun-*) are in total phonological agreement. This is basically true also for the nominal isoglosses below (note, however, differences under

ištinə, *šalə*, *šurə*). Putative isoglosses which show greater diversity have been demonstrated to be wrong or remain doubtful.

1. *Roots used in verbal forms: ag-* "guide" (H. "take up"); *al-* (H. *ale-*) "speak"; *am-* "burn"; *ar-* "give"; *ašḫ-* "make an offering, sacrifice"; *durb-* "become hostile" (H. only in noun *torbi*, *torubi* "enemy"); *ḫa-* "take"; *ḫaš-* "hear" (H. *ḫaž-*); *ḫut=i(y)-* "pray" (H. *ḫud-* "raise"); *kul-* "let" (H. *koˀl-*); *man-* "be" (H. *mann-*); *naḫ-*(H. *naḫḫ-*) "sit down"; *nun-* "come" (H. *un-*); *piṣ-* *"rejoice" (only in the noun *piṣušə* "joy"; H. *pic-* (written with sV symbols)); *šat-* "take" (H. *šatt-*); *tan-* "do," "make"; *ti-* "speak" (H. *tive*, *tia*, *tieni* "word"); *urb-* "slaughter"; *ušt-* "to leave for a campaign" (H. *ušt=a=nni* "warrior," "hero").
2. *Nouns: ate-* "father" (H. *atta=i*); *babanə* "mountainous region" (H. *p/ƒaba*, *p/fabni*, *p/ʃabanni* "mountain"); *edi-* (see §5.1; H. *edi* "person, body"; see Ch. 9, §5.1); *eurə* "lord" (H. *evri*); *eurišə* "lordship" (H. *evrišše* "lordship"); *ḫarə* "road" (H. *ḫari*); *ḫuradə* "warrior" (H. *ḫuradi* "[a kind of] warrior"); *išanə* "opposite bank, lakeside" (H. *e/išave* "opposite bank"); *ištinə* (see §5.1; H. *ištani* "inside, middle"); *kurə* (ukrə?) "foot" (H. *ugri* "foot"); *pilə* "canal" (H. *pilli/a*); *p/bura* "slave" (H. *pura=me*); *qarqaranə* "coat of mail" (H. *kargarni*, a piece of military equipment); *šali* "year" (H. *šawala*); *šeḫirə* "living" (H. *še/uġurni* "life"; presumably identical with the archaic element of a personal name *šeġirni*); *šuḫə* "new" (H. *šuġe* "new"); *šurə* "weapon" (H. *šauri*); *tarmanilə* (pl.) "spring," "well" (H. *tarmani* "spring," "well"; *tarm-* "drink"); *taršuani* "man" (H. *taržu(w)ani*); ^{uzu} *tišnu* (also *tišni*?) a part of the body (H. *tižni*, *tiža* "heart"); *ulə* "another" (H. *oli*).

It cannot be demonstrated that all of these isoglosses were inherited from the proto-language ancestral to Hurrian and Urartian. It is possible that some words (especially military vocabulary) were borrowed from Hurrian into Proto-Urartian in the middle of the second millennium BC.

In several cases, it can be shown that Urartian and Hurrian use different lexemes which apparently only exist in one of the two languages: thus, for "build," "erect [a building]" Urartian consistently uses *šid=išt-*, whereas Hurrian uses *pa-*.

One word has been claimed as a loan from Akkadian – *kubušə* "helmet." Even this, however, is questionable, since Akkadian *kubšu* is not a piece of military equipment but a headdress or cap, often made of wool and used by gods, kings, and high officials.

There are no secure examples of borrowings from other languages.

Bibliography

There is no Urartian grammar which presents the present state of knowledge of the language. The following monographs are in need of correction and supplementation in the light of the research literature of the last decades:

Benedict, W. 1958. "Urartian phonology and morphology." Dissertation, University of Michigan.
Diakonoff, I. 1971. *Hurrisch und Urartäisch*. Munich: Kitzinger.
Friedrich, J. 1933. *Einführung ins Urartäische*. Leipzig: Hinrichs.
_____. 1969. "Urartäisch." In *Altkleinasiatische Sprachen*, pp. 31–53. Handbuch der Orientalistik. Leiden/Cologne: Brill.
Khačikjan, M. 1985. *Churritskij i urartskij jazyki*. Jerevan: AN Armanskoj SSR.
Melikišvili, G. 1971. *Die urartäische Sprache*. Rome: Biblical Institute Press.
Meščaninov, I. 1958, 1962. *Grammatičeskij stroj urartskogo jazyka*, vols. I–II. Moscow/Leningrad: Academy of Sciences of the USSR.

The indices of the two corpora of text editions may serve as a dictionary:

König, F. 1955–1957. *Handbuch der chaldischen Inschriften.* Graz: Selbstverlag Ernst Weidners.

Melikišvili, G. 1960. *Urartskie klinoobraznye nadpisi.* Moscow: Academy of Sciences of the USSR (Supplement: UKN II, in *Vestnik Drevnej Istorii* 1971/3, pp. 229–255, 1971/4, pp. 267–294).

For history, culture and comprehensive bibliographies see:

Salvini, M. 1995. *Geschichte und Kultur der Urartäer.* Darmstadt: Wissenschaftliche Buchgesellschaft.

Zimansky, P. 1998. *Ancient Ararat. A Handbook of Urartian Studies.* Delmar, NY: Caravan Books.

CHAPTER 11

Classical Armenian

JAMES P. T. CLACKSON

1. HISTORICAL AND CULTURAL CONTEXTS

Armenian forms an independent branch of the Indo-European language family. Although Armenian was spoken in areas adjacent to those inhabited by speakers of Anatolian languages, it shares few significant linguistic features with the Anatolian subgroup of Indo-European. Its closest linguistic relatives are Greek and the Indo-Iranian subgroup. These three branches of Indo-European show shared developments in their morphology and vocabulary which are not found in other Indo-European languages: for example, the use of the augment **e-* to mark past tense verb forms; the use of a marker **-bʰi (s)* for the instrumental case; and the prohibitive particle **mē*.

Some scholars have thought that the agreements between Armenian and Greek are sufficient to allow the reconstruction of a Helleno-Armenian subgroup of Indo-European, but their arguments are not conclusive, since it cannot be clearly proved that the agreements represent shared common innovations. Others, relying on an ancient tradition that the Armenians were a "colony of the Phrygians" (Herodotus 7.73) have tried to identify developments shared by Armenian and Phrygian, but have met with little success. Some of the phonetic developments which have been claimed for Phrygian also took place in Armenian, but all too often these sound changes rest upon very uncertain etymologies, and the close link between the languages is called into question by several well-established Phrygian forms. For example, the Phrygian form *matar* is generally taken to be a nominative singular meaning "mother," from Proto-Indo-European **mātēr*; the cognate Armenian form is *mayr*. Note that *matar* shows a development of **ē* to *a* (found also in other Phrygian words) which is at odds with the development of **ē* to *i* found in Armenian.

The position of Armenian as a separate branch of Indo-European was not recognized until 1875 by Heinrich Hübschmann (Hübschmann 1875). Before that date most comparativists believed Armenian to be an Iranian language, mistakenly taking the large number of Iranian loanwords in Armenian to represent the inherited vocabulary. Their inability to isolate the "native" stratum of vocabulary in Armenian is understandable: only a small number of words are directly inherited from Proto-Indo-European, and these have undergone a series of complicated and intricate sound changes which make many forms unrecognizable.

Only a small amount of information about the prehistory of Armenian can be deduced from linguistic material. The large influx of Iranian vocabulary will be discussed more fully below. Some Iranian words may have been borrowed into Armenian as early as the sixth century BC, but the greatest period of influence was the Parthian period in the first four centuries of the Christian era. While the Armenian lexicon shows the influence of Iranian, the phonemic inventory of the language is strikingly similar to Georgian, the Kartvelian language

historically spoken in areas to the north of Armenia. It is unlikely that this situation is the result of chance, but it must result from a long period of contact between the speakers of the two languages. The morphological categories and syntax of Kartvelian languages may also have influenced Armenian. However, there is little lexical interchange between Kartvelian and Armenian, although some Iranian loanwords in Old Georgian appear to have entered the language via Armenian.

The extralinguistic facts relevant to the prehistory of the Armenian people are also obscure. Speakers of Armenian appear to have replaced an earlier population of Urartian speakers (see Ch. 10) in the mountainous region of Eastern Anatolia. The name *Armenia* first occurs in the Old Persian inscriptions at Bīsotūn dated to *c.* 520 BC (but note that the Armenians use the ethnonym *hay* [plural *hayk'*] to refer to themselves). We have no record of the Armenian language before the fifth century AD. The Old Persian, Greek, and Roman sources do mention a number of prominent Armenians by name, but unfortunately the majority of these names are Iranian in origin, for example, Dādrši- (in Darius' Bīsotūn inscription), Tigranes, and Tiridates. Other names are either Urartian (Haldita- in the Bīsotūn inscription) or obscure and unknown in literate times in Armenia (Araxa- in the Bīsotūn inscription).

Armenia officially adopted Christianity in the early years of the fourth century AD (the traditional date is 301–304). Conversion to Christianity provided the impetus for the creation of an alphabet (see below) and the translation of the Bible into the Armenian language in the fifth century. The Bible translation and the historical and theological works of the fifth century provided the model for the classical language, which was the medium of educated written discourse for Armenians until the nineteenth century, and is still used as a liturgical language in the Armenian Church.

Modern Armenian consists of a large number of different local dialects, usually grouped into two principal branches, Eastern and Western. Sub- and nonliterary written material from the thirteenth-century Armenian Kingdom of Cilicia (often termed *Middle Armenian*) shows that the separation of the East and West dialect groups had already taken place at that date, and reveals the wide range of variation in the spoken language. However, the language of the Armenian Bible translation and early authors is strikingly uniform and may result from a deliberate attempt to create a standard. It seems a priori unlikely that the inhabitants of the different valleys and plains in the mountainous region of the Armenian Highlands should have spoken a uniform language in the fifth century, and some passages in classical authors can be interpreted as references to dialectal differences in the Armenian lexicon (cited by G. B. Djahukian at Greppin and Khachaturian 1986:9f.).

2. WRITING SYSTEM

Classical Armenian is written in an alphabet of thirty-six letters (increased to thirty-eight letters in the tenth century). The alphabet was specially created for the language and was used for no other language until recent times. The exact circumstances and date of the creation of the Armenian alphabet are not exactly known. The traditional account, given in the earliest sources, attributes the creation of writing to the saint Mesrop (also called Maštoc') in the early years of the fifth century (the dates AD 404 and 406–407 are frequently cited). Koriwn, contemporary and biographer of Mesrop, relates that the saint adapted a previous writing system invented by a Syrian bishop, Daniel, and this has led to speculation that an earlier script for Armenian existed, despite the complete absence of any attested remains. It is possible that Koriwn was referring to a different alphabet, such as Aramaic; pre-Christian inscriptions found in Armenia are written in Greek or Aramaic.

The earliest surviving specimens of the Armenian script are inscriptions in stone in the now ruined church of Tekor and on mosaic pavements excavated in Jerusalem. These are not dated, but art historians have been able to ascribe their contexts to between the end of the fifth and the beginning of the sixth century. The earliest Armenian manuscript of the Gospels was copied in AD 887, but there are palimpsests, manuscript fragments and a papyrus which are of an earlier date. The early examples of the script show only capital letters (termed *erkat'agir* "iron-writing" in Armenian).

The relationship of the letter-forms of the Armenian script to other scripts of the Near East has been a subject of much dispute. Many scholars now concur with the view that Mesrop used the Greek alphabet as a model. This is supported by the following observations: (i) the script is written from right to left; (ii) the order of the letters for which there are Greek correspondences follows that of the Greek alphabet; (iii) some of the letter-forms correspond to those of a cursive form of Greek, for example: բ <B> for *b* (compare Greek *β*); (iv) the digraph ՈՒ <OW> is used to represent the vowel [u] in imitation of Greek ου for [u]. However, it is difficult to find appropriate models for most of the letters for which there are no Greek equivalents, and Mesrop's original contribution to the formation of the alphabet should not be underestimated. The alphabet has an almost perfect one-to-one correspondence with the phonemes of Classical Armenian. Linguists working on Armenian normally use a particular transliteration system (for which see Schmitt 1972) which I will follow here.

Table 11.1 The Armenian alphabet

Character	Transcription	Character	Transcription
Ա	a	Ճ	č
Բ	b	Մ	m
Գ	g	Յ	y
Դ	d	Ն	n
Ե	e	Շ	š
Զ	z	Ո	o
Է	ê	Չ	č'
Ը	ə	Պ	p
Թ	t'	Ջ	ǰ
Ժ	ž	Ռ	ṙ
Ի	i	Ս	s
Լ	l	Վ	v
Խ	x	Տ	t
Ծ	c	Ր	r
Կ	k	Ց	c'
Հ	h	Ւ	w
Ձ	j	Փ	p'
Ղ	ł	Ք	k'

3. PHONOLOGY

3.1 Consonants

The phonemic inventory of Classical Armenian consonants is presented in Table 11.2. Where the traditional transliteration scheme is at odds with the International Phonetic Alphabet, I have indicated the IPA equivalent in square brackets.

Table 11.2 The consonantal phonemes of Classical Armenian

Manner of articulation	Place of articulation						
	Labial	Dental	Alveolar	Palato-alveolar	Palatal	Velar	Glottal
Stops and affricates							
Voiceless	p	t	c [ts]	č [tʃ]		k	
Voiced	b	d	j [dz]	ǰ [dʒ]		g	
Aspirate	pʻ [pʰ]	tʻ [tʰ]	cʻ [tsʰ]	čʻ [tʃʰ]		kʻ [kʰ]	
Fricatives							
Voiceless						x	h
Sibilants							
Voiceless		s		š [ʃ]			
Voiced		z		ž [ʒ]			
Nasals	m	n					
Liquids			r, ṙ		l	ł	
Glides	w/v				y [j]		

The phonetic interpretation of several Armenian phonemes is not clear-cut, and different explanations are possible. A notorious problem has long been the identification of the manner of articulation of the different stop/affricate series. The aspirates /pʻ/, /tʻ/, etc. are unproblematic; these sounds are usually transcribed as Greek aspirates and are used to transcribe Greek aspirates. The presence of a voiceless velar fricative phoneme /x/, distinct from /kʻ/, makes it clear that these Armenian consonants cannot be ascribed a fricative pronunciation. The other two series have been variously interpreted. The series /b/, /d/, etc. has voice as a distinctive feature: they are used to transcribe voiced stops in other languages and are themselves transcribed as voiced stops. Similar evidence enables us to know that the series /p/, /t/, etc. are unvoiced. The straightforward interpretation would therefore be that the three stop series were respectively aspirated, voiced, and voiceless. However, this leads to serious problems for the explanation of diachronic phonological developments, in particular for the emergence of the Modern Armenian dialects. In Modern Western Armenian, members of the Classical Armenian series /p/, /t/, etc. have become voiced obstruents, while members of the series /b/, /d/, etc. have become voiceless. A *simultaneous* diachonic development

(1) voiced stops > voiceless stops
voiceless stops > voiced stops

has been rightly rejected as impossible. The change would have to have been instantaneous in the dialects concerned in order for the two series not to be confused. It is therefore assumed that either one of the Classical "voiced" or "voiceless" series, or both, also had some extra feature which would allow one or both series to stand in opposition to a "plain" voiced or voiceless series. The diachronic development could therefore be as follows (taking, for the sake of illustration, the voiceless series to have an extra distinctive feature):

(2)

Stage I	*Stage II*	*Stage III*
voiced	voiceless	voiceless
voiceless + X	voiceless + X	voiced

It is not difficult to find possible features which would fit the bill. Many Modern Eastern Armenian dialects show a three-way distinction between aspirates, voiceless ejectives, and voiced obstruents. Phonetic investigation has also indicated that in some Eastern Armenian

dialects the voiced series is also aspirated. It is not clear, however, that any of the three possible systems is correct for fifth-century Armenian: (i) ejective / voiceless aspirate / voiced aspirate; (ii) voiceless / voiceless aspirate / voiced aspirate; or (iii) ejective / voiceless aspirate / voiced (see Vaux 1998:238f.)

Classical Armenian, like many Modern Armenian dialects, had two phonemically distinct varieties of *r*: /r̄/ is a rolled alveolar trill, and /r/ is an unrolled approximant. The difference between /r̄/ and /r/ is neutralized before immediately following /n/, where only /r̄/ can appear. The Armenian version of the grammatical work attributed to the Greek grammarian Dionysios Thrax lists /r̄/ as a double consonant, and this, together with the Armenian use of /r̄/ for [rr] in Iranian loanwords, has led some scholars to interpret /r̄/ as a geminate. However, genuine geminate consonants are extremely rare in Armenian, and it is therefore preferable to consider /r̄/ as an independent unit phoneme.

The phonemic opposition between /l/ and /ɬ/, the palatal and velar lateral approximants, may have been neutralized before a following consonant (where the velar lateral is usually written), and possibly also in word-final position after /y/ (where there is some alternation in spelling in early biblical manuscripts). In Modern Armenian /ɬ/ has developed to a voiced uvular fricative.

There is some uncertainty over the phonemic status and the phonetic value of the Armenian letters transcribed as *v* and *w*. In Classical Armenian they are nearly in complementary distribution; *v* occurs in word-initial (and sometimes morpheme-initial) position and after *o*, whereas *w* is found: (i) as part of the digraph *ow* for the vowel [u]; (ii) after *a*, *e*, *i*; (iii) in the position C_V in oblique cases of polysyllables ending in *-i*, for example, *ordwoy* "of the son" (genitive singular of *ordi*). Both sounds also appear to contrast with the digraph *ow* in the position C_V; note the following pairs:

(3) *anowan*, genitive singular of *anown* "name" : *anvan* "invincible"
anowoy, genitive singular of *aniw* "wheel" : *hanwoy*, genitive singular of *hani* "grandmother"

In the traditional pronunciation of Classical Armenian all three sounds are pronounced as [v].

3.2 Vowels

Figure 11.1 presents the phonemic inventory of Classical Armenian vowels:

	FRONT	*CENTRAL*	*BACK*
HIGH	i		ow [u]
HIGH-MID	ê	ə	
MID	e		o
LOW		a	

Figure 11.1 The vowel phonemes of Classical Armenian

The vowel system of Classical Armenian is relatively straightforward. Vowel length is not distinctive. There are six full vowels: /a/, /e/, /ê/, /i/, /o/, /ow/, as well as /ə/ (schwa), which can never occur in a stressed syllable. The vowel /ê/ derives diachronically from **ey*, and in some paradigms the rule *e* + *y* > /ê/ is still operative. There are six diphthongs /ea/, /aw/, /iw/, /ew/, /ay/, and /oy/, and two triphthongs, /eay/ and /iay/. The exact pronunciation

of these diphthongs is disputed. The diphthong /ea/ is traditionally pronounced [ya], and /oy/ is traditionally pronounced [ui] in all positions except word-final. Word-final /-oy/ and /-ay/ are traditionally rendered as [-o] and [-a] respectively; this is almost certainly a later development, but it should be noted that in some Classical Armenian paradigms [-o] and [-a] derive synchronically from /-oy/ and /-ay/: compare the pronominal forms *kʻo* "your" from /kʻoy/ (genitive *kʻoyoy*) and *na* "he, she, it" from /nay/ (written *nayn* with the enclitic definite article *-n*).

The vocalism of Armenian is partly dependent on the prosodic feature of stress. In Armenian the stress was always placed on the final syllable of an accented word (the few exceptions to this rule either result from recent univerbation, or are pronominal forms or interjections). High vowels and some diphthongs undergo a regular and predictable raising or reduction when not lying under the stress accent. The synchronic rules for vowel alternation are broadly as below:

(4)

In stressed syllables	*In unstressed syllables*
i	ə
ow	ə
ê	i
oy	ow
ea	e

Consider the following examples: (i) *hin* "old," genitive *hnoy* (read as *hənoy*); (ii) *sowt* "false," derived verb *stem* "I lie" (read as *sətem*); (iii) *gitem* "I know," but *angêt* "ignorant; (iv) *yoys* "hope," genitive *yowsoy*; (v) *sirecʻi* "I loved," aorist of *sirem* "I love," 3rd singular *sireacʻ* "(s)he loved."

3.3 Phonotactics

In Classical Armenian texts the vowel *ə* (*schwa*) is not written except in word-initial position before a cluster of nasal or *ł* followed by a consonant. This may give the impression that the language admitted complex and lengthy consonant clusters, for example, *čšmarit* "true," *sksanim* "I begin," *mkrtem* "I baptize," *mštnǰean* "eternal." However, the traditional pronunciation of Classical Armenian, and the writing of *schwa* at line-endings in some manuscripts reveal that Armenian avoided complex consonant clusters in syllable-initial position. In fact, no syllable could begin with more than a single consonant. Initial combinations of the type *sibilant* + *obstruent* were pronounced with *schwa* preceding the cluster: orthographic *stin* "breast" = [əstin], *sksanim* "I begin" = [əskəsanim]. Note that such initial clusters could also be read with *schwa* separating the sibilant and obstruent in some derived terms, such as *stem* "I lie" = [sətem] from *sowt* "false." In combinations of the type *obstruent* + *liquid/nasal*, the *schwa* was inserted after the obstruent: orthographic *glowx* "head" = [gəlux]; *grem* "I write" = [gərem]; *gnam* "I go" = [gənam], etc. Certain clusters of two consonants are admitted in syllable-final position, but the exact rules governing the occurrence of such clusters are not exactly known (see further Godel 1975:9–23). As stated above, geminate consonants are almost entirely excluded in Armenian; where geminates appear to occur they generally straddle a morpheme boundary.

3.4 Historical phonology

The development of the Classical Armenian sounds from the Indo-European parent language involved a number of intricate and sometimes unusual sound changes. However, the paucity of inherited vocabulary, and uncertainty over the correct etymologies of much

of the Armenian vocabulary often makes it difficult, if not impossible, to reconstruct the conditioning factors for a sound change. An illustrative example of the difficulties may be provided by the fate of Proto-Indo-European initial **y* in Armenian: scholars have argued for a development to *l-* , *j-*, *ǰ-*, and *ϕ*.

The obstruent system of Armenian has no exact parallel in any other Indo-European language. What are traditionally reconstructed as the voiced stops of Proto-Indo-European are represented in Armenian by the voiceless series *p*, *t*, *c*, *č*, *k*, parallel to their outcome as voiceless stops in Germanic. The traditionally reconstructed voiceless series is continued, at least in some positions, by aspirates *pʻ*, *tʻ*, *cʻ*, *čʻ*, *kʻ*, and the voiced aspirate series by the Armenian "voiced" series *b*, *d*, *j*, *ǰ*, *g* (as seen above, it may be better to describe this series as voiced aspirate).

Among the unusual sound changes of Armenian is the regular metathesis of clusters of the type *obstruent* + *liquid* to *liquid* + *obstruent*; this occurs even in initial position, for example, *artasowkʻ* "tears" < **draĥu-* . But, the most famous sound change, familiar from many textbooks on historical linguistics, is the development of the cluster **dw-* to *erk-* in initial position as in the word for "two" *erkow* < **dwō*. It is still not fully clear by what steps the sound change took place; most explanations envisage a loss of occlusion of **d* > *r* and concomitant "hardening" of **w* to a velar (the development of **w* to Armenian *g* is found in other words).

4. MORPHOLOGY

4.1 Word formation

Armenian is an inflectional language of a recognizable Indo-European type. Morphological marking is mostly encoded through suffixation, although some morphological categories are expressed through prefixes and in several noun classes case-marking is shown through internal vowel changes, sometimes combined with suffixation and sometimes not.

Most of the morphological processes in Armenian are fusional, as in other ancient Indo-European languages. In Modern Armenian, morphological marking is far closer to an agglutinative type, and several morphological processes of Classical Armenian could also be described as agglutinative: for example, the instrumental case in most of the noun declensions (using the *o*-declension as a representative example):

(5)

nom. sg.	ji	*nom. pl.*	ji-kʻ
instr. sg.	ji-ov	*instr. pl.*	ji-ov-kʻ

The case-marking here is, however, crucially different from the system of case-marking in Modern Armenian, and, apparently, also from the majority of agglutinative languages, in that the plural marker *-kʻ* follows, rather than precedes, the instrumental marker *-ov*. Agglutinative-type patterning is also found in verbal paradigms.

The basic unit of word formation is the lexical root, which may be mono- or polysyllabic. In some verbs the aorist stem is identical with the lexical root, for example, root *tes-* "see," third singular aorist *e-tes*; but this pattern is of limited productivity in Classical Armenian, and most present and aorist verbal stems are formed through suffixation. Most noun and adjective stems are also derived through suffixation of the root, even where the root stands as the second member of a compound. In many instances, the form of the nominative singular is coincidental with that of the root, and the suffix is only apparent in oblique cases. For example, the root *gorc-* means "work," from which are derived (synchronically) a noun *gorc*

"work," a verb *gorcem* "I work" and a compound adjective *angorc* "lazy." The noun *gorc* and adjective *angorc* cannot, however, be described as root formations, as they have different declensions: *gorc* is an *o*-stem (genitive plural *gorcocʻ*), whereas *angorc* is an *i*-stem (genitive plural *angorcicʻ*). A more exact citation form would consequently be *gorc(o)* and *angorc(i)*.

Unlike the earlier Indo-European languages, Classical Armenian has given up vowel alternation (ablaut) within a lexical root as a productive derivational marker. Ablaut alternations are, however, still found in some of the inherited vocabulary items, for example, *barjr* "high" and *erknaberj* "sky-high"; *snanim* "I nourish" and *san* "nursling"; but the only productive use of vowel alternation is in the formation of reduplicated compounds, for which see below.

Preverbs and compounding are also employed to form lexical stems, as in other Indo-European languages. However, Armenian is unusual among languages of that family in that nouns and verbs may also be derived directly from an inflected nominal form, or from a complete syntagm. For example, *kanambi* "having a wife" is derived from the instrumental singular, *kanamb*, of *kin* "woman, wife"; a common word for "night," *cʻayg* (*o*-stem), derives from the prepositional phrase *cʻ-ayg* "until (*cʻ-*) dawn" (*ayg*, normally *ow*-stem); the adjective *čʻkʻmeł* "innocent, free from sin" is formed from a complete sentence:

(6) *čʻ=ikʻ* *meł*
not=any.NOM.SG. sin.NOM.SG.
"there is no sin"

4.2 Nominal declensions

The Armenian nominal declension has seven cases: nominative, accusative, genitive-dative, locative, ablative, instrumental. A few personal names borrowed from Greek show a distinct vocative form, modeled on the Greek vocative, but the nominative normally serves as the case of address. There are two numbers, singular and plural. There are no gender distinctions, even in pronouns.

The nominal declensions of Armenian are noteworthy for the large degree of partial and complete syncretism that is found. The nominative and accusative are syncretic in all declensions (except for personal pronouns) in the singular, but distinct in the plural, where the accusative and locative are always syncretic. The genitive-dative and ablative are always syncretized in the plural, but in most declensions they are distinct in the singular, while the locative is syncretized with the genitive-dative in most declensions in the singular, having a distinct case-marker only in one declension class.

In Classical Armenian there is a fairly large number of different nominal declensional paradigms. Even so, for the instrumental singular and all plural cases the case-markers themselves are either the same or morphophonemic alternatives:

(7)

instr. sg.	-w /-v /-b
nom. pl.	-kʻ
acc. pl., loc. pl.	-s
gen.-dat.-abl. pl.	-cʻ
instr. pl.	-wkʻ / -vkʻ / -bkʻ

The plural declensions of all nouns and nearly all pronouns are consequently nearly isomorphic. The declensions differ in the markers of the oblique singular cases and the vocalism of the element preceding the instrumental singular and plural and the genitive-dative-ablative plural.

It is possible to divide the regular declensional paradigms into three broad patterns.

1. The first type shows an invariable stem; the nominative singular is zero-marked and ends in a consonant, or the vowel *-ow*, or is a monosyllable ending in *-i*. The case-markers of the instrumental and genitive-dative-ablative plural are preceded by the stem-vowel: *a*, *i*, *o* or *ow*. There is also a separate subclass of the *a*-declension, restricted to personal names, which I have not listed here.

(8)

	a-declension "year"	*i-declension* "heart"	*o-declension* "horse"	*ow-declension* "advice"
Singular				
Nominative	am	sirt	ji	xrat
Accusative	am	sirt	ji	xrat
Genitive-dative	ami	srti	jioy	xratow
Locative	ami	srti	ji	xratow
Ablative	amê	srtê	jioy	xratowê/xratê
Instrumental	amaw	srtiw	jiov	xratow
Plural				
Nominative	amk‘	sirtk‘	jik‘	xratk‘
Accusative	ams	sirts	jis	xrats
Genitive-dative	amac‘	srtic‘	jioc‘	xratowc‘
Locative	ams	sirts	jis	xrats
Ablative	amac‘	srtic‘	jioc‘	xratowc‘
Instrumental	amawk‘	srtiwk‘	jiovk‘	xratowk‘

The noun *xrat* is unusual in showing both ablative singular forms *xratê* and *xratowê*; most of the nouns in the *ow*-declension show only one or the other form.

2. The second type can be termed the "mixed" type; it comprises only polysyllabic nouns with a nominative singular in *-i*. Unlike the previous inflection type, the stem undergoes modifications in different cases: the final *-i* of the nominative changes to *-e-* before following *-a-*, and *-w-* before following *-o-*. The inflectional endings are mostly the same as the *o-* and *a*-declensions, but several nouns of this class show a locative and ablative formed with the marker *-ǰ* which is also found in some irregular noun declensions and in a few pronominal forms.

(9)

	wo-declension "son"	*ea-declension* "place"
Singular		
Nominative	ordi	teł̇i
Accusative	ordi	teł̇i
Genitive-dative	ordwoy	teł̇woy
Locative	ordi/ordwoǰ	teł̇woǰ
Ablative	ordwoy	teł̇woy/teł̇woǰê
Instrumental	ordwov	teł̇eaw
Plural		
Nominative	ordik‘	teł̇ik‘
Accusative	ordis	teł̇is
Genitive-dative	ordwoc‘	teł̇eac‘
Locative	ordis	teł̇is
Ablative	ordwoc‘	teł̇eac‘
Instrumental	ordwovk‘	teł̇eawk‘

3. The third type covers nouns with a variable stem. The nominative singular ends *-Cn*, *-Cr* or *-Cł* (*C* = any consonant or *w*). In cases outside the nominative-accusative singular the stem changes either through vowel-insertion or vowel-alternation in the predestinential syllable. In the *r*- and *ł*-declensions the insertion vowel is normally *e*, but the *n*-declension has several subclasses with different internal vocalism.

(10)

	r-declension	*ł-declension*	*n-declension*	
	"bone"	"star"	"finger"	"blood"
Singular				
Nominative	oskr	astł	matn	ariwn
Accusative	oskr	astł	matn	ariwn
Genitive-dative	osker	asteł	matin	arean
Locative	osker	asteł	matin	arean
Ablative	oskerê	astełê	matnê	arenê
Instrumental	oskerb	astełb	matamb	areamb
Plural				
Nominative	oskerk‘	astełk‘	matownk‘	ariwnk‘
Accusative	oskers	astełs	matowns	ariwns
Genitive-dative	oskerac‘	astełac‘	matanc‘	areanc‘
Locative	oskers	astełs	matowns	ariwns
Ablative	oskerac‘	astełac‘	matanc‘	areanc‘
Instrumental	oskerbk‘	astełbk‘	matambk‘	areambk‘

The forms given for the genitive-dative-ablative plural and the instrumental plural for the *r*- and *ł*-declension are illustrative. In early texts, forms ending *-rc‘* and *-rawk‘* and *-ławk‘* are also found. The *n*-stem declension has a number of subclasses which show different patterns of vowel alternation before the *-n-* in the genitive-dative and locative of the singular and the nominative and accusative-locative in the plural. There are a number of other minor and irregular declension patterns which show variations on the above types. Several nouns also show different plural and singular declension patterns, for example: the noun *now* "daughter-in-law" declines as an *o*-stem in the singular, but an *n*-stem (nominative plural *nowank‘*) in the plural.

4.3 Pronominal declensions

As in many other Indo-European languages, in Armenian the declension of deictic pronouns shows a considerable degree of integration with the nominal paradigms, whereas the personal pronouns are synchronically anomalous. The most noteworthy structural feature of the pronominal inflection is the absence of syncretism between genitive and dative singular, which is found in all nominal declensions; the personal pronouns show a difference between genitive and dative plural as well. Many of the pronominal case-markers are the same as those used in the nominal declensions, but other markers are also found, most importantly *-r* as a marker of the genitive singular, and *-owm* for the dative, locative, and ablative.

The pronominal declensions show several examples of compound case-marking, where one case is built up from another inflectional form. This process is also found in some nominal declensions (for example, the ablative form *teławǰê* formed from the locative *teławǰ* in the *wo*-declension cited above), but is more widespread among the pronouns. The case affected is always the ablative, which adds its characteristic marker *-(an)ê* to the form of the locative case in the singular, but to the genitive-dative in the plural. For example:

(11) *nmanê* ablative singular of *na* "he, she it," formed from *nma*, locative singular *owmekʿê* ablative singular of *okʿ* "anyone," formed from *owmekʿ*, locative singular *nocʿanê* ablative plural of *na*, formed from *nocʿa*, genitive-dative plural

(There are also sporadic examples of the unextended form *nocʿa* used as an ablative plural in the earliest texts.)

Demonstrative pronouns in Armenian show a three-way deixis corresponding to proximity to speaker, addressee, and other. Pronouns marked for proximity to the speaker share a stem *s-*: anaphoric *sa*, demonstrative pronoun and adjective *ays*, *soyn* "the same." For proximity to the addressee the stem is *d-*: anaphoric *da*, demonstrative *ayd*, *doyn* "the same." And for nonproximity to speaker and addressee the stem is *n-*: anaphoric *na*, demonstrative *ayn*, and *noyn* "the same." The same deixis system operates for the indeclinable clitic definite articles *-s*, *-d*, and *-n*.

Interrogative and indefinite pronouns are marked as human/nonhuman: *ov* "who?", *omn* "someone," *okʿ* "anyone," opposed to *zi* "what?", and *imn*/*inčʿ* "something, anything."

As representative of the variety of the pronominal declension, there follow the classical forms of the first singular and plural personal pronoun and the anaphoric pronoun *na*:

(12) Personal and anaphoric pronouns

	"I"	"we"
Nominative	es	mekʿ
Accusative	is	mez
Genitive	im	mer
Dative	inj	mez
Locative	is	mez
Ablative	inên	mênǰ
Instrumental	inew	mewkʿ

	"he, she, it"	"they"
Nominative	na	nokʿa
Accusative	na	nosa
Genitive	nora	nocʿa
Dative	nma	nocʿa
Locative	nma	nosa
Ablative	nmanê	nocʿanê
Instrumental	novaw	nokʿawkʿ

4.4 Verbal conjugations

The Armenian verbal system shows separate categories for person, number, tense/aspect, voice, and mood. The verbal paradigm is built around the opposition of a present and aorist stem. From the present stem are formed the present indicative, imperfect indicative, present subjunctive, imperative, and infinitive, while from the aorist stem are formed the aorist indicative, aorist subjunctive, and imperative. Various nominal and adjectival formations, including the past participle, are formed from both the aorist and present stem.

Indicative forms encode both tense and aspect. The imperfect and aorist indicative both predominantly refer to situations in the time preceding the utterance, and the present indicative refers to events contemporaneous with the utterance (the present and imperfect can also have modal uses in, for example, conditional sentences). Reference to events in future

time is usually made with the subjunctive. The basis of the opposition between present and aorist stems is aspectual. This is most clearly seen in the imperative: the present imperative is used (in all cases except for the existential verb) with the negative *mi* as a prohibitive, but the aorist imperative is only used as a positive imperative. However, the basis of the aspectual nuance in the subjunctive and indicative is not always clear; in the Bible translation, Greek aorist subjunctives are translated by both aorist and present subjunctives, and Greek present subjunctives similarly. It has been suggested that the present/aorist opposition was differently organized in Armenian and Greek and that in Armenian the aorist is the marked aspect (see Meillet 1909:104–113 [= 1962:93–102] and Vogt 1930 [= 1988:8–24]).

Classical Armenian has a curiously skewed system of voice marking. In the present indicative and imperative, one class of verbs, with first-person singular *-em*, regularly forms mediopassives in *-im*. However, verbs with first-person singular *-im* (other than those which serve as mediopassives to verbs in *-em*), *-am*, and *-owm* are not marked for voice. In the imperfect, indicative voice is not marked in any verb paradigm. But in the aorist all indicative, subjunctive and imperative forms are marked as active or mediopassive with a separate set of endings. There is no marking of voice in the infinitive or past participle. In addition, there is a large number of deponent verbs which only show mediopassive forms.

4.4.1 Present tense

In the present stem system, nearly all verbs fall into four different classes: the *-em*, *-im*, *-am*, and *-owm* conjugations. Examples of conjugation are as follows:

(13) Present and imperfect indicative

	Present indicative			
	"I bring"	"I am brought"	"I hope"	"I take"
1st sg.	berem	berim	yowsam	aṙnowm
2nd sg.	beres	beris	yowsas	aṙnows
3rd sg.	berê	beri	yowsay	aṙnow
1st pl.	beremkʻ	berimkʻ	yowsamkʻ	aṙnowmkʻ
2nd pl.	berêkʻ	berikʻ	yowsaykʻ	aṙnowkʻ
3rd pl.	beren	berin	yowsan	aṙnown
	Imperfect			
1st sg.	berei		yowsayi	aṙnowi
2nd sg.	bereir		yowsayir	aṙnowir
3rd sg.	berêr		yowsayr	aṙnoyr
1st pl.	bereakʻ		yowsayakʻ	aṙnowakʻ
2nd pl.	bereikʻ		yowsayikʻ	aṙnowikʻ
3rd pl.	berein		yowsayin	aṙnowin

The endings of the present subjunctive conjugation are identical with those of the present indicative, but the stem is formed by the addition of a suffix *-icʻ-* to the present stem, illustrated here with the first and second persons of the singular:

(14) Present subjunctive

1st sg.	bericʻem	bericʻim	yowsaycʻem	aṙnowcʻowm
2nd sg.	bericʻes	bericʻis	yowsaycʻes	aṙnowcʻows

Note that the subjunctive of the *-am* conjugation (*yowsayc‘em*) is formed with the quasi-active personal endings *-em*, *-es*, etc.; this is the case even for deponent verbs which exclusively take passive endings in the aorist.

The present imperative has special endings in the second-person singular:

(15) berer berir yowsar aṙnowr

4.4.2 Aorist tense

There is only a single set of inflectional endings for the active and mediopassive in the aorist system. The prefix *e-* (termed the “augment”) is attached to finite aorist verb forms which would otherwise be mononsyllabic. As an example, consider *tesi*, the aorist of *tesanem* “I see”:

(16) Aorist indicative

	Active	*Passive*
1st sg.	tes-i	tes-ay
2nd sg.	tes-er	tes-ar
3rd sg.	e-tes	tes-aw
1st pl.	tes-ak‘	tes-ak‘
2nd pl.	tes-êk‘	tes-ayk‘
3rd pl.	tes-in	tes-an

The aorist subjunctive is formed with the suffix *-c‘-* and a special set of endings, some of which recall the present *-em* and *-im* conjugations:

(17) Aorist subjunctive

	Active	*Passive*
1st sg.	tes-ic‘	tes-ayc‘
2nd sg.	tes-c‘es	tes-c‘is
3rd sg.	tes-c‘ê	tes-c‘i
1st pl.	tes-c‘owk‘	tes-c‘owk‘
2nd pl.	tes-ǰik‘	tes-ǰik‘
3rd pl.	tes-c‘en	tes-c‘in

The aorist imperative has different endings for mono- and polysyllabic aorist stems in the singular. For polysyllabic stems, the aorist active imperative is formed through loss of the final consonant of the stem. For monosyllabic stems the endings are as follows:

(18) Aorist imperative

	Active	*Passive*
2nd sg.	tes	tes-ir
2nd plural	tes-êk‘	tes-arowk‘

4.5 Nonfinite verbal formations

All Armenian verbs can form a verbal noun, traditionally termed the infinitive, through the addition of *-l* to the present stem, with the slight complication that verbs in the *-im* conjugation have an infinitive in *-el*. The infinitive is not marked for aspect or voice, and it behaves like a noun in that it declines (as an *o*-stem), can be marked by an article and by

dependent genitives, and is governed by prepositions. As the complement after verbs the infinitive never receives a definite article or defining genitive.

All Armenian verbs are also capable of forming a past participle, usually by the addition of the suffix *-eal* to the aorist stem; in one class of verbs, those with present *-em*/*-im*, aorist *-ecʻi*/*-ecʻay*, the past participle can be optionally formed from the present stem. The past participle is also unmarked for voice. The subject of the participle frequently stands in the genitive case when it has a transitive meaning.

Other suffixes also attach to the present or aorist stem to form verbal adjectives. The most closely integrated into the verbal system is the so-called future-participle formed with a suffix *-ocʻ* added directly to the present infinitive. These forms are always found as predicates with the copula verb to denote immediacy, necessity, or obligation; they are not marked for voice. The suffix *-i* is also added directly on the infinitive to form passive adjectives, such as *sireli* "lovable" from *sirel* "to love."

Two other "quasi-participial" forms should be mentioned:

1. The first is an *a*-stem construction in *-oł*/*-awł* (both spellings are found in the earliest manuscripts), formed from either present or aorist stem: both *tesan-oł* and *tes-oł* "see-ing" are found in early texts.
2. The second is an *o*-stem formation in *-own*, built from the present stem.
   These forms are predictable in meaning and used with the same syntactic constructions as the verbs from which they are derived, but neither is freely productive.

4.6 Derivational morphology

Armenian mainly forms derived verbs and nouns through suffixation. There are a large number of different suffixes, many highly productive in Classical Armenian with largely predictable meanings. Nouns can be derived from nouns, verbs, or indeed whole syntagms (see §4.1 and the example of [6]). For most nouns the nominative singular also serves as the stem to which suffixes are attached; for deverbative formations the aorist stem of the verb is usually used. Some suffixed forms may themselves serve as a base for further suffixation, with the consequence that a single lexical root may have a large number of derivatives.

Some examples of Armenian patterns of nominal suffixation can be shown from the following derivatives of *gorc* "work, action, manufacture," found in fifth-century Armenian (compounds have been excluded):

1. *gorcawor* "workman, anyone who works," formed with the suffix *-awor* which forms nouns denoting occupation or profession. From this is further built *gorcaworowtʻiwn* "work (in the abstract), labor" with the extremely common abstract noun suffix *-owtʻiwn*.
2. *gorci* "tool," formed with the suffix *-i* which is sometimes used, as here, to denote an instrument. A derivative of *gorci* can be made by the adjectival suffix *-akan*, yielding *gorciakan* "instrumental."

There are also a number of highly productive derivational suffixes used to form verbs. Extremely common is the suffix used to form causatives: present *-owcʻane-*, aorist *-owcʻ-* (third singular *-oycʻ*, aorist imperative *-o*), added to the aorist stem of the verb: thus, *dar̄nam* "I turn (intr.)," aorist *darjay* gives *darjowcʻanem* "I turn (tr.)."

4.7 Compounds

Compounding is a productive process of word formation in Classical Armenian (see Meillet 1913b = 1962:159–184 for the best survey); indeed, many of the derivational suffixes of

Armenian (for example, *-awor* mentioned above) evolve from generalized compound forms. For all compounds the head of the compound occurs as the second member. The first member of a compound, if a noun or adjective, normally stands in the stem-form which, for most items, is identical with the nominative singular. When the second element of a compound does not begin with a vowel, the productive pattern is to insert a liaison vowel *-a-* between the two members of the compound. However, a number of compounds are formed without the liaison vowel *-a-*, and in derivatives of compounds the liaison vowel is often dropped. The principal productive types of compounding found in Armenian are the following:

1. Exocentric compounds of the type *modifier* + *head noun*: *mec* "big" + *town* "house" > *mecatown* "rich"; *an-* "without-" + *mit(k‘)* (*a*-stem) "mind" > *anmit* "mad, senseless." Exocentric compounds frequently follow the same declension class as their head noun, but many are declined as *i*-stems: in the Bible translation *anmit* is found declined both as an *i*-stem and as an *a*-stem.
2. Endocentric compounds of the type *modifier* + *head noun*: *aysawr* "today," from *ays* "this" and *awr* "day." This type of compound is of limited productivity in fifth-century Armenian.
3. Governing compounds, with a verbal element as the second member. This type is highly productive in Armenian. As examples, consider: *jowkn* "fish" + *orsam* "I hunt" > *jknors* "fisher" (*a*-stem); *andam* "limb" + *lowcanem* "I loose" (aorist *lowci*, third singular *eloyc*) > *andamaloyc* "paralytic, having been loosed as to the limbs." This second example shows a compound which appears to be exocentric with the first element as its head: "having loosened limbs."
4. There are a small number of copulative compounds in Armenian; usually these show the conjunction *ew* between the two elements: *ert‘ewek* (*a*-stem) "coming and going," derived from the stems of *ert‘am* "I come" and *eki* suppletive aorist of *gam* "I go."
5. A productive means of forming words with intensive or distributive meanings is through reduplication of the same lexical element, sometimes with associated vowel or consonant changes (see Leroy 1986 for full survey): *mecamec* "very big" (*mec* "big"); *dasadas* "in divisions" (*das* "division"); *kerakowr* "food" (suppletive aorist *ker-ay* "I ate"); *ałxamałx* "diverse goods for sale" (*ałx* "box, baggage").

4.8 Numerals

The numeral system of Armenian is decimal. The numbers 1–16 and the decads, hundreds and 1,000 and 10,000 are expressed by single lexical items; other numbers are formed through juxtaposition and combination using *ew* "and." Suffixed forms of the cardinal numbers are used to express ordinal, collective, multiplicative, and iterative numerals. The numbers 1–4 are inflected in all cases, but higher numbers rarely show inflection in early texts. Some of the lower numerals follow as examples: *mi* "1," *erkow* "2," *erek‘* "3," *č‘ork‘* "4," *hing* "5," *vec‘* "6," *ewt‘n* "7," *owt‘* "8," *inn* "9," *tasn* "10," *k‘san* "20," *k‘san ew inn* "29."

5. SYNTAX

There is only space here to sketch out a few of the more remarkable features of Armenian syntax; some topics of relevance, such as the role of aspect in the verbal system, have already been discussed. Other topics, such as the syntax of coordinate and subordinate clauses, will

be omitted from what follows since the syntactic elements are largely familiar from other Indo-European languages; thus Armenian uses particles to introduce subordinate clauses which have an internal stucture similar to that of main clauses.

5.1 Word order

In Classical Armenian, word order has mostly a pragmatic, rather than syntactic, function. Modern Armenian is a fairly rigorous head-final language, but the earlier language had different preferred orders depending on the nature of the syntactic constituent. Armenian has prepositions, rather than postpositions; in noun phrases the unmarked order is *adjective – head noun*, but *head noun – dependent genitive*. Armenian prose exhibits great variety in the position of the verb in the sentence, with verb-initial placement particularly frequent in historical narrative.

5.2 Concord

The rules for concord in Classical Armenian are not straightforward, particularly for noun phrases. Modern Armenian has moved away from the Indo-European pattern, in which all constituents in a noun phrase are marked for concord or dependence, towards a system in which there is only one marker for the whole phrase. The earlier language appears to stand halfway between the two types. Adjectives sometimes agree with their head nouns, but sometimes they do not. Meillet (1900 = 1962:39–55) worked out the following general tendencies:

(19) A. adjectives following their head noun show concord
B. monosyllabic adjectives preceding their head noun show concord unless the noun is nominative or accusative-locative plural

As Meillet noted, these rules do not always apply, and sometimes adjective and noun show partial concord: they are both in the same case, but the adjective is singular and the noun is plural, for example, Mark 5:42:

(20) *ew* *zarmacʻan* *mecaw* *zarmanaleawkʻ*
and amaze.AOR.PASS.3RDPL. great.INSTR.SG. amazement.INSTR.PL.
"and they were amazed with great amazement"

Clearly this could also explain the lack of concord between adjectives and nouns in the nominative and accusative plural, since the nominative-accusative singular is zero-marked.

Noun phrases involving numerals also follow a peculiar pattern of concord. When joined with one of the inflected numerals, 2 to 4, head nouns are marked as plural. With a higher numeral, head nouns are mostly only marked as plural nominative or accusative if they precede the numeral. When they follow the head noun they are marked as singular, and sometimes a following verb is inflected as singular not plural, for example, Luke 8:2:

(21) *ewtʻn* *dew=n* *eleal* *êr*
seven devil.NOM.SG.=ART. leave.PAST.PART. be.IMPF.3RDSG.
"the seven devils had left"

The marking of nominal dependents in noun phrases also shows divergence from the Indo-European type. A sporadic feature observable in some Armenian texts (most frequently the early historical writers) but avoided in others (e.g., the Gospel versions) is case attraction, whereby all constituents of a noun phrase, including adnominal dependents, are attracted

into the same case as the head noun (see Hübschmann 1906:478–480 = 1976:434–436, and Vogt 1932 = 1988:25–49). For example, at Genesis 6:7 many Armenian manuscripts read

(22) *y=eresac‘* *erkrê*
from=face.ABL.PL. earth.ABL.SG. (*eresk‘* “face” is *plurale tantum*)

to render Greek ἀπὸ προσώπου τῆς γῆς “from the face of the earth,” rather than the “expected” (in terms of Indo-European syntax) construction:

(23) **y=eresac‘* *erkri*
*from=face.ABL.PL. earth.GEN.SG.

This “case attraction” is most frequent when the head noun stands in the ablative or instrumental, although there are also examples where the head noun is in the locative. The case into which the adnominal dependent is attracted is always unambiguous.

5.3 Case usage

Case usage in Classical Armenian is broadly similar to that found in other older Indo-European languages, but there are a few important areas of divergence. Except for a few fossilized phrases, cases only have local functions in conjunction with prepositions. Some grammatical functions are also marked by prepositions: the use of the ablative with the preposition *i* (prevocalic *y-*) “from” as the case of the agent after passive verbs is not surprising, but a more interesting phenomenon is the use of the preposition *z-* to mark the accusative. When a noun or pronoun in the accusative is definite, the preposition *z-* precedes the noun, but indefinite items are not so marked. For example:

(24) *etes* *kin*
see.AOR.3RD SG. woman.ACC.SG.
“he saw a woman”

but

(25) *etes* *z=kin=n*
see.AOR.3RDSG. PREP.=woman.ACC.SG.=ART.
“he saw the woman”

5.4 Cliticized articles

Armenian marks definiteness with three clitic particles *-s*, *-d*, *-n*, termed articles, which are unmarked for case, number, or gender, but which are marked for proximity, correlating with the deictic pronouns *ays* “this (near speaker),” *ayd* “that (near addressee),” and *ayn* “that” (see Jungmann 1964 and 1965). In early Armenian texts these articles frequently have a weak deictic force, for example, Mark 13:1,

(26) *tes,* *orpisi* *en* *k‘arink‘=s*
see.AOR.IMPV. what-sort be.PRES.3RDPL. stone.NOM.PL.=ART.
“Look, how wonderful the(se) stones are!”

but they are used also without any perceivable deictic force, for example, Mark 14:38:

(27) *ogi=s* *yawžar* *ê* *bayc‘* *marmin=s* *tkar* *ê*
spirit=ART. willing be.PRES.3RDSG. but body=ART. weak be.PRES.3RDSG.
“the spirit is willing but the flesh is weak”

Relative phrases have a syntax similar to that of noun phrases, even to the extent that an entire relative phrase can be marked with an article, which is attached to the first accented word in the relative phrase, whatever part of speech it is, for example, Mark 14:65:

(28) *ov* *ê* *ayn* *or* *ehar=n* *z=kʻez?*
who be.PRES.3RDSG. that.NOM.SG. who hit.AOR.3RDSG.=ART. PREP=you.ACC.
"Who is the one that hit you?"

5.5 Syntax of the past participle

A peculiar and much discussed aspect of Armenian syntax is the construction used with the past participle and the periphrastic perfect, formed from the combination of the past participle and copula. For intransitive verbs, or the passive of transitive verbs, the subject of the participle is usually in the nominative, and the copula agrees in number with the subject, for example, Matthew 4:24:

(29) *or* *neɫeal* *ein*
who afflict.PAST.PART. be.IMPF.3RDPL.
"(those) who had been afflicted"

However, the construction with transitive verbs is highly unusual. The logical object is in the accusative case, but the logical subject is placed in the genitive case; in the periphrastic perfect the copula always takes the third-person singular form, for example, Matthew 6:8:

(30) *minčʻew* *jer* *xndreal* *inčʻ* *icʻê*
before you.GEN.PL. [seek.PAST.PART] [anything.ACC.] [be.SUBJUNC.3RDSG.]
i *nmanê*
from he.ABL.SG.
"before you seek anything from him"

When a participle phrase precedes a different main verb the subject of the participle remains in the genitive, even if it is the subject of the main verb of the sentence, for example, Matthew 9:2:

(31) *ew* *teseal* *yisowsi* *z=hawats* *nocʻa* *asê . . .*
and see.PAST.PART. Jesus.GEN.SG. PREP.=faith.ACC.PL. he.GEN.PL. say.PRES.3RDSG.
"And Jesus seeing their faith said . . . "

6. LEXICON

The lexicon of Classical Armenian has a number of different components. Only a small proportion of the lexicon is inherited directly from Proto-Indo-European. This includes a number of basic vocabulary items: the lower numerals (the word for "100" *hariwr* is not Indo-European, but its source is not clear); many of the terms for kinship relations; body parts; livestock; adjectives denoting physical properties; verbs denoting common human activities or experiences. A few noteworthy shifts of meaning have taken place: PIE **ekʷo-* "horse" > Armenian *êš* "donkey"; PIE **gʷeh₂-* "step, go" > Armenian *kam* "stand," PIE **h₂nēbʰ-* "boss, hub" > Armenian *aniw* "wheel."

There are a very large number of Iranian loanwords in Armenian, over a thousand separate lexical items not counting derivatives or compounded forms. The Iranian influence on the Armenian language is comparable to the influence of Norman French and Latin on English.

In Armenian, not only is the larger part of vocabulary of administration, military life, and religion borrowed from Iranian, but also adjectives and prepositions and a number of adjectival, adverbial, and nominal suffixes. Even phrasal combinations of noun and verb are calqued from Iranian. The loans can be divided into two different strata: (i) during the Parthian period (*c.* 200 BC to AD 400), cultural and political contacts between the Armenians and Iranians were closest, and there was a large influx of words from Parthian including common terms such as *mah* "death," *ašxarh* "land," *šat* "very," *seaw* "black" and *spitak* "white"; (ii) in the later Sasanian period, contact was much less close and loanwords from this period are not well integrated into the Armenian lexicon.

With the advent of Christianity, more loanwords entered the language, principally from Greek and Syriac, resulting from increased contact with fellow Christians and the use of the Greek and Syriac Bibles in the early Armenian Church.

Although a large portion of the Armenian vocabulary can be traced to its Indo-European, Iranian, Greek or Syriac origin, much remains obscure, for example, the words *sag* "goose," *zokʿanč*ʿ "mother-in-law" and *glowx* "head."

Bibliography

Introduction, grammars and collections of articles

Ajello, R. 1997. "Armenian." In A. Giacalone Ramat and P. Ramat (eds.), *The Indo-European Languages*, pp. 197–227. New York: Routledge.

Clackson, J. 1994. *The Linguistic Relationship between Armenian and Greek*. Oxford: Blackwell.

de Lamberterie, C. 1992. "Introduction à l'arménien classique." *LALIES* 10:234–289.

Djahukian, G. B. 1986. "Introduction." In J. A. C. Greppin and A. A. Khachaturian (eds.), *A Handbook of Armenian Dialectology*. Delmar, NY: Caravan Books.

Godel, R. 1975. *An Introduction to the Study of Classical Armenian*. Wiesbaden: Dr. Ludwig Reichert.

Hübschmann, H. 1875. "Ueber die Stellung des Armenischen im Kreise der indogermanischen Sprachen." *Zeitschrift für vergleichende Sprachforschung* 23:5–49.

_____. 1976. *Kleine Schriften zum Armenischen*. Edited by R. Schmitt. Hildersheim: Olms.

Jensen, H. 1959. *Altarmenische Grammatik*. Heidelberg: Carl Winter.

Meillet, A. 1913a. *Altarmenisches Elementarbuch*. Heidelberg: Carl Winter.

_____. 1962. *Études de linguistique et de philologie arméniennes I: Recherches sur la syntaxe comparée de l'arménien, suivies de la composition en arménien*. Lisboa: Librairie Bertrand.

_____. 1977. *Études de linguistique et de philologie arméniennes II*. Louvain-la-Neuve: Orientaliste.

Renoux, C. 1993. "Langue et littérature arméniennes." In M. Albert, R. Beylot, René-G. Coquin, *et al.* (eds.), *Christianismes orientaux. Introduction à l'étude des langues et des littératures*, pp. 107–166. Paris: Editions du Cerf.

Schmitt, R. 1981. *Grammatik des Klassisch-Armenischen mit sprachvergleichenden Erläuterungen*. Innsbruck: Institut für Sprachwissenschaft der Universität.

Solta, G. R. 1963. "Die Armenische Sprache." In G. Deeters (ed.), [*Armenisch und kaukasische Sprachen.*] Handbuch der Orientalistik I/VII. Leiden: Brill.

Tumanjan, E. G. 1971. *Drevnearmjanskij jazyk*. Moscow: Nauka.

Vogt, H. 1988. *Linguistique caucasienne et arménienne*. Studia Caucasologica II. Edited by E. Hovdhaugen and F. Thordarson. Oslo: Norwegian University Press.

Script

Russell, J. R. 1994. "On the origins and invention of the Armenian script." *Le Muséon* 107:317–333.

Sanjian, A. K. 1996. "The Armenian alphabet." In P. T. Daniels and W. Bright (eds.), *The World's Writing Systems*, pp. 356–363. New York/Oxford: Oxford University Press.

Schmitt, R. 1972. "Empfehlungen zur Transliteration der armenischen Schrift." *Zeitschrift für vergleichende Sprachforschung* 86:296–306.

Phonology

Feydit, F. 1982. *Considérations sur l'alphabet de Saint Mesrop et recherches sur la phonétique de l'arménien* (2nd edition). Vienna: Mechitharisten.
Jensen, H. 1957. "Die altarmenische Aussprache der Buchstaben *kh ph th*." In J. Irmscher (ed.), *Aus der byzantinischen Arbeit der Deutschen Demokratischen Republik*, vol. I, pp. 27–38. Berlin: Akademie-Verlag.
Vaux, B. 1998. *The Phonology of Armenian*. Oxford: Oxford University Press.
Vogt, H. 1958. "Les occlusives de l'arménien." *Norsk Tidsskrift for Sprogvidenskap* 18:143–161.

Morphology

Connolly, M. J. 1972. "A descriptive normalisation of the Classical Armenian nominal system." *Revue des Études Arméniennes* NS 9:1–45.
Klingenschmitt, G. 1982. *Das altarmenische Verbum*. Wiesbaden: Dr. Ludwig Reichert.
Leroy, M. 1986. "Le redoublement comme procédé de formation nominal en arménien classique." In M. Leroy and F. Mawet (eds.), *La place de l'arménien dans les langues indo-européennes*, pp. 62–75. Louvain-la-Neuve: Peeters.
Meillet, A. 1909. "Recherches sur la syntaxe comparée de l'arménien. IV. Emploi des formes personelles des verbes." *Mémoires de la Société de la Linguistique de Paris* 16:92–131.
_____. 1913b. "De la composition en arménien." *Mémoires de la Société de la Linguistique de Paris* 18:245–270.
Olsen, Birgit Anette. 1999. *The Noun in Biblical Armenian*. Berlin/New York: Mouton de Gruyter.
Stempel, R. 1983. *Die infiniten Verbalformen des Armenischen*. Frankfurt am Main/Bern/New York: Peter Lang.
Vogt, H. 1930. "Les deux thèmes verbaux de l'arménien classique." *Norsk Tidsskrift for Sprogvidenskap* 4:129–145.

Syntax

De Lamberterie, C. 1997. "L'article dans la relative en arménien classique." In E. Crespo and J. L. Garcie Ramon (eds.), *Berthold Delbrück y la sintaxis indoeuropea hoy: Actas del Coloquio de la Indogermanische Gesellschaft, Madrid, 21–24 de septiembre de 1994*, pp. 311–326. Madrid: Ediciones de la Universidad Autónoma de Madrid; Wiesbaden: Dr. Ludwig Reichert.
Hübschmann, H. 1906. "Armeniaca." *Indogermanische Forschungen* 19:457–480.
Jungmann, P. 1964. "L'emploi de l'article défini avec le substantif en arménien classique." *Revue des Études Arméniennes* NS 1:47–99.
_____. 1965. "L'emploi de l'article défini avec le substantif en arménien classique (suit et fin)." *Revue des Études Arméniennes* NS 2:43–116.
Klein, J. S. 1996. *On Personal Deixis in Classical Armenian: A Study of the Syntax and Semantics of the n-, s-, and d- Demonstratives in Manuscripts E and M of the Old Armenian Gospels*. Dettelbach: Röll.
Lyonnet, S. 1933. *Le parfait en arménien classique*. Paris: Champion.
Meillet, A. 1898. "Recherches sur la syntaxe comparée de l'arménien. I. les dèmonstratifs." *Mémoires de la Société de la Linguistique de Paris* 10:241–273.
_____. 1900. "Recherches sur la syntaxe comparée de l'arménien. II. Les règles d'accord de l'adjectif." *Mémoires de la Société de la Linguistique de Paris* 11:369–389.
Ouzounian, A. 1992. *Le discours rapporté en arménien classique*. Louvain-la-Neuve: Peeters.
Vogt, H. 1932. "Les groupes nominaux en arménien et en géorgien ancien." *Norsk Tielsskrift for Sprogvidenskap* 5:57–81.
_____. 1937. "Les formes nominales du verbe arménien. Étude sur la syntaxe de l'arménien classique." *Norsk Tidsskrift for Sprogvidenskap* 8:5–70.

Dictionaries and lexical studies

Ačaŕyan, H. 1971–1979. *Hayeren armatakan baŕaran* (2nd edition, 4 vols.). Erevan: University Press.

Awetik'ean, G., X. Siwrmêlean, and M. Awgerean. 1836–1837. *Nor baṙgirk' haykazean lezowi* (2 vols.). Venice: St. Lazar. Reprint 1990, Osnabrück: Biblio.

Hübschmann, H. 1895–1897. *Armenische Grammatik. I Teil: Armenische Etymologie.* Leipzig: Breitkopf and Härtel.

Jungmann, P. and Jos. J. S. Weitenberg. 1993. *A Reverse Analytical Dictionary of Classical Armenian.* Berlin/New York: Mouton de Gruyter.

Künzle, B. O. 1984. *Das altarmenische Evangelium/L'Évangile arménien ancien* (2 vols.). Bern: Peter Lang.

Solta, G. R. 1960. *Die Stellung des Armenischen im Kreise der indogermanischen Sprachen.* Vienna: Mechitharisten.

CHAPTER 12

Early Georgian

KEVIN TUITE

1. HISTORICAL AND CULTURAL CONTEXTS

Georgian is a member of the Kartvelian family, one of the three indigenous Caucasian language families. Its sister languages are Mingrelian and Laz, two closely related languages spoken in western Georgia and northeast Turkey, and Svan, spoken in the highlands of northwest Georgia. There has been much speculation about the relation of Kartvelian to other language families. Typological similarities with Indo-European and Afro-Asiatic and an impressive number of vocabulary items which appear to be shared with these families have led some linguists to include Kartvelian as a peripheral member of the so-called Nostratic macrofamily, a phyletic grouping encompassing many of the principal Eurasiatic language groups. Even if the Nostratic hypothesis is not correct, the Kartvelian languages show the imprint of long-standing contact with Indo-European and Semitic speech communities, going back four thousand years or more. Most specialists locate the Proto-Kartvelian speech community either in or somewhat to the south of modern-day Georgia.

Ancient Near Eastern documents as early as the twelfth–eleventh centuries BC mention tribal groups which are likely to have included Proto-Georgian speakers. The first clear indications of Georgian political entities date from the seventh–sixth centuries BC, by which time Greek colonies are installed in Colchis, on the east coast of the Black Sea, and much of Transcaucasia and Asia Minor is under Persian domination. The two major early Georgian kingdoms – Colchis in the west and Iberia in the east – began to consolidate at this time.

During this period the Aramaic language, the lingua franca of the far-flung Persian Empire, was adopted as a medium for written communication in Georgia, as attested in inscriptions in the period preceding the introduction of Christianity. The adoption of Georgian as a written language is usually seen as a consequence of the conversion of the elite to Christianity in the middle of the fourth century.

The oldest Georgian monuments are written in well-formed letters, and the *karagmebi,* abbreviations of common words and sacred names, show considerable uniformity from the earliest texts onward: for example, **o͡o** (*oüpalo* "Lord"), **š͡e** (*šeic'q'ale* "have mercy [on somebody]!"). It is evident that the new literary language built upon an already well-established cultural infrastructure, appropriating the functions, conventions, and status of both the written language of pagan Georgia (Aramaic) and the new state religion (Greek, Armenian, and Syriac).

For the purposes of this chapter, we will employ the following periodization of the Georgian literary language:

(1)

Early Old Georgian (EG):	5th–8th centuries
Classical Old Georgian (COG)	9th–11th centuries
Middle Georgian:	12th–18th centuries
Modern Georgian (ModG):	18th–20th centuries

The Early Old Georgian corpus contains eight manuscript texts (all but one of them palimpsests) and about a dozen inscriptions; altogether, it would fill a book of little over two hundred pages. Two dialects are represented in these materials, known to scholars as *Xanmet'i* "superfluous *x*'s" and *Haemet'i* "superfluous *h*'s." The first term was coined by the tenth-century translator Giorgi Mtac'mideli, and reflects the most salient feature of these texts from the perspective of a Classical Old Georgian speaker: a second-person subject (S2) and third-person object (O3) prefix *x-*, where the Classical language has *h-*, *s-*, or zero. The two Haemet'i texts make consistent use of *h-* in these contexts. Consider the first words of Matthew 17:4 in three early translations (on the agglutinative morphology of the verb, see §§4.3; 4.3.3, for a list of abbreviations specific to this chapter, see §6):

(2)

Xanmet'i (*c.* 500)	mi=**x**-u-g-o p'et're da **x**-rkw-a iesu-s
Haemet'i (*c.* 750)	mi=**h**-u-g-o p'et're da **h**-rkw-a iesu-s
Hadish (897) (COG)	mi=**Ø**-u-g-o p'et're da **h**-rkw-a iesu-s
	(Pv-**O3**-ObVn-answer-S3sg. Peter and **O3**-say-S3sg. Jesus-DAT.)
	"Peter answered and said to Jesus"

The retention of two verb forms with S2 *x-* in all known varieties of Georgian implies that the Xanmet'i dialect is especially conservative in this respect. Most Xanmet'i texts come from eastern Georgia, and the single Haemet'i inscription is in the west. While the two dialects doubtless derive from distinct varieties of spoken Georgian, this by no means implies that they corresponded closely to the Georgian spoken by the individual scribes who produced the documents in our corpus. There is evidence of diglossia as early as the Cambridge fragments of Jeremiah, *c.* AD 600. In what is otherwise a solidly Xanmet'i text, three verbs have O3 prefixes in *h-* rather than *x-*, a *lapsus calami* indicative of a Haemet'i-speaking monk copying from a Xanmet'i original. The only extended Haemet'i text, the eighth-century lectionary fragments, appears to have been composed by a grammatically unsophisticated scribe who already spoke a dialect similar to Classical Old Georgian, to judge by the extremely high error ratio: the *h*-prefix is missing in fully 36 percent of the verbs where it ought to appear (see Sarjveladze 1971:18).

2. WRITING SYSTEM

The Early Old Georgian documents are written in the alphabetic script known as *mrglovani* ("rounded") or *asomtavruli* ("capital letters"), the oldest of the three Georgian scripts. Asomtavruli writing was used throughout the Old Georgian period, but with formal changes which enable paleographers to arrive at an approximate dating of manuscripts almost at first glance. In the earliest manuscripts and inscriptions the letters are well-rounded and wider than those in later documents, and the top part of the letters *b*, *q'*, and *u* forms a closed loop.

Table 12.1 The Early Georgian Asomtavruli script with numerical values

Character	Transcription	Numerical value	Character	Transcription	Numerical value
Ⴀ	a	1	Ⴠ	r	100
Ⴁ	b	2	Ⴡ	s	200
Ⴂ	g	3	Ⴢ	t’	300
Ⴃ	d	4	Ⴣ	ü	400
Ⴄ	e	5	Ⴤ	p	500
Ⴅ	v	6	Ⴥ	k	600
Ⴆ	z	7	⴦	ɣ	700
Ⴇ	ê(ey)	8	Ⴧ	q’	800
Ⴈ	t	9	⴨	š	900
Ⴉ	i	10	⴩	č	1,000
Ⴊ	k’	20	⴪	c	2,000
Ⴋ	l	30	Ⴜ	j	3,000
Ⴌ	m	40	Ⴝ	c’	4,000
Ⴍ	n	50	Ⴞ	č’	5,000
Ⴎ	y	60	Ⴟ	x	6,000
Ⴏ	o	70	Ⴠ	q	7,000
Ⴐ	p’	80	Ⴡ	ǰ	8,000
Ⴑ	ž	90	Ⴢ	h	9,000

The later Georgian scripts, known as *nusxa-xucuri* (“ecclesiastic minuscule”) and *mxedruli* (“knightly,” i.e., “secular”), evolved from the asomtavruli alphabet in the course of the Classical period.

In terms of its time of creation, relationship to the Greek alphabet, and general morphology, the Georgian asomtavruli script forms a group with the other two early Christian Transcaucasian alphabets: the Armenian and the Caucasian Albanian. All three incorporate the Greek letter order, but without the straightforward appropriation of Greek characters that marked the creation of most Greek-based alphabets. Except for a handful of cases, the letters of the Armenian and Georgian alphabets are either entirely new creations, or radical transformations of Greek characters. The creator (or creators) of the Georgian alphabet placed the additional characters needed for the phonemes lacking a Greek equivalent at the end, after *k*, the equivalent of Greek *chi* (*k*^{h}). Other Early Georgian grammatological features calqued on the Greek model include the creation of an equivalent to *eta* (it represents the diphthong /ey/), and the use of an *oü* digraph to represent the phonemes /u/ or /w/ (e.g., *čwen* “we, us,” spelled *čoüen* in Old Georgian).

Table 12.2 The Early Georgian consonants

	Stops and affricates			Fricatives		Nasals	Glides and Liquids
	Voiced	Aspirated	Ejective	Voiced	Voiceless		
(Bi-) Labial	b	p	p’	v	—	m	w
Dental	d	t	t’			n	
Alveolar	j [dz]	c [ts]	c’ [ts’]	z	s		r l
Palato-alveolar	ǰ[dʒ]	č[tʃ]	č’ [tʃ’]	ž[ʒ]	š [ʃ]		y [j]
Velar	g	k	k’				
Uvular	—	q	q’	ɣ [ʁ]	x [χ]		
Glottal					h		

3. PHONOLOGY

3.1 Phonemic inventory

As Caucasian languages go, Georgian has a fairly restrained phonemic inventory. The stops and affricates come in triplets (voiced, voiceless aspirated, and voiceless ejective, i.e., glottalized), and the fricatives in pairs (voiced and voiceless). There are five vowels, without any distinction of length: /a/, /e/, /i/, /o/, /u/. The consonants of Xanmet’i Georgian are listed in Table 12.2. The transcription used here is similar to those employed by most Caucasologists and Armenologists. (International Phonetic Alphabet equivalents are included in square brackets.)

3.2 Allophonic variation

The only allophonic alternations of note in Early Georgian are between [w] and [v], and between [i] and [y]. In general, [w] is employed immediately after obstruents and [v] in other contexts (e.g., in representations of the first-person subject prefix: ***v****-i-c-i* “I know something,” but *x-****w****-e-ji-eb* “I seek something”). The glide [y] only appears as the nonsyllabic alternant of [i] after vowels, when the latter is the initial phoneme of a case suffix.

3.3 Phonotaxis

Although Early Georgian words can contain daunting sequences of consonants, for example, *msxwerp’l-* “victim,” *xtnda* “(s)he liked it,” the structure of lexemes is constrained by phonotactic rules. Many groups of consonants represent so-called harmonic clusters, found in all Kartvelian languages. These consist of an anterior stop, affricate, or fricative followed by a posterior (velar or uvular) consonant, other than /q/, sharing the same voice-onset features; some examples are: ***j****ɣola-* “leading,” ***c’q’****al-* “water,” ***sx****wa-* “other.” A harmonic cluster functions phonotactically as a single consonant. There is also a class of “nonharmonic clusters,” which are the mirror image of harmonic groups: back consonants precede front, and the voice-onset features are different, for example, ***k’ b****il-* “tooth,” ***č’d****e-* “notch.” Sonorants, especially /m/ and /r/, can precede or follow consonants or clusters within the same lexemes.

Table 12.3 Declension of mojγw[a]r – "leader"

		Long		
	Short	Singular	n-/t-plural	eb-plural
ABS.	mojγwar-Ø	mojγwar-i	mojγwar-n-i	mojγwr-eb-i
ERG.	mojγwar-man	mojγwar-man	mojγwar-t-a	mojγwr-eb-man
DAT.	mojγwar-s	mojγwar-s-a	mojγwar-t-a	mojγwr-eb-s-a
GEN.	mojγwr-is	mojγwr-is-a	mojγwar-t-a	mojγwr-eb-is-a
INSTR.	mojγwr-it	mojγwr-it-a	(mojγwr-it-a)	mojγwr-eb-it-a
ADV.	mojγwr-ad	mojγwr-ad	(mojγwr-ad)	mojγwr-eb-ad
VOC.	—	mojγwar-o	mojγwar-n-o	mojγwr-eb-o

4. MORPHOLOGY

4.1 Word structure

The typical Kartvelian nominal root is monosyllabic, with the most common shape being XVX or XV (where X = a single consonant or cluster, optionally preceded and/or followed by sonorants; see §3.3): for example, *mc'q'ems-* "shepherd," *qorc-* "flesh," *t'ba-* "lake." Verbal roots can be either monosyllabic or nonsyllabic, some of the latter comprising no more than a single consonant: *-k'rjal-* "forbid," *-c'q'-* "begin," *-γ-* "receive." Vowel-initial roots are less common, and tend to be limited to deictics and pronouns, numerals, and words of foreign origin.

4.2 Nominal morphology

The Early Georgian common noun is declined for seven cases (absolutive, ergative, dative, genitive, instrumental, adverbial, and vocative) and two numbers (singular and plural). Many noun stems, in particular those with a final syllable containing the vowels /a/ or /e/ followed by an approximant (e.g., *mojγwar-*), undergo syncope of the vowel when the stem is followed by a declensional morpheme of the configuration -VC- (e.g., *mojγwr-is*). Undoubtedly, at one time syncope was automatically conditioned by stress placement or perhaps vowel length; by the earliest texts, however, it was no longer predictable. The full declensional paradigm of a syncopating common noun is given here (on the short and long case forms, see §4.2.1.2).

The declension of vowel-final stems is slightly more complicated. As a general rule, the relative strength of vowels when two of them come into contact across a morpheme boundary follows the hierarchy: *o*, *u* > *i* > *e* > *a*. For example, a suffix beginning in /-i/ added to a stem ending in /a-/ or /e-/ will cause the latter to drop, whereas the same /-i/ will change to /-y/ when preceded by a stem-final /o-/ or /u-/: for example, *kw**a**+**i**s* > *kwis* "stone-GEN."; *xur**o**+**i**s* > *xuroys* "carpenter-GEN." The long absolutive suffix /-i/, however, always becomes /-y/ when added to a vowel-final noun (e.g., *kw**a**+**i*** > *kway* "stone-ABS."). When two vowels of the set /e/, /o/, /u/ meet, both are expressed without reduction or loss: *sarc'mun**o**+**o*** > *sarc'munoo* "faithful-VOC."

4.2.1 Nominal cases

In the present section each of the seven cases is discussed, as well as the long and short case form distinction

4.2.1.1 Absolutive and ergative cases

Early Georgian was a language of the split-ergative type, with ergative-absolutive alignment in certain circumstances, and nominative-accusative alignment in others. The Series II verb forms, marking perfective aspect, assign absolutive case to the subjects of intransitive verbs and the direct objects of transitive verbs. The ergative case is assigned to the subjects of transitive verbs. The imperfective Series I forms, by contrast, assign absolutive case to both transitive and intransitive subjects, and mark the direct object in the dative case.

4.2.1.2 Long and short case forms

The formal and functional distinction between the long and short forms of the cases has received extensive study. To summarize it briefly, the absolutive and ergative endings, and the vowel /-a/ added to the dative, genitive, and instrumental, derive from postposed demonstratives used as direct articles (as we shall see, this process occurred a second time in the history of Georgian). The attested distribution of short and long absolutive noun phrases reflects a no-longer productive indefinite/definite opposition in the nominal system. The principal uses of the bare-stem absolutive are in (i) predicate nominals (*tkwen xq'avt igi* ***kwab-Ø*** *avazak'ta* [Lk 19:46] "you made it **a den** of thieves"); (ii) naming constructions (*romelsa hrkwian* ***betlem-Ø*** [Lk 2:4] "which they call **Bethlehem**"); (iii) time and distance expressions, especially when quantified by numerals (*xiq'o mun* ***ormeoc-Ø dγe-Ø*** [Mk 1:13] "he was there **forty days**"); (iv) compound verbs incorporating a noun stem with generic reference (*nu* ***k'ac***=*k'lav* [Mk 10:19] "thou shalt not kill," literally: "thou shalt not **person**=kill").

4.2.1.3 Dative case

This case has the widest range of functions. It is assigned to indirect objects, and to the direct objects of Series I verbs. A large number of verbs, mostly statives and passives, assign dative case and indirect-object status to their subjects. As would be expected, these are primarily verbs of sensation (***ma-s*** *x-c'q'ur-i-s* "**(s)he-DAT**. is thirsty"), of emotion (***ma-s*** *x-u-q'war-s* "**(s)he-DAT**. loves somebody"), and of possession (***ma-s*** *x-u-c* "**(s)he-DAT**. has something"). The dative also appears in time and place expressions: ***ma-s žam-sa*** *xrkwa iesu* (Mk 3:3) "**At that time-DAT**. Jesus said"; *xiq'o igi* ***ierusalêm-s*** (Jn 2:23) "He was **in Jerusalem-DAT**."

4.2.1.4 Genitive case

The Early Georgian genitive signals a fairly broad range of relationships between nouns: possession, membership, kinship, substance, and so forth. The genitive optionally marks certain argument–verb dependencies when these are nominalized (*xicit* ***niČ̌-isa k'etil-isa*** *micemay* [Mt 7:11] "you know how to give good things," lit. "you know the giving **of good things**"), though nonfinite verbs can alternatively assign the same cases as their finite counterparts. The long-form genitive can also indicate motion toward a person, rather like Greek πρός + accusative (e.g., *movida* ***iesu-ysa*** [Mt 14:29] "he came **toward Jesus**"). The short genitive occurs in compounds (***mγdel-t*** *mojγwarni* [Mt 27:62] "chief priests," lit. "leaders **of the priests**"), and in certain adverbial expressions with a quantifier (*sam* ***gz-is*** [Mk 14:30] "three **times**").

4.2.1.5 Instrumental case

This case marks a wide range of instruments, means, or accessories (*šemosili* ***samosl-ita sp'et'ak'-ita*** [Mk 16:5] "dressed **in white garments**"). The short instrumental marks the place from which motion occurs, a usage which opposes it to the allative sense of the adverbial case: *iesu mosrul ars* ***huriast'an-it*** *galilea-d* (Jn 4:47) "Jesus has come **from Judea** (instr.) to Galilee (adv.)."

4.2.1.6 Adverbial case

In addition to the allative function mentioned immediately above, this case is employed to derive adverbial expressions from adjectives and nouns (*brc'q'invale-****d*** "splendid-**ly**"). The adverbial case of the verbal noun functions like an Indo-European infinitive (*ic'q'o* ***gamosxma-d*** *romelni xq'iddes t'redebsa* [Lk 19:45] "he began **to expel** those who were selling doves").

4.2.1.7 Vocative case

This case is believed to be of more recent origin than the other six. Titles and common nouns take the vocative in *-o*. Proper names are rarely used in direct address in the Early Georgian corpus, but when they are, they are in the bare-stem form (*c'inac'armet'q'wel-o* ***davit***, *gwitxar* [*Mrv.* 4.3] "Prophet (voc.) **David**, tell us . . . ").

4.2.2 Plural marking

Early Georgian has two structurally distinct means of marking nominal plurality. By far the most frequently used is the synthetic *n-/t-* plural declension. The *n*-rectus-plural suffix is limited to the absolutive and vocative, and may be historically related to the plural absolutive suffix of the verb (see §4.3.3 [**9**]). The single oblique plural morpheme *-t-(a)* can represent the dative, genitive, or ergative cases; the instrumental and adverbial do not appear to have had distinct plural forms in this declension (cf. the instrumental with plural reference in Mt 15:8: *eri ese* ***bag-ita mat-ita*** *p'at'iv mcems* "these people honor me **with their lip(s)**").

The agglutinative *eb-* plural suffix, followed by the case endings of the singular declension, appears only a couple of dozen times in the Early Georgian corpus, sometimes in conjunction with *n-/t-* plural nouns: *brm-****eb****-i da q'ruv-****n****-i* (Mt 15:30) "the blind (*eb*-plural) and the deaf (*n*-plural)." While there is no evidence of a semantic distinction between the two plural morphemes in Early Georgian, only *n*-plural nouns can control plural agreement in the verb and within the noun phrase, whereas *eb*-plurals are syntactically singular: *rabami kw-****eb****-i ars* "what large stones there are (lit. **is**)" (Mk 13:1).

4.2.3 Definite articles

In what appears to be a renewal of the prehistoric means of signaling this category, demonstrative pronouns placed after the first word of the noun phrase serve to indicate definiteness. Broadly speaking, the Early Georgian definite article functions similarly to its French and English counterparts. In the episode of the healing of the man with the withered hand (Mk 3:1–5), for example, the protagonist and his hand are first introduced through indefinite nouns: *da xiq'o mun* ***k'aci*** *romelsa* ***qeli*** *ganqmel xedga* (Mk 3:1) "And there was **a man** who had **a** withered **hand**." Further on in the story, when they are mentioned again, the definite articles are employed: *da xrkwa* ***k'acsa mas****: ganiratx qeli šeni . . . da k'walad moxego* ***qeli igi*** (Mk 3:5) "And he said **to the man**: Stick out your hand . . . and thereupon **the hand** was restored to him."

4.2.4 Pronouns

4.2.4.1 Personal pronouns and proper names

First- and second-person pronouns, the personal relative/interrogative pronoun *vi-n* "who," and proper names do not have a distinct ergative case form. In addition, the first- and second-person pronouns lack distinct dative and vocative forms as well, using the bare stem in these contexts:

(3)

	1st sg.	1st pl.	2nd sg.	2nd pl.	vin	*Proper names*
ABS./VOC./ ERG.	me	čwen	šen	tkwen	vi-n "who"	iesu "Jesus"
DAT.	me	čwen	šen	tkwen	vi-s	iesu-s
GEN.	čem-i	čwen-i	šen-i	tkwen-i	vi-s-(a)	iesu-ys-(a)
ADV.	čem-da	čwen-da	šen-da	tkwen-da	—	iesu-d
INSTR.	čem-it-(a)	čwen-it-(a)	šen-it-(a)	tkwen-it-(a)	—	iesu-yt

The genitive-case stem of the personal pronouns serves as a base for possessive adjectives: for example, *mama-man* ***tkwen****-man* (father-ERG. your$_{pl.}$-ERG.), *mam-isa* ***tkwen****-isa* (father-GEN. your$_{pl.}$-GEN.), etc. "your father."

4.2.4.2 Interrogative/indefinite pronouns

The principal interrogative pronouns are: *vi-* "who"; *romel-* "which"; *ra-* "what," and its derivatives *ra-ysa-twis* "why" and *ra-oden-* "how much / how many." These can be converted into indefinite pronouns by the addition of the suffix *-me*: *vi-n-me* "someone," *ra-y-me* "something," etc.

4.2.4.3 Relative pronoun

The relative pronoun *passe-partout* is *romel-*, which can have animate or inanimate antecedents. When the relative clause is necessary for the identification of the referent, *romel-* can be accompanied by a demonstrative, almost always *igi*, which does not decline in this context: *ara ese ars=a* ***romel-sa igi*** *xejiebdes mok'lvad?* (not that-ABS. is=QUES. **which-DAT. DEM.** they-were-seeking to.kill-ADV.; Jn 7:25) "Is this not **the one whom** they sought to kill?"

4.2.4.4 Demonstrative pronouns

The demonstrative pronouns come in three sets, with suppletive absolutive and non-absolutive (oblique) stems. They take the same case and number suffixes as common nouns, save for the archaic ergative singular ending *-n*.

(4)

	absolutive	oblique	meaning
I.	ese	ama-	"this"
II.	ege	maga-	"that" (associated with interlocutor)
III.	igi	ma-	"that" (remote); basic 3rd-person pronouns "she," "he," "it," "they"

All of these demonstratives double as definite articles. The set II demonstratives, although commonly encountered in conversation, are relatively rare in writing, and hence sparsely represented in the Early Georgian corpus. As would be expected for pronouns associated with the real or metaphoric locus of the interlocutor, they occur almost exclusively in reported speech. At the conclusion of a discussion, for example, Jesus is quoted as saying:

ara q'(ove)lta dait'ion sit'q'way ***ege*** (Mt 19:11) "Not everyone will accept **that** teaching" (i.e., the teaching which the interlocutors have just mentioned). The set III demonstratives are also the unmarked third-person pronouns, and as such have a far higher frequency of occurrence than the other two sets combined: ***ma-n*** *xrkwa* ***ma-s*** (Lk 15:27) "he-ERG. said to him-DAT."

4.3 Verbal morphology

The Early Georgian verb is morphologically more complex than the noun, but its generally agglutinative structure permits an analysis by *morpheme slots* and regularities of co-occurrence. In this section, the longest in the chapter, we will begin with an overview of (i) the three verb classes and (ii) the three paradigm series; then embark on a detailed examination of the morphology, slot by slot, followed by a presentation of the semantics of the tense-aspect-mood paradigms (the=sign is used in the glosses to segment cliticized or incorporated lexical elements, such as preverbs, clitic pronouns, and incorporated noun stems, from the internal morphology of the verb).

4.3.1 Verb classes

Georgian philologists divide the verbs of the classical language into three classes, also known as *voices* or *conjugations*, according to their morphology, semantics, and valence. The same tripartite division is employed here, with one minor change.

4.3.1.1 Transitive class

This class includes all verbs having Series II forms that assign ergative case to their subjects. Almost all of these verbs are in fact transitive, but a goodly number are either monovalent (*man imruša* [Lk 16:18] "he-ERG. committed adultery") or bivalent with an indirect object but no direct object (*man mas mixugo* "he-ERG. him-DAT. answered").

4.3.1.2 Intransitive class

The *intransitive class* includes both true passives, derived from transitive roots, and basic intransitives. There are four subgroups in this class:

1. *i-prefixal*: Such verbs are marked by the version vowel *-i-* (see §4.3.3 [**6**]) before the verb root (slot 6), preceded by a dummy third-person object prefix (see §4.3.3 [**4**]). Always monovalent, their only argument is a subject assigned absolutive case: *igi x-**i**-kmn-eb-i-s* (that:ABS. "O3"-PASS.-make-SM-TM-S3sg.) "something is being made, done."
2. *e-prefixal*: This subgroup is marked by the version vowel *-e-*, and comprises verbs that are almost always bivalent, with a subject assigned absolutive case and an indirect object assigned dative case: *igi mas x-**e**-kmn-eb-i-s* (that:ABS. that:DAT. O3-OBVN-make-SM-TM-S3sg.) "something is being made, done to/for somebody."
3. *suffixal*: These verbs are marked by the suffix *-n* or *-d*. Many of these verbs are inchoative, often derived from nouns or adjectives: *igi gan=jlier-**d**-eb-i-s* (that:ABS. Pv=strong-PASS.-SM-TM-S3sg.) "somebody becomes strong."
4. *root intransitive*: These verbs have no special marker and constitute a small, nonproductive, and archaic group: *igi še=k'rb-eb-i-s* (that:ABS. Pv=gather-SM-TM-S3sg.) "(group) gathers together."

Table 12.4 Early Georgian verb classes ("conjugations")

	Transitive class	Intransitive class	Atelic class
Semantic characteristics	Agentive, accomplishment verbs	Root intransitive, inchoative, passive	Atelic stative and activity verbs
Syntactic characteristics	Assign ERG. in Series II; inversion in Series III	Never assign ERG.	Simplest (archaic?) Series II forms do not assign ERG.
Range of verb forms	All 3 series	All 3 series	Typically Series I only; rare examples with periphrastic or "borrowed" Series II and III

4.3.1.3 Atelic verb class

The third class, which I have designated "atelic verbs," comprises verbs used to describe an ongoing state or activity, without a foregrounded beginning or end point. The atelic class includes statives (*-kw-*/*-kwn-* "have," *-ši-* "be hungry") and activity verbs (*-kadag-* "preach," *-γaγad-* "cry out"). One important morphological difference between these and verbs of the other two classes, consistent with their semantics, is the absence of an opposition between perfective and imperfective forms. Each verb selects a single past indicative and future/conjunctive paradigm, usually from Series I, less often from Series II (the term "conjunctive" [Georgian *k'avshirebiti*] is used by Georgian grammarians to denote a set of verb forms with subjunctive, optative, or future meaning):

(5)			
	present:	x-a-kw-s "somebody has something"	x-gon-i-es "somebody thinks something"
	past:	x-a-kwn-d-a [=imperfect]	x-e-gon-a [=aorist]
	future/conjunctive:	x-a-kwn-d-e-s [=impf. conjunctive]	x-e-gon-o-s [=optative]

4.3.2 Paradigm series

Georgian verb forms are traditionally grouped into paradigms marking a specific tense, mood, and aspect. The Early Georgian transitive or intransitive verb formed thirteen paradigms, as far as can be told from the corpus, of which one is sufficiently rare that its status as a productive form is questionable. The Georgian paradigms are grouped into three sets or *series*, based on their stem morphology and syntactic properties:

4.3.2.1 Series II ("aorist series")

These are the morphologically simplest verb forms, associated with perfective, more precisely, *punctiliar* aspect: in the structuring of the narrative, the event or state is represented as a closed-off point (opposed to the linear sense of the Series I paradigms). In some contexts the punctiliar aspect emphasizes the completion of the narrated event; in others its primary function is to mark the events forming the principal narrative line. The ergative case is only assigned by the Series II forms of transitive verbs.

4.3.2.2 Series I ("present series")

The Series I paradigms include a stem formant (*series marker*) which does not appear in the corresponding Series II forms. The two morphologically basic Series I paradigms mark the present indicative. The other four members of the series contain the stem augment

-d-/-od-/-id- and pair off with the Series II paradigms employing the same tense/mood vowels and person suffixes. The contrast is one of durative (or linear) aspect versus punctiliar; the Series I paradigms emphasize the duration of an event, either to imply noncompletion, or to set the temporal background for a foregrounded event marked by a Series II form. In prehistoric Kartvelian, the Series I paradigms were all intransitive, as reflected in their case-assigning properties (they cannot assign ergative case) and in their morphology (the series markers seem to be the relics of ancient antipassive suffixes).

4.3.2.3 Series III ("perfect series")

This is the most recent and formally most heterogeneous of the three series. In the Early Georgian period, only transitive verbs had synthetic Series III forms; intransitives formed their perfects analytically, as in Latin (*micemul ars = datum est*). The Early Georgian transitive and intransitive Series III forms are identical to the absolute (monovalent) and relative (bivalent) passives of state, and indeed the semantic distance between the passive and perfect functions of these forms is often not very large: the Series III paradigms are principally resultative in meaning, referring to a state of affairs proceeding from the completion of an earlier action.

(6)

	monovalent passive of state	*intransitive Series III*
c'eril ars	it is written (present)	it has been written (present perfect)
c'eril xiq'o	it was written (aorist)	it had been written (pluperfect)
	bivalent passive of state	*transitive Series III*
x-u-c'er-i-e-s	it is written to/for somebody (present)	somebody has written it (present perfect)
x-e-c'er-a	it was written to/for somebody (aorist)	somebody had written it (pluperfect)

One interesting syntactic feature of transitive Series III verbs is known as *inversion*: they assign dative case and indirect-object marking to their semantic subjects, and subject status to their direct objects. The case-shift phenomena associated with transitive verbs in Series I, II and III is illustrated in Table 12.5:

Table 12.5 Case shift

	Transitive construction			Intransitive construction		
	Subject	Direct object		Subject		
Series I:	**mama-y**	je-sa	x-p'ov-eb-s	je-y	x-i-p'ov-eb-i-s	
(nom.-acc.)	father-ABS.	son-DAT.	O3-find-SM-S3sg.	son-ABS.	O3-PASS.-find-SM-TM-S3sg.	
	"The father finds (his) son"			"The son is being found"		
Series II:	**mama-man**	je-y	p'ov-a	je-y	x-i-p'ov-a	
(erg.-abs.)	father-ERG.	son-ABS.	find-S3sg.	son-ABS.	O3-PASS.-find-S3sg.	
	"The father found (his) son"			"The son was found"		
Series III:	**mama-sa**	je-y	x-u-p'ovn-i-e-s	je-y	p'ovebul	ars
(dat.-abs.)	father-DAT.	son-ABS.	O3-OBVN-find-TM-TM-S3sg.	son-ABS.	found	is
	"The father has found (his) son"			"The son has been found"		

4.3.3 Composition of the verb

The Early Georgian verb can be analyzed as consisting of fourteen slots, which may or may not be filled with a morpheme in a given verb form: (i) six prefixal positions; (ii) the root; and (iii) seven suffixal positions:

(7) The fourteen slots of the Early Georgian verb

preverb$_1$-preverb$_2$=clitic$_3$=O$_4$-S$_5$-version$_6$-ROOT$_7$-causative/passive/inchoative$_8$-ABS.plural$_9$-series$_{10}$-imperfect$_{11}$-tense/mood$_{12}$-S$_{13}$=clitic$_{14}$

1. *Slot 1 – preverb with more or less predictable directional meaning*: The most common Early Georgian preverbs are: *mi-* "to, away"; *da-* "down"; *šta-* "down"; *aγ-* "up"; *gan-* "out"; *še-* "in"; *c'ar-* "away"; *garda-* "across, downward"; *uk'un-* "backwards."

2. *Slot 2 – preverb mo- ("hither")*: Indicates movement toward the source, or point of reference (usually, but not always, the locus of the speaker). The addition of *mo-* to a slot 1 preverb gives combinations such as ***še-mo***=*slva-y* "come in, enter [toward source]." The preverb *da-* can also follow certain preverbs, adding what appears to be a nuance of intensity or iteration, as in ***mi-mo-da***=*x-xed-v-id-a* (thither-hither-**da-**O3-look-SM-IMP.-S3sg.) "circumspectavit" (*PJ* 57). In Modern Georgian, preverbs have the additional function of signaling perfective aspect, as in the Slavic languages. Although this is not the case in Early Georgian, there is nonetheless a perceptible tendency for Series I verb forms to lack preverbs, while Series II forms generally have them. The preverbal slot of certain verbs can also be occupied by incorporated direct objects with generic reference: ***γaγad***=*q'-o* (**cry**=do-S3sg.) "he cried out."

3. *Slot 3 – preverbal clitic*: In Early Georgian, unlike the modern standard language, the bond between preverbs and verbs was sufficiently loose to permit the optional interposition of certain clitic particles, a phenomenon known as *tmesis*. The ten or so Early Georgian preverbal clitics form two semantic groups: (i) adverbials (*-re-* "a little"; *-oden-* "when"; *-ray-* "while, after") and (ii) indefinite pronominals (*-vietme-*, *-vinme-* "some [people]"; *-rayme-* "something"). Consider these examples: *še*=***oden***=*rižwneboda* (Jn 6:17) "**when** it was getting dark"; *mi*=***vietme***=*xuges mc'ignobarta ganta* (Mt 12:38) "**some** of the scribes addressed him."

4. *Slot 4 – morphological object prefix (Set O)*: The Set O person prefixes cross-reference, in the majority of contexts, an argument assigned the dative case. Given the complexity of Georgian case-assignment rules, this latter could be an indirect or direct object, or even the subject of an indirect or Series III transitive verb. First- and second-person absolutive direct objects also control Set O agreement. There are four Set O prefixes, forming a two-by-two array:

(8) Morphological object (Set O) markers

	− *hearer*	+ *hearer*
+ *speaker*	m- (1st singular or exclusive)	gw- (1st inclusive)
− *speaker*	x- (h-) (3rd person)	g- (2nd person)

What appears to be a dummy third-person object prefix (O3) is attested in all Early Georgian *i*-prefixal passives, even though these are monovalent in surface structure: *mi*=***x-i-***q'wan-a igi angeloz-ta-gan c'iaγ-ta abraham-is-ta* (to=**O3?**-PASS.-bear-S3sg. he:ABS. angel-GEN.PL.-by bosom-DAT.PL. Abraham-GEN.-DAT.PL.; Lk 16:22) "he was carried by angels to the bosom of Abraham." One possible explanation is that the *x*-prefix once marked agreement with the demoted deep-structure subject (e.g., "angels" in the above example).

5. *Slot 5 – morphological subject prefix (Set S)*: The Set S markers cross-reference the subjects of verbs with direct syntax, and the direct objects of verbs with indirect syntax. The prefixes indicate person only; number being marked by a suffix in slot 13:

(9) Morphological subject (Set S) markers

	singular (slot 5 or 13)	*plural (slot 5 and 13)*
1st person	v/w-	v/w- -t
2nd person	x- (h-)	x- (h-) -t
3rd person	-s, -a, -n	-n, -es, -ed

With one exception, the presence of a Set O prefix blocks the expression of the Set S prefix controlled by the morphological subject: for example, *šen me mo-**m**-c-e* (you me Pv=**O1excl**.-give-OPT.) "You$_{sg.}$ will give it to me." The exception is the combination of third-person object (O3) and first-person subject markers (S1), in which case both are expressed in surface structure: *me mas mi=**x-w**-c-e* (I this:DAT. Pv=**O3-S1**-give-OPT.) "I will give it to him/her." In later Old Georgian, the order of the person prefixes reverses, with the S1 marker preceding the O3 prefix.

6. *Slot 6 – version vowel*: The grammatical category of *version* (Georgian *kceva*) reflects, roughly speaking, the relation between the action or the absolutive argument (direct object of a transitive verb or subject of an intransitive verb), and either the agent or indirect object. There are four formally distinct version relations, though only a few verbs distinguish all four, and many lack the distinction entirely.

6A. *Subjective version*: This formant indicates an activity either done for the benefit of the agent him- or herself, or directed toward a direct object linked to (or even identical to) the subject. It is marked by the version vowel *-i-* in all persons (*sibrjne-man **i**-šên-a tavisa twisisa saxli* [*999* Proverbs 9:1] "Wisdom built a home **for itself**"). Possibly of the same origin is the marker *-i-* in monovalent prefixal passives, which occupies the version vowel slot.

6B. *Objective version*: This marker indicates the presence of an indirect object: for example, *aγ=x-**u**-dgin-o-s mk'widri **jma-sa twis-sa*** (up=**O3**-ObVn-stand-OPT.-S3sg. offspring-ABS. brother-DAT. own-DAT.; Mt 22:24) "that he raise up offspring **for his brother**." It is generally marked by the version vowels *-u-* (3rd-person object) and *-i-* (1st- or 2nd-person object); prefixal passive verbs and four archaic transitives employ *-e-* (all persons).

6C. *Superessive version*: This is a less common version indicating the presence of an indirect object denoting some kind of surface *upon which* the action is accomplished: for example, *moxgwares k'icwi igi iesus da da=x-**a**-sx-es **mas** samoseli* (Mk 11:7) "They brought the colt to Jesus and set [their] clothing **upon it**." Superessive version is marked by the vowel *-a-* in all persons.

6D. *Neutral version*: Many version-marking verbs have a neutral form, with either the vowel *-a-* or no version marker at all.

In a handful of transitive verbs, the version vowel alternates with zero in the third-person subject forms, an alternation evidently once conditioned by stress placement in verbs with or without a syllabic person suffix: S2sg. *x-**a**-rkw-Ø* "you said something to somebody" versus S3sg. *x-**Ø**-rkw-a* "(s)he said something to somebody."

7. *Slot 7 – verb root*: Many verb roots undergo ablaut, of which the two principal patterns are as follows:

7A. *e -i- Ø*: These root vowels display the distribution: *e* (Tr. Series I; Intr. aorist S1/2), *i* (Tr. Series II), *Ø* (other Intr.). Consider, for example, *še=x-k'r**e**b-s* "he gathers$_{tr}$" (Mt 12:30); *še=x-i-k'r**i** b-i* "you gather$_{tr}$ (habitually)" (Mt 25:24); *še=k'rb-es* "they gathered$_{intr}$" (Mt 13:2).

7B. *Ø -a*: The distribution is: *Ø* (most forms), *a* (Aorist S1/2); thus, *mo=k'l-a* "(s)he killed somebody," *mo=v-k'**al*** "I killed somebody."

Early Georgian ablaut is believed to be the outgrowth of prehistoric alternations related to syllable quantity, stress placement, and perhaps transitivity.

8. *Slot 8 – passive/inchoative or causative suffix*: Directly following the root is a slot reserved for the valence-altering suffixes *-d/-n* (passive/inchoative) and *-ev/-i(v)/-in* (causative). The former pair of allomorphs is used to form suffixal passives, with *-d* added mostly to stems ending in the sonorants /l/, /r/, or /n/, and *-n* in other contexts. The causative suffixes are often accompanied by the version vowel *-a-*: *aγ=x-w-**a**-dg-**in**-eb* "I raise somebody," compare *aγ=w-dg-eb-i* "I rise, get up."

9. *Slot 9 – plural absolutive suffix*: Series II and Series III verb forms (except for the suffixal passives and root intransitives) add a marker *-(e)n-* if the absolutive-case argument, denoting the direct object or intransitive subject, is formally plural (i.e., marked by the pluralizer *-n*, which may be related to *-(e)n-*): *rayta=mca x-i-did-**n**-es igi-**n**-i* (that-OPT. O3-PASS.-big-**Pl**. **Abs**.-S3pl. this-**Pl**.-Abs.; Mt 6:2) "that **they** be magnified"; ***m**-i-qsn-**en** čwen borot'isa-gan* (**O1excl**.-OBVN-release-**Pl**. **Abs**. **us** evil-from; Mt 6:13) "deliver **us** from evil."

10. *Slot 10 – series marker (or "present/future stem formant")*: This is a lexically specified morpheme used to form the Series I stem of most verbs, for example:

(10)	*Series I (imperfect):*	x-c-**em**-d-es	(O3-strike-**SM**-IMP.-S3pl.) "they were striking him"
	Series II (aorist):	x-c-**Ø**-es	(O3-strike-S3pl.) "they struck him"

The principal series markers are *-eb-*, *-av-*, and *-i-*; the less common allomorphs include *-am-*, *-ev-*, *-em-*, *-ob-*, and *-op-*. According to most experts, the series markers were once antipassive formants, deriving aspectually durative intransitives from transitive forms associated with punctiliar aspect. The vowels of some series markers undergo syncope when followed by certain suffixes, and the markers *-av* and *-am* undergo a vowel mutation that may reflect prehistoric umlaut: compare the forms *x-loc-**av**-s* "somebody implores somebody" (present); *x-loc-**v-id**-a* "somebody was imploring somebody" (S3sg. imperfect), and *x-loc-**ev-d**-Ø* "you were imploring somebody" (S2sg imperfect, < **x-loc-**av-id**-Ø*).

11. *Slot 11 – imperfect stem suffix*: The stem augment *-d/-od/-id* is used to form the imperfect and indeed all of the Series I paradigms except for the present and present iterative. The allomorph *-od* is employed by intransitives and some atelics; *-id* follows the series markers *-av* and *-am*; and *-d* appears elsewhere.

12. *Slot 12 – tense/mood vowel*: A vowel (*-e-*, *-o-*, *-i-*) inserted before the person/number (Set S) suffix of certain forms serves to distinguish indicative from conjunctive paradigms. Also occupying this slot is the suffix *-i* of the passive present, and a homophonous (perhaps cognate) suffix employed by statives and the present perfect of transitives in conjunction with an *-e-* element of unclear origin, for example, *g-gon-**i-e**-s* "you think something." The passive and stative *-i-* are to be further distinguished from the vowel /i/ inserted before the Set S suffix *-n* and optionally before the S1/2 pluralizer *-t* (see **13**) in certain paradigms: for example, in the imperfect imperative *x-a-did-eb-d-**i**-n* "may they praise somebody."

13. *Slot 13 – person/number suffix (Set S)*: While the first- and second-person subject (S1/2) suffixes are the same in all paradigms, the third singular and plural subject (S3) morphemes come in three pairs, correlated to a degree with semantic features of the verb forms. A few

Table 12.6 Set S (morphological subject) suffix groups

Set S suffix set (slot 13)	1st and 2nd person	3rd singular	3rd plural
A. PRESENT/CONJUNCTIVE present, present-perfect, imperfect iterative, permansive, optative, imperfect and pluperfect conjunctive	sg. -Ø / pl. -t	-s	-n / -en / -an
B. PAST INDICATIVE imperfect, aorist, pluperfect	sg. -Ø / pl. -t	-a	-es
C. IMPERATIVE/ITERATIVE present iterative, imperfect and aorist imperative	sg. -Ø / pl. -t	-n	-ed

paradigms are distinguished by the Set S suffixes alone (e.g., present indicative and present iterative, optative and aorist imperative); since the S1/2 endings do not vary, only the S3 forms are distinct in these instances.

14. *Slot 14 – postposed clitics*: These include the optative particle *-mca* (used with indicative-mood verbs to give them optative/subjunctive force); the adverbials *-ɣa* "even, just" and *-ve* "indeed, the very" (e.g., *kvani ɣaɣadebden=**ve*** [Lk 22:60] "**the very** rocks will cry out"); the yes-no question particle *-a*; and the indefinite quantifier *-me* (e.g., *xiq'os=**me** vin tkwengani k'aci* [Mt 7:9] "would there be **any** man among you?").

4.3.4 Verb paradigms and their functions

In the present section, Early Georgian verb paradigms and their functions are discussed according to paradigm series (see §4.3.2). In Table 12.7, verb paradigms are illustrated using transitive (TR) and intransitive (INTR.) S3sg. (having a third-person singular subject marker) forms of *mi=c-em-a* "give"; verb slots (see §4.3.3) are indicated by subscript numerals.

4.3.4.1 Paradigm Series I

1. *Present*: This is the unmarked present indicative paradigm, and the most frequently attested in the Early Georgian corpus.

2. *Present iterative*: The present iterative can be formally distinguished from the present in the third person only. It often appears in statements of verities and generalizations. Note the contrast between the present iterative and simple present in the following passage. The present iterative and the permansive, its Series II counterpart, are used to convey a fact known from repeated observation, while the optative (future) and present are used in the description of an event – the Second Coming – which will occur only once:

(11) *xolo leɣwisagan isc'avet igavi igi : ras žams rt'oni misni daččwnian da purceli **gamo=val-n** xuc'q'odit rametu axlos **ar-n** zapxuli. egreca tkwen : ras žams hixilot ese q'oveli xuc'q'odit rametu axlos **ar-s** k'arta zeda*

"From the fig tree learn a lesson: When its branches grow tender (PERMANSIVE) and the leaves **come out** (PRESENT ITERATIVE), you will know that summer **is** (PRESENT ITERATIVE) near. Likewise when you will see (OPTATIVE) all these things, you will know that he **is** (PRESENT) near, at your door" (*GL* Mt 24:32–33).

Table 12.7 Early Georgian verb paradigms

	Punctiliar (Series II)	Linear/durative (Series I)	Resultative (Series III)
present indicative	— — —	*present* TR. $mi_1 = x_4\text{-}c_7\text{-}em_{10}\text{-}s_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}em_{10}\text{-}i_{12}\text{-}s_{13}$	*present perfect* TR. $mi_1 = x_4\text{-}u_6\text{-}c_7\text{-}i_{12}\text{-}e_{12}\text{-}s_{13}$ INTR. mi = cemul ars
past indicative	*aorist* TR. $mi_1 = x_4\text{-}c_7\text{-}a_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}a_{13}$	*imperfect* TR. $mi_1 = x_4\text{-}c_7\text{-}em_{10}\text{-}d_{11}\text{-}a_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}em_{10}\text{-}od_{11}\text{-}a_{13}$	*pluperfect* TR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}a_{13}$ INTR. mi = cemul xiq'o
future/ conjunctive	*optative* TR. $mi_1 = x_4\text{-}c_7\text{-}e_{12}\text{-}s_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}e_{12}\text{-}s_{13}$	*imperfect conjunctive* TR. $mi_1 = x_4\text{-}c_7\text{-}em_{10}\text{-}d_{11}\text{-}e_{12}\text{-}s_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}em_{10}\text{-}od_{11}\text{-}i_{12}\text{-}s_{13}$	*pluperfect conjunctive* TR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}e_{12}\text{-}s_{13}$ INTR. mi = cemul xiq'os
permansive/ habitual	*permansive* TR. $mi_1 = x_4\text{-}c_7\text{-}i_{12}\text{-}s_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}i_{12}\text{-}s_{13}$	[*imperfect iterative*] TR. $mi_1 = x_4\text{-}c_7\text{-}em_{10}\text{-}d_{11}\text{-}i_{12}\text{-}s_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}em_{10}\text{-}od_{11}\text{-}i_{12}\text{-}s_{13}$ *present iterative* TR. $mi_1 = x_4\text{-}c_7\text{-}em_{10}\text{-}n_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}em_{10}\text{-}i_{12}\text{-}n_{13}$	— — —
imperative	*aorist imperative* TR. $mi_1 = x_4\text{-}c_7\text{-}e_{12}\text{-}n_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}e_{12}\text{-}n_{13}$	*imperfect imperative* TR. $mi_1 = x_4\text{-}c_7\text{-}em_{10}\text{-}d_{11}\text{-}i_{12}\text{-}n_{13}$ INTR. $mi_1 = x_4\text{-}e_6\text{-}c_7\text{-}em_{10}\text{-}od_{11}\text{-}e_{12}\text{-}n_{13}$	— — —

The other principal function of this paradigm is in negative imperatives introduced by the particle *nu* "do not" (2nd person: *nu še = x-jrc'un-d-eb-i-t* [Lk 21:9] "do not be anxious"; 3rd person: *nu še = jrc'un-d-eb-i-n guli tkweni* [Jn 14:1] "Let not your heart be anxious").

3. *Imperfect indicative*: This is the basic Series I past indicative paradigm, aspectually contrasted with the aorist. It is the only past indicative form for many stative and atelic verbs: *brc'q'in-v-id-a* "glistened"; *jc'-od-a* "trembled"; *x-tn-d-a* "liked."

4. *Imperfect imperative*: Early Georgian has two positive imperative paradigms, distinguished by aspect. The imperfect imperative is used to direct the listener to engage in some sort of ongoing, repeated activity: *sneulta* ***gan = x-k'urn-eb-d-i-t***, *ganbok'lebulta* ***gan = x-c'med-d-i-t*** (Mt 10:8) "cure the sick, cleanse the leprous." As with the aorist imperative, the imperfect imperative has no S2 prefix: *še = **(Ø)**-vid-od-e-t ic'rosa mas bč'esa* (Mt 7:13) "enter by the narrow gate."

5. *Imperfect iterative*: This paradigm is unusually difficult to detect, in that it is formally identical to the Series I conjunctive of intransitive verbs, and – in the first and second person – to the imperfect indicative of transitive verbs. This leaves the S3sg. and S3pl. of the transitive conjugation as the only morphologically unambiguous forms of the imperfect iterative. Only three examples are attested in the Early Georgian corpus, all from the same passage:

(12) ***v-e-vedr-eb-od-i-t*** *da odes igi ševidis vitar igi šišit da jc'olit vdget* [L. K'ik'nadze reads *vdg**it***] *da* ***guls v-e-t'q'-od-i-t*** *da γmrtisa mimart* ***v-i-loc-v-id-i-t*** *misisa mis gulisa mokcevisatwis*

> "[If we desire something from an earthly monarch] . . . **we would plead** (IMP. ITER.) to his servant for admission and when he comes (PERMANSIVE), we would stand (PERMANSIVE) as though in fear and trembling, and **we would feel desire** (IMP. ITER.) and **we would pray** (IMP. ITER.) to God that his heart be turned (toward us)" (*Mrv* 65).

The presence of the permansive indicates that a gnomic/iterative sense is intended. It should be noted that the manuscript in question is relatively late (eighth century), and contains numerous divergences from standard Early Georgian usage. In particular, the O3 prefix *x-* is frequently omitted before the S1 marker, as in the above passage. It may be that the imperfect iterative was an innovation in late Early Georgian, or introduced into this text from the native dialect of the translator.

6. *Imperfect conjunctive*: The imperfect conjunctive can be translated by either a subjunctive or a future indicative, depending on context: (fut. indic.) *da mravalni cruv c'inac'armet'q'welni aγ=dg-e-n da* ***x-a-ctun-eb-d-e-n*** *mravalta* (Mt 24:11) "and many false prophets will arise (OPTATIVE) and **will deceive** (IMPERFECT CONJUNCTIVE) many"; (subjunc.) *tu marǰwenê qeli šeni* ***g-a-ctun-eb-d-e-s*** (Mt 5:30) šen "if your right hand **deceive** you." The imperfect conjunctive (and optative) are likewise commonly found in restrictive relative clauses: *xlocevdit romelni* ***mi=g=xweč-d-e-n*** *tkwen* (Mt 5:44) "pray for those who **persecute** you."

4.3.4.2 Paradigm Series II

1. *Aorist*: The aorist is the unmarked Series II paradigm, the second most common verb form in the Early Georgian corpus, after the present indicative. In narratives the aorist is employed by verbs representing the main story line, presented as a succession of events; in this function it contrasts primarily with the imperfect, as well as the conjunctive paradigms, the pluperfect, etc.

2. *Aorist imperative*: The second-person aorist imperative is formally the simplest of the Early Georgian paradigms, lacking the Set S prefix found in the otherwise identical aorist indicative: for example, *mo=ved* "come!"; compare aorist *mo=x-wed* "you came."

3. *Permansive (aorist iterative)*: This paradigm is employed in parables, statements of regularities, and accepted truths, and as such can be translated by the simple present in English: *mas* ***x-u-rkw-i*** *c'arved da* ***c'ar=vid-i-s*** (Mt 8:9) "I **tell** him 'go,' and he **goes**."

4. *Optative (aorist conjunctive)*: The optative, like its Series I counterpart, the imperfect conjunctive, can have either future indicative or subjunctive meaning. In the latter sense it commonly appears after subordinating conjunctions.

4.3.4.3 Paradigm Series III

1. *Present perfect*: The Early Georgian present perfect is primarily resultative in meaning, representing a state of affairs extending to the (narrative) present as resulting from some event in the past: for example, ***aγ=dgomil ars*** *mk'wdretit* (Mt 14:2) "he **has risen** from the dead" (implication: he is still alive); *ege q'oveli* ***da=m-i-marx-av-s*** *siq'rmit čemitgan* (Mt 19:20) "all of these [commandments] I have kept since childhood" (implication: I still do).

2. *Pluperfect*: The basic function of the Early Georgian pluperfect is to mark past anteriority: *šeic'q'nares igi galilevelta rametu q'oveli* ***x-e-xilv-a*** *raodeni* ***x-e-kmn-a*** *ierusalêms* (Jn 4:45) "The Galileans welcomed him, for they **had seen** all that he **had done** in Jerusalem." The semantic difference between Series III and passive of state is especially slight in the case of

intransitive present perfects and pluperfects: ***šek'rebul xiq'o*** *bevreuli eri* (Lk 12:1) "a crowd of thousands **had (was?) gathered**."

3. *Pluperfect conjunctive*: This rare paradigm is attested only twice in the Early Georgian corpus. In both cases it appears to mark future anteriority: *<arγa>* ***x-e-q'iv-n-o-s*** *katamsa vidremde uvar = mq'o me sam gzis* (Jn 13:38) "The cock **will** not **have crowed** before you deny me three times"; *net'ar xiq'wnen romelta ara* ***x-w-e-xilv-o*** *da x(w)urc'mene* (*GL* Jn 20:29) "Blessed will be those who **will** not **have seen me** but who will believe in me" (note that the S1 prefix *w-* in *xwexilvo* marks the direct object, in accordance with the inverse syntax governed by transitive verbs in Series III; see §4.3.2.3).

4.3.5 Nonfinite verbals

The principal nonfinite forms of the Early Georgian verb are the verbal noun and three participles: active, past passive, and future passive.

4.3.5.1 Verbal noun

This is usually formed by adding the suffix *-a* to the verb root and its series marker (a smaller number of verbs, mostly members of the atelic class, employ the suffix *-il/-ol/-ul,* sometimes with the prefix *si-*). Among other things it can function like an infinitive in nominalized clauses subcategorized by certain verbs: for example, *p'ilat'e xubrjana* ***mi=c-em-a-d*** *gwami misi* (Mt 27:58) "Pilate ordered them **to give** him his (Jesus') body" (lit. "Pilate ordered them **the giving** of his body").

4.3.5.2 Participles

The active or agentive participle contains a prefix *m-/ma-/me-/mo-* inserted before the stem, and a suffix *-el/-ar/-ul*: *vin ars* ***mi=m=c-em-el-i*** *misi* (Jn 6:64) "who is the **one who will hand** him **over**" (lit. "who is his **giver**"). The past (or perfect) passive participle is usually formed with the suffix *-il/-ul*; among other uses it is employed in the Series III forms of intransitive verbs: *romelta* ***mi=c-em=ul*** *ars* (Mt 19:11) "[those] to whom it is **given**." The future passive is formed with the addition of a prefix *sa-* before the stem, and the same suffix as in the corresponding active participle: *xicit* ***sa=c-em=el-i*** *k'etili micemad švilta tkwenta* (Lk 11:13) "you know to give your children good **gifts**" (lit. "that-which-is-to-be-given").

4.4 Diachronic morphological developments

Although the Xanmet'i dialect is the most archaic attested variety of Georgian, hints of changes to come can be detected here and there in Early Georgian texts. Among them are the following.

1. *Uncertainty in the use of O1excl. m-*: While the inclusive/exclusive opposition in the Set O prefixes is maintained in the Xanmet'i gospels, evidence that the first-person inclusive object marker *gw-* is being reinterpreted as a general first plural prefix begins to appear in the Graz Lectionary composed a century later: *vitar igi* ***m****-e-t'q'-od-a čwen gzasa zeda; da vitar igi gamo =* ***gw****-i-targman-eb-d-a čwen c'ignta* (*GL* Lk 24:32) "how he spoke to **us** (*m-*) on the road, and how he interpreted the books for **us** (*gw-*)."

2. *Paradigm recruitment for atelic verbs*: In later stages of Georgian, atelic activity verbs have the same range of paradigms as the transitive and intransitive conjugations. In the Early Georgian period, however, the rare Series II and III atelic verbs seem almost to be nonce

formations cobbled together from elements borrowed from the transitive and intransitive conjugations. The early Series II paradigms of atelic verbs display three types of formation:

(i) periphrastic, formed with *q'opa* "make": *γaγad* = *q'o* (Mt 14:30; Jn 7:28) "he cried out" (lit. "he made a cry")
(ii) root intransitive morphosyntax (more archaic?) with subject in absolutive: *katami q'iv-a* (Lk 22:60) "the cock-ABS. crowed"
(iii) transitive morphosyntax (more recent?) with subject in ergative and verb in subject version: *man i-mruš-a (*Mt 5:28) "he-ERG. committed adultery."

The root *-q'iv-* "crow" is a curious case, having a formally intransitive aorist, but a formally transitive pluperfect conjunctive with inversion: *x-e-q'iv-n-o-s katam-sa* (O3-OBVN-crow-PL.?-TM-S3sg. cock-DAT.; Jn 13:38) "the cock will have crowed."

4.5 Numerals

Georgian has a mixed decimal and vigesimal counting system. Monomorphemic number names are used for counting to ten, followed then by compounds of the form "ten-N-more" (e.g., *at=rva=met'* lit."10-8-more," i.e., "18") up to *oc* "20." Counting continues by scores (e.g., *otx = me-oc da a(t) = cxra = met'* lit. "4 = score and 10=9= more," i.e., "99" [Mt 18:12]) up to *as* "100." Higher units include *at = as* ("10 = 100") "1,000" and *bevr* "10,000."

5. SYNTAX

5.1 Word order

Early Georgian word order gives the impression of being freer than it actually is. While it is indeed the case that very few constituents occupy an *obligatory* position, most do have a preferred position. According to Sarjveladze's quantitative study (1984:528, 535–536), Old Georgian in general, and Early Georgian in particular, favors head–modifier order both within the clause and within the noun phrase (NP): direct and indirect object after the verb; adjective, article, and possessor after the head noun, for example, *twali$_1$ šeni$_2$ marǰwenê$_3$* (Mt 5:29) "your$_2$ right$_3$ eye$_1$." The principal exceptions are interrogative, negative, and numeral modifiers, which generally precede their head. The subject, interestingly, is as likely to follow the verb as precede it, postverbal position being favored by subject NPs referring to new topics: *xolo xiq'wnes mun* ***dedanica mravalni*** (Mt 27:55) "But **many women** were there."

Among the items which have a relatively fixed position are definite articles and sentential clitics such as *tu* "if," *ra(y)* "when," which follow the first element in the NP or clause: *atertmet'i* ***igi*** *moc'apeni* (Mt 28:16) "**the** eleven disciples"; *aγ=* ***ra*** *=xesrulnes dγeni igi* (Lk 4:2) "**When** those days were over."

5.2 Coordination and subordination

In addition to the relative pronoun *romel-*, described earlier (see §4.2.4.3), other interrogative pronouns double as subordinators, for example, *raoden-* "how much?"; "as much as": *xuq'wes mas* ***raodeni*** *xunda* (Mt 17:12) "they did to him **as much as** they wanted." Subordinate clauses can likewise be introduced by conjunctions of various sorts: *tu* "if," *rayta* "that," *vidremde* "until," etc. Many of these require a verb in the conjunctive or optative. The principal coordinating conjunction is *da*, which operates at the word, phrase, and clause level.

5.3 Agreement

Agreement, as distinguished from cross-referencing, occurs within the NP, and also between certain verb forms and absolutive-case NPs within a phrase . In the instance of NP-internal agreement, adjectives, articles, and even genitive-case modifiers reflect the case and number of the head noun: *jujeul-**n-i** mat-**n-i*** (alumnus-PL.-ABS. their-PL.-ABS.; *BQ* III) "their foster children." In NPs where a modifier is itself modified by a noun in the genitive, the latter may bear three case endings: its own (genitive), a copy of its head's case (genitive), and the case assigned the head of its head: for example, *saidumlo-y*$_1$ sasupevel-isa$_2$ ca-**ta**$_3$-***ysa*$_2$*-y*$_1$ (secret-ABS. kingdom-GEN. sky-**GEN. PL.-GEN.-ABS.**; Mt 13:11) "the secret of the kingdom of the heavens." The second agreement phenomenon of note is between Series II and Series III verbs and their absolutive arguments. Formally plural absolutive NPs (those marked with the pluralizer *-n-*, as well as first- and second-person pronouns and plural null anaphors) control the probably cognate agreement marker *-(e)n-* in slot 9 of the verb (see §4.3.3 [**9**]).

6. LEXICON

The great majority of lexemes employed in the Early Georgian texts are of indigenous origin, as far as can be told. At the same time, a number of cultures have left their imprint on the Georgian lexicon. The Greek of eastern Christianity has contributed terms such as *ek'lesia* "church" and *angeloz-* "angel"; *nav-* "ship" and *mankana* "machine, device" may go back to Hellenic times, when Greek merchants first established trading posts in Colchis. Persian civilization, with which the Georgians have been in regular contact since well before the Christian period, is the source of a considerable number of words, including many in common use: *p'at'iv-* "honor," *žam-* "time," *parto* "wide." The contribution of Armenian is easy to underestimate, since many words of Persian and Syriac origin (*sp'et'ak'-* "white," *targm(a)n* "translate") presumably entered Georgian via their neighbors to the south. The verb root *šên-* "build" and possibly the noun *mgel-* "wolf" (borrowed to replace a tabooed inherited root?) represent prehistoric loans from Armenian.

Abbreviations

Linguistic terms

IMP.	imperfect-stem formant
O1excl	1st-person exclusive object marker
O1incl	1st-person inclusive object marker
O3	3rd-person object marker
ObVn	objective version vowel
Pv	preverb
Ques.	question particle
S1	1st-person subject marker
S3pl.	3rd-person plural subject marker
S3sg.	3rd-person singular subject marker
SbVn	subjective version vowel
SM	series marker
TM	tense/mood vowel

Most of this chapter was written in 1996. Since that time, further Early Georgian texts have been made available for study, including the palimpsest Codex Georg. 2 of Vienna, and a new edition of the Graz Lectionary, through the effors of Jost Gippert (Frankfurt) and Zurab Sarjveladze (Tbilisi). Recently, the archeologist Levan Ch'ilashvili has published the startling claim that several fragmentary inscriptions uncovered during excavations of what he believes was a pagan temple at Nek'risi, in eastern Georgia, are to be dated to the 1st–3rd centuries AD (*Burji Erovnisa* #3, pp. 6–7, 2001). If true, this would be the first evidence that the Georgian alphabet predated the adoption of Christianity as state religion. In my view, there is nothing in either the form of the letters, nor in the grammatical features of the one inscription that has been published, which would compel the attribution of such an early date. It remains to be seen whether further investigation of the inscriptions, and the archeological context in which they were found, will confirm Ch'ilashvili's hypothesis.

Bibliography

Abuladze, I. 1973. *kartuli c'eris nimušebi. p'aleograpiuli albomi* (Examples of Georgian writing. A paleographic album; 2nd edition). Tbilisi: Mecniereba.

Birdsall, J. N. 1970. "A second Georgian recension of the Protevangelium Jacobi." *Le Muséon* 83:49–72.

_____. 1991. "Georgian paleography." In A. C. Harris (ed.), *The Indigenous Languages of the Caucasus, Vol. 1: The Kartvelian Languages*, pp. 85–128. Delmar, NY: Caravan Books.

Blake, R. 1932. "Khanmeti palimpsest fragments of the Old Georgian version of Jeremiah." *Harvard Theological Review* 25:207–272.

C'ereteli, G. 1960. *ujvelesi kartuli c'arc'erebi p'alest'inidan* (The oldest Georgian inscriptions from Palestine). Tbilisi: Mecniereba.

Danelia, K. and Z. Sarjveladze. 1997. *Kartuli p'aleograpia.* [Georgian paleography.] Tbilisi: Nek'eri.

Gamq'relidze, T. 1990. C'eris anbanuri sist'ema da jveli kartuli damc'erloba. anbanuri c'eris t'ip'ologia da c'armomavloba (Alphabetic writing and Old Georgian script. The typology and origins of alphabet writing). Tbilisi: Tbilisi State University Press.

Kajaia, L. (ed.). 1984. *xanmet'i t'ekst'ebi, 1: xanmet'i otxtavi* (Xanmeti texts, 1: the Xanmeti Gospels). Tbilisi: Mecniereba.

Molitor, J. (ed.). 1956. *Monumenta Iberica antiquiora: Textus chanmeti et haemeti ex inscriptionibus, Bibliis et patribus.* Louvain la-Neuve: Corpus Scriptorum Christianorum Orientalium.

Sarjveladze, Z. 1971. *xanmet' da haemet' t'ekst'ebši dadast'urebul zmnis p'irian formata sajieblebi* (A tabulation of the finite verb forms attested in the Xanmeti and Haemeti texts). Tbilisi: Mecniereba.

_____. 1984. *kartuli salit'erat'uro enis ist'oriis šesavali* (An introduction to the history of the Georgian literary language). Tbilisi: Ganatleba.

Tuite, K. 1990. "Das Präfix *x-* im Frühgeorgischen." *Georgica* 13/14:34–61.

Sources

Mt, Mk, Lk, Jn	Xanmet'i gospels (6th century) [Kajaia 1984]
Bol	Bolnisi inscriptions (493–494) [Abuladze 1973]
BQ	Bir el-Qutt inscriptions (429–444) [C'ereteli 1960]
GL	Graz Xanmet'i Lectionary (late 7th century) [Molitor 1956]
H	Haemet'i lectionary (8th century) [Molitor 1956]
Jer	Cambridge & Oxford Jeremiah fragments (*c.* 600) [Blake 1932; Molitor 1956]
Mrv	Xanmet'i Mravaltavi (early 8th century) [Molitor 1956]
PJ	Protevangelium Jacobi (*c.* 700) [Birdsall 1970]
999	Palimpsest H-999 (Bible fragments, *c.* 500) [Molitor 1956]

The cuneiform script

	aš, dil, rum, rù		la
	ḫal		bin, pin; $^{(giš)}$APIN = *epennu* "plow"
	mug/k/q, b/puk		maḫ
	ba, pá		tu, ṭú
	zu, ṣú		li, le
	su, kuš; SU = *zumru* "body"; KUŠ = *mašku* "skin, hide"		kúr, bab/p, pap; KÚR =*aḫû* "strange, foreign, hostile," *nakāru* "to be hostile"
	rug/k/q, šin, šun		mu; MU = *nīšu* "life," *šattu* "year," *šumu* "name"
	bal, pal; BALA = *palû* "reign"		qa; $SILA_3$ = *qû* (unit of capacity)
	ád/t/ṭ, gír		kád/t, šíd
	búl, púl		kàd/t
	tar, ṭar, tír, ṭír, kud/t, qud/t, ḫaz/s/ṣ, ḫaš, sil, šil; SILA = *sūqu* "street"		gil, kíl, qíl
	an, ìl; AN = *šamû* "sky, heaven"; DINGIR = *ilu* "god" (also determinative before deities)		ru, šub/p
	ka, qà; KA =*pû* "mouth"		be, pè, bad/t/ṭ, til, mid/t/ṭ, ziz/s; BE = *šumma* "if"
	nag/k/q; NAG = *šatû* "to drink"		na
	KÚ = *akālu* "to eat"		šir
	rí, ré, iri_4; ere_4; URU = *ālu* "town, city"		k/qul; NUMUN = *zēru* "seed," "progeny"
	ÌR = *ardu* "slave"		ti, ṭì
	ITI = *arḫu* "mouth" (also determinative before names of months)		bar, pár, maš; MAŠ = *mišlum* "half, middle"; *šumma* "if"; MAŠ.GAG.EN or MAŠ.EN.GAG = *muškēnu* "dependent, commoner"
	šaḫ, šiḫ; ŠAḪ = *šaḫû* "pig"		nu

	MÁŠ = *ṣibtu* "interest," *puḫādu* "lamb"; (lú) MÁŠ.ŠU.GÍD = *bārû* "diviner, haruspex"		en; EN = *bēlu* "lord"
	kun		ṭàr
	ḫu, pag/k/q; MUŠEN = *iṣṣūru* "bird" (also determinative following names of birds)		šur
	nam		suḫ
	ig/k/q, eg/k/q		mùš; dINANA (deity, Sum. Inana, Akk. Ištar)
	mud/t/ṭ		sa
	rad/t/ṭ		gán, kán, gà; $GANA_2$ = *eqlu* "field"; IKU = *ikû* (surface measure)
	zi, ze, sí, ṣé, ṣé		kár
	gi, ge		gú, tik/q; GÚ = *kišādu* "neck"; GÚ.UN (or GUN) = *biltu* "weight, tribute, load"
	ri, re, dal, tal ṭal		dur, ṭur
	nun, zil, ṣil; NUN = *rubû* "prince"		GUN (or GÚ.UN) = *biltu* "weight, tribute, load"
	gáb/p, kab/p, qáb/p ḫúb/p		làl; LÀL = *dišpu* "honey"
	ḫub/p		gur, qur; GUR = *kurru* (measure of capacity)
	kad/t/ṭ, qàd/t; GADA = *kitû* "linen"; NA.GADA "shepherd"		si, se
	dim, tim		dar, tár, ṭár
	mun		sag/k/q, šag/k/q, riš, ris, res; SAG = *rēšu*, "head"; SAG.ÌR = *ardu* "male slave"; $SAG.GEME_2$ = *amtu* "female slave"
	ag/k/q		má; (giš)MÁ = *eleppu* "boat"
	MÈ = *tāḫāzu* "battle"		dir, ṭir
	tab/p, ṭab/p, dáb/p; TAB.BA = *tappû* "business associate, partner"		in
	šum, tag/k/q		rab/p
	ab/p		šàr; LUGAL = *šarru* "king"
	nab/p		šìr, ḫir, sar, šar; $KIRI_6$ = *kirû* "garden, orchard"
	mul		bàt; BÀD = *dūru* "wall"
	ug/k/q		sì, sè
	az/s/ṣ		

	URUDU = *erû* “copper, bronze”		kas, raš/s; KASKAL = *ḫarrānu* “road, path, journey”
	ká; KÁ = *bābu* “gate, opening”		
	um		gab/p, qab/p; GABA = *irtu* “chest, breast”
	dub/p, tub/p, ṭup; DUB = *ṭuppu* “tablet”; DUB.SAR = *ṭupšarru* “scribe”		duḫ, taḫ, ṭuḫ
	dá, ta ṭá		ru_6; EDIN = *ṣēru* “plain, steppe”
	i		daḫ taḫ, ṭaḫ
	ia		
	gan, kan, kám (also determinative following numbers)		am; AM = *rīmu* “wild bull”
	tur, ṭùr; DUMU = *māru* “son”; DUMU.MUNUŠ = *mārtu* “daughter”; TUR = *ṣeḫēru* “to be small, young”		$šir_4$; UZU = *šīru* “meat, flesh” (also determinative before body parts)
	ad/t/ṭ; AD = *abu* “father”		ne, ṭè, bil, pil, kúm, bí; IZI = *išātu* “fire”
	ṣi, ṣe, zí, zé		bíl, píl
	šàm (variant of šám)		NA_4 = *abnu* “stone” (also determinative before stone objects)
	ram		kak, qaq
	šám; SA_{10} = *šâmu* “to buy, purchase”		ni, né, zal, ṣal, lí, lé, ì; Ì (or Ì.GIŠ) = *šamnu* “oil fat”
	zik/q		ir er
	gum, kum, qum, qu		mal, gá, mà
	gaz, gaṣ		DAGAL = *rapāšu* “to be wide, large”; AMA = *ummu* “mother”
	SUḪUŠ = *išdu* “base, foundation”		$SILA_4$ = *puḫādu* “lamb”
	kas_4; $^{lú}KAŠ_4$ = *lasīmu* “courier”		ùr
	úr; ÚR = *sūnu* “lap,” *pēmu* “thigh”		dag/k/q, tág/k/q, ṭak
	il, él		
	du, ṭù, gub/p, kub/p, qub/p; DU = *alāku* “to go”; GUB = *uzuzzu* “to stand”		
	dum, tum, ṭum, tu_4		pa, ḫad/t/ṭ; UGULA = *aklu* “overseer, inspector”
	ANŠE = *imēru* “donkey”		šab/p, sab/p
	EGIR = *arki* “behind, in back of, after”		síp; $^{(lú)}$SIPA = *rē’û* “shepherd”
	GEŠTIN = *karānu* “wine”		
	uš, nid/t/ṭ		

	iš, íz/s/ṣ, mil; SAḪAR = *eperu* “earth, dust, soil”		giš, iz/s/ṣ, ez/s/ṣ; GIŠ = *iṣu* “wood” (also determinative before wooden objects)
	bi, bé, pí, kaš; KAŠ = *šikaru* “beer”		GUD = *alpu* “ox, bull”
	šim, rig/k/q		al
  	kib/p, qib/p mar	 	ub/p, ár gàr, qar
	e		id/t/ṭ; ed/t/ṭ; Á = *idu* “side, arm, strength”
	dug/k/q, lud/t/ṭ; DUG = *karpatu* “pot, container” (also determinative before vessels)		lil
	un; UN = *nišū* “people”; KALAM = *mātu* “land, country”		$MURUB_4$ = *qablu* “hip, waist, middle”
	gid/t/ṭ, kid/t/ṭ, qid/t, saḫ, líl		$ṭe_5$; $^{(lú)}$SIMUG = *nappāḫu* “smith, metal worker”
	šid/t/ṭ, lag/k/q		áš
	rid/t/ṭ, mis; KIŠIB = *kunukku* “cylinder seal”		ma
	ú, šam; Ú = *šammu* “grass, herb, plant” (also determinative before plants)		gal, qal; GAL = *rabû* “great”
	ga, kà, qá		BARAG = *parakku* “cult, dais, sanctuary”
	luḫ, làḫ, liḫ, raḫ, riḫ		gir, kir, qir, biš, piš
	kal, dan, tan, rib/p, lab/p		mir; AGA = *agû* “crown”; NIMGIR = *nāgiru* “herald”
	bid/t/ṭ, pid/t; É = *bītu* “house, temple”		bur, pur
	nir		BALAG = *balaggu* “a musical instrument (drum)”
			ša
	gi_4, ge_4		šu, qad/t; ŠU = *qātu* “hand”
	ra		lul, lib/p, lup, nar
	LÚ = *awīlu* “man” (also determinative before male professions)		sa_6; GIŠIMMAR = *gišimmaru* “date-palm”
	šiš, sis, siš; ŠEŠ = *aḫu* “brother”		ALAN = *ṣalmu* “statue”
	zag/k/q; ZAG = *idu* “side, border”		URI = *Akkadû* “Akkadian”
	gam		zib/p, ṣib/p, sìp

	kur, mad/t/ṭ, nad/t, lad/t/ṭ, šad/t/ṭ, sad/t/ṭ; KUR = *šadû* "mountain," *mātu* "country, land"		
	še; ŠE = *ûm* "barley, grain" (also determinative before grains)		ḫi, ḫe
	bu, pu, sír, šir, gíd/t/ṭ, qíd/t, šúd		aʾ, iʾ, eʾ, uʾ, ʾa, ʾi, ʾe, ʾu
	uz/s/ṣ		aḫ, iḫ, eḫ, uḫ
	šud/t/ṭ, sir, sù		kam (also determinative following numbers)
	muš, ṣir		im, em
	tir		bir, pìr
	te, ṭe$_4$, de$_4$; TE = *ṭeḫû* "to approach"		ḫur, ḫar, mur; ^{giš}ḪUR = *uṣurtu* "design, plan"
	kar		ḫuš
	liš, lis		
	u$_4$, ud/t/ṭ, tam, tú, par, pir, liḫ, ḫiš; UD/U$_4$ = *ūmu* "day"; ^{d}UTU = Sum. Utu, Akk. Šamaš (deity)		
	pi, pe, tál; GEŠTU = *uznu* "ear, wisdom, understanding"		
	lìb, lìp; ŠAG$_4$ = *libbu* "heart, mind, thought, inside"		
	ṣab/p, zab/p; ERIN$_2$ = *ṣābu* "gang, army, troops"		
	u		ši, lim; IGI = *īnu* "eye"
	muḫ; UGU = *muḫḫu* "skull, top"; *eli* "on, upon, over, above"		ar
	lid/t/ṭ; ÁB = *arḫu* "cow"		SIG$_5$ = *damāqu* "to be good, favorable"
	kiš, kis, qiš, qis		ù
	mi, mé, ṣíl, gi$_6$; GI$_6$ = *mušītu* "night, nighttime"		ḫul
	gul, qúl, sún		di, de, ṭi, ṭe, sá; DI = *dīnu* "decision, judgment"; DI.KUD = *dânu* "to judge"
	nim, num, nù, tum$_4$		dul, tul
	lam		ki, ke, qí, qé; KI = *erṣetu* "earth, land, district" (also determinative following names of countries)
	zur, ṣur		din, tin

	pan, ban		dun, šul
	gim, kim, qim, ṭím		KUG = *ellu* “pure”; KUG.SIG$_{17}$ = *ḫurāṣu* “gold”; KUG.BABBAR = *kaspu* “silver”
	ul		pad/t/ṭ, šug/k/q
	GÌR = *šēpu* “foot”		man, mìn, niš
			eš, sin
			diš, tiš, ṭiš, tiz (also determinative before male proper names)
			lal, lá
	kil, qil, rim, ḫab/p		šal, sal, rag/k/q, mán, mín; MUNUS = *sinništu* “woman” (also determinative before female proper names and occupations)
	ENGUR = *apsû* “abyss, subterranean ocean”		zum, súm, ṣum, ṣu, ríg/k/q
	(giš)GIGIR = *narkabtu* “chariot”		nin; NIN = *aḫātu* “sister,” *bēltu* “lady, mistress”
	zar, ṣar		dam, ṭam; DAM = *mutu* “husband,” *aššatum* “wife”; DAM.GÀR = *tamkāru* “merchant”
	ù		GEME$_2$ = *amtu* “female slave”
	bul, pul		gu, qù
	sug/k/q		NAGAR = *nagāru* “carpenter”
	NENNI = *annanna* “so-and-so, such-and-such”		nig/k/q
	me, mì, šib/p, sib/p		el, il$_5$
	meš (also a marker of plurality following logograms)		lum, ḫum
	ib/p, eb/p		SIG$_4$ = *libittu* “(mud) brick”
	ku, qú, dúr, tuš; TÚG = *ṣubātu* “garment” (also determinative before garments)		dúk, tug/k/q
	lu; UDU = *immeru* “sheep”		ur, lig/k/q, daš, das, taš, tas, tíz, tís, tíš
	dib/p, tib/p, ṭib/p, dab/p		a; A = *mû* “water”

	kin, qin, qi, qe; KIN = *šipru* "message, work, labor"		za, sà, ṣa
	šík, šíq; SÍG = *šīpātu* "wool" (also determinative before objects made of wool or types of wool)		ŋa, ku_6; KU_6 = *nūnu* "fish" (also determinative following names of fish)
	ERIN = *erēnu* "cedar"		sig/k/q, šik/q
	šú		ṭu
	ÉN = *šiptu* "incantation"		šá, níg/k/q, gar; NINDA = *akalu* "bread, food"

APPENDIX 2

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