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A Structural Grammar of Babylonian

Harrassowitz Verlag · Wiesbaden

PREFACE

The purpose of this grammar is to provide a description of Babylonian which may serve both as a systematic theoretical statement of the structure of the language, and as a guide towards a better understanding of the textual record. The two major methodological concerns which have guided my effort may be summed up as follows. On the one hand, I have been especially mindful of the need to validate each category on the basis of explicit formal criteria. This applies not only to categories introduced here and at variance with common Assyriological tradition (e.g., in the treatment of the so-called irregular verbs); it also applies to well established categories which I have inherited from that tradition, but for which I have nevertheless sought to provide a fresh formal justification (e.g., the verbal tenses or the subjective/objective genitive). The second major concern has been to seek a validation of structural perceptions by looking at how they yield a better understanding of the texts, which are the only remaining cultural embodiment of this particular linguistic system. Wide ranges of meaning are embedded in grammatical mechanisms, and their full effect cannot be gauged on purely contextual grounds, i.e., through ad hoc conclusions from individual texts viewed in isolation. The discussion of such diverse topics as the notional value of verbal forms, the expression of action and condition, or the role of emphasis – all illustrate how much more insight a structural or distributional analysis of the language may ultimately yield at the level of textual exegesis.

More specifically, the overall goals and limitations of my endeavor may be spelled out as follows.

(1) The *linguistic methodology* employed aims at obtaining a coherent view of the linguistic system of Babylonian in its inner structure with an emphasis on evaluating the distributional validity of each and every grammatical class (whether traditionally accepted in Assyriology or proposed afresh here). Thus the term "structural" in the title implies (a) a rigorous definition of each class in its relationship to other classes, (b) a consistent differentiation between formal and notional categories, and (c) an understanding of the language as a living and organic system. Not taking established terms or concepts for granted, I make a serious effort at articulating in a structurally explicit manner what I perceive to be valid insights in the traditional understanding of grammar. Only where such an under-

standing is, in my opinion, at variance with the inner logic of the grammatical system, do I propose alternate interpretations; and only where accepted terminology seems to be specifically misleading, or where a non-English term has become part of common usage, do I introduce new terms. In either case, I have explained in detail my reasons for doing so whenever the occasion presents itself.

(2) There are, in fact, a number of *differences with respect to previous works on Akkadian grammar*, which are far-reaching because they affect a variety of levels of analysis, of which I will mention here two in particular. (a) The first pertains to specific phenomena, such as the following. There are certain categories which are radically altered in their understanding and are presented within a new setting, such as the allocation of the weak verbs to morphophonemics. Other categories are analyzed in ways that cut across established classifications, such as the personal inflection of the verb, whose consonantal component is allocated to external inflection, while the vocalic component is allocated to internal inflection. Some categories are dropped altogether, e.g., the permansive as a tense of the verb (the pertinent forms are re-interpreted as a special form of nominal sentence; for the perfect see presently). New categories are introduced which are generally not found in grammatical treatments, e.g., the category of emphasis, here treated as a special type of adjunct. (b) The second major difference pertains to the inclusion of levels of analysis previously neglected, such as the following. A proper articulation of the system of internal inflection allows, *inter alia*, for a more rigorous definition of the concept of root and the consequent exclusion of primary nouns and loanwords from nominal derivation. The concept of morphophonemics leads to the recognition of a normal level of patterning for phenomena otherwise considered anomalous, such as the so-called irregular verbs. A careful distinction between formal and notional levels of analysis brings new light to categories which have otherwise been described in a vague and impressionistic way, e.g., the distinction between action and condition. A syntactical analysis centered on the sentence rather than on inflectional categories opens the way for a new understanding of such varied phenomena as nominalization, hendiadys, or coordination.

(3) As will be clear from even a cursory look at the volume, neither do I follow, nor do I presume to make a contribution to, any particular school of *theoretical linguistics*. In particular, it may be noted that the term "structural" employed in the title refers simply to my concern for rigorous formal analysis, in a sense that might also be described as "distributional." The former term ("structural") refers to the linguistic system viewed as an organic whole, the latter ("distributional") refers to the method used in breaking down this system by identifying patterns of recurrence among its component parts. While I have tried to utilize basic concepts of contemporary linguistics, I have couched my presentation in a rather traditional style. Accordingly, I have refrained from using any highly specialized formalization, in the belief that the basic foundations and principles of linguistic theory have

a validity of their own which transcends specific formalizations, so that it should be feasible, in a case such as mine, to employ the former without applying the latter. In this respect my grammar is not as advanced as the groundbreaking work by ERICA REINER, who first brought the full impact of modern linguistics to bear on the study of Akkadian. (In a more autobiographic vein, I would like to acknowledge my personal debt to her, since I sat as a student in her classes using as our textbook what were then the proofs of her *Linguistic Analysis*.)

(4) As for the objection that modern linguistic methods are not suited for *dead languages* in general, and thus for Babylonian in particular, the following qualifications are in order. It is true, on the one hand, that the lack of living speakers prevents us from verifying unequivocally the possibility or non-possibility of given grammatical constructions. Yet it must be understood that while there are no living speakers today, they obviously existed at a certain point in the past; in other words, to the extent that the language was a living organism in the past, it can still be understood as such today. To this end, we must reckon with a set of filters which stand between us and this living organism, in particular the scribal medium and the size and nature of the textual inventory. We can cope with these two filters through the application of graphemic criteria for the former, and sampling procedures for the latter. If so, while we cannot tap directly the living competence of native speakers, we can arrive inferentially at adequate equivalents. Distributional analysis is a major factor in this process: given a sizable textual corpus, the patterned recurrence, or non-recurrence, of given classes to form specific distributional arrays is the most significant of these equivalents. Note in this respect how the statement of non-occurrence is a particularly important result of a linguistic analysis dependent on living informants: their competence is trusted in excluding the possibility of certain phenomena, i.e., in documenting their non-occurrence. Such a statement acquires its significance in function of a-priori structural considerations which prompted the question in the first place. For a dead language with a vast corpus of extant texts, such as Akkadian, electronic data processing can serve as the functional equivalent of a living informant in that it allows unlimited capillary access to even the most daunting amount of data, as long as these are properly structured. In my own work, I have benefited from a preliminary data bank of Old Babylonian data, so structured (see below, Introduction, 0.2).

(5) I have already referred a few times, in this preface, to a *grammatical tradition*, and I will do so often again within the course of the book. By this I mean the commonly accepted principles and categories, for which I feel that no particular bibliographical reference is necessary (though references will be given in a companion volume about which see presently). I generally refer to such a tradition when my presentation is at variance with it; when I wish to raise some objections to a common understanding of grammatical phenomena, even if I go along with it; when I articulate an explicit explanation for statements which are otherwise ac-

cepted as axioms. I hope it is clear from each specific instance where this occurs, as well as from the overall tone of my argumentation, that I do this out of the greatest respect for this tradition, and without any eagerness to espouse what is different only for the sake of novelty at any cost. The constant effort, which I trust will be apparent, to explain my reasons for choosing a different option should attest to the seriousness with which I have considered all alternatives – witness, for instance, the decision to retain the verbal category of the perfect in order to allow for more reflection on the reasons which, as they stand now, indicate to me that such a category should in fact be abandoned. Similarly, one should note how I have often proposed a fresh definition for traditional terms which appear to have been accepted and repeated in a somewhat unreflected way: this, too, should indicate with what care I have weighed the received wisdom before departing from it. Not that it could have been otherwise, considering the incalculable contributions of this tradition, as embedded especially in the monumental work by WOLFRAM VON SODEN. Thus, while I am aware as to how radically different, and admittedly controversial, some of the positions advanced here might be, I would like for them to be understood within the continuum of the tradition, rather than in antagonism to it.

(6) *Bibliographical references* are kept to a minimum. Besides meeting the obvious need to provide textual citations,[1] they are generally meant to provide support for special and unusual points that are made in the text. No attempt is made here to offer a systematic bibliographical apparatus for each grammatical category discussed. Because of the size that such a documentation entails, if given in an exhaustive manner, I have chosen to place such information in a separate volume, which will appear at a later date. Entitled *A Critical Review of Akkadian Grammatical Studies*, it contains a comprehensive annotated bibliography of studies on both Babylonian and other dialects of Akkadian, with an introductory chapter that gives a history of the discipline, and a detailed topical index sorted by grammatical categories in the same sequence as the one followed here. In this topical index one will find a systematic and exhaustive bibliographical coverage of each subject presented in this grammar, whether or not the particular opinion represented by each bibliographical entry has been dealt with in the corresponding section of the grammar. In this sense the topical index provides a full-fledged supplement to the data presented here, with the addition of points of detail which are omitted from the present book. By thus separating the fuller scholarly apparatus from the main body of the grammar I have been able to retain a more discursive style in my presentation, which I hope may contribute to the readability of my text. By the same token, the scholarly apparatus to be provided in the companion volume will be

[1] References are given only for passages which are non-paradigmatic and which exhibit some unique feature. References for passages which can easily be located in the dictionaries are omitted. Forms within paradigms are not necessarily attested and are often generated on an *ad hoc* basis.

both more comprehensive and more fully documented than if relegated to footnotes given in this volume. It should be noted that in the grammar I have not given references to the companion volume, since the latter follows exactly the same sequence of topics as the former, so that cross-references may be assumed as automatic.

(7) It is hoped that this grammar may serve a *pedagogical purpose* and be utilized by students in the process of learning Akkadian. Though the book is obviously not an elementary introduction, it must be said that beginning students in Akkadian are not normally at an elementary stage either. Akkadian is studied only at the University level, where the study of grammar should entail more than just familiarity with a minimum of rules meant as an aid for a quick reading of the texts. The deeper the understanding of the linguistic structure, the firmer is our control on textual analysis, and the more finely tuned our sensitivity for the nuances of expression. In this light, a grammatical study is not only a key for deciphering a coded text, but also a diapason for training our inner ear to the life that still breathes in the texts. These can then be shown to be, in truth, not dead but only dormant. I should also note that relatively more attention than usual is given here to a definition of terms, and more space to a discursive type of argumentation. As for terminology, I have endeavored to explain in some detail even standard terms (e.g., verbal aspect or tense): my concern is not so much for nomenclature as for the underlying conceptual structure, for which after all the terms serve but as a label. As for argumentation, I have sought to communicate some of the heuristic function of grammatical research, where other grammars tend to offer a more deictic presentation of rules and data: this is partly because of the novelty of some of the conclusions, and partly because it seems pedagogically instructive to carry the students through a given line of grammatical reasoning rather than just presenting them with the resulting conclusions. My personal experience, and that of my students, in using various versions of this grammar in my own Akkadian classes has been very positive, and if circumstances will warrant it, it may be desirable to publish in the future a workbook which would include the exercises, drills and other instructional aids I have been using in my classes in support of this grammar.

(8) While I have kept formal linguistic notation to a minimum, the degree of substantive formalization may appear excessively algebraic to some – see, for instance, the presentation of the verbal patterns, where I have taken the concept of matrix to its logical consequences. The major argument in defense of my choice is the one already proposed, namely that this approach seemed best suited to arrive at a rigorous definition of the structural system of the language. But there is a secondary argument, which has in fact influenced my thinking even though there is no overt trace of it in this work. As conceived, my approach lends itself to the development of programming rules for the purposes of an *electronic grammar of Akkadian*, i.e., a set of programs which interpret the textual data on the one hand, and

can generate, on the other, specific forms in response to stated parameters. I have in fact tested this possibility with some preliminary programs which parse verbal forms, including those from weak roots, both actively and passively; for these I have used as algorithms the rules formulated in the grammar. Further work along these lines will prove that, far from being just a curiosity, this use of the grammar is effective in testing the consistency of the grammatical system, generating forms in simulation of living speakers, and serving the needs of practical pedagogical use.

A first draft of this grammar was completed in 1970, and some early versions have been circulated to various colleagues and have been used over the years in class instruction. For their comments on specific points I wish to thank the students who have followed my classes (several of whom are credited in the body of the text for their specific contributions). In particular, for their assistance in the final stages of proofreading, I wish to acknowledge the contribution of ROGER B. GOOD, RAJU KUNJUMMEN, DANA M. REEMES, MIKI YOKOYAMA, and especially of CHANG BAE LEE. From among the colleagues who have contributed comments on earlier versions I wish to thank especially JOHN B. CALLENDER +, THORKILD JACOBSEN +, ALAN S. KAYE, WILLIAM L. MORAN and THOMAS G. PENCHOEN. Most particularly it was I. J. GELB + who not only commented on specific points of my text, but also shared with me his keen insights on Akkadian grammar and on the variety of linguistic methods that could be applied to it.

Financial support has been provided by the Research Committee of the Academic Senate of the University of California, Los Angeles, which, through its enlightened and generous policy, has made it possible for me to rely over the years on the sustained assistance of a number of graduate students. Support for the electronic analysis of cuneiform texts, of which this grammar is in some ways an offshoot, has been provided by the National Endowment for the Humanities Grant RO 6291-72-153; by the UCLA Campus Computing Network; and by the Packard Humanities Institute. Support for the publication of this volume has been provided by IIMAS – The International Institute for Mesopotamian Area Studies. To all of these institutions goes my heartfelt gratitude.

This volume is dedicated to two mentors and friends who have followed my personal growth stretching back in time even further than the beginning of my work on the grammar. Over the years, they were unfailing in pointing to the permanence of values, unfailing at the same time in their search for openness to changes in perception – ever a reminder of how the coherence of the journey is inextricably bound with the caleidoscopic drifting of the landscape.

La dedica a Mons. Luigi Villa riflette in particolare il profondo legame che mi ha associato a lui negli anni della mia prima formazione universitaria e che si è venuto sempre più intensificando pur con le intervenute distanze di tempo e di spazio – un legame che tanto più mi nutre alle radici quanto più meditato è il ripensamento dei valori da lui additati e personificati

Beola and Malibu, Fall 1995 Giorgio Buccellati

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SYMBOLS

C	any consonant (upper case letters stand for sets of alternating realizations)
V	any vowel
I	*i/a*, see below, 14.2
ʔ	*ʾ/:/∅*, see below, 41.1
N	*n/:/∅*, see below, 42.1
W	*w/ʾ/:/∅*, see below, 43.3
/	root vowel u/a
\	root vowel i/a
:	upper case notation for length (subsuming set of realizations)
˂	length expressed segmentally (and referring to the phoneme that precedes)
˃	length expressed segmentally (and referring to the phoneme that follows)
·	length expressed segmentally (and referring to the phoneme that precedes)
#	word boundary
{}	morphemic transcription (when explicitly marked)
//	phonemic transcription (when explicitly marked)
| |	equivalent of [ ] for graphemic, sign by sign transliteration
[ ]	(1) *graphemically*: sign by sign transliteration; (2) *palaeographically*: a break in the original text; (3) *morphemically*: form not attested. – Generally, the symbol is omitted in case one, since sign by sign transliteration is normally apparent from the context. When an explicit notation is needed, I use in this grammar the symbol | |.
*	non existence of a given form (given after the asterisk), whether the form is reconstructed or it is structurally excluded
-	(1) *graphemically*: sign boundary in sign by sign transliteration; (2) *morphemically*: morpheme boundary (also given as +); (3) *occurring alone in a cell of a chart or diagram*: absence of a given phenomenon
+	(1) *within words*: morpheme boundary (also given as -); (2) *occurring alone in a cell of a chart or diagram*: presence of a given phenomenon
~	(1) alternative realization (normally understood in the sense that something can be rewritten as something else, see for example below, 41.3); (2) correlation of forms, e.g., when a form is derived from another (see, e.g., 10.2)
>,<	(1) *in historical reconstructions*: direction of change; (2) *in syntax*: direction of transformation from kernel sentence to transform

ABBREVIATIONS

acc	accusative
B(tn)	B(tn) stem
cf.	compare
cm	common
cnst	construct
cnstrnt	construent
D(tn)	D(tn) stem
dev.	deviation
DN	divine name
encl.	enclitic
ex.	example
fem	feminine
fm	feminine
gen	genitive
gend.	gender
GN	geographical name
gnd	gender
Imp	imperative
Inf	infinitive
LB	Late Babylonian
masc	masculine
MB	Middle Babylonian
ms	masculine
N(tn)	N(tn) stem
NA	Neo-Assyrian
NB	Neo-Babylonian
nmb	number
nom	nominative
nrm	normal
OA	Old Assyrian
OAkk	Old Akkadian
OB	Old Babylonian
part.	participle
perf.	perfect
pers.	person
PN	personal name
pres.	present
pret.	preterite
prtcpl	participle
s.v.	sub voce
SB	Standard Babylonian
sec.	secondary
Š(tn)	Š(tn) stem
vadj	verbal adjective
wr.	written, writing
WSem	West Semitic

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INTRODUCTION

0.1 A historical sketch of Akkadian

The schematic maps reproduced on the following page provide a brief visual synopsis of the development of Akkadian and of the main dialectal classifications within it. "Akkadian" is the term used to cover the entire span of time from the middle of the third millennium to the time of Christ. The oldest period is known as "Old Akkadian": it is the language spoken under the kings of the Sargonic dynasty, and it is very closely related to the language spoken at Ebla, which several scholars consider a form of Old Akkadian.

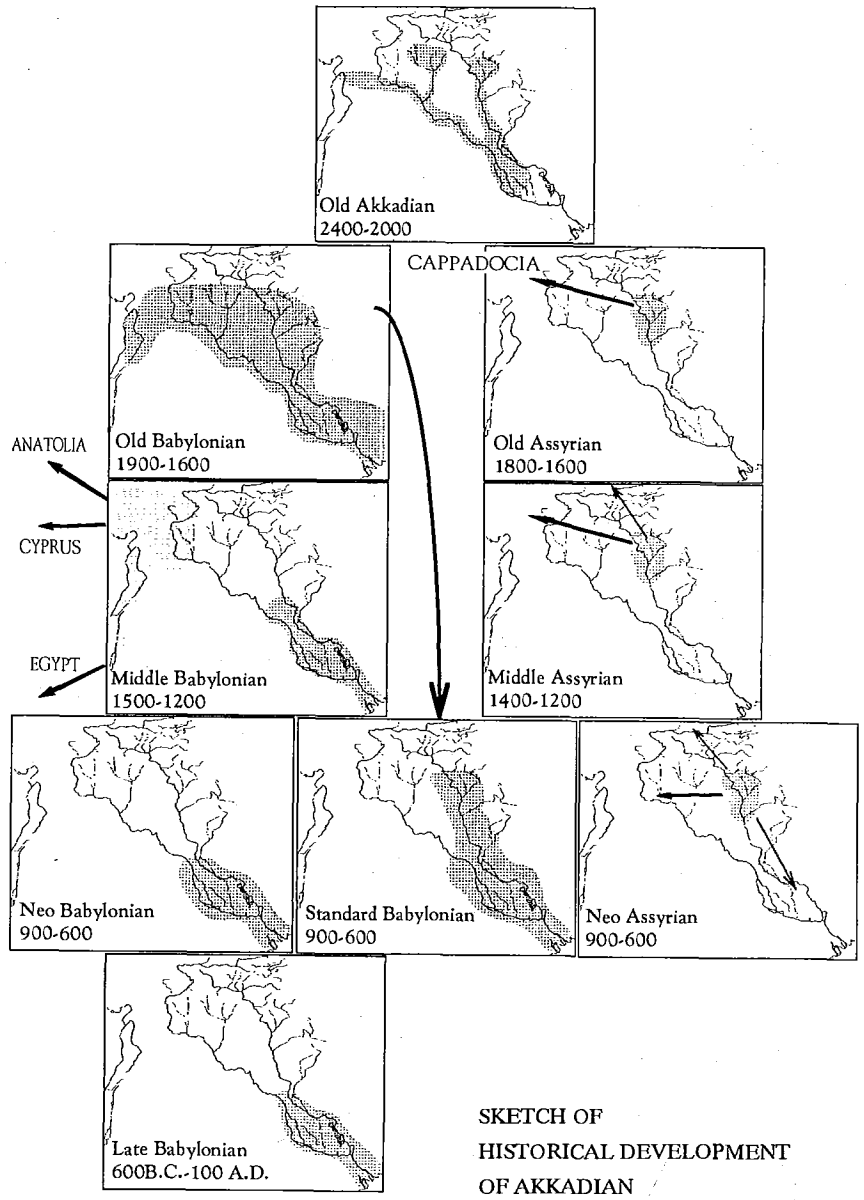
The period around 2000 B.C. marks a sharp break in the linguistic tradition of Mesopotamia. This is especially evidenced by the emergence of two clearly differentiated dialects – Assyrian in the North and Babylonian in the South, in the West and at times also in the North. Old Assyrian is perhaps more closely related to Old Akkadian, although there is also a definite continuity between Old Akkadian and Old Babylonian. From now on, the two main strands run a parallel course, both divided in three parallel periods, identified respectively as Old, Middle and Neo-. Throughout its development, Assyrian remained more clearly restricted within well defined geographical confines: the triangle formed by the Tigris, the lower Zab and the Zagros mountains. Even the Old Assyrian texts found in Cappadocia, while outside this area in geographical terms, belong squarely within it in linguistic terms, since they were written by merchants who were only temporarily absent from their homeland. Babylonian, on the other hand, is a much more cosmopolitan language, being spoken over a much wider area, especially in the Old Babylonian period, and being used also by the Assyrians as a cultural language. It is remarkable to note, in the light of such a widespread diffusion, how relatively minor the internal variations are within Old Babylonian itself.

At the time of Middle Babylonian, a version of Akkadian is also used in the West; many of the texts were found in the Egyptian capital known by its modern name of Amarna: it is a poorly written type of Akkadian, which reflects inadequate training of non-Akkadian speaking scribes, especially in texts written in the capitals of petty local kingdoms in Syria.

Standard Babylonian is the term used for a revival of some aspects of Old Babylonian in the literary texts of the Assyrian empire. Many of the major works of lit-

erature, such as Gilgamesh or the Enuma Elish, and the political texts known as royal inscriptions, are written in this form of Akkadian, a revival of what was perceived as the classical form of the language.

Late Babylonian, on the other hand, is the language written at a time when Akkadian was no longer a spoken language, after it had been replaced by Aramaic.



SKETCH OF
HISTORICAL DEVELOPMENT
OF AKKADIAN

0.2 Babylonian within Akkadian

As indicated in the title of this grammar, we will limit the scope of our inquiry to Babylonian. I use the generic term "Babylonian" to refer essentially to Old Babylonian and its survivals in other Babylonian dialects of later periods, in particular Standard Babylonian. Either Old Babylonian as such, or Babylonian in the extended meaning, is generally viewed as the classical dialect of Akkadian.[1] This is partly due to the impact of extra-linguistic considerations, such as the cultural significance of the textual output of that period, and partly to the very fact that the archaizing imitations of Old Babylonian in the later periods attest to a certain normative character, or at least a certain linguistic influence of the dialect as felt even in antiquity. While such a meaning of the term "Babylonian" taken to refer to common strands in a continuous linguistic development is in common practice, its use in the present context requires some explanation.

I should stress in the first place that it is not my goal to produce a reference grammar of Old Babylonian or, even less, of "Babylonian" in the broader sense of the term – meaning by this a grammar that includes an exhaustive philological documentation of the textual corpus which underlies the linguistic analysis.[2] The examples provided are meant to illustrate the linguistic understanding of given phenomena, not to document the spread of their chronological or geographical range. In practice, I will generally choose Old Babylonian examples in the first place, and Middle or Standard Babylonian examples either in addition to Old Babylonian examples, or in place of them whenever they are either the only or the better ones available.

Since the term "Babylonian" does not refer to a dialect spoken over a restricted period of time, how can it properly be the object of a synchronic, structural

[1] Rowton, e.g., uses the term "classic" Babylonian to refer to just such a concept, see ROWTON 1962 "Permansive", p. 234.

[2] I have undertaken a different effort along these lines, namely an electronic analysis of cuneiform texts, from a graphemic, morphological and syntactical point of view. This project originated in 1968 with one of the first major grants from the National Endowment for the Humanities aimed at developing the application of electronic data processing and analysis to textual corpora. It is still active, and it is ultimately meant to provide a categorized rendition of various corpora, where a vast documentary body of data can be scanned electronically for pertinent linguistic phenomena – the closest equivalent to a "living" informant for a "dead" language. A few volumes and disks have appeared, and others on graphemics, morphemics and syntax are in different stages of preparation. For a recent status report on the project see G. BUCCELLATI, "Cybernetica Mesopotamica," in E. M. COOK (ed.), *Sopher Mahir: Northwest Semitic Studies presented to Stanislav Segert*, (= *Maarav*, 5-6), 1990, pp. 23-32. – I will refer occasionally to a sample corpus of 219 letters from the royal chancery of Babylon under Hammurapi and his successors. In its current form, this data base includes 13,274 words as text occurrences and 2,594 words as lexical items.

analysis? Why not limit the scope of the research more specifically to "Old" Babylonian? In my understanding, the term "Babylonian" refers to a linguistic system which includes *kat'exochēn* the dialects of the Old Babylonian period, but also, in addition, its survivals in later periods. The wide chronological span which subsumes data here treated as synchronic may be surprising. But, as I will stress presently (0.6), "synchrony" does not mean "contemporaneity"; rather, it refers to the essential need for the component elements of a system to co-function in structurally defined ways, if that system is to retain its identity. In point of fact, even the Old Babylonian "dialect" of the Old Babylonian period is not a synchronic monolith, because significant dialectal variations obtain for a period of some four centuries over a region that spans from Southwestern Iran to Western Syria. No effort is made here to differentiate systematically between these various dialects and subdialects, precisely because it is assumed that Babylonian as such represents a coherent linguistic system of its own.

In practice, it may be noted, the very term "Akkadian" is often equated with the notion of Babylonian that I have just outlined, partly because of the notion that Old Babylonian and its survivals represent the classical stage of the language, as mentioned above. When a typical Akkadian form is cited in the literature, it is normally the Old or Standard Babylonian form, to which divergent forms may be contrasted from Old Akkadian, Assyrian or Neo-Babylonian: emblematic in this respect is the practice followed in the two major Akkadian dictionaries, in which the entry words are generally given in the Old Babylonian form in *AHw* and in the Standard Babylonian form in *CAD*. In this grammar, too, I will generally speak of "Akkadian" when the phenomena envisaged apply across the board.

0.3 Textual data

From the point of view of the relationship between spoken and written language, we may perhaps best distinguish three levels in the textual tradition. *(A)* Letters are the texts which most closely represent the spoken language of the day. They were dictated to a scribe, and retain much of the flavor of direct speech, although even the letters are filtered through the routine of scribal writing habits. *(B)* The literary texts in a broad sense contain a more reflexive approach to the written medium: the language is more refined, sophisticated, cultured, and hence less closely linked to normal speech. *(C)* The administrative and scientific texts (e.g., contracts or rituals) are highly formulaic in nature, and thus one more degree removed from actual speech. Like all forms, they developed a style which, although responsive to the rules of grammar, is nevertheless more static, conservative and rigid.

From the point of view of the scribes, we may also distinguish three major types. *(A)* Scribes of the royal chancery were responsible for political texts (normally in the form of display inscriptions), literary and scientific texts kept in the royal libraries, diplomatic correspondence, treaties and administrative texts. *(B)* Scribes of the temple schools were responsible for religious texts used in the cult (e.g., rituals, hymns, incantations), literary and scientific texts, and administrative texts. *(C)* Private scribes handled almost exclusively letters and administrative matters.

From the point of view of form, the typology is much too rich for even a brief overview. Only two points may be mentioned by way of example. Poetic texts are numerous, and while the rules of metric control are not well understood, there can be little doubt that a real distinction obtained between normal discourse (prose) and one which is more highly channeled (poetry). The other example is the so-called scientific literature, which is characterized by the presence of an "if" clause: a case is stated in the conditional form, and its consequence, or resolution, is stated as the main sentence; this simple stylistic device allows for an easy flow of the argumentation, which is the hallmark of all scientific reasoning.

The content of the textual tradition is also extremely rich and complex, and need not occupy us here, since its bearing on a linguistic description of Akkadian is more tenuous.

The rules and exemplification used in this grammar are of a sufficiently generalized import that they may be taken to apply to the broad range of texts mentioned above, exclusive primarily of poetry.

0.4 Writing and language

Akkadian is a dead language in the precise sense that no living speaker exists today or has existed since the time when modern analysis of this particular language started in the last century. Our knowledge of it is not based on living informants, but has rather been derived almost entirely through the medium of written sources (the only exception being that some of our information, particularly with regard to phonology, has been obtained inferentially from parallels with "living" languages). The writing system itself was meant to convey the language in its full reality, but it remains an opaque medium, which cannot be taken at face value. This is true of many other systems, such as the one used for English, which can hardly be called a transparent medium. Not that the English writing system is inadequate: as a system it is adequate, because it renders the language fully and coherently. But there are only a few one-to-one correspondences between the graphic symbols and the sounds of the language, and as a result a correct reading requires the application of a great number of rules. Akkadian presents similar dif-

ficulties, though for different reasons. The question is: how is it possible to discover such rules for Akkadian if the lack of living informants prevents an independent control of the written evidence? The answer is twofold.

In the first place, internal criticism can show both inconsistencies and regularities in the writing system, which may allow a reasonably good insight into the real significance of certain graphic notations. For instance, the *same* Akkadian word may be written differently as *ip-pa-ar-ra-as* and *i-pa-ra-as*. This could be taken to mean that Akkadian has long and simple consonants in free variation: but such a conclusion is ruled out by various considerations (not to be given here) of a phonological and morphological nature. The better conclusion is that consonantal length, though present and contrastive in the language, may or may not be represented in the writing. When not represented graphically, it has to be read into the text through the knowledge of the phonological and morphological structure of the language. In the case given above, both forms should be read *ipparras*.[3]

The second most effective guide in the effort at attaining to the language behind the writing, is the comparison with living languages which are related to Akkadian, namely the various Semitic languages spoken today chiefly in Southwestern Asia and North Africa. Comparative considerations are especially important in phonological matters, since no inference can be made as to articulation on the basis of an internal analysis of the script and the textual data. Clearly, our description of the phonemic inventory cannot be done purely on the basis of the cuneiform material, but presupposes a comparative and historical approach as an indispensable prerequisite. For example, the reading of 𒀀𒁀 as *a-ab,* and its interpretation as /ʾ*ab*/ "father of" is based on the correlation with the word ʾ*ab* "father (of)," in Arabic, Hebrew, etc., and on the observation that such reading and meaning fits equally well all other occurrences of 𒀀𒁀 (where these two signs can be isolated as constituting a single word). Note that while the *meaning* "father of" could also be obtained from the context or from an ancient translation in a non-Semitic language, it is only the correlation with known Semitic languages which allows a *phonological* analysis establishing the reading ʾ*ab* and more precisely the articulatory nature of ʾ as glottal stop, *a* as back low vowel, *b* as labial voiced stop. In addition, occasional transcriptions of isolated Akkadian words in other ancient scripts (e.g., Greek) are also of some value for a thorough reconstruction of the phonological structure of Akkadian.

In some ways, then, it is possible to reach behind the writing system and perceive linguistic reality as expressed by graphic symbols. Yet the fact remains that

[3] In my understanding, graphemics is the study of the systematic correlations between the phonemic dimension of a language and its graphic embodiment. As such it extends beyond the identification of specific values for given signs, and it includes especially rules of correlation such as the one just stated above. In this grammar I refrain altogether from a discussion of graphemics, which I have treated most recently in "The Ebla Electronic Corpus: Graphemic Analysis," in *Actes du Colloque International de l'Histoire et l'Archéologie de la Mohafazat d'Idlib = AAAS* 40 (1990) 8-26.

our understanding of the language is largely based on a set of assumptions regarding the nature of the Akkadian writing system. In this grammar we will dispense with any comparative and historical argumentation aimed at showing the validity of such assumptions; they are simply taken for granted. It may be noted that, in this respect, there is general agreement among scholars, and that nothing in this grammar will be introduced that is based on a controversial understanding of the writing phenomena. It should also be stressed that while there is reasonable certainty as to the accuracy of phonemic, grammatical and semantic analysis, the details of articulatory phonetics are only approximate, and may in some cases be considerably at variance with actual pronunciation in ancient times. Thus, the classification of phonemes which follows is based on articulatory considerations obviously not because articulation can be verified empirically, but simply because it is assumed on distributional and comparative grounds.

In this grammar we will follow Gelb in using the term "transliteration" for a sign by sign (or a graphemic) rendering of the cuneiform script, and the term "transcription" for a phonemic rendering of individual words. Transliteration will normally be represented graphically by syllables in italics linked by a hyphen, e.g., *i-pa-ra-as,* transcription by a connected word in italics, sometimes enclosed between virgules, e.g. *iparras* or */iparras/*.

0.5 A structural approach

The description of Babylonian given here aims at providing an understanding of the structure of the language as such, and not only a key to the reading of texts. In other words, my goal is to provide not a phrasebook with 'how-to' explanations, but rather a description of the language viewed as a system, through which one can in turn shed light on individual texts. At first, this may seem like needless acrobatics in which one indulges at one's own peril instead of adhering closely to the texts. But I hope to show that there is merit to this approach, and that far from leading us into a rarefied and sterile atmosphere of self-serving abstruseness, it increases our real understanding of the expressive mechanisms – and thus of course of the texts which are our only conduit of expression and meaning.

In the first place, any language has an internal structure of its own which is worthy of independent study. There is an almost aesthetic quality to an appreciation of the architectural qualities of a linguistic system, which is truly a living organism. And if we try to do justice to the language as an autonomous entity, we can "learn" it more fully and in greater depth: we will then avoid two pitfalls which we may call the "straight-jacket" and the "ad hoc" approaches. The straight-jacket method is one which presupposes a language as having some kind of logical priority, and models other languages to conform to it; whether this assumed priority is

attributed to Latin or English, it will in any case do injustice to the language we are trying to study, and suffocate, as it were, its authentic characteristics. The ad hoc method is one which prescinds from systematic theory, and explains a language in function of one or another specific text: this approach seems more satisfying at first, but may end up in a morass of unrelated details which seriously lessen our explanatory powers.

The present grammar is structurally oriented in the specific sense that it looks at Babylonian on its own terms, as an autonomous entity: our presuppositions are all in function of the language as a living organism, with its own internal constraints, rules and peculiarities. The key procedure, in this method, is to identify what are normally called "distributional classes." These are groups of phenomena which can be shown to have the same functions in different contexts: for instance a preposition will be defined as such not because it can be translated with an English preposition, but because it occurs regularly in the language with a certain class of words and not another. For instance, the two words */ina īmur/* cannot co-occur in this sequence in Akkadian (just as their counterpart "in he saw" cannot co-occur in English), whereas the two words */ina bītim/* do co-occur (just as their English counterpart "in the house"). We can say, then, that words with the same distribution as */ina/* belong to one and the same class, namely a class which admits co-occurrence with words like */bītim/* but not co-occurrence with words like */īmur/*. Words are thus "distributed" into well specified formal "classes," that is, they fall into distributional classes which can be so identified in formal terms.

A correlative notion to distributional classes is that of mutual exclusivity among such classes. In terms of the above example we can say that */ina/* and */īmur/* are mutually exclusive because one is not found to replace the other in any known context. Wherever we find */ina/* or another word belonging to the same class, we cannot find */īmur/* or another word of the same class: thus the sequence */īmur bītim/* is impossible in the language.

A structural approach is especially important in the case of "dead" languages, i.e., languages for whom there are no living informants – like Akkadian. Here we can only rely on the internal consistency of the linguistic phenomena observed, without the benefit of independent verification in answer to specific questions. When we say that something is impossible in the language, we mean to say that it is inconsistent with everything that has been observed in the known texts. The validity of such a statement depends not only on the size of the textual sample on which it is based, but also on the stringency of the structural analysis: the more accurate we are in our understanding of structural affinities and incompatibilities, the safer our conclusions will be with regard to the possibility or impossibility of given linguistic phenomena.

A criticism which has been raised against attempts such as mine is that one merely restates the obvious in different terms. In one respect, this may indeed be

expected to be the case. Ironically, it may be said that the sum total of all possible sentences in a language *is* a grammar, too – but so unwieldy as to be meaningless. A "re-statement," then, is useful because it accounts more effectively for classes of phenomena, or, alternatively, because it articulates in explicit terms correlations which are present only implicitly in the data. The value of a grammar is to be found in the degree of simplicity and comprehensiveness of such re-statement.

Another criticism is that new terms and new formalizations are considered as needlessly complex and abstract, as if they were adopted to make up for an actual lack of understanding. For my part, I have seriously striven to introduce only such elements of either terminology or formalization as are truly needed for the definition of genuine structural relationships. In its pejorative connotation, "jargon" is to language what "bureaucracy" is to society – a parasitic superstructure which suffocates the organism it is supposed to serve. Such jargon I try to avoid. But the reverse is also true. Since there is a tendency to attribute substantive, rather than nominal, valence to labels, it is important that labels be as close as possible to the reality which they are meant to define. Such jargon I do introduce. For these reasons, I pay more attention than one might expect to a justification of terminology and formalizations. I obviously do not mean to preempt the work of general linguists who can explain such matters better and more fully. I only wish to show that there is substance to such terms and schemes as I have chosen. This seems especially useful since at times a certain amount of lip service is paid to jargon, in such a way that, for instance, "phoneme" may stand for nothing more than a "letter," or "grapheme" for "cuneiform sign."

While I follow a strict structural method in the grammatical presentation of the language, room can be made in the practice of teaching for a more inductive approach. What matters is to be able to keep the levels of analysis separate: in other words, when studying the language as a language, we must be mindful of its internal structure rather than of its empirical embodiment in given textual passages; but in order to read the texts, we can and must use our own intuition, bypassing or short circuiting, whenever useful, theoretical considerations.

0.6 Synchrony and diachrony

Another fundamental concept is the difference between a synchronic and a diachronic description of the language. A diachronic description views the language in its becoming, i.e., as it unfolds through various historical stages: a phenomenon is explained in terms of its chronological antecedents and presuppositions, it is viewed as the result of a set of conditions and in turn as a precondition for further development.

A synchronic description, on the other hand, views the language as a working system, in terms of the logical connections of its component parts, and regardless of how they have come into being through time. Synchrony is not a small slice of temporal development, it is rather a logical system viewed outside of any temporal development.

An analogy may help to explain these concepts more clearly. The assembly chart of any mechanical tool details the interconnections among the constituent parts of the tool in a purely synchronic way, i.e., as a logical system. It ignores the issue of temporal development (i.e., it ignores diachrony) in many different ways: for instance, it ignores the question of how and when the various component pieces were manufactured, who invented them, whether they were all in stock at the time this particular tool was produced and marketed, it even ignores, overtly, the question of which pieces must be mounted first and which last (although this is in fact implied by the diagrammatic position of the lines which show how the pieces go together). Note that all of these issues are of real interest for a fuller understanding of the tool itself: the quality of a given model may well have been influenced by what component parts were already in stock, so that a particular design improvement may have been foregone for the sake of economy – a "historical" fact which might explain a particular structural flaw in our hypothetical mechanical tool. But a structural description of the tool, i.e. its assembly chart, works at other levels of significance and explanation than a historical justification: the user just wants to know how to change a part, and to that end he only needs to know how *all* existing parts fit together.

That is precisely what we will attempt to do in this grammar: we will study the question as to how *all* the known parts of Babylonian fit together, we will try to reconstruct the assembly chart of a real organism as it existed at a given point in time in the past. Note the last comment: we must deal with a specific "model," as in the case of a tool's assembly chart, not with an abstract, universal type. And the particular model which we will choose is Babylonian in the sense described above (0.2). It should be clear that our choice to give here a synchronic presentation is in no way to be understood as belittling the value of a historical presentation. A historical, or diachronic, study is fully justified and in fact very important; it is simply that we must keep levels of analysis rigorously distinct, and that here we choose to analyze only the synchronic dimension.

It is important to understand the difference between "synchrony" and "contemporaneity." I already stressed that synchrony is not a thin slice of diachrony – it is for the same reason that synchrony is not simply a statement about two things which exist at the same point in time. Note how tricky etymology would be in this respect: etymologically, synchrony (Greek "with" + "time") is in fact identical to contemporaneity (Latin "with" + "time"). But consider the following example, taken from English. The two sentences "he doesn't" and "he don't" are indeed

contemporary, since they are both spoken and understood by currently living speakers. But they are not *synchronic*, because they do not co-occur as part of the same speaker's dialect: whoever says "he doesn't" would not say "he don't" (except quoting or imitating another speaker).[4] We can say that the two sentences, "he doesn't" and "he don't," occupy the same slot in the same distributional class, hence, they are mutually exclusive, and not allowed within the same synchronic system.

The analogy we have just proposed may also serve to illustrate another aspect which was discussed above, namely the concept of a structural approach. The mechanical tool of our analogy is obviously intended to be used for a specific utilitarian purpose. Similarly, one might argue, a language is a tool used to convey a message: hence one expects to have rules of operation (how to speak it or how to read a text) and only secondarily may an interest arise in the "assembly" chart (the structural make-up of the language). After all, most human beings speak one or more languages without any real knowledge of their structure. This is true: it is what is called "linguistic competence," which is different from linguistic theoretical awareness. In the case of a dead language like Akkadian, however, the lack of living informants makes it imperative to develop some degree of linguistic sophistication even in order to obtain a low level understanding of the texts: one cannot profitably use a Berlitz school approach to the study of cuneiform. Language may certainly be viewed as a tool, but an infinitely more delicate and subtle one than a mechanical tool, and a serious knowledge of its operational capabilities requires a real understanding of the "assembly chart," even for utilitarian purposes.

[4] Of course, the same *physical* speaker might utter both phrases if he speaks, on different occasions or different contexts, both dialects – much as the two phrases "he doesn't" and "il ne fait pas" may be physically uttered by the same (bilingual) speaker, but remain nevertheless portions of two distinct languages, i.e. two distinct synchronic systems.

PHONOLOGY

PART I
THE PHONEMES

Chapter 1
Phonemic Inventory

1.1 Phonemics and phonetics

The distinction between phonemics and phonetics, a key concept of general phonology, is especially useful in dealing with dead languages. Phonetics deals with sounds according to their physical properties. As such, sounds can be described in terms of acoustic theory, they can be charted on the basis of spectrograms, they can be contrasted in terms of minute articulatory characteristics.

Phonemics, on the other hand, deals with sounds as the key operative components of the language understood as an expressive system. Phonemes are selected sounds or sound classes, which acquire their value within any given linguistic system (such as English, Akkadian, etc.) because of their contrast with, and juxtaposition to, other sounds. They are, in other words, part of a closed system, where the various interrelationships of the component parts determine the function and value of the component parts themselves.

Obviously, phonemics presupposes phonetics, in that a phoneme is not an abstraction – as if phonemics were the phonology of mute speakers! Phonemes correspond to real sounds, or at least to ranges of real sounds. Hence phonemics must be rooted in a clear understanding of phonetics. For instance, the recognition of allophones (distinct phonetic realizations within the same phoneme) implies the existence of a phonetically plausible range: it would be untenable to suggest that, e.g., the sounds *p* and *z* are allophones of the same phoneme. Thus phonetics and phonemics are not to be contrasted as if they dealt with sounds in one case and non-sounds in the other, but rather on the basis of sounds viewed as belonging to either an open or a closed system.

We may return to the analogy of a mechanical tool (see above, 0.6) in order to explain in simple terms the concept of phonemics as a closed system. On a tool's assembly chart there are component parts which belong to different categories – let us say, bolts, nuts, washers, etc. What matters in terms of the assembly chart is that each bolt is shown as having an appropriate washer and nut, and an appropriate location; the physical properties of bolts, washers and nuts (e.g., their weight, color, material), are less relevant in terms of the assembly chart. The assembly chart is a closed system which requires a fixed and exact amount of bolts, washers and nuts: these acquire their value in terms of their relationship and their position. Contrast this situation with the stock requirements of a hardware store: this is an open system in that bolts and washers and nuts stored in adjacent bins have no reciprocal relationship in terms of themselves – although they would have a typological relationship (items of similar size and cost are likely to be stored in adjacent bins), a marketing relationship (the storekeeper will know which ones sell better), etc. So then: bolts, washers and nuts *on the assembly chart* are the equivalent of phonemes, while bolts and washers and nuts *in the store bins* are the equivalent of phones (the sounds studied by phonetics).

It will be apparent that a study of Akkadian phonology (a term which subsumes both phonetics and phonemics) will be severely limited in what it can say about the physical properties of sounds, since living informants have long since disappeared: hence there is, in practice, no real Akkadian phonetics except for what can be said inferentially in terms of articulation (see presently). Akkadian phonemics, on the other hand, is well known and of fundamental importance for anything else which can be said about the language: we know what the contrastive values of the sounds were, even though the exact physical quality of these sounds escapes us. To put it in practical terms, it seems a safe presumption to say that if we were to meet a living informant of Akkadian and were to converse together, we would certainly be found to have a very strong accent, but would ultimately be able to make ourselves understood.

Through the inferential kind of reasoning referred to above, we can reconstruct the phonemic system of Akkadian in terms of how the sounds were articulated. Again it should be stressed that we lay no claim to a secret knowledge of the physical properties of Akkadian sounds (whether acoustically or articulatorily); we are just establishing distributional classes which we assume to match the articulatory properties of modern speakers of related Semitic languages.

It may be useful to outline briefly the structure of the physical apparatus with which sounds are uttered. Sounds are produced by a flow of air coming from the lungs through the oral and nasal cavities: the various configurations assumed by these cavities and their component parts constitute the "articulation" of a sound. The starting point of the vocal apparatus is represented by the glottis; and the end

point consists of the lips and the nostrils. In Akkadian, the flow of air is assumed to have been unidirectional, i.e., going only from the lungs to the outside, without any sound produced by inhalation of the air or aspiration. Normally the air flows through both the oral and the nasal cavities. If it flows through the nasal cavity only, with an occlusion of the oral cavity, then we have a nasal sound. Other occlusions, partial or complete, are provided by the tongue, the teeth and the lips. The "place of articulation" corresponds precisely to the place where an obstruction deviates the flow of air: thus we have a labial if the air finds an obstacle in the area of the lips, a dental if in the area of the teeth, etc.

1.2 Consonants

Considering the place of articulation, six categories may be distinguished, depending on whether obstruction of the flow of air from the lungs occurs at the lips (labials), the teeth (dentals), the gums (alveolars), the front of palate (alveopalatals), the soft or back palate (velars), the vocal chords in the larynx or glottis (laryngeal or glottal).

Considering the manner of articulation, two main classes are to be distinguished depending on whether the occlusion is complete (stops) or only partial. The latter group is further subdivided into five classes, depending on whether the passage of air is limited by a narrow constriction in the mouth (fricatives), or else by closure of the mouth and opening of the nasal passage (nasals), by opening at both sides of the tongue (lateral), by vibration of the tip of the tongue (trill), by opening through the midline of the tongue (median resonants or semi-vowels).

A further subdivision with respect to the manner of articulation is determined by the presence or lack of voice (voiced vs. voiceless), and further by what is normally called "emphasis" in the field of Semitics, i.e., a feature which may have consisted of either glottalization or back-pharyngealization (emphatic).

Since there is general agreement about the phonemes which have just been described, it does not seem necessary to document in detail the underlying phonemic analysis. Only two comments are in place here. First, it should be emphasized that the description in articulatory terms is purely approximate, and that what really matters is the phonemic contrast not only of the individual phonemes, but also of the various classes of phonemes. For example, it is important that the classes labeled dentals, alveolars, palato-alveolars were distinguished phonemically (as evidenced by the differences in their behavior in clusters, see, e.g., below, chapter 52), whether or not the phonetic articulation was in fact produced at the respective position in the mouth implied by the articulatory terms.

The second comment regards the dissent (REINER 1966 *Analysis*, 35-37) concerning the phonemic status of glottal stop, semivowels and length (for which see presently): in Reiner's analysis, these are all considered as allophones of the same phoneme. While her argumentation has appeal from a structural point of view, it seems best here to retain the distinction as phonemic, not only on historical grounds, but also on the basis of minimal pairs such as *wabālum* "to bring" ~ *ʾabālum* "to dry out," and *yūm* "mine" ~ *ʾūm* "day of."

For *ś*, see below, 5.1 and 53.5. For *g̃, p̣, b̌, ṯ, d̆, k̆, g̣* see below, 1.6. For *rº*, see below, 55.1 n.1.

The combination of the various consonantal features, and the resulting inventory of consonantal phonemes, is tabulated below:

			point of articulation					
			lab.	dental	alveol.	palat.-alveolar	velar	glottal
		voiceless	*p*	*t*			*k*	ʾ
	stops	voiced	*b*	*d*			*g*	
		emphatic		*ṭ*			*q*	
manner		voiceless			*s*	*š*		*ḫ*
of	fricatives	voiced			*z*			
artic.		emphatic			*ṣ*			
	nasals		*m*	*n*				
	lateral				*l*			
	trill				*r*			
	semi-vowels		*w*				*y*	

When phonemes are transliterated with letters used to render English phonemes, the name given to the phoneme is the same as that of the English letter. In other cases, the name of the corresponding Arabic or Hebrew letter is used, as in the following cases (where alternative transliterations occasionally found in the literature are also given):

ṭ	*ṭeṭ*
ṣ	*tsade*
q, also *ḳ*	*qof*
š	*shin*
ś	*sin*

ḫ, also *kh, x*	*khet*
ʾ, also *ʔ*, *ʔ*[1]	*aleph*
w	*waw*
y, also *j*	*yod*

1.3 Vowels

Akkadian distinguishes four vowels, which may be described in terms of the relative height and relative position of the tongue. If the relative points are described as high and low, front and back, the resulting combinations are: one front high vowel (*i*), one front low (*e*), one back low (*a*), one back high (*u*). Note that even though *a* and *e* are clearly different phonemes, they share a similar status in several instances, with regard to either historical (see below, 5.1; 14.5) or morphemic conditions (11, n.1). These relationships may be tabulated as follows:

	front	back
high	*i*	*u*
low	*e*	*a*

An additional distinguishing feature in terms of articulation is that in *i, e, a* the lips are unrounded, in *u* rounded.

A mid central vowel *ə* (called "*shwa*") may possibly be postulated in some cases, notably in the verbal vocalism (see below 14.1) and in the construct state (56); it may also help explain the Assyrian phenomenon of vowel harmony. This remains however a conjecture and accordingly no such phoneme is in fact recognized in the present grammar.

1.4 Length

Any vowel and any consonant may occur either short or long. Since there is only a two-way opposition, the term "short" is to be understood as referring to normal length; notationally, therefore, a "short" vowel is left unmarked, and only a long consonant is marked. That length is phonemic is indicated by numerous minimal pairs such as:

šarratum "queen"	vs.	*šarrātum* (*šarra:tum, šarraʿtum*) "queens"
idin "give!"	vs.	*iddin* (*id:in, idʿin*) "he gave."

[1] This notation for aleph is modeled after the number *3* which is also sometimes used to render aleph. The symbol *ʔ* is used in this grammar to represent upper case aleph, for the use of which see especially below, 39.1.

Length markers generally used in Assyriological transcription are logically inconsistent: they are a macron over the vowel for vocalic length (e.g., *ā*) and reduplicated writing for consonantal length (e.g., *dd*); short phonemes, on the other hand, are unmarked (e.g., *a*, *d*). The notations given above in parenthesis (colon or raised dot placed to the right of the pertinent letter: *a:* or *a·* and *d:* or *d·*) are used in linguistics, and are occasionally found in Assyriology as well. In the present grammar, the common Assyriological tradition (e.g., *ā* and *dd*) will be retained in spite of its inconsistency (it may be noted that this notation has the practical advantage of facilitating the marking of syllable boundary, e.g., *šar-rum*). In addition, both the raised dot and the colon will be used whenever either notation helps to emphasize the segmental nature of length for reasons of description. The difference in use between the two is as follows: the single raised dot stands for simple length of the phoneme to the left (e.g., *a·* or *d·*); the colon stands for a set of multiple realizations subsumed under the symbol of length, in a function similar to upper case letter (e.g., *k:n*, see below 39.1). A refinement of this convention that is peculiar to this grammar, is the addition of an arrow above the raised dot (·←, ·→), which is used for special reasons described below (35.3).

Note that, in any case, all these notations are meant to represent one and only one phonological phenomenon, i.e., the protraction of articulation. In particular, reduplicated writing to mark consonantal length should in no way be construed to mean that the consonant is "double"; as indicated, consonantal length should be understood precisely as a prolonged articulation of the same consonant, not as a doubly performed articulation which repeats the same consonant twice.[2] Hence one should properly speak of a long, not a double consonant. In this respect the traditional notation for vocalic length (a macron) is the most appropriate, since length is properly a "suprasegmental" phonological phenomenon; the "segmental" notation represented by the raised dot is useful to represent a morphemic configuration, but is misleading from a phonological point of view.

Many authors differentiate vocalic quantity in Akkadian more finely than indicated above, namely:

V for normal or short vowel, e.g., *kalbum* "dog"
$\bar{V}$ for morphological length, e.g., *kalbū* "dogs"
$\hat{V}$ for contraction length, e.g., *maḫrûm* (from *maḫrium*) "first

and a few authors recognize one more type of contraction length, namely:

[2] This is likely on general phonetic grounds, and is confirmed in Akkadian by considering that (1) clusters of homorganic consonants are impossible (see 9.3), and (2) consonantal clusters and long consonants yield different realizations when followed by {ø} in the construct state, see 56.2. "Double" consonants or vowels can occur only at word boundary, e.g., *nīš Šamaš* "by the life of Shamash" or *ṭuppi ilim* "god's tablet" (the latter example is applicable only if we exclude the phonetic reality of aleph in word initial position, see 2.1). – Note that the standard siglum D for the D stem of the verb (which is retained in this grammar, see 13.3) is in fact inappropriate, since it stands for doubling, rather than lengthening of the middle radical.

$\tilde{V}$ for contraction of two vowels one of which is morphologically long, e.g., *banūm* (*banāum*) "to build."

The difference between the second type ($\bar{V}$) and the third and fourth ($\hat{V}$, $\tilde{V}$) is borne out by the cuneiform writing system, which normally leaves morphological length unmarked, but adds often an extra vowel sign for contraction length (e.g., *ra-bu-ú-tum* for *rabūtum* "greatness"). It is an open question whether these degrees of vocalic quantity are phonemic or not. Minimal pairs may in fact be adduced, for instance:

panū "face"	vs.	*panû* "first"
imnū "he counted"	vs.	*imnû* "they counted"

It is not clear, however, to what extent these minimal pairs are contrastive on the phonemic level, since the differentiation in the writing system, where it occurs, may more likely represent a historical writing than reflect a phonological reality (in other words, it is conceivable that the words in the pairs given above may be homonyms). Alternatively, writing may indicate a difference in stress (*p'anū* vs. *pan'ū*, *'imnū* vs. *imn'ū*), for which see presently. An explicit argument against the validity of a separate phonemic status for $\hat{V}$ may be adduced on the basis of the treatment of middle weak radical, for which see below, 44.1:3: instead of the contrasting pair *itūrū* ~ *iturrū* for preterite ~ present one would expect to have *itūrū* ~ *itûrū* if the extra length contrast were indeed operative. In this grammar, the assumption is made that the finer differentiation of vocalic quantity is applicable only on the level of historical writing, hence, as indicated above, only two degrees are recognized – short (V) and long ($\bar{V}$), as follows:

i e u a and *ī ē ū ā*.

1.5 Stress

Very little is known about stress, and it should be noted that when it is discussed at all, it is often in function of metrics, in which case the argumentation is likely to be subjected to a vicious circle, where unknown prosodic rules have been based on unknown stress rules. There are two main points to be considered – the phonemic status and the position of stress.

As for the first point, Akkadian stress appears to be non-phonemic for two reasons: (1) there are no convincing minimal pairs with contrastive stress, and (2) stress seems to be automatic. Potential minimal pairs prove inconclusive given the lack of a regular graphic marker for stress in the cuneiform writing system; we are thus left with the simple *possibility* that semantic contrast between identical words

might have been paralleled by stress contrast – such as, in a hypothetical way, in the following pairs:

p'anū "face" vs. *pan'ū* "first" (see above, 1.4)
m'ilik "counsel of" vs. *mil'ik* "give advice!"

Only a systematic inquiry into the problem, along both synchronic and diachronic lines, may arrive at a clearer definition of the range of possible solutions.[3]

As for the position of stress, the general tendency is to place it on the first long syllable from the end of the word, except for morphemic length on the final syllable; long syllable refers to either a syllable with long vowel or a closed syllable. (Note that stress is in any case presumed to apply not to individual phonemes, but to syllables, for which see below, 2.6.) Examples are:

m'āḫirum "the one who receives"
'imḫurū "they received" (the first syllable is long because the first vowel is followed by consonantal cluster, see below, 2.6; the final long vowel is disregarded because it has morphemic length)
im'aḫḫarū "they receive" (same, with quadrisyllabic word)
maḫr'ū "first" (stress on final long vowel because length here is not morphemic, but is rather the result of contraction)
šarr'āku "I am king" (morphemic length counts because it is not in final position).

It should be noted that these "rules" refer to simple words, i.e., words which are not compounds and are not followed by enclitics or suffixes, for which see below, 31.4. It is very likely that in these cases there would have been secondary stresses, e.g.,

šarr'āk'ū-ma "I am king and"
ana šarr'ī-šu "to his king."

Indeed, the writing often seems to indicate that such stress would fall before the enclitic or suffix.

This traditional, and mostly unreflected, stress pattern has been questioned by REINER 1966 *Analysis*, 38f., who has brought forth good arguments in favor of stress on the first syllable of the word. In this case, too, stress is still considered automatic, and hence non-phonemic.

In this grammar I assume that stress is automatic and therefore non-phonemic. Since stress position is thus purely a matter of phonetic realization it is not necessary to opt for any special position; hence Akkadian words will be left unmarked with respect to stress, except occasionally for secondary stress.

[3] Note for instance the strong case made by HETZRON 1969 "**y'aqtul*" in favor of a minimal pair *y'aqtul* ~ *yaq'ul* in Proto-Semitic and Proto-Akkadian (see below, 28.4). Note that stress notation is placed immediately before the vowel affected.

Under the term "intonation" one includes variations in loudness and pitch (rendered notationally by means of contours). I will only refer occasionally to this phenomenon, which may be considered as a form of syntactical or sentence stress, see below, 59.3; 73.1; 76.1.

1.6 A note on phonetic realizations

As indicated above, the articulatory description of the phonemes is only approximate – an approximation which fortunately does not undermine our understanding of the phonemic structure of the language. We owe it to the carefulness of scribal orthographic tradition that the writing system yields a consistent picture of the underlying phonemic reality. But precisely in virtue of the remarkable consistency of the scribes certain deviations in the writing which tend to appear with some frequency cannot be considered as scribal mistakes, but rather seem to reflect linguistic peculiarities.

The possibility of variations in the vocalic quality (*ö*, *ü*; also *ə*, see above 1.3), palatalization of dental nasal (*ḡ*), non-emphatic realization of the velar emphatic (*k* for *q*), spirantization of stops (*p̲*, *b̲*, *t̲*, *d̲*, *k̲*, *g̲*) have been occasionally pointed out in the literature.[4] The number of examples collected is sufficient to allow a reasonable certainty that such different realizations were indeed present in the language. However, (1) they did not achieve phonemic status, and (2) it seems likely that they were not automatic (not even within limited dialects), but rather that they were in free variation.

[4] See especially VON SODEN 1948 "Vokalfärbungen," 1968 "Spirantisierung," and KNUDSEN 1961 "q phoneme," 1969 "Spirantization." For the affricate realization of sibilants see FABER 1985 "Evidence"; DIAKONOFF 1991-92 *Proto-Afrasian*.

Chapter 2
Distributional Classes

2.1 Word initial

Any simple vowel and any simple short consonant may occur as word initial. This excludes long consonants, consonantal clusters, and vocalic clusters. Of the semi-vowels, *w* occurs regularly in word initial position in Old Babylonian (but not later, see below, 5.1); on the other hand, *y* does not occur in word initial position except in late loanwords[1].

As noted above, Akkadian does not admit consonantal clusters in word initial position. It may be noted in this connection that loanwords with initial cluster in the original form are resolved with the insertion of vowels; thus for example the Greek name Stratonike is rendered as *As-ta-ar-ta-ni-ik-ku* (with prosthetic *a*).

The question as to whether glottal stop (ʾ) does or does not occur in word initial position presents a special problem. In modern transcription it is normally assumed that initial vowel is the more frequent realization, or else that initial aleph is automatic, so that initial aleph is never indicated: both major dictionaries (*CAD* and *AHw*) do not have an aleph section, but rather four different sections for each of the vowels *a*, *e*, *i*, *u*. There are two questions in this respect: whether aleph did occur at all in word initial position, and if so, whether it was automatic.

As for the first question, it seems best to assume that aleph did in fact occur in word initial position, at least in Old Babylonian. If the contrary is assumed to have been the case, it is because writings like *a-bu-um* "father" or *i-li-ik-šu* "his special service" do not seem to indicate explicitly the presence of aleph. Now it is true that a special sign for aleph is not used in these instances, i.e. writings such as *ʾa-a-bu-um* or *ʾi-i-li-ik-šu* are at best very rare, if attested at all. But it seems likely that the simple vocalic signs usually transliterated as *a*, *e*, *i*, *ú*, *ù*[2] did in fact include also glottal stop, i.e. *ʾa*, *aʾ*, *ʾe*, *eʾ*, etc. This is borne out in Old Babylonian by such writings as *ú-ul* "not," *i-il-la-ak* "he will go," where the first sign is certainly not

[1] See REINER 1964 "Subsystem" 167-180; GELB 1970 "Syllabary" 536-543.

[2] Note that in the Assyriological tradition, accent marks on transliterated signs do not indicate phonological stress, but rather serve as an index to a sequence of standard homophones. Thus *ú* stands for u_2 (the second sign with reading *u* in the modern Assyriological sequence) and *ù* for u_3.

needed to clarify the vocalic quality of the following sign, since in this respect *ul* and *il* are both unequivocal. The function of the initial signs *ú* and *i* was probably to indicate instead the presence of aleph, in which case a phonetically minded transliteration would be *ʾu-ul*, *ʾi-il-la-ak*. The same conclusion would apply in *word medial* position, i.e., with writings such as *še-a-am* "barley," for *šeʾam*, which could then be transliterated as *še-ʾa-am*. In support of this conclusion there is the fact that certain plain vowel signs seem to have become specialized for *ʾV*, namely E_2 for *ʾa*, U_2 and U_3 for *ʾu*, at least in Old Akkadian.[3]

If the single vowel signs could be used to emphasize the presence of aleph, the signs with vowel and consonant, on the other hand, certainly did not include aleph, i.e., the signs UL or IL do not, in and of themselves, represent *ʾul or *ʾil. Hence writings such as *ul* and *il-la-ak* cannot be taken to express initial aleph graphically, i.e., they cannot in and of themselves be transliterated *ʾul or *ʾil-la-ak. With these writings, then, it would be possible to assume that the correspondent words were pronounced without initial aleph.

We need thus to explain the coexistence, in the Old Babylonian period, of such writings as *ù-ul* and *ul*, or *i-il-la-ak* and *il-la-ak* to render the same words. Three alternative interpretations may be considered. (1) One may consider *ù-ul* and *i-il-la-ak* as historical writings reflecting a period when initial aleph was both present in the language and expressed explicitily by means of a separate grapheme. (2) One may assume that *ul* and *il-la-ak* are defective writings, and that aleph occurred automatically in front of every vowel in initial position. This explanation would be in line with what we know to have applied for the indication of consonantal length, which is rather erratic in the writing, though it certainly was not in the language. (3) One may assume that in word initial position aleph and vowels are in free variation.

Whatever the case may be, the problem has in fact no phonemic relevance because initial aleph never seems to be contrastive with initial vowel, as far as it can be judged from the texts. Here, too, (as with the problem of stress) caution is in place because it is a priori not impossible that there may be a minimal pair between, e.g., *ʾunaqqir* "I destroyed" and *unaqqir* "he destroyed," except that in such a case one would expect to see more often a presumed initial aleph explicitly indicated in writing with the aleph sign. Since this is not true, it seems best to assume that ʾ may stand as an allophone for any vowel in word initial position. This is the option followed in this grammar, where ʾ will be used explicitly to represent details of the morphological structure where needed (e.g., when contrasting {*ʾaprus*}

[3] GELB 1961 *Grammar* 88-89, 164-65; E. SOLLBERGER in *TCS* 1, 94f. I should stress that I am not advocating the introduction of new transliteration symbols such as ʾA for A, etc. The symbols should certainly remain as they are in standard transliteration, but with a clear understanding of their potential value.

with {*t-aprus*} in the verb, see below, 27.1). Otherwise the common usage will be followed in omitting aleph as word initial.

2.2 Word final

Any simple vowel or simple short consonant, but no semivowel, may occur in word final position. Concerning the nature of vocalic clusters see presently, under 2.4.

Consonantal clusters and long consonants do not occur in word final position. When an unmarked morpheme follows a consonantal cluster, or long consonant, for instance in the construct state of the noun, the resulting final cluster is resolved according to morphophonemic rules, see below, 56.

2.3 Word medial

Any simple vowel, long or short, and any simple consonant, long or short, may occur in word medial position. Concerning the nature of vocalic clusters see presently, under 2.4.

Consonantal clusters of two, but not more, short consonants may occur in word medial position. The limitations on possible combinations of consonants derive from the non-occurrence of certain consonantal sequences in the root, for which see below, 9.3. (I prefer to leave the statement concerning the incompatibility of the radicals to morphology because in that framework the statement can be more inclusive, and because it serves as a valid argument in favor of the reality of the root. This differs from REINER 1966 *Analysis*, who includes part at least of the non-occurring radical combinations in the list of non-occurring clusters).

2.4 Vocalic clusters

Combinations of two vowels occur only when a morphemic boundary intervenes between them, either in medial or final position, e.g., *bēl-ī-a* "of my lord," *rabī+at* "she is great," *rabī+ū* "they are great"; the only exception is with verbal forms of the type *iqīaš*, for which see below, 44.4. We cannot tell what the exact phonetic realization might have been, except that no real diphthong seems to have existed in Akkadian in the sense of a vocalic cluster operating as single phoneme (in the same way, for instance, that the affricate *ts* is a consonantal cluster operating as a single phoneme, see above, 1.6, n.4); Akkadian vocalic clusters are thus assumed to be not only bi-phonemic but also bi-syllabic. In other words, while it seems reasonably certain that we do not have a bi-syllabic *rab–yat* (long dash representing syllabic boundary), we cannot say for sure whether the presumed tri-syllabic rendering would have been realized with a plain vocalic cluster (*ra–bī–at*), with a semi-vocalic glide (*ra–bī–yat*), or with a glottal stop (*ra–bī–ʾat*). Whatever the case, the difference would be purely phonetic and not phonemic, because either glide or glottal stop would be automatic, hence not phonemic. My impression is that the resolution with semi-vocalic glide is the most likely; however, in this grammar I will normally use the vocalic cluster as such, largely because this is the standard Assyriological notation.

Forms like the ones mentioned (*ra-bi-at*, *ra-bi-ú*) are also given in writing in such a way as to indicate an assimilation of the first vowel in the vocalic cluster (thus: *ra-ba-at*, *ra-bu-ú*). This is known as contraction, meaning that the two vowels merge into a single long vowel, the quality of which is always that of the second vowel of the cluster. Phonemically, then, the first set of forms may be understood as *rabīat / rabīyat / rabīʾat*, and the second as *rabāt*. Since the two sets occur side by side already in Old Babylonian, the question arises as to which form, if any, was normative. The terms of the problem are similar to those concerning aleph in word initial position, and a solution has to be chosen between two alternatives. The first is to assume that all vocalic clusters had become contracted by the Old Babylonian period, in which case *ra-bi-at*, *ra-bi-ú* would be understood as both historical and morphographemic spellings; in this case, one may further assume that the change occurred over a transitional stage when assimilation, but not contraction had taken place, thus resulting in the following sequence:

rabī(y/ʾ)u > *rabūʾu* > *rabū*

The other alternative is to assume that both forms, contracted and uncontracted, coexisted in free variation. The former alternative would seem more plausible, but the frequency of uncontracted spellings calls for caution; uncontracted spellings are especially frequent in the case of the personal pronouns of set II, such as *ku+āti*, *šu+āti*, etc. (see below, 31.3; note however that the expected forms **ki+āti*, **ki+āšim* never occur, only the contracted forms *kāti*, *kāšim*). In this grammar we will opt for the second alternative, and consider the two forms to be in free variation.

Certain other occurrences of contiguous vowels in the writing normally represent a defective writing which omits either a glottal stop or a long semivowel (used not as a glide, but as a regular consonant), e.g., *da-i-kum* for *dāʾikum* "killer", or *da-a-a-num* for *dayyānum* "judge." These are different from vocalic clusters as described above on three counts. (1) Aleph is in fact often expressed in the writing of words of this type through the addition of single vowel signs, a specific sign for

aleph, or signs with *ḫ* (e.g., *da-ʾi-ik*, *da-a-a-ik-tum*, NB). (2) Contraction does not develop in these cases as it does in those where we assume the presence of a true vocalic cluster (thus, no **dīkum*). (3) Considerations of morphemic analysis or word derivation imply the presence of a glottal stop (*dāʾik-um* corresponds to the pattern *pāris-*, and *dayyānum* to the pattern *parrās-*).

2.5 Summary

The distribution of consonantal and vocalic phonemes within a word is tabulated in the following chart (± refers to free variation with *ø*; square brackets indicate specific exceptions; V subsumes semivowels):

	initial	medial	final
C	+	+	+
C·	–	+	–
C_1C_2	–	+	–
V	± [*y*]	+	+ [*w,y*]
V·	±	+	+
V_1V_2	±?	+?	+?

2.6 Syllabic structure

The distributional rules at the level of the syllable are as follows:

(1) the components of either a consonantal cluster or a vocalic cluster are always separated by syllabic boundary;
(2) long consonant is treated like a cluster of two identical consonants with syllable boundary between them (i.e., in terms of syllabic structure, a long consonant functions as a reduplicated consonant – even though phonetically one must still consider length as a protraction of articulation, for which see above, 1.4);
(3) no syllable begins with a vowel except (possibly) if it is word initial or second element of a vocalic cluster;
(4) no long vowel occurs in front of long consonant or consonantal cluster.

Syllabic notation in the writing system is very accurate and consistent (more so perhaps than for any other aspect of the language, which makes the term "syllabic writing" very appropriate). The distinction between signs corresponds normally to syllable boundary, except that syllables of the type CVC, when not available in the sign inventory (and often even when available) are rendered by the notation CV_1-V_1C. The possible combinations of phonemes into syllables, with some of the possible environments, and with the corresponding forms in the cuneiform writing are tabulated in the chart on the following page. Note in particular that a long vowel cannot occur in a syllable if followed by a long consonant or consonantal cluster, thus –(C)V·– on the one hand and –(C)VC–C, –(C)VC–· on the other are in complementary distribution. Hence all three types, namely (C)V·, (C)VC·, and (C)VCC, may be described as expressing a long syllable. Therefore syllabic quantity and vocalic quantity must be kept distinct: a long syllable need not have a long vowel.

The various types of syllables may enter freely into combination with each other, with the limitations concerning V, V·, and CV·C noted above. Only one, but very important exception exists to such freedom of combination: no sequence of three syllables is possible if the sequence results from affixation and the first two syllables are short. Since affixation (a morphological process) is a conditioning factor, discussion of this problem belongs to morphophonemics, and accordingly will be discussed below, 55.

2.7 A note on syllabic length

As it was just mentioned, a syllable is considered long if either it contains a long vowel, or if the vowel is followed by consonantal cluster or long consonant. However, the prosodic equivalence between –CV·– on the one hand, and –CVCC– or –CVC·– on the other, should not be taken to imply that there is no phonemic contrast ever between these combinations,[4] see for instance the following contrasting pairs:

ikšudāma "they reached and then"
ikšudamma "he reached towards and then"

dālum "bucket"
dallum "inferior"

dānum "to judge"
dannum "mighty."

[4] As one might erroneously infer from REINER 1966 *Analysis* 4.1.2.5; see DIAKONOFF 1991-92 *Proto-Afrasian*, p. 116.

Syllabic pattern			Phonemic transcription	Graphemic transliteration	Translation
syllable and environment			long dash represents syllabic boundary	hyphen represents sign boundary	
#	V	C...	*a – wī – lum*	*a-wi-lum*	"man"
...V	V	#	*ib – nī – u*	*ib-ni-ú*	"that he built"
#	V·	C...	*ā – li – kum*	*a-li-kum*	"going"
...V	V·	#	*ib – nī – ū*	*ib-ni-ú*	"they built"
#	VC	·...	*aš – šum*	*aš-šu-um, aš-šum*	"in order to"
#	VC_1	C_2...	*ab – num*	*ab-nu-um, ab-num*	"stone"
...V_1	V_2C	#	*ra – bī – at*	*ra-bi-at*	"she is great"
#	V·C	#	*āl*	*al*	"city of"
...V·	V·C	#	*ra – bī – ān*	*ra-bi-an*	"mayor of"
#	CV	C...	*ma – ḫir*	*ma-ḫi-ir, ma-ḫir*	"he is in receipt of"
...C_1	C_2V	C...	*kal – ba – tum*	*ka-al-ba-tum, kal-ba-tum*	"bitch"
...C	·V	#	*šum – ma*	*šum-ma*	"if"
...V	CV	C...	*ma – ḫi – rū*	*ma-ḫi-ru*	"they are in recp't of"
...V·	CV	C...	*mā – ḫi – rum*	*ma-ḫi-rum*	"receiver"
#	CV·	C...	*mā – ḫi – rum*	*ma-ḫi-rum*	"receiver"
...C_1	C_2V·	C...	*kal – bā – tum*	*ka-al-ba-tum, kal-ba-tum*	"bitches"
...C	·V·	C...	*šar – rā – tum*	*ša-ar-ra-tum, šar-ra-tum*	"queens"
...V	CV·	V...	*ra – bī – at*	*ra-bi-at*	"she is great"
...V	CV·	#	*ṭā – bū*	*ṭa-bu-ú*	"they are good"
#	CVC	·...	*šum – ma*	*šum-ma*	"if"
#	CVC_1	C_2...	*šum – šu*	*šum-šu*	"his name"
...C	·VC	#	*aš – šum*	*aš-šum*	"because"
...C_1	C_2VC	#	*ab – num*	*ab-num*	"stone"
...V	CVC	#	*ma – ḫir*	*ma-ḫi-ir, ma-ḫir*	"he is in receipt of"
...V	CVC	C...	*e – piš – tu*	*e-piš-tu*	"workmanship"
#	CV·C	#	*bāb*	*ba-ab*	"door of"
...C	CV·C	#	*uk – tīn*	*uk-ti-in*	"he then established"
...V	CV·C	#	*ṭā – bāk*	*ṭa-ba-ak*	"I am good"

PART II

PHONOLOGICAL CHANGE

Chapter 3

Types of Phonological Change

As convincingly argued by JACOBSEN,[1] who first introduced the concept of morphophonemic alternation in Akkadian, and then explicitly elaborated by REINER,[2] a description of phonological change in Akkadian ought to distinguish sharply among different types.

The first is conditioned by morphological factors, and as such it is not (as one often understands it) a "change" from a preexistent form into another; it is rather an alternation which must be described synchronically and is mapped paradigmatically rather than derivationally. Morphophonemic alternations take up a vast portion of Akkadian grammatical description, and are given in detail below in a separate section of the grammar.

The second type of phonological change is also of the alternating type, but cannot be explained on the basis of morphological conditioning. It is treated here as free variation in the next chapter.

The third type consists of transformations in time from an actually preexisting form into another: inasmuch as it is historical and diachronic, this type of change does not properly belong in a synchronic statement such as the present grammar. Therefore it will only be treated briefly in chapter 5.

[1] JACOBSEN 1960 *"Ittallak"* p.107 f.

[2] REINER 1966 *Analysis* pp. 105-116

Chapter 4
Free Variation

Where no distributional criteria may be found to account for cases of phonological alternation, these are classified as being in free variation. Some instances[1] from the Babylonian area follow:

a ~ e	*ḫasūm* ~ *ḫesūm* "to cover" *ušakniš* ~ *ušekniš* "he subdued"
i ~ *e*	*šīrum* ~ *šērum* "flesh" *immirū* ~ *immerū* "they became bright" *ušatmiḫ* ~ *ušatmeḫ* "I cause to seize"
b ~ *p*	*baqāru* ~ *paqāru* "to claim"
metathesis	*ḫutpu* ~ *ḫuptu* "bronze arrowhead"
syncope	*imaḫḫuṣūši*[2] ~ *imaḫṣūši* "they hit her"

In some cases, a distributional pattern may be recognized along dialectal lines:

m ~ *n*	*baqāmu* (OB) ~ *baqānu* (MB) "to shear"
metathesis	*askuppum* (OB) ~ *aksuppum* (OA) "stone slab"

Another type of free variation consists of unpredictable occurrences of sandhi or crasis across word boundaries, especially in the case of close juncture, such as with a construct state or in personal names (see also below, 6.3), e.g.:

šūlī ~ *šū ilī* "the one of the gods"
libbālim (wr. *li-ba-li-im*[3]) ~ *libbi ālim* "within the city"
nidippīm (wr. *ni-di-pi-im*[4]) ~ *nidin pīm* "promise"

[1] Taken from REINER 1966 *Analysis* p.115 f., except where otherwise noted.

[2] This could of course be the result of an omission in the writing: *i-maḫ-*<*ḫu*>*-ṣu-ši*.

[3] *UET* 5 114:2, see *CAD L* 168a for other examples.

[4] *TCL* 17 56:38; see *CAD N* 209a for other examples.

Qišassīn (wr. *Qí-ša*-DINGIR-XXX[5]) ~ *Qišat-Sīn* "Gift-of-Sin"
ṣiššamši (wr. *ṣi-i-šam-ši*[6]) ~ *ṣīt šamši* "the sun's coming out, sunrise."[7]

[5] See STAMM 1939 *Namengebung* 259.

[6] Given as a separate entry under *ṣī šamši(m)* in *AHw* 1096. The crasis interpretation proposed here seems more likely than positing a masculine realization **ṣium* (which is implied in *AHw*'s entry) in place of the common feminine form *ṣītum*.

[7] See entries in *AHw* p. 1106b.

Chapter 5
Excursus on Historical Development

Historical changes are transformations which happen automatically at given points in time and affect both the phonemic inventory and phonological distributional classes. Since this grammar deals with a synchronic presentation of the language, only a brief excursus on diachronic matters is in place here. Historical change affecting morphophonemic alternations will be considered briefly below (chapter 35.2).

5.1 Rearrangement of phonemic inventory

A considerable rearrangement of the phonemic inventory (see the chart on the next page) had taken place in prehistoric times as Akkadian developed from Proto-Semitic. The reconstruction is based on comparison with other Semitic languages, and, while it lies entirely outside the scope of this grammar, it will be useful to give in synoptic fashion a tabulation of the correlation between assumed Proto-Semitic phonemes (starred) and attested Akkadian correspondences. Note that only in the case of the vowels has the rearrangement increased the Akkadian inventory; the consonantism on the other hand has been vastly reduced. To the inventory below, length should also be added as present in Proto-Semitic.

The various phonemes which have coalesced from earlier Proto-Semitic phonemes into aleph are either named after their counterpart in other Semitic languages, or else they are referred to as aleph distinguished by a numerical index, as follows:

ʾ "*aleph*" = $ʾ_1$
h "*he*" = $ʾ_2$
ḥ "*ḥe*" = $ʾ_3$
ʿ "ʿ*ain*" = $ʾ_4$
ġ "*ghain*" = $ʾ_5$

VOWELS

high front	**i > i*	*ʾilum* "god"
high back	**u > u*	*ʾuznum* "ear"
low back	**a > a*	*ʾabum* "father"
	> e	*ʾepištum* "deed"

CONSONANTS AND SEMIVOWELS

	stops	fricatives	other	gloss
labials	**p > p* **b > b*		**m > m* **w > w*	*petū* "to open" *bītu* "house," *mūtu* "death" *walādu* "to bear"
inter-dentals		**t̲ > š* **d̲ > z* **ṯ, *ḏ̣ > ṣ*		*šebēru* "to break" *ʾaḫāzu* "to take" *ṣillu* "shadow" *ʾerṣetu* "earth"
dentals	**t > t* **d > d* **ṭ > ṭ*			*petū* "to open" *dānu* "to judge" *ṭābu* "good"
dental-alveolar			**n > n* **l > l* **r > r*	*nadānu* "to give" *ʾilu* "god" *rēšu* "head"
alveolars		**s > s* **z > z* **ṣ > ṣ*		*nasāku* "to throw" *ʾezzu* "angry" *ṣalmu* "statue"
palato-alveolars		**š, *ś > š*	**y > y*	*šamū* "to hear," *ʾayyalu* "deer" *ʾešer* "ten"
velars	**k > k* **g > g* **q > q*	**ḫ > ḫ* **ġ > ʾ*		*kānu* "to be firm," *ʾaḫāzu* "to take" *nagāšu* "to tread," *ʾerēbu* "to enter" *qerēbu* "to approach"
pharyngeals		**ḥ > ʾ* **ʿ > ʾ*		*ʾedēšu* "to be new" *ʾebēru* "to cross"
glottal	**ʾ > ʾ*	**h > ʾ*		*ʾabu* "father," *ʾalāku* "to go"

DERIVATION OF PHONEMIC INVENTORY FROM PROTO-SEMITIC

To the same series, some scholars also attach the following:

w *"waw"* = ʾ$_6$
y *"yod"* = ʾ$_7$

Historical development accounts for the change *a* > *e* with some roots containing aleph (see below, 14.5). The change occurred with roots which originally had ʾ$_{3\text{-}5.7}$ and occasionally ʾ$_2$ as a radical, and it was due to vocalic assimilation to the original consonant, probably through an intermediary stage when it had become palatalized. Old Akkadian seems to have retained ʾ$_{3\text{-}5}$ as a distinct consonant, which was probably realized as ʿ.

The changes affecting fricatives are complex, and the Old Akkadian system is rather at variance with the later ones; in particular, it appears as though **ṯ* may have been preserved as such, and that *š* may have corresponded only to **š* and **ś*.

As for Babylonian itself, only one main change may be recognized in the development of the phonemic inventory: after Old Babylonian, *w* disappeared (the few instances in which it is preserved in the writing should be explained as historical writing). In word medial position, *w* became *m*, e.g. *awīlum* > *amīlu* "man." In word initial position it was dropped (alternatively, it became ʾ), e.g. *wardum* > *ardu* "slave"; *m* for *w* is found in word initial position only when introduced secondarily through the process of internal inflection (e.g., *muššuru*, next to *uššuru*, in place of *wuššuru* "to set free," is a secondary infinitive derivation from *umaššer* "I set free").

5.2 Rearrangement of phonemic distributional classes

Some of these changes may be assigned to the transition from Proto-Semitic to Akkadian, and all occur in word medial position (Nn. 1-3 below). Within Babylonian itself, several changes also occur; the first two affect the vocalism (N. 4-5), while the others affect consonantal clusters, and therefore occur only in word medial position (Nn. 5-8).

(1) ʾ$_{3\text{-}5}$ do not normally occur as first element of a consonantal cluster; they are dropped and the preceding vowel is lengthened, for example:

**baʿlum* > *bēlum* "lord"

There are, however, exceptions, e.g., *naʾdum* "attentive."

(2) ʾ$_{6\text{-}7}$ coalesce with a preceding vowel into *ū*, *ī* respectively, for example:

**mawtum* > *mūtum* "death"
**baytum* > *bītum* "house"

(3) The cluster *n*C is subject to regressive assimilation, i.e. it yields C·, e.g.,

**kanpum* > *kappum* "wing"
**ʾanpum* > *ʾappum* "nose."

The same assimilation occurs in some cases at morpheme boundary, see below, 53.2, and in compounds:

**bun+panī* > *buppanī* "in front of"
**šin+zū* > *šizzū* "one third" (for both examples see below, 6.3).

One could assume that assimilation did in fact take place regularly in the language, but was not expressed regularly in the writing, where morphographemic constraints may have obtained. Further study may indicate that other phonological factors were operative (e.g., the presence of initial *n* in *nidintum* may have exercised a dissimilative effect); for now, I prefer to assume that the phonological change itself was not regular, and that it was limited to certain words.

(4) Within Old Babylonian, vocalic clusters are contracted in such a way that a single long vowel results, the quality of which is the same as that of the second vowel of the cluster (see already above, 2.4, and below, 35.2; 55.2), e.g.,

rabīat > *rabāt*
rabīū > *rabū*.

(5) In Neo-Babylonian, a final short vowel is dropped, e.g., *amīlu/a/i* > *amīl* "man." This phenomenon, of far-reaching consequences because important morphological distinctions are lost, such as case endings in the noun and the subjunctive ending in the verb, is obscured by a persistent tradition of historical-morphographemic writing. It may be detected chiefly because of the many mistakes made in the notation of those endings.

(6) In Middle Babylonian the palato-alveolar fricative (*š*) becomes liquid lateral (*l*) in front of dental stop (*t*, *d*, *ṭ*), e.g.:

št > *lt*	*ištakan* > *iltakan* "he has placed"
šd > *ld*	*išdu* > *ildu* "foundation"
šṭ > *lṭ*	*išṭur* > *ilṭur* "he wrote"
šs > *ls*	**išsī* > *ilsī* "he screamed" (from *šasū*)

(7) After Old Babylonian the nasal labial (*m*) becomes dental-alveolar nasal (*n*) before dental (*t*, *d*, *ṭ*) and before palato-alveolar (*š*); this is a case of homorganic assimilation:

mt > *nt*	*imtanūtū* > *intanūtū* "they keep dying"
md > *nd*	*imdud* > *indud* "he measured"

			Proto-Sem. > Akkadian	OB > MB,NB
phonemic inventory	vowels	conditioned	$^{\circ}_{3\text{-}5} > {}^{\circ}_{1}(\sim e)$	
	conson.	unconditioned	$\underline{t}$, $\underline{d}$, $\underline{t}$, $\underline{d}$ } > $\check{s}$	
			$\dot{g}$, $\dot{c}$, $\dot{h}$, $\dot{h}$ } > $^{\circ}$	
			$\acute{s}$ > $\check{s}$	
		conditioned		$\#^{\circ} > \#\emptyset$ (?) $w > m$ (med.) $\#w > \#^{\circ}, \#m$
distributional classes	vowels	compens. length	$V^{\circ}C > V{\cdot}C$	
		contraction	$Vy > \bar{\imath}$ $Vw > \bar{u}$	$V_1V_2 > \bar{V}_2$
		apocope		$V\# > \emptyset\#$
	conson.	assimilation	$nC > CC$	$rn > nn$
		partial assimil.		$št > lt$ $šd > ld$ $šṭ > lṭ$ $mt > nt$ $md > nd$ $mṭ > nṭ$ $mš > nš$
		nasalization		$bb > mb$ $dd > nd$ $zz > nz$ $gg > ng$

SURVEY OF HISTORICAL DEVELOPMENTS

mṭ > *nṭ* *imṭī* > *inṭī* "it became little"
mš > *nš* *amšī* > *anšī* "I forgot"

This change may have begun already in Old Babylonian, e.g., *ibqumšu* > *ibqunšu*.

(8) After Old Babylonian, a long voiced consonant becomes nasalized; this is a case of homorganic dissimilation:

bb > *mb* *ibbī* > *imbī* "he called"
mm > *nm* *nammuru* > *nanmuru* "to be seen"
dd > *nd* *inaddī* > *inandī* "he throws"
zz > *nz* *inazziq* > *inanziq* "he gets angry"
gg > *ng* *imaggar* > *imangar* "he is willing"

(9) A certain generalized tendency towards regressive assimilation may be noted in the language, though precise rules cannot be given. See, for example:

tš > *šš* *ṣīt šamši* > *ṣiššamši* "rising of the sun" (see above, 4)
šamšu > *šaššu* "sun" (see below, 53.6)
td > *dd* *dibbāt dīnim* > *dibbaddīnim* "words of judgment" (see below 6.3)
mk > *kk* *ūmam kal* > *ūmakkal* "daily" (see below, 6.3)
ny > *yy* *Sīn-yatum* > *Siyyatum* personal name[1] (see below, 21.5)

(10) After Old Babylonian, *r* is assimilated to a following nasal, e.g.,

m > *nn* *amu* > *annu* "guilt"

The various historical developments described in this chapter are summarized in tabular form in the chart on the preceding page.

[1] Hypocoristicon built on the divine name Sin, see UNGNAD in *VAB* 6, p. 433.

MORPHOLOGY

Chapter 6
Morphological Processes

The morphological processes used in Akkadian are four:

(1) internal inflection,
(2) external inflection,
(3) word composition,
(4) reduplication.

Only the first two processes are common and productive: they will be described at length in the two major parts of Morphology; in this chapter only the essential features will be pointed out. The other two processes are rare, and I will limit myself to a few remarks in the remainder of this chapter.

6.1 Internal inflection

Internal inflection is a system comprising various sets of discontinuous morphemes, which are called "patterns." The patterns, in their alternation, affect only the basic kernel of the word, which is called "core" or "base." Thus in the following pair of words:

t-<u>ašpur</u>-ānim "you (plur.) sent towards," and
t-<u>ašappar</u>-ānim "you (plur.) will send towards,"

the variation consists of a modification of the structure of the base (underlined in the examples above). The modification is not realized by means of the juxtaposition of indivisible elements acting as modifiers (such as English {-ed} to express past action, e.g. walk ~ walked). Rather one finds each time a realignment of the elements of the base, which are, therefore, divisible or discontinuous. Such a process is somewhat similar to the English alternation of the type cling ~ clung, but there are fundamental differences. In Akkadian, the discontinuity among the constituent elements is total, because they may occur without clustering at all (*š-p-r*), or with clusters which include either the first two radicals (*šp-r*) or the last two (*š-pr*). In English, on the other hand, the cluster cannot be broken (*cl-ng* only), so

that we deal essentially with apophony, at least in historical times.[1] There can only be one base, and hence only one pattern, for each word (except perhaps in the case of word composition, for which see presently).

Note that the image conveyed by the term "internal" refers to the fact that inflectional variations apply within the core that is then affected, to the left and right, by "external" inflection.

6.2 External inflection

External inflection is a system comprising various sets of indivisible modifiers, which are added to the base, and are called "affixes." Thus in the pair of words:

t-ašpur-ānim "you (plur.) sent towards"
ʾ-ašpur-am "I sent towards"

the variation is determined by the different modifiers (underlined), which are added either before or after the bases. Depending on their position, the modifiers (affixes) are subdivided respectively into "prefixes" and "postfixes." Note the use of the term "postfix" in place of the traditional term "suffix" which I prefer to reserve for elements which are joined to other words without being part of that word's inflection (e.g. *kalab+šu* "his dog," see also below, 6.3). Affixes are continuous and indivisible, so that *-am*, for instance, does not occur as **-a-m*. On the other hand, they are cumulative, i.e. there can be more than one affix for each word; their relative position is not free, but rather rigidly determined by a fixed sequential order. No more than one affix for each class may occur, with but very few exceptions.

Prefixes may be added only to bases resulting from internal inflection. Postfixes, on the other hand, may be added not only to such bases, but also to lexical items for which internal inflection does not obtain (e.g., loanwords). In this grammar the term "core" is used in a strict sense to refer to the unit derived by means of internal inflection, while the term "base" is used both in a broad sense to refer to any word kernel to which affixes may be added and more specifically to a noun with an unmotivated kernel, i.e. one not susceptible of internal inflection (see below, 10.1).

Akkadian words may be distinguished into various classes (corresponding to the "parts of speech," as in traditional terminology) depending on the degree to which they partake of the various sets of alternations within each main type of inflection. Thus every verb is characterized by internal inflection for stem, mood and

[1] Cases of apophony may possibly also be recognized in Akkadian, e.g., *dār* "continuously" vs. *dūrum* "continuity" (see below, 9.2). They occur too seldom, however, to be recognized as a separate, productive morphological mechanism.

tense and by external inflection for number, gender, person and secondary mood. Some classes of nouns have internal inflection, and they all have external inflection for number, gender and case. The pronoun has only external inflection, for number, gender, case and person. Finally the invariables exclude all inflection, as is implicit in the term itself. The data are tabulated in the following chart.

PART OF SPEECH	TYPE OF INFLECTION							
	INTERNAL			EXTERNAL				
	tense	prim. mood	stem	numb	gend.	case	pers.	sec. mood
verb	+	+	+	+	+	−	+	+
noun	−	−	±	+	+	+	−	−
pronoun	−	−	−	+	+	+	±	−
invariables	−	−	−	−	−	−	−	−

DISTRIBUTION OF PRODUCTIVE INFLECTIONAL SYSTEMS ACCORDING TO PARTS OF SPEECH

6.3 Word composition

Word composition is rare in Akkadian, and no clear structural pattern can be discerned for the few instances known. These must therefore be understood as the fossilized remnants of mechanisms which may have been operative in earlier stages of the language, or in Semitic in general (note how some of the compounds quoted below seem to imply forms which are not common in historical Akkadian). In other words, word composition is an etymological, rather than a grammatical phenomenon, and its occurrences can only be listed lexically. As constitutive elements of compounds we find:

two pronouns[2]
attamannu "whoever" (from *atta* "you" and *mannu* "who?")
mimma "whichever" (possibly from *mīn-* "which?" and *man-* "who?")
mamman "whoever" (from *man-*, reduplicated; see below, 6.3)

pronoun and verb
minde "perhaps" (possibly from *mannum* "who?" and *īde* "he knows")

[2] It is possible that the element *man* may not be originally pronominal, but rather adverbial (as with the enclitic that marks the unrealizable potential, see below, 73.4).

two substantives
eṣenṣēru "backbone" (from **eṣmum, eṣemtum* "bone" and *ṣērum* "back")
šamaššammu "sesame" (from *šamnum* "oil" and *šammum* "plant")[3]
ūmakkal "daily" (from *ūmum* "day" and *kalū* "totality")

substantive and adjective
šaddaqdim "last year" (from *šattum* "year" and *qadmum* "early")
ašaršani "elsewhere" (from *ašrum* "place" and *šanūm* "other")
aḫullā "beyond" (from *aḫum* "side" and *ullūm* "that one")

particle and adjective
laššū "a have-not" (from *lā* "not" and *išū* "he has")[4]

adjective and adverb
annīkīʾam "here" (from *annūm* "this" and *kīʾam* "thus")

two numerals
sebēšer "seventeen" (from *sebē* "seven" and *ešer* "ten"; similarly for all numerals above ten)

numeral and substantive
šizzū "one third" (from *šinā* "two" and *zū* "half")
šinipū[5] "two thirds" (from *šinā* "two" and *pū* "mouth"?).

Compounds with three constitutive elements are even rarer; the following example gives at the same time evidence for yet another structural type, an adverb occurring in composition with both a substantive and an adjective:

ḫadī-ūʾa-amēlu "a moody person" (from *ḫadūm* "happy," *ūʾa* "alas" and *amēlu* "man").

While in traditional grammar word composition as such is generally not discussed, it is implied in the understanding of specific cases, like the ones given above. In some cases, however, what is understood as an example of word composition may be explained otherwise. The following example, for instance, may be understood as a case of apposition (see below, 81.2):

lullū amēlu "an 'aborigine' man" (in *CAD* s.v. the name is written with a dash, *lullū-amēlu*, implying a compound),

[3] But see the objections by F. R. KRAUS, "Sesam in Alten Mesopotamien," *JAOS* 88 (1968) 114f.

[4] See below 82.1 for other indications that *lā* + substantive may be considered a compound.

[5] Note that in this word the sequence of three syllables of which the first two are short is not in violation of the morphophonemic rule to this effect (see below, 55.1) because there is no morphemic boundary, but rather word boundary between the two components. Note however that several Old Assyrian texts give a spelling with two *p*'s, see *AHw* p.1242b.

and the following ones as construct states (see below, 23):

buppani "in front of" (from *būnu* "face" and *panī* "face")
murnisqi "thoroughbred horse" (from *mūru* "foal" and *nisqu* "choice")
liblibbi "offspring" (from *libbu* "heart").

These constructions are entered in the dictionaries as separate lexemes, but there is no reason to consider them other than regular occurrences of the construct state plus the genitive (*liblibbu* is occasionally nominalized, but only in lexical texts).

For different reasons, the construct state followed by the genitive could actually be considered an example of word composition, and if so it would be the only case where this inflectional process would be productive (for notional considerations see below, 20.6). There are four reasons which may suggest considering a construct state plus genitive as a case of word composition. – (*A*) In a few cases, there is a phonological contraction between a noun in the construct state and the genitive which follows it, of the type *libbālim* (see above, 4). – (*B*) When written logographically, a construction of this type is sometimes presented as constituting a single word: for instance, the marker of the plural (MEŠ) occurs at the end even though it refers to the first component of the construction, e.g., LU_2 A.AB.BA.MEŠ (instead of LU_2.MEŠ A.AB.BA) for *awīlū tamti* ("sea fishermen"). – (*C*) The construction as a whole may be nominalized (at least in the later periods) by the addition of the postfix *-ūt-um*, which is used to form abstracts (for a similar case of nominalization see also *liblibbu* above). Thus *mār šiprim* "messenger" literally "son of the mission"; but with the addition of *-ūtum* we have *mār šipr-ūt-um* "messenger-ship," i.e. "office of messenger," and not "son of mission-ship."[6] A similar nominalization is found with the expression *damqam-īn-am*[7] "the good one as to the eye" = "the one with good eyes," written *dam-qá-mi-nam* (i.e. without word boundary between the contruct state *damqam*, for which see below, 23.4, and the following noun): the accusative ending *-am* (of *īn-am*) nominalizes the whole construction. Expressions of the type *āl šarrūti-šu* "his city-of-royalty" = "his royal city," with the so-called attributive genitive (for which see below, 79), also seem to indicate that the construct state functioned as a compound. – (*D*) The final reason is syntactical in nature. Note the following sentence: *bēl eleppim ša eleppašu ṭebiat* "the boatman whose boat is sunken."[8] Were *bēl eleppim* to have the meaning "owner of the boat," one would expect the sentence to be *bēl eleppim ša ṭebiat* "the owner of the boat which is sunken"; the repetition of *eleppašu*, on the other hand, suggests that *bēl eleppim* was indeed felt to have the pregnant value "boatman," i.e. a compound not unlike its English counterpart in usage.

[6] For references see *AHw*, p.616.

[7] VON SODEN 1960 "Status Rectus-Formen" 163-64; *CAD D* 67b.

[8] *CH* §240 rev. xx 72.

But other considerations, mostly phonological in nature, do not favor an analysis of the construct relationship as a compound. Normal morphophonemic alternations do not occur as a result of the juxtaposition of a construct state and a genitive. The rule stated in 55.1 does not normally apply, see for instance *maḫar abīya*,[9] not **maḫrabīya* "in front of my father" (assuming *abīya* to be without initial aleph, i.e., not *ʾabīya*). Nor do the rules stated in 53.5 apply normally, see for instance *šubat šarrim*, not **šubassarrim*, "dwelling of the king," as opposed to *šubassu* = *{šubat+šu}* "his dwelling." It is only exceptionally that one finds an indication that the two components may have been fused, as in *dibbaddīnim* (written *di-ba-di-ni-im*[10]) for *dibbāt dīnim* "words of judgement" = "verdict" (with consonants in contact) or *mukinništar* (written *mu-ki-in-ni-iš*$_8$*-tár*[11]) for *mukīn(n) Ištar* "the one who sets up *Ištar* (in the temple Eulmaš)" (with consonant and initial vowel or aleph in contact). But such a phonological fusion (sandhi, see above, 4) remains exceptional, and the prevailing rule is that phonologically the components of a construct relationship behave as two distinct words.

Another argument against taking the construct state as a case of word composition is syntactical in nature (see below, 82). Since it is possible for more than one construct to be governed by the same construent (e.g., *ilik eqlim, kirīm u bītim*[12] "the special duty of, i.e. imposed upon, house, field and orchard"), and, more rarely, for more than one construent to govern the same construct (*šakkanakkū rubū u nišū Amqarruna*[13] "the generals, the nobles and the populace of Eqron"), it appears that both the construent and the construct are two distinct words.

Similar problems of interpretation are encountered in the case of proper names. There, too, nominalization is normal and regular, e.g., *Abī-ṭāb-um* "The 'My-father-is-good'," where final *-um* is a nominalizing element typical of personal names, as in *Ikšud-um* "The 'He-reached'." And yet morphophonemic rules (see below, 53.5) do not apply, as with *Rīš-Šamaš*,[14] not **Rīs-Samaš*, "Jubilation-of-Šamaš." Other morphophonemic rules, however, may or may not apply, as with *Damiq-ilīšu* which is attested next to *Damqilīšu* "Favorably-received-by-his-god."

Whether or not the existence of compounds in Akkadian is accepted, the fact remains that no formal characteristics are attached to word composition as such, so that this phenomenon will not occupy us any longer in this grammar.

[9] *AbB* 1 15:18 and passim. For more examples see for instance REINER 1966 *Analysis* pp. 107, 111, 114.

[10] *AbB* 1 131:18.27. See also *damqamīnam* quoted above.

[11] *CH* iv 48

[12] *CH* § 40 xii 45-46. For the terms construent and construct see below, 23.1.

[13] *OIP* II ii 73 (Sennacherib).

[14] *VAB* 6, p. 432, cf. STAMM 1939 *Namengebung* 263.

6.4 Reduplication

Reduplication is not productive in Akkadian, but it may have been at an earlier stage of the language, because traces of it are found in all three of the grammatical processes just described. It has been noted more often in the literature than word composition.

In the case of internal inflection, a verbal stem with reduplication of one radical has been pointed out by Kienast, and more about it will be said below, 13.4. Along the same lines one may consider, from a historical point of view, the so-called geminate roots (below, 39.3), which may be interpreted as having a reduplication of the final radical.[15] Also various examples of reduplication with nominal patterns have been noted.[16]

As for external inflection, attention has been called to the fact that the plural of some words is formed by reduplicating the final consonant of the root, preceded in each case by the vowel *ā*:

singular	plural	
**upš-um*	*upš-āš-ū*	"doings, sorcery" (only in the plural)
šam-ū	*šam-ām-ū*	"sky ~ heavens"
m-ū	*m-ām-ū*	"water ~ waters"

It should be noted, however, that the last two examples could also be explained as deriving from a phonological extension of the base, as with *aḫ-um* "brother" ~ *aḫ-ām-iš* together"; with either interpretation, since both *šam-ū* and *m-ū* are already plural, the reduplicated or extended base provides an alternative plural form. In the feminine, we have in one case the reduplication of the final consonant of the base (preceded by *ā*), and in another the reduplication of the feminine affix *-āt*):

alak-tum	*al[a]k-āk-āt-um*	"way ~ ways"
iš-āt-um	*iš-āt-āt-um*	"fire ~ fire signals" (see also below, 21.3; 22.8).

Similarly, reduplication of one radical may serve to form a diminutive, e.g.,

sūq-um	*sūq-āq-um*	"street ~ alley."

Finally, reduplication of the entire base may also occur; this type seems especially at home with pronouns and adverbial expressions:

[15] CASTELLINO 1962 *System* 122

[16] VON SODEN 1952 *Grundriss* §§ 54; 57 a-b.

dann-um	*dan-dann-um*	"powerful ~ very powerful" (adject.)
mann-um	*mamman (man-man)*	"who ~ someone" (pronoun)
aḫ-um	*aḫmaḫam (aḫam-aḫam)*	"side ~ reciprocally" (adverb. accus.)
bīt-um	*bīt-bīt-iš*	"house ~ into every house" (term. adv.).

6.5 Survey of boundary types: the word

At this point it may be well to review the various types of phonological and morphological boundaries which have been touched upon so far. We will also anticipate some of the considerations to be presented later in order to propose here a preliminary definition of the notion of "word" in Akkadian.

The boundary inventory of Akkadian comprises five types.

(1) Phonemic boundary:
occurs between individual phonemes.

(2) Syllabic boundary:
occurs always after simple or long vowel and after simple consonant.

(3) Affix boundary (or morphemic juncture, see below 53-56):
(a) is determined by external inflection, e.g., *ʾ-ireddī-am*
(b) prevents vocalic assimilation from extending to affix, e.g., *ʾ-ireddī-am* (not **ʾ-ireddī-em*)
(c) the resulting combination is subject to word syllabic structure, e.g., *ʾ-iktašd-am* (not **ʾ-iktašad-am*).

(4) Suffix and enclitic boundary (or morphemic boundary proper, below 53-56):
(a) is determined by suffixation and enclisis, e.g *imḫur+šu*, *imḫur+ma*
(b) prevents vocalic assimilation from extending to suffix or enclitic, e.g., *ʾireddī+ša*, *ireddī+ma* (not **ʾireddī-še*, **ʾireddī-me*)
(c) the resulting combination is subject to morphophonemic alternations, e.g., *šarras+su = {šarrat-šu}*
(d) the resulting combination is not subject to word syllabic structure, e.g., *šarra+šunū* (not **šarrašnū*).

(5) Composition boundary, for proper names and loanwords:
(a) is determined by word composition
(b) prevents vocalic assimilation, e.g., *Bēl+aḫa+ušabši* (not **Bēl-eḫe-ušebši*)
(c) prevents morphophonemic alternation, e.g., *Šamaš+šum+ukīn* (not **Šamas-sum-ukīn*); *dan-dannum* (not **daddannum*)

(d) prevents application of word syllabic structure rule, e.g., *Abu+ṭāb* (not *Ab-ṭāb*).

These data are tabulated in the chart on the following page.

The definition of word boundary, and hence the notion of word itself presents considerable problems.[17] As a tentative solution it may be suggested that the word includes all of the boundaries indicated above, i.e. that a word is a combination resulting not only from affixation, but also from suffixation, enclisis and composition, so that the following combinations should all be considered as single words (as generally indicated in the traditional way of transliterating and transcribing such combinations): *iparrasam*, *imḫuršu*, *imḫurma*, *Abuṭāb*. In support of this conclusion is the application of morphophonemic alternations for suffixation and enclisis, and the possibility of nominalization for compounds, e.g., *(Ab-ī+ṭāb)-um*.

Description of boundary	Type of boundary			
	syllabic	affix	suffix and enclitic	word composition
occurs after vowel or simple cons.	+	–	–	–
coincides with external inflection	–	+	+	+
prevents vocalic assimilation	–	+	+	+
prevents applic. of syllabic structure rule	–	–	+	+
prevents morphophonemic alternation	–	–	–	+

MORPHOPHONEMIC CONDITIONS DEFINING BOUNDARIES

[17] On this see especially the remarks by GELB 1969 *Sequential* 133-135.

PART I
INTERNAL INFLECTION

Chapter 7
Interdigitation

Internal inflection has been defined in the preceding chapter as a system comprising various sets of discontinuous morphemes, called patterns. Because they are discontinuous, these morphemes cannot by definition occur alone. In fact, every such morpheme is always coupled with another item, equally discontinuous in nature: the root. The root is not predictable morphologically, and must be given lexically. Neither root nor pattern can occur alone, but only in combination with one another, and in every case there can only be one root for one pattern. Alternatively: every root requires one pattern, and only one at the time, every pattern requires one root, and only one at the time. Hence the following definitions may be given:

Root is a discontinuous morpheme and lexical item from which inflected forms are derived.

Pattern is a discontinuous morpheme which gives shape to, or "motivates" (see below, 10.1), the root according to internal inflection. In the literature, patterns are also called "schemes."

Core is the item resulting from the combination of roots and patterns (the core is subsumed under the more generic term *base*, see above, 6.2, and below, 20). Other terms used in the literature are "theme" or "stem" (in this grammar the term "stem" is reserved for the conjugations of the verb, see below 13).

Due to the nature of their reciprocal combinations, root and pattern are said to be interlocking or interdigitating with respect to one another. The terms "interlocking" and "interdigitating" may best be explained by showing graphically the

situation which they are meant to describe. As an example one may choose the Akkadian root *rks*, which may be said to convey the semantic idea of "binding." Such generic meaning can be made specific only by the addition of other phonemes, especially vowels: and it must be noted that both the quality and the position of the vowels are determinant factors. Thus if we add a short *a* after the first consonant and a long *a* (*ā*) after the second, we obtain the following combination: *rakās* with the meaning "to bind." Changing the quality and arrangement of the vowels we obtain, for instance, *rākis* "the one who binds," *riks* "bond, treaty," and, with the addition of another consonant, *markas* "instrument for binding, rope." In a more abstract way, we may say that the semantic notion of "binding" (*rks*) has been motivated morphologically in the form of an infinitive (i.e., a description of action, *rakās*), a participle (i.e., a subject of action, *rākis*), a noun of action (*riks*), and a noun of instrument (*markas*). The situation may be represented in tabular form as follows:

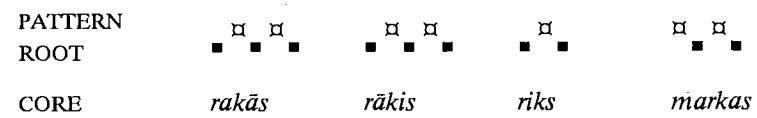
PATTERN ROOT	$r^{a}k^{\bar{a}}s$	$r^{\bar{a}}k^{i}s$	$r^{i}ks$	$ma_{rk}{}^{a}{}_{s}$
CORE	*rakās*	*rākis*	*riks*	*markas*
ACTUAL WORD (CORE + EXT. INFLECTION)	*rakās-um*	*rākis-um*	*riks-um*	*markas-um*
MEANING OF PATTERN	infinitive	participle	noun of action	noun of instrument
MEANING OF WORD	"to bind"	"binder"	"bond"	"rope"

If we substitute the digits 1, 2 and 3 for the radicals *r*, *k* and *s*, the situation may be represented as follows:

PATTERN ROOT	$1^{a}2^{\bar{a}}3$	$1^{\bar{a}}2^{i}3$	$1^{i}23$	$ma_{12}{}^{a}{}_{3}$
CORE	*rakās*	*rākis*	*riks*	*markas*

The elements of the top two rows act like digits which acquire meaning only through their reciprocal combinations, and thus they are said to be in an interdigitating relationship.

Using yet another visual approach we may indicate the pattern by means of a pointed circle, and the root by means of a solid square, and represent their interaction as follows:



The base is obtained by lowering the pattern into the root and "locking" one into the other, as it were, hence they are said to be in an interlocking relationship.

Roots and patterns are said to be interdigitating when viewed in their reciprocal *relationship*; if viewed in *themselves*, on the other hand, roots and patterns are each said to be "discontinuous" (also "discrete"). This term requires further explanation. It refers very aptly to the tensional factor, as it were, which *binds together* the constitutive elements of these morphemes, and yet allows the same elements sufficient elasticity to be *detached* from one another; these constitutive elements form a single chain, but the rings of this chain need not be contiguous. We may represent this graphically by means of extra-segmental links (i.e., graphic markers which lie outside the sequence of phonemes represented as segments on a line): this image describes well the tensional factor which characterizes both the essential integrity and the potential discontinuity of the morphemes:

PATTERN	$a\overline{\ \ }\bar{a}$	$\bar{a}\overline{\ \ }i$	i	$ma\overline{\ \ }a$
ROOT	$r__k__s$	$r__k__s$	$r__ks$	$rk___s$
CORE	*rakās*	*rākis*	*riks*	*markas*

By convention, however, the elements of the root are symbolized neither by digits nor by geometrical symbols, but rather, and much more aptly, by consonants. The consonants which are used in the case of Akkadian are *p, r* and *s*. This particular sequence of consonants is in fact a real Akkadian root, which carries the generic lexical idea of "separating, dividing." But in terms of our conventional notation, this must be considered accidental, for when the consonants are used to express an interdigitating relationship, *p r s* stand simply for 1 2 3. The advantages of using *p r s* instead of 1 2 3 is immediately apparent if one considers that *parās*, for example, can be pronounced as one word, while the enunciation of *1a2ā3* requires a longer time and is obscure to the listener. The use of *p r s* for 1 2 3 is therefore purely practical in nature, and one must bear in mind that from this point of view *p* is nothing but an algebraic symbol for 1, *r* a symbol for 2, and *s* a symbol for 3.

It should also be noted that in the earlier stages of Assyriology, the conventional consonants used were *k š d* instead of *p r s*, and that other conventional notations for the same phenomenon include:

q	*ṭ*	*l*	(Hebrew, e.g. *qāṭal*)
f	*ᶜ*	*l*	(Arabic, e.g. *faᶜala*)

q b r (comparative Semitics, e.g., *qabār*)
R_1 R_2 R_3 (for radical one, two and three, e.g., $R_1aR_2\bar{a}R_3$)
F M L (for first, middle and last radical, e.g., F*a*M*ā*L)
. . . (a sequence of three dots, whereby the number in the sequence is determined by the relative position of the dots, e.g: *.a.ā.*)

One must be warned against a possible misunderstanding which might arise from the use of consonants instead of digits as a symbol for representing the root: by writing *pirs* as a single word one must not assume that the intended pattern is in fact a word. While *pirs* is the core of a word, when used to represent a pattern it simply stands as a configuration expressing the positional value of discontinuous morphemes. In this grammar I will use upper case letters when I wish to emphasize the function of a form as pattern rather than as a real word, for example:

PARIS- for the pattern *1a2i3*, and
paris- for the core of the word meaning "separate."

SECTION A
THE ROOT

Chapter 8
Nature of the Root

8.1 The root as a morpheme

The concept of root is often considered as purely lexical in nature. In point of fact, it is also very specifically morphological inasmuch as it is an integral part of the interdigitation system and hence of internal inflection. In this grammar, the concept of root is utilized in a way which is at the same time more restricted and more expanded than in other treatments of Akkadian or Semitic languages, even with respect to grammars which do include the concept of root within their framework.

The concept of root utilized here is more restricted because it is reserved exclusively for discontinuous components of the interdigitation system described above. Distributionally, this means that all verbs imply of necessity a root, while nouns may or may not imply it. There are no roots from which only verbs can be derived: whenever verbal forms are possible from a given root, so are nominal forms, e.g., *idnin* "he became strong" and *dannum* "strong";[1] hence this is called the verbal-nominal root, or simply the verbal root.

[1] Given the status of Akkadian as a dead language, there are many instances when *only verbal forms* are attested from a given root, and no nominal forms. When this is the case, however, it may be expected on the basis of frequency distribution that the root in question will be rare, so that the lack of attestation is less meaningful when weighed against the structural pattern emerging from the textually productive roots. Note that the verb *išū*, which at first would seem to represent the case of a frequently attested verbal root without noun formations, does in fact exhibit such formations in the permansive *išāku* (which I consider derived from an adjective *iše-*) and in the compound *laššū* "absent."

There are, on the other hand, roots from which only nouns (motivated by different patterns) can be derived: these are called nominal roots. Among these are a few primary nouns (e.g., *eṭellu* "lord" ~ *mēṭellu* "lordship"), but the only productive class is that of nouns for numerals (e.g., *ḫamiš* "five" ~ *ḫummuš* "fivefold"). The recognition of such an interdigitating nominal root for numerals is new (see below, 9.2), and it is in this respect that my concept of root most differs from that found elsewhere.

In current terminology, the term "nominal root" includes nouns which do not admit interdigitation, e.g., a primary noun like *šarrum* "king" or a loanword like *ṭuppum* "tablet."[2] By so doing, however, the concept of root becomes ambiguous in that it is made to subsume two essentially different items, one discontinuous (an interdigitating root as found in *dannum, dunnum, dunnunum*) and the other continuous or indivisible (a non-interdigitating noun such as *šarrum* or *ṭuppum*). Accordingly, I will strictly refrain from using the term "root" for such unmotivated nouns.

The following chart compares my understanding of the concept of root with that found in current Akkadian (and Semitic) grammars.

STANDARD TERMINOLOGY	TERMINOLOGY IN THIS GRAMMAR	DISTRIBUTION	EXAMPLES
verbal root	verbal-(nominal) root	interdigitation of verbs and nouns	*idnin* ~ *dannum*
[missing]	nominal root	interdigitation of nouns only	
		– rare	*eṭellu* ~ *mēṭellu*
		– regular	*ḫamiš* ~ *ḫummuš*
nominal root	unmotivated noun	no interdigitation	
		– primary nouns	*šarrum*
		– loanwords	*ṭuppum*

TERMINOLOGY DESCRIBING THE CONCEPT OF ROOT

[2] To emphasize the point being made, we may consider how *šarrum* does not interdigitate with any such word as **šurrum* (which could be postulated a priori with the meaning "kingship," on the analogy of *dannum* "strong" vs. *dunnum* "strength), or how *ṭuppum* does not interdigitate with any such word as **ṭuppupum* (which could be postulated a priori with the meaning "to make a tablet," on the analogy of *dannum* "strong" vs. *dunnunum* "to make strong").

8.2 The root as a lexeme

While potentially every root may interdigitate with every pattern, there is in fact only a limited number of configurations which are applicable for any given root. Such a distribution of patterns per root is not predictable, i.e., it is not morphological, and can only be given lexically as a list appended to each root. Such a listing will include for instance the information that the pattern *pirs* is applicable to the root *rks* (*riks*-), but not to the root *dnn* (**dinn*-), or that the pattern *purrus* (the D-stem of the verb) is applicable to *dnn* (*dunnun*-) but not to *ʾlk* (**ʾulluk*-).

One type of information which belongs in this class, because it is lexical in nature, but is sometimes considered mistakenly within morphology, is the so-called "root vowel." The term itself would seem to imply that this vowel is an element of the root, on the same level as the consonants (for which see the next chapter), but that is not so. The so-called "root vowel" is in fact a lexical determination of the appropriate patterns for certain finite verbal forms from any given root. As such, it is to be treated below in the discussion about patterns (14.4).

The notional value of the root can only be given through a lexical listing, i.e., it is totally unpredictable on the basis of its structural characteristics. This means that the morphology of the root is in no way related to notional categories, but rather only to positional ones.

8.3 "Reality" of the root

The root is an abstraction, which does not exist as a concrete utterance in the language. But the same holds true of many other grammatical concepts – for instance a verbal paradigm which does not exist in the language in the same way that a sentence does. The "reality" of the root, as of any other grammatical device, lies in its functionality, in its explanatory power. That it is an operative factor in Akkadian grammar is borne out primarily by the fact that it allows for a plausible and coherent reconstruction of Akkadian (as well as other Semitic languages), and that it can be analyzed in terms of a clearly defined structure (see next chapter). Other phenomena as well point to the reality of the root so understood, for example the different treatment of the subjunctive affix *-u*, which occurs after *ī* when it is a radical element, but not when it is a marker of external inflection (see below, 28.2, n.1), or the phonotactic rule of apheresis which obtains with motivated nouns only (see below, 55.1).

It is also significant to recall here the derivation of verbs from loanwords – absent in Akkadian, but common in other Semitic languages (see below, 10.1-2). In

those Semitic languages which allow verbal derivation from loanwords, loanwords are exploded, as it were, so that they may be adapted to the needs of internal inflection by equating its consonants with radicals.

A third main type of root has been posited by some scholars, namely a root with only two non-vocalic elements, i.e., a biradical root. This theory may be appropriately maintained from a historical point of view, but does not hold true descriptively, because length should be considered as a true radical in all weak roots. In this grammar, true biradicalism is recognized only in a minor subsystem within the framework of verbs first waw (see below, 43).

Chapter 9
Structure of the Root

9.1 The verbal-(nominal) root

There are two basic types of verbal root, one consisting of *three* non-vocalic < radical elements, the other consisting of *four* non-vocalic radical elements. The non-vocalic radicals may in turn be divided in two categories, depending on whether they are:

(1) simple consonantal phonemes (symbolized by lower case c), or
(2) sets including length, ∅ and/or consonantal phonemes (symbolized by ·/∅/c or simply by upper case C). The choices between members of the sets are governed by morphophonemic rules which will be stated below (Morphophonemics, Part I, Section B). Traditionally, these sets are known as "weak" radicals,[1] and will be so labelled here too, with some qualifications (see below, 39).

A root may consist entirely of consonantal radicals, and is then called in the traditional terminology (which will be retained here) a "strong" root. Depending on whether there are three or four consonantal radicals, one speaks of strong triradicals or strong quadriradicals.[2]

No more than one or two weak radicals may occur in any given root, so that a weak root consists of one or two weak radicals and, for the rest, of consonantal radicals.[3] Weak radicals in simple weak roots may occur in initial, medial or final position with triradicals, but only in middle and final position with quadriradicals. Weak radicals in double weak verbs may occur only in initial/medial and ini-

[1] Note that I use the term radical both as an adjective and as a substantive. In the latter usage, it stands for "individual element within a given root."

[2] I use the terms "tri-" and "quadriradicals" as substantives, in the sense of "root with three" or "four radicals," respectively. The terms "tri-" and "quadriliteral," which are in common use, should be avoided, since the implied reference to "letters" of the alphabet is not in keeping with the purely phonemic and morphophonemic nature of the phenomenon.

[3] On the possibility of a triple weak root see below, 46.3,4,6.

tial/final positions with both tri- and quadriradicals. The chart on the following page summarizes the various possibilities in tabular form.

STRUCTURAL TYPE		RADICAL ELEMENTS (RADICALS)	ACTUAL ROOT	EXAMPLE
trirad.	tricons. or strong	ccc	*ṣbt*	*iṣbat* "he grasped"
	set or weak	Ccc	*ʔrk*	*īrik* "he became long"
		cCc	*k:n*	*ikūn* "he stood firm"
		ccC	*bn:*	*ibnī* "he built"
		CcC	*Nb:*	*ibbī* "he called"
		CCc	*N:ḫ*	*inūḫ* "he came to rest"
	quadricons. or strong	cccc	*pršd*	*ipparšid* "he fled"
quadrirad.	set or weak	ccCc	*šp:l*	*ušpēl* "he changed"
		cccC	*prk:*	*ipparkū* "he stopped"
		CcCc	*Nṭ:l*	*iṭṭūl* "he laid down"
		CccC	*Nzz:*	*izzizzū* "they stood up"

9.2 The nominal root: the system of numerals

With the exception of numerals, examples of an interdigitating nominal root are non-systemic (i.e., non-productive) and rare. Some of the pertinent examples are:

pronouns	*mannum* "who"	~ *mīnum* "which"
nouns	*eršum* "wise"	~ *mērešum* "wisdom"
	eṭellum "lord"	~ *mēṭellum* "lordship"
	ibrum "friend"	~ *itbārum* "comrade"
	qadmum "early"	~ *qudmum* "front"
	dār "continuously"	~ *dūrum* "continuity."

While the pronouns may be explained as a case of apophony, the nouns exhibit shapes which are identical in form and meaning to patterns derived from verbal roots, hence the concept of internal inflection is properly applicable – though for examples like *mannum/mīnum*, *qadmum/qudmum*, *dār/dūrum* the principle of

apophony may also be adduced, see above, 6.1, n.1. It is of course possible that interdigitation of the type shown above may have taken place through the intermediary of denominative verbs (see below, 10.2) which are simply not attested in our documentation for these particular sets of nouns.

A different case is that of nouns used for numerals. Here interdigitation is used to express a difference between cardinals, ordinals, fractions, multiplicatives, distributives and possibly internal plurals. The data are tabulated in the chart given on the following pages. It will be noted that while patterns are not monovalent, in that for instance PARIS can be used for different functions, there is normally a contrastive use of these patterns for the same digit; for example, PARIS is used for the ordinal of 2 because it is not used for any other function of the same digit. In any case, certain patterns are clearly used preferentially for specific functions, so especially PARUS for ordinals, PURRUS for multiplicatives and PURUSSA:ˆ for distributives.

For some of the first numerals there are also attested denominative verbs, of which however only the one from 2 is common (*šunnū* "to double"); from the other numerals a corresponding verb is either specialized in use (*šalāšum*), or rare (*rebūm*, *ḫamāšum*), or not attested at all. Thus the data present us with a double alternative. Either we assume that a denominative verb existed for all numerals – and in this case the treatment of numerals falls together with the verbal root described in the preceding section (with the understanding that actual verbal forms are accidentally missing in our documentation); or we consider this particular set of nouns as admitting the possibility of interdigitation even without the intermediary of a verb.

Perhaps a substantive answer to this problem is not very important nor even relevant, since in any case the use of denominative verbs from numerals (except 2) would remain quite rare, artificial and intrinsically unproductive, in contrast with the proliferation of a system of well motivated nominal patterns. In other words, nominal interdigitation from the roots for numerals is a well integrated and developed system, whereas verbal interdigitation from the same roots would be in any case marginal at best and artificial (except for 2).

It is interesting to note how this type of nominal interdigitation seems to have extended also to roots which were used only secondarily in connection with numerals, as in *rēš-t-ī-um* "first" ~ *rūš-t-ī-um* "first, best." The first adjective in the pair is derived by external inflection from the substantive *rēš-um* "head," and the second may instead be derived analogically from the same substantive on the basis of the patterns PARUS and PURS for ordinals and fractions.

If this singular position of the numerals with respect to internal inflection is accepted, there would then be a justification for a separate treatment of the numerals within the framework of morphology. In the traditional presentation, numerals

	cardinals "six" (primary noun: substantive)	ordinals "sixth" (adjective of subject)	fractions "one sixth" (substantive of descrptn)
	paris *piras* *paras* *parās* *ʾipris* *ʾapras*	*paris* *parus* *parās-ī*[7] *ʾipris-ī*	*purs* *paris*
1	*ʾišti*ʾ*(-ān)*	*ʾištī*	
2	*šinā*[5]	*šanī*	
3	*šalāš*	*šaluš* *šališ* *šalāš-ī*[7]	*šulš*
4	*ʾerbē*[4]	*rebū* *rabāʾ-ī*[7]	*rabī*
5	*ḫamiš*	*ḫamuš* *ḫamāš-ī*[7]	
6	*šediš*	*šeduš* *šadāš-ī*[7]	*šediš* *šušš*[8]
7	*sebē*[1]	*sebū*	*sebī*
8	*samān*	*samun*	*samin*
9	*tešē*[2] *tišē*[6]	*tešī*	*tešī*
10	*ʾešer*[3]	*ʾešur*	*ʾešir* *ʾušr*

[1] From *sabaᶜ*
[2] From *taša*ᶜ
[3] From *ᶜašar*
[4] From *ʾarbaᶜ*
[5] From *šināʾ*
[6] From *tišaᶜ*
[7] Assyrian forms
[8] From *šudš*

THE NOMINAL ROOT:
INTERNAL INFLECTION OF THE NUMERALS
(left side)

	multipl. "sixfold" (adjective of subject)	collect. "sextet" (subst., concrete[1])	distributive "every six" (adjective of subject)	intern. plural? "sixty"	verb regular factitive "to be(come) #" "to make #"
	purrus	*purūs*	*pirr-āʾ* *puruss-āʾ*	*purs*	B stem: D stem: *parās* *purrus*
1	*šunnū*	*šunū*	*šinn-āʾ*		*šunnū*
2	*šunnū*				*šunnū*
3	*šulluš*		*šulušš-āʾ*		*šalāš*[3]
4		*rubū*	*rubuʾʾ-āʾ*		*(rebēʾ)*[4]
5	*ḫummuš*	*ḫumūš*			*(ḫamāš)*[4]
6		*šudūš*		*šušš*[2]	
7					
8	*summun*	*sumūn*			
9		*tušū*	*tušuʾʾ-āʾ*		
10	*ʾuššur*	*ʾušūr*	*ʾušurr-āʾ*		

[1] Compare English "pair," "dozen."
[2] From *šudš*
[3] Attested in hendiadys and as a factitive
[4] Attested rarely and late, in mathematical texts.

THE NOMINAL ROOT:
INTERNAL INFLECTION OF THE NUMERALS
(right side)

are in fact singled out in morphology and juxtaposed to nouns, verbs and pronouns, but no real morphological justification is given for this procedure, since from the point of view of external inflection numerals exhibit the same characteristics as nouns. The traditional treatment of numerals is therefore like an intrusion into morphology on the basis not of morphological, but of purely lexical and syntactic criteria (numerals constitute a precise lexical group and have peculiar rules of agreement, for which see below, 81.3). The suggestion advanced here, on the other hand, would vindicate on purely morphological grounds the special treatment of numerals within morphology.

9.3 Incompatibility of the radicals

There are distributional restrictions in the combinations of consonants which can occur in a root. These restrictions apply regularly to radicals, and not to analogous consonants of non-interdigitating words.

Strictly speaking, one may wish to include this topic within morphophonemics, since the phonemic peculiarities described are conditioned by morphemic constraints, namely the status of these phonemes as radicals. However, I retain the presentation in this context because we are not properly dealing here with a case of alternating realizations deriving from morphemic inflection, as is otherwise typical of morphophonemics, but rather with the lexical non-occurrence of given configurations.

The specific structural incompatibilities are listed below (note that the first three statements apply also to Semitic languages in general). The symbols used are:

- A for alveolars;
- D for dentals;
- E for emphatic consonants;
- H for homorganic radicals (consonants with the same point of articulation);
- L for liquids;
- P for palato-alveolars;
- R for any other radical;
- V for voiced;
- (=) the exclusion does not apply if the radicals in question are identical.

The non-occurring configurations in term of root structure are as follows:

*H R H (=) No roots of the type **tRd* or **dRt* occur. However, the non-contact sequence as such is phonemically possible, and is found to occur under the following conditions:
- if the radicals in first and third position are identical: *ḫšḫ* "to desire," *knk* "to seal," *ndn* "to give," *šqš* "to kill"
- with emphatics: *ṭrd* "to send"
- as the result of external inflection: *ṭ-amaddaḳ* "you measure," *dim-ṭ-um* "tear"
- in primary nouns and loanwords (all with identical first and last consonant): *šamš-um* "sun," *bāb-um* "door," *dād-um* "beloved," *nūn-um* "fish," *lil-āt-um* "night," *dabdūm* "defeat," *kalakk-um* "silo" (see also *šalš-um* "three").

*H H R (=) No roots of the type **dtR* or *tdR* occur. However, the non-contact sequence as such is phonemically possible, and is found to occur under the following conditions:
- if the radicals in first and second position are identical and the final radical is weak: *ḫaḫū* "to spit," *šašū* "to disturb"[4]
- as the result of inflection: *tidūku* "to fight each other"
- in primary nouns and loanwords: *diṭānu* "bison" *diṭallu* "ash."

*R H H (=) No roots of the type **Rqk* or **Rgk* occur. However, the non-contact sequence as such is phonemically possible, and is found to occur under the following conditions:
- if the radicals in second and third position are identical (which is very frequent: these are the so-called "geminate roots"): *dbb* "to speak"
- as the result of external inflection: *leqēku* "I am in possession of," *eqāku* "I am careless."

*V V V (=) No roots of the type **gbd* occur, i.e. a sequence of three voiced radicals does not occur. However, the non-contact sequence as such is phonemically possible, and is found to occur under the following conditions:
- if the radicals in second and third position are identical: *dbb* "to speak"
- in primary nouns and loanwords: *gabīdu* "liver," *gabadibbu* "parapet."

[4] Pointed out by W. G. Lambert and A.R. Millard, *Atra-Ḫasis. The Babyonian Story of the Flood.*, Oxford 1969, p.149.

*D A R
*R D A
*D P R
*R D P
*A P R
*R A P
*n L R
*R n L
*š ṣ r
*k ḫ R
*R š ṣ
*R k ḫ

No roots of the type **tš·* or **zšg* occur.[5] However, non-contact sequences of this type are phonemically possible, and are found to occur under the following conditions:

- in primary nouns and loanwords: *tišūm* "nine," *zišagallu* "divine encouragement"

Some of the exceptions may perhaps be explained as denominative roots from primary nouns (e.g., *duššupu* "to sweeten" ~ *dišpu* "honey"). Normally forms from such exceptional roots do not exhibit a contact sequence of the relevant consonants. In two cases where contact sequence occurs, either assimilation or metathesis takes place: *edēšu* "to be(come) new" ~ *eššu* "new," *qadištu* (fem.) ~ *qašdu* (masc.)"pure."

*R R *g*
*R R *z*
(=)

No roots of the type **kng*, **ʾnz* occur, i.e. *g* and *z* are never found as third radicals. However, these phonemes are found to occur in analogous positions under the following conditions:

- if the second and third radical are identical: *ezz-um* "angry"
- in primary nouns and loanwords: *enz-um* "goat," *šalg-um* "snow," and the proper names *Anz-um* and *King-u*.

*E R E
*E E R
*R E E
(=)

This is known as Geers' law,[6] whereby two or three emphatics do not occur in the same root, except if they are identical and occur in second and third position. When a combination of two or three emphatics would be expected in Akkadian according to comparative considerations, the corresponding voiceless consonant appears; of two emphatics, *ṣ* is always retained except in front of *q*, and *q* is retained over *ṭ*. Examples:
ṣbt (instead of *ṣbṭ*) "to seize"
s·q (instead of *ṣ·q*) "to be(come) narrow"
kṣr (instead of *qṣr*) "to tie"
qtr (instead of *qṭr*) "to smoke."

[5] For the non-occurrence of these sequences see REINER 1966 *Analysis* 46-51; her statement of these rules is not given in terms of internal inflection.

[6] GEERS 1965 "Emphatics."

Chapter 10

Historical Excursus on the Unmotivated Noun

10.1 Unmotivated nouns: primary nouns and loanwords

A large percentage of Akkadian nouns are not derived from a root. In other words, there is no morphological intervention on (or motivation of) a prior skeletal structure such as the root. This means that unmotivated nouns share with other nouns only the process of external, and not of internal, inflection; following the terminology set forth in 6.2, affixes are added to bases, as well as cores. This type of nouns includes two subgroups. (1) Unmotivated primary nouns of Semitic origin: these are mostly substantives for animate beings or concrete, inanimate objects, such as *ʾab-um* "father," *kalb-um* "dog," or *ʾabn-um* "stone." (2) Unmotivated loanwords from other languages, mainly Sumerian: these are especially words referring to the technical and cultural sphere, such as *ṭupp-um* "tablet," *ṭupšarr-um*, "scribe," *ʾekall-um* "palace."

The term "primary" refers to the fact that the nouns in question are not derived secondarily from an entity which is to be presupposed logically; the term "unmotivated," on the other hand, is used in lieu of "unpatterned," as if the term "motif" were used in the same sense as "pattern"; there is, in other words, a complementary distribution whereby "pattern" and "(un)motivated" are used in stead of "motif" and "(un)patterned."

The term "unmotivated" is more generic than "primary" because it includes loanwords as well as Semitic nouns without internal inflection. The term "primary," on the other hand, does not include loanwords, since these are derived, at least historically, from a documentable prior realization of the same semantic reality in a different language.

10.2 Denominative verbs

One should emphasize at this point the significant fact that Akkadian did not borrow any verb from Sumerian.[1] This can be explained if one considers that (a) Akkadian admits denominative verbs only to a very limited degree, and (b) Sumerian does not have an interdigitating system. The result of these two facts combined is that Akkadian was neither in a position to borrow interdigitating roots (which did not exist in Sumerian) nor capable of transforming the borrowed nouns into interdigitating roots, since it lacked the mechanisms necessary to extract, as it were, a root from a noun which was not already interdigitating. To give an example: Sumerian *nagar* "carpenter" was borrowed into Akkadian as *na(g)gār-um* (with the same meaning), but a root **Ngr* did not become operative in Akkadian, notwithstanding the existence of such close (and numerous) parallels as *šarrāq-um* "thief" ~ *šarāq-um* "to steal." Nor did the Sumerian verb *tum* (written |*túm*|) "to bring" yield any Akkadian verbal form; specifically, it did not yield a form such as **tūm* "bring!" though this would have been identical in structure to a common type of Akkadian root, represented for instance by *tūr* "return!"[2]

This observation furnishes additional, indirect support in favor of the reality of the root: for it shows that verbal forms were indeed determined by an interdigitating system which presupposes a discontinuous root, and not the external shape of single verbal patterns. In other words, no such form as **tūm* was borrowed because no correlative root **t:m* could be "extracted" from it, even though outwardly **tūm* and *tūr* are identical in shape. Incidentally, the fact that permansives, but not verbal finite forms, may be derived from loanwords and primary nouns, supports the thesis (followed in this grammar, see below, 17.4; 25.3) that the permansive is not part of the verbal system.

The D stem of the verb (see below, 16.4) is, by its own nature, denominative, since its notional value is factitive (see below, 73.5). This means that it signifies production of condition, i.e., production of a state which is generally expressed by a noun. Yet even denominative verbs in the D stem are relatively few.

An analogous phenomenon, which also remains to be investigated, is the derivation of nouns directly from primary nouns without the intermediary of a denominative verb, i.e. the existence of denominative nouns, as with *ruš-t-ī-um* "first"

[1] See A. FALKENSTEIN "Kontakte zwischen Sumerern und Akkadern auf sprachlichem Gebiet," RAI 9, *Genava* N.S. 8, 1960, p. 310: the only possible exception known to him is Akkadian *šupēlum* from Sumerian *šubal*. In *MAD* 3 258, GELB connects *ša'āmum* "to buy," attested also in South Arabic, with Sumerian *šām*.

[2] A possible exception, which was pointed out to me by RAJU KUNJUMMEN, is the alternation between *marārum* "to break a field for cultivation" and *marrum* "shovel", which is assumed to be a Sumerian loanword.

from *rēš-um* "head." In at least one case there is derivation from a loanword: *šutummu* "storehouse" ~ *šatammu* "temple administrator" (SB).

The whole question of denomination needs to be studied thoroughly. The very criteria according to which a verb or a noun are considered to be derived from a noun are unclear. They seem to be often based on vague notional considerations, without the support of explicit formal criteria. Take for example the three following examples, all attested in Old Babylonian:

bātum "to spend the night" ~ *bītum* "house"
duššupum "to sweeten" ~ *dišpum* "honey," *dašpum* "sweet"
gullubum "to shave" ~ *gallābum* "barber."

They are structurally quite different from each other. The first is in the B stem, and the relationship of the noun to the process is that of an adjunct (a concept equivalent to what is traditionally known as an adverb in the syntactical sense, see below, 33.5; 66); in other words, the verb might be interpreted as meaning "to be *in* the house." Also, there is no adjective derived from this root by means of internal inflection (*bīt-ān-ī-um* "interior" is derived by means of affixes, see below, 20). Note that the case of *marārum* ~ *marrum* cited above (n.2) would belong to the same type as *bātum* ~ *bītum*. The second example is in the D stem, and the relationship of noun to process is that of a direct object, with a meaning "to make like honey." Significantly, there is in this case a verbal adjective belonging with the B stem. The third example is in the D stem, and the relationship of noun to process is that of an adjunct: "to make according to the barber." No verbal adjective exists for this root. Tentatively, then, I would be inclined to consider *bātum*, *marārum* and *gullubum* as properly denominative, because the lack of adjectives suggests that *bītum*, *marrum* and *gallābum* are the primary nouns at the origin of the verb. Conversely, I would not so consider *duššupum*, suggesting that *dišpum* may be interpreted as a noun of condition derived through interdigitation from the root, with an original meaning "sweetness," subsequently lexicalized to mean "honey" (but see above, 9.3, for an argument in favor of a denominative interpretation).

It seems possible that the tendency to create denominative verbs may have increased in later periods, and this may be a significant productive factor in the development of the language during the first millennium. Here are some examples:

eṭēl-u "to become adult" ~ *eṭl-um* "man"
šalāš-u "to become triple" ~ *šalš-um* "three"
šumšū "to develop late" ~ *mūš-um* "night"
šušrū "to develop early" ~ *šēr-um* "morning"[3]
utnennu "to pray, beseech" ~ *unnīn-um* "supplication."[4]

[3] The latter two occur in *BAW* 11 46, quoted by SPEISER 1952 "Elative," pp. 478, 481, 492.

[4] VON SODEN 1952 *Grundriss* § 107 v.

10.3 Historical reality of primary nouns

While it is clear that loanwords are not integrated into the interdigitating system – nor has anyone suggested that they are –, traditional grammar generally derives primary nouns of Semitic origin (e.g., *kalb-um*) from a root, either consonantal (*klb*) or with fixed vowel (*kalb-*). My position on this subject may be summed up as follows. (*A*) Since the phenomenon of interdigitation is so distinctive and pervasive, and since the term "root" is intimately connected with its description, it seems best to avoid using the same term to refer to items which are intrinsically non-interdigitating. (*B*) To the extent that the term "root" is used to indicate an original Semitic word, it may be aptly replaced by the term "primary noun." (*C*) Considering what little indication there is, on comparative grounds, for vocalic alternations applicable to the same nouns, they may best be considered as cases of apophony rather than of root interdigitation. (*D*) There are no structural means to distinguish between primary nouns and loanwords, so that they will be treated here as belonging (synchronically) to a single class of unmotivated nouns. (*E*) To describe the phonemic configuration of primary nouns I will use the term "shape," so as to retain the term "pattern" only for interdigitating roots. (*F*) The term "nominal root" will be reserved for the system of numerals, as explained above (9.2). – The criteria which lead to these conclusions follow (see also above, 8.3).

(1) Comparative criterion: Akkadian primary nouns are derived from Semitic. The existence of a Semitic original for primary nouns is suggested by the existence of the same noun in other Semitic languages. Thus Akkadian *ʾumm-um* "mother" has close parallels such as Hebrew *ʾimm-ô* "his mother" or Arabic *ʾumm-un* "mother." In this particular case, the difference in vocalization emphasizes the specific reality of the consonantal skeleton of the word; in other words, the consonantal sequence *ʾmm* was realized in Akkadian according to the shape PURR, but in Hebrew and Arabic according to the shape PIRR. By way of contrast, neither Hebrew nor Arabic have *ṭupp-um* (attested in Akkadian as a loanword from Sumerian with the meaning "tablet"), much less **ṭipp-um*, hence no root **ṭpp* may be isolated. But given the total lack of pattern diversification even from a noun such as *ʾumm-um* (no such forms as **ʾamim-* "maternal" in any of these languages), it is best to understand the interrelationship between Akkadian and the other languages as a case of apophony.

(2) Historical criterion: denomination in Semitic and Akkadian. In contrast with other Semitic languages, Akkadian shows hardly any tendency to form denominative verbs, as discussed in 10.2. The significance for our current topic lies in the fact that the Akkadian situation, because of its antiquity, may be understood as a trait of earlier Semitic in general (while conversely the growing tendency towards denomination may be viewed as a trait of Semitic from the first millennium B.C. onward). If so, the roots proper (i.e., the interdigitating, verbal-nominal roots) are to be viewed *qua* roots as part of an original lexical stock; in other words, what is primary is the presence of a specific set of interdigitating roots as such, and not a grammatical mechanism which might on its own produce new lexical items. The contrast between roots and primary nouns is therefore enhanced.

(3) Structural criterion: every primary noun occurs in only one shape, hence interdigitation is at best potential, not factual. Nouns like *ʾumm-um* "mother" or *zikar-um* "male" are not correlated to any other Akkadian noun containing the same consonants (and carrying the same generic meaning), i.e., nouns like **ʾamm-um* "motherly" or **zukr-um* "masculinity" are not attested. Without such a set of alternants one cannot speak of proper internal inflection for *ʾumm-um* or *zikar-um* but at best only of frozen patterns from potential roots, or of apophony for interlanguage pairs like Akkadian *ʾumm-um* and Hebrew *ʾim(m)*.

(4) Structural criterion: shapes of primary nouns tend to coincide with patterns of deverbal nouns, but are not unequivocal with respect to loanwords. The shape of a primary noun like *ʾumm-um* "mother" is identical to the pattern of *dunn-um* "strength" which is a deverbal noun, hence truly interdigitating (cf. *dann-um* "strong," *dunnun-um* "to strengthen," etc.). Were such a correspondence between shape of primary nouns and patterns of deverbal nouns universal and unequivocal, there would be a structural criterion for isolating primary nouns from loanwords, but neither condition obtains. (a) The correspondence is not universal, because there are shapes which occur with primary nouns only, as with the shape of *ʾab-um* "father" or *lišān-um* "tongue." Especially interesting in this respect is the shape PARS which became specialized for primary nouns, while deverbal nouns apparently similar in shape, such as *damq-um* "good," are in reality from the pattern *paris* (*damiq*). (b) But, primarily, the correspondence is not unequivocal, i.e., loanwords too, besides primary nouns, may correspond in shape to the pattern of deverbal nouns, e.g., *ṭupp-um* "tablet" is identical in shape with (primary) *ʾumm-um* "mother" and (deverbal) *dunn-um* "might," though *ṭupp-um* may clearly be shown, historically and comparatively, to be a loanword from Sumerian. Here too, then, the structural test fails to isolate primary nouns as a class in itself, distinct from loanwords.

10.4 Remarks on the structure of primary nouns

Even though primary nouns and loanwords are to be treated together as unmotivated nouns, a few remarks are possible concerning more specifically the

structure of primary nouns. (*A*) Only substantives are found as primary nouns, and not adjectives. (*B*) The rules concerning the incompatibility of the radicals given above (9.3) do not apply in the case of primary nouns, as they do in the case of verbal roots. (*C*) A primary noun may be feminine even without the proper inflectional marker for the feminine (taken from external inflection), as with *ʾelepp-um* "boat," in which case the gender is determined on the basis of the agreement of verbs, adjectives and pronouns. Feminine deverbal nouns, on the other hand, are always characterized by an external feminine marker. (*D*) The shapes in which a primary nouns may occur constitute a limited set, which partly overlaps with, and partly differs from, the set of patterns of a verbal root. (*E*) There are certain limitations on the types of vocalism found with primary nouns.[5] (*F*) There is a considerable number of primary nouns with consonantism identical to that of verbal roots, proportionately higher perhaps than homonymy among verbal roots. Examples are:

maḫr-um "front" ~ *maḫār-um* "to receive"
kišād-um "neck" ~ *kašād-um* "to reach"
zikar-um "male" ~ *zakār-um* "to declare."

This homonymy does not usually create ambiguity, because the primary nouns tend to appear in shapes which are not used as patterns for deverbal nouns, such as *pars* or *pirās*, precisely as in the examples quoted above.

A list of shapes for primary nouns is appended below, with correspondences to patterns of verbal roots (for a complete list of the latter see the next chapter). Note especially that (a) no primary noun shapes include consonants as those found in deverbal extended patterns such as *mapras*, which are instead common for verbal roots; and that (b) certain shapes are specialized for primary nouns, particularly in cases where ambiguity would otherwise arise. The chart on the following page lists in tabular form the correpondences between shapes for primary nouns and patterns for deverbal nouns. For the sake of completeness, a column listing loanwords is also added.

[5] See DIAKONOFF 1991-92 *Proto-Afrasian*, p. 68f.

Base (unmotivated nouns existing independently of internal inflection)				SHAPE or PATTERN	Core (interdigitating nouns derived through internal inflection)	
loanwords and unknown		primary nouns			verbal and deverbal nouns	
		ʾab-	father	PAR		
		ʾil-	god	RIS	*ṣib-t-*	interest
		šum-	name	RUS	*šub-t-*	dwelling
kār-	harbor	*bāmt-*	half	PA:S	*kān-*	to be firm
		ṭīṭ-	clay	PI:S	*kīn-*	constant
šēp-	foot	*nēš-*	lion	PE:S	*nēr-*	to kill
būr-	calf	*būr-*	well	PU:S	*būr-*	hunger
kakk-	weapon	*šarr-*	king	PARR	*dann-*	powerful
		šinn-	tooth	PIRR	*midd-at-*	measure
ṭupp-	tablet	*ʾumm-*	mother	PURR	*dunn-*	power
parṣ-	ritual	*kalb-*	dog	PARS	*baqr-*	claim
kibr-	share	*ʾišd-*	foundation	PIRS	*šipr-*	mission
gurn-	average	*ʾuzn-*	ear	PURS	*dumq-*	goodness
Tiʾam-	Sea deity	*zikar-*	male	PIRAS		
Puran-	Euphrates	*ʾugar-*	irrig.basin	PURAS		
karān-	wine	*ʾatān*	donkey mare	PARA:S	*kašād-*	to reach
		parīs-	oar	PARI:S	*maḫīr-*	price
		ʾabūr-	harvest	PARU:S	*šarūr-*	glow
		lišān-	tongue	PIRA:S		
		kunās-	emmer	PURA:S	*ṣuḫār-*	youngster
		supūr-	fence	PURU:S	*rukūb-*	vehicle
		ʾārib-	raven	PA:RIS	*kāšid-*	conqueror
		ḫassīn-	axe	PARRI:S		
		biṣṣūr-	fem.genitals	PIRRU:S	*sikkūr-*	belt
		ʾelepp-	boat	PARASS		
		ʾabull-	gate	PARUSS	*namurr-*	awesome
		sugull-	hard	PURUSS	*kunukk-*	seal
ṭupšarr-	scribe			–		
ʾigigall-	wise man			–		

COMPARATIVE CHART OF UNMOTIVATED AND DERIVED NOUNS

SECTION B

PATTERNS FROM STRONG TRIRADICAL ROOTS

Chapter 11

Nominal Patterns

The minimal and necessary constituent of any nominal pattern is a vowel (alternatively: every pattern has at least one vowel), as in *pirs*, a pattern which may be described as "vowel *i* after the first radical." Additional constituents are vowels, consonants and length. The maximal number of constituents is three vowels and three consonants. All vowels may serve as pattern constituents, namely *a*(/*e*),[1] *u*, *i*, either short or long. Of the consonants only the following may serve as pattern constituents: *m*, *n*, *t*, *š*, ʾ. The consonants serving as pattern constituents can only be short; in addition, however, lengthening of a radical may also occur as pattern constituent.

From a purely formal point of view, the patterns may be arranged in a unilinear sequence of increasing complexity, depending on the quality and quantity of constituents found in the patterns. They may also be arranged on the basis of a coordinate system, such as will be outlined below for the verbal patterns (chapters 12-15); such system is however less differentiated for nominal than verbal patterns, and an arrangement of nominal patterns according to such a coordinate system is left for a later presentation (16.2).

The main traits of the unilinear system of nominal patterns are tabulated in the following chart. A listing of nominal patterns from strong triradicals and other types of root, with an indication of specific functions where appropriate, is given below (51.2; for PARS see 10.3:4a; for the *dab(b)abāb-* type see below, 55.1).

[1] The vowel *e* appears only as an alternant for *a*, i.e., all patterns which exhibit one or more vowels *a* may be realized with the vowel *e* instead, under circumstances to be specified later. Even though the two vowels *a* and *e* are not allophones, because they are clearly different phonemes, they share the same distribution in terms of morpheme patterning.

constituents: vowels & voc. length	cons.	radical length	undiffer. patterns (▪ stands for radical)	actual patterns: final *a*	final *i*	final *u*
1			▪V▪▪	(*pars* ?)	*pirs*	*purs*
2			▪V▪V▪	*paras*	*paris*	*parus*
2:			▪V▪V:▪	*parās*	*parīs*	*parūs*
				purās	*purīs*	*purūs*
			▪V:▪V▪		*pāris*	
2		:	▪V▪:V▪	*parras*	*parris*	
						purrus
			▪V▪V▪:			*paruss*
					piriss	
				purass		*puruss*
2:		:	▪V▪:V:▪	*parrās*		
					pirrūs	
2	1		CV▪▪V▪		*ʾipris*	
				mapras		
				mipras		
				mupras		
						naprus
						šaprus
						šuprus
				tapras		*taprus*
			▪VC▪V▪			*pitrus*
2:	1		CV▪▪V:▪	*šaprās*		
				taprās	*taprīs*	
			▪VC▪V:▪	*pitrās*		
3	1	:	CV▪:V▪V▪		*mupparis*	
			CV▪V▪:V▪		*muparris*	
			▪VCV▪:V▪			*pitarrus*
						putarrus
3:	1	:	▪V▪V▪:V:C	*purussāʾ*		
3	2		CVCV▪▪V▪		*mušapris*	
3	2	:	CV▪CV▪:V▪		*muptarris*	
3	3		CVCCV▪▪V▪		*muštapris*	

UNILINEAR PROGRESSION OF NOMINAL PATTERNS

Chapter 12
Verbal Patterns

12.1 Nominal and verbal patterns

The verbal patterns are distinguished from the nominal patterns on two counts. First and foremost, there is a structural difference between the two systems of internal inflection. For, while the nominal patterns may be arranged in a unilinear sequence where each pattern shows progressively one more degree of complexity with respect to the preceding one, the system of verbal patterns is bidimensional, as it were, because its forms can best be defined by two coordinates, especially with regard to consonantism. The numerals, too, exhibit a bidimensional system of internal inflection which is analogous in form to the verbal system, though quite different from it notionally.

The second consideration is extrinsic to the system of internal inflection, and is based on the fact that the *external* inflection of bases formed on verbal patterns is altogether different from that of nominal patterns (see below, part IIB).

There are three instances in which the two systems of verbal and nominal patterns overlap in their internal inflection, namely in the case of three patterns which are used respectively for (1) generic description of action or condition (commonly known as infinitive, e.g., *ṣabāt-um* "to seize"), (2) subject of condition (stative participle or verbal adjective, e.g., *ṣabt-um* "held, holder"), and (3) subject of action (fientive participle, or simply participle e.g., *ṣābit-um* "the one who seizes").[1] From the point of view of external inflection, all three behave like nouns, in that they receive the endings for number, gender and case, but not for person, tense or mood. On the other hand, (a) they are fully integrated, from the point of view of internal inflection, in the coordinate system of the verbal patterns; and in addition, (b) these three types of nouns – alone among all nouns – can govern both the genitive (like other nouns) *and* the accusative (like the verbs). Because of their special relationship with the verb, these nouns will be considered throughout as part of the system of verbal patterns, and will be called "verbal nouns." The other nouns, which are also derived from a verbal root, but (a) do not fit in the coor-

[1] See below, 16, for a discussion of the notional aspect of these forms.

dinate system, and (b) do not govern the accusative, will be called in this grammar "deverbal nouns." The verbal patterns in a proper sense will be called "finite forms." The situation is represented in tabular form in the following chart.

		NOUN				VERB
		unmotivated (primary and loanwords)	numerals	deverbal	verbal	finite forms
EXTERNAL INFLECTION	state	+	+	+	+	–
	case	+	+	+	+	–
	person	–	–	–	–	+
	mood	–	–	–	–	+
INTERNAL INFLECTION	none	+	–	–	–	–
	unilinear	–	–	+	–	–
	coordinate	–	(+)	–	+	+
SYNTAX	+ genitive	+	(+)	+	+	–
	+ accusat.	–	–	–	+	+
		no pattern	nominal pattern			verbal pattern

DISTRIBUTION OF NOMINAL AND VERBAL PATTERNS

12.2 The system of coordinates

The traditional paradigm layout will largely be followed here, except for a few modifications and clarifications which will be introduced at the proper place. While the result conforms by and large with the traditional presentation, the rationale for the system is articulated here in greater detail than is normally the case, on both the formal and the notional level. A full explanation of the notional categories is left for the syntax, since they overlap and cut across morphological categories, and respond to the needs of syntactical, rather than morphological, structure. For example, some of the categories which appear in the paradigm are based on the distinction between action and condition, which can only properly be explained within syntax. Hence, while it is proper to introduce the distinction here as

an explanation of the paradigm, a full elaboration of the concept itself can only be undertaken beyond the limits of morphology.

The paradigm is based on a two-dimensional matrix, which is characterized by two coordinates – an horizontal axis (of abscissae) and a vertical axis (of ordinates). *Formally*, there are special consonantal and vocalic characteristics which can be mapped onto this system with a high degree of regularity. *Notionally*, too, the two coordinates correspond to very specific and discrete categories. In the following chapters we will consider the three aspects in turn (consonantism, vocalism, notional categories). In general, it will appear that consonantism is mostly used to define the vertical, and vocalism both the vertical and the horizontal axis. The traditional labels used to refer to the various slots in the matrix are drawn partly from the formal configuration and partly from the notional values: they will be used here throughout, with the appropriate explanation being given at the relevant point in the presentation.

Chapter 13
Verbal Patterns: Consonantism

13.1 The coordinate system and the paradigm

The basic system of verbal patterns, as defined by consonants and length, may be mapped along the following two coordinates (▪ stands for radicals and colon for length).

PATTERNS →

LABEL ↓		VERBAL NOUNS: st/ftv infin.	VERBAL NOUNS: stative partcpl	VERBAL NOUNS: fientive partcpl	FINITE FORMS: imp.	FINITE FORMS: pret.	FINITE FORMS: perf.	FINITE FORMS: pres.
CONSON. MARKER		ø	ø	ø,m▪▪▪	ø	ø	▪t▪▪	▪▪:▪
STEMS								
B	ø							
N	N▪▪▪							
D	▪▪:▪							
DR	▪▪:▪:▪							
Š	š▪▪▪							
ŠD	š▪▪:▪							
Bt	▪t▪▪							
Nt	Nt▪▪▪							
Dt	▪t▪:▪							
Št	št▪▪▪							
Btn	▪tN▪▪							
Ntn	NtN▪▪▪							
Dtn	▪tN▪:▪							
Štn	štN▪▪▪							

When all coordinates are drawn from the two axes, the resulting scheme yields the complete consonantal system of the verbal patterns, as shown in the paradigm given below.

In the derivation of the actual forms from the coordinates, one will notice that some of the markers do not in fact appear as one would expect in terms of a mathematical application of the matrix, because often length or N (realized as length) are omitted: the pertinent forms are entered in the paradigm with square brackets around the omitted element. In one case, i.e., the present Št, the length marker which is characteristic of the present may or may not occur (the second form is traditionally labeled Št2); the distribution of the two forms follows semantic lines (see below, 16.4).

Note that the consonantal shape of four forms is identical in each stem, since they are all characterized by *ø* on the horizontal axis: infinitive, verbal adjective, imperative and preterite. There is however no real homonymy except for the infinitive and verbal adjective of the derived stems, because of the differentiation introduced by vocalism (see below, 14).

Because they are attested only rarely, the Nt and other compound stems (see below, 13.4) are omitted from this and all subsequent paradigms.

		VERBAL NOUNS: inf.	VERBAL NOUNS: vadj	VERBAL NOUNS: partcpl	FINITE FORMS: imp.	FINITE FORMS: pret.	FINITE FORMS: perf.	FINITE FORMS: pres.
		ø	ø	ø,m▪▪▪	ø	ø	▪t▪▪	▪▪:▪
B	ø	*prs*		*prs*	*prs*		*ptrs*	*pr:s*
N	N▪▪▪	*Nprs*		*mNprs*	*Nprs*		*Ntprs*	*Npr:s*
D	▪▪:▪	*pr:s*		*mpr:s*	*pr:s*		*ptr:s*	*pr:[:]s*
Š	š▪▪▪	*šprs*		*mšprs*	*šprs*		*štprs*	*špr[:]s*
Bt	▪t▪▪	*ptrs*		*mptrs*	*ptrs*		*pttrs*	*ptr:s*
Dt	▪t▪:▪	*ptr:s*		*mptr:s*	*ptr:s*		*pttr:s*	*ptr:[:]s*
Št / Št2	št▪▪▪	*štprs*		*mštprs*	*štprs*		*šttprs*	*štpr[:]s* / *štpr:s*
Btn	▪tN▪▪	*ptNrs*		*mptNrs*	*ptNrs*		*pttNrs*	*ptNr[:]s*
Ntn	NtN▪▪▪	*Nt[N]prs*		*mNt[N]prs*	*Nt[N]prs*		*Nt[N]tprs*	*NtNpr[:]s*
Dtn	▪tN▪:▪	*pt[N]r:s*		*mpt[N]r:s*	*pt[N]r:s*		*ptt[N]r:s*	*ptNr:[:]s*
Štn	štN▪▪▪	*št[N]prs*		*mšt[N]prs*	*št[N]prs*		*št[N]tprs*	*štNpr[:]s*

13.2 A note on the format of the paradigm

The paradigm layout adopted in this grammar differs from the traditional one in two significant respects (besides some aspects of the nomenclature, for which see presently).

(1) The permansive or stative, which is generally considered a tense of the verb, is here considered a part of nominal inflection, and is treated elsewhere (see below, 17.4; 25.3). Even though the same is presumably applicable to the perfect as well (see below, 13.4:3; 16.5), this form is retained as in traditional grammar.

(2) The sequence of the stems is B–N–D–Š rather than B–D–Š–N. The sequence adopted here reflects the logical progression of formal consonantal characteristics for each stem, which may be summarized as follows (see also below, 38.3):

B	▪▪▪	basic stem (no stem markers)
N	▪:▪▪	lengthening of first radical (realized as *n* under certain conditions)
D	▪▪:▪	lengthening of second radical
Š	š▪▪▪	addition of consonantal marker

For reasons which will be given in the discussion of the weak roots (below, 35.1), I prefer to consider the stem marker represented by N not as a single consonantal phoneme, but as a set of alternating realizations; the capital letter is used here as a notation for the concept of such a set. The principal realization of the N stem marker is therefore length of the first radical, and not strong consonantal *n*. In this light the natural progression of the consonantal markers recommends the paradigm sequence adopted here. This is confirmed by the nature of the vocalism of verbal patterns (see below, 14), which offers a more transparent configuration with the same sequence.

13.3 A note on terminology

I will deal more at length in later chapters with the substance of both the formal and notional aspects of the forms given in the paradigm. Here, where the paradigm is introduced for the first time, I will only offer a few remarks about some general aspects of the terminology used.

The label B is used in this grammar to refer to the basic stem. Generally, the label G is used, which is borrowed from the German term "Grundstamm." Since there is no compelling reason to retain this particular foreign label in English nomenclature, I prefer to replace it, as indicated, with B for "Basic."[1]

[1] Thus already REINER 1966 *Analysis* p.73.

The label D is retained in spite of the misleading implications conveyed by the concept of "doubling": as explained above (1.4), and as indicated by the marker of length given as distinctive stem marker, the phonemic phenomenon envisaged is properly one of lengthening (protracted articulation) rather than of doubling (repetition of articulation). The label is therefore to be understood as referring purely to the (modern) graphic notation, which renders consonantal length by means of a doubly written consonant.

A combination of Roman and Arabic numerals is in common use (for instance in *CAD*) to refer to the sequence of stems, according to the following scheme:

I = B	I 2 = Bt	I 3 = Btn
II = D	II 2 = Dt	II 3 = Dtn
III = Š	III 2 = Št	III 3 = Štn
II/III = ŠD		
IV = N	IV 2 = Nt	IV 3 = Ntn

The numeric sequence reflects the traditional progression B–D–Š–N, and as such it does not fit the progression which I have adopted here. In addition, it is cumbersome for the higher numbers, and it cannot easily be used to identify new stems like the DR stem. It thus seems less appropriate than the letter sequence.

The generic term "derived stems" is used to refer to all stems other than the B stem, since they are derived (synchronically) through the addition of consonantal elements.

The labels used here to designate verbal nouns and finite forms are the traditional ones, and they refer to notional characteristics which are discussed in detail below (16.3; see there also for a resolution of the abbreviations). Here I will only note that I retain the use of the terms "verbal adjective" (abbreviated "vadj") and "participle" (abbreviated "part"), even though they reflect, in my view, an inadequate understanding of the corresponding categories. (From the point of view of nomenclature, it is interesting to note that the two terms are in practice synonymous, since the term "participle" refers to a grammatical element that partakes of the nature of both a verb and an adjective – obviously the same notion conveyed by the term "verbal adjective.") In fact, both forms are properly participial (i.e., verbal and adjectival at one and the same time), and they are distinguished only in that the so-called verbal adjective is stative, whereas what is simply called participle *kat'exochèn* is fientive (see below, 16.3 and 70.5). Accordingly, the proper terms should be "stative participle" and "fientive participle." Since they may however appear cumbersome for common usage, I will use systematically in their stead the traditional terms "verbal adjective" and "participle" respectively.

Similarly, the simple term "infinitive" should be understood as an abbreviation for "stative/fientive infinitive." To indicate the switch in terminology, I have used the two different sets of terms in the opposing charts given above in 13.1.

13.4 A note on compound stems

The stems with medial *t* and *tn* are productive compound stems, where "compound" refers to the cumulation of two stem markers. Two other compound stems which are recognized in the literature are non-productive, and two additional ones, equally non-productive, are proposed here as likely alternatives to the standard treatment of the perfect.

(1) DR STEM. – An R-stem was identified by KIENAST.[2] The forms as he understands them are possibly at variance with the phonotactic rule resulting in apheresis (55.1:4).[3] On the other hand, he has noted the strong similarity with the D stem,[4] and the gemination of the second radical is explained in one case on the basis of an analogical influence of the D stem. The conclusion seems inescapable to me that such "gemination" is in fact present in all forms, so that this stem is actually characterized by *both lengthening and reduplication* of the middle radical – with the result that the stem is DR, and not simply R. The fact that this is not regularly expressed in writing constitutes no difficulty since long consonant is often not expressed in cuneiform, especially when the phonotactic structure of the word requires length. Thus forms like *li-da-na-an-ni-in* or *tu-za-qa-qu-ru* may best be interpreted as *līdannannin* "may he strengthen" (instead of *līdanannin*) and *tuzaqqaqquru* "to build very high" (instead of *tuzaqaqquru*). For an alternative interpretation see below, 55.1:4. As already mentioned, I will not include the DR stem in the paradigms that follow because it is not productive in the language.

(2) The ŠD STEM combines the formal characteristics of both the Š and the D stem, and is so far attested only in a few forms – participle, present and preterite. It is similarly excluded from the paradigms.

(3) TR STEM. – I am proposing that forms universally interpreted as perfects of *t* stems be reinterpreted as preterites of a stem analogous to the DR stem, namely one characterized by the reduplication of the *t* stem identifier. This stem can be further compounded with an additional stem identifier, for instance with *š*

[2] KIENAST 1957 "Reduplikation"; 1961 "R-Stamm."

[3] In the first of the two articles, this difficulty was noted twice, namely on p. 44, n. 1 where it is said that forms like *utelelli* are "als **ūtelelli*, **īttelelli* und *mūtelellūm* anzusetzen" and on p. 47 f., n. 5 where it is noted that the middle short vowel, instead of dropping, is preserved "aus Grunden des Systemzwanges." But in the second article as well as in the paradigms of both articles the difficulty is not fully considered.

[4] See especially "Reduplikation," p. 47, where the form *muktaššaššum* is analyzed as *muk-ta<na>-ššašišum*.

to form a ŠTR stem. Forms of this type are extremely rare: out of a corpus of more than 12000 verbal forms,[5] only two are pertinent.[6]

(4) TTN STEM. – I am similarly proposing that forms universally interpreted as perfects of *tn* stems be reinterpreted as preterites of a stem analogous to the ŠD stem, namely one characterized by the cumulation of two (or more) stem identifiers. This stem can also be further compounded with an additional stem identifier, for instance with *š* to form a ŠTTN stem. Forms of this type are just as rare: out of the same corpus, only two are pertinent.[7]

13.5 The case against the "perfect": formal considerations

The proposal in favor of the existence of TR and TTN stems has far-reaching consequences, because it calls into question the very existence of the Akkadian perfect as a separate morphological category. The notional reasons why this seems likely to me are briefly described below (16.5). Here I have only pointed out the logic of an alternative formal explanation for forms with double *t* or with *t* and *tn*. Such alternative explanation, based on the structural parallelism with other recognized compound stems (DR and ŠD), eliminates what would otherwise appear to be the only cogent reason for the existence of the perfect in the first place.

The extreme scarcity, hence the non-productivity, of such forms is a strong case against the retention of the perfect as a separate morphological category. Since the temporal value of the alleged perfect can easily, in fact, even more convincingly, be assigned to the preterite of the T and TN stems (see below, 16.5), it would seem preferable to eliminate altogether the perfect from the verbal paradigm. If I do not do so in this grammar, it is only in deference to tradition.

[5] Taken from the first 12 volumes of OB letters published in *AbB*, and analyzed by my student T. F. LEONG to whom I am grateful for this information. LEONG has utilized the corpus for his UCLA dissertation *Tense, Mood and Aspect in Old Babylonian*, 1994.

[6] The forms are: *tuštataṭrissu* "you then have deducted for yourself (the amount owed) him" (*AbB* 11 44:14); and *aštatāl* "I then asked myself" (*AbB* 11 118:14'). See also *uštatamḫir* "she has then claimed equal rank" (*CH* §146 rev. viii 51). Note how the cumulation of identifiers results in the presence of two distinct notional values, temporal and reflexive.

[7] They are: *abtattaq* "I then kept cutting" (*AbB* 9 42:22); *i[bta]takkī* "he then continued to cry" (*AbB* 10 200:15). As in the previous examples, the cumulation of identifiers results in the presence of two distinct notional values, i.e., temporal and iterative.

Chapter 14
Verbal Patterns: Vocalism

14.1 Introductory

All verbal patterns include two to five vowels (excluding of course the affixes which are elements of external, not of internal, inflection). The vowels are always short except in two cases, the infinitive and participle B. Only the first and last vowels, however, are distinctive; the middle vowel(s) are only added, whenever necessary, to allow the resolution of consonantal clusters, hence the middle vowel(s), when present, is(/are) always, indistinctively, the same, namely *a*.[1] The possible configurations are shown in tabular form in the following scheme, where each letter stands for a syllable, and F/L stand for variable vowels in first (F) and last (L) position respectively; in the right column one finds examples of actual patterns, with the relevant vowels underlined:

(prefixes -)	F		L (- postfixes)	*-i pr u s -*
(prefixes -)	F	a	L (- postfixes)	*-u p a rr i s -*
(prefixes -)	F	a a	L (- postfixes)	*-i pt a n a qq i d -*
(prefixes -)	F	a a a	L (- postfixes)	*-i tt a n a pr a šš a d -*

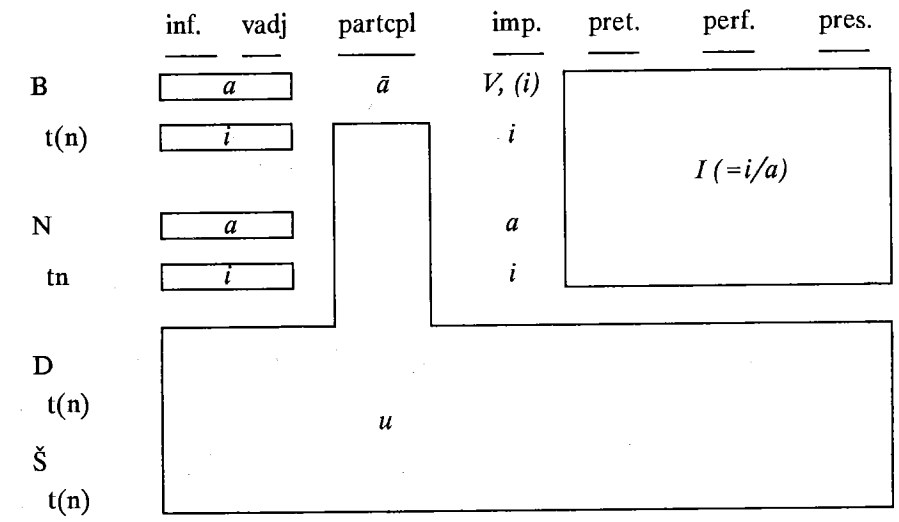
14.2 First vowel

The function of the first vowel is to serve as auxiliary stem marker; as such, it complements the stem discriminating function of the consonantal skeleton as displayed by the vertical axis of the system (see chapter 13). It may be noted that a vocalic differentiation of the stems is often necessary, because consonantism by itself is not always distinctive, for instance in the present B and D (which are both *pr:s*). With only the partial exception of the participle Bt(n), N, Ntn and imperative

[1] This middle vowel, which appears to be automatic and is in any case morphemically non-distinctive, may have been realized phonologically as *ə* (see above, 1.3). – The only case in which the middle vowel of a verbal pattern is not *a* is found with the middle weak verbs, and then only exceptionally, namely when the middle vowel is not contracted, as in *iqīaš* "he gives as a gift," see below, 44.4, and also 43.5. This is the only other instance when one finds a long vowel in a verbal pattern.

B, the first vowel of the B and N stems is either *a* or *i*, while the first vowel of the D and Š stems is *u* throughout. The vocalism of the first syllable is represented graphically in the chart below (*V* stands for root vowel, see below, 14.4; *I* stands for *i/a*, see below, 14.6).

The vowel *i* in the imperative B occurs only with the following verbs, all of which have root vowel *a*: *lamādu* "to learn," *palāḫu* "to fear," *pašāḫu* "to anoint," *rakābu* "to ride," *takālu* "to trust" (see also below, 14.7 and 45.3).



VOCALISM OF VERBAL PATTERNS: FIRST VOWEL

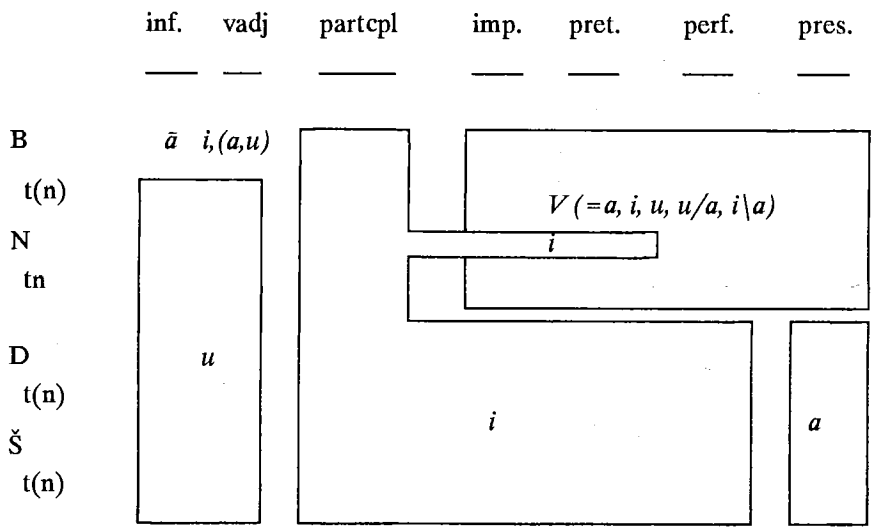
14.3 Last vowel

The function of the last vowel is to serve as the main marker for tenses and verbal nouns. A vocalic differentiation between nouns and tenses is generally necessary, because consonantism by itself is not sufficiently distinctive, as in the D preterite and present (both of which have the consonantism *pr:s*).

Another original function of the last vowel was to distinguish various types of direction and mode (transitivity and action vs. intransitivity and condition), but this function is largely obliterated in Babylonian and may be reconstructed primarily on historical and comparative grounds (for which see the excursus below, 15.2).

The predictable distribution of the final vowel is as follows: (1) *ā* for the B infinitive; (2) *u* for the infinitive and verbal adjective of all derived stems; (3) *i* for the participle of all stems, for the imperative and preterite of the N stem, and for the imperative, preterite and perfect of the D(tn) and Š(tn) stems; (4) *a* for present of the D(tn) and Š(tn) stems.

The following forms exhibit multiple realizations which are not predictable and must therefore be given lexically. (5) The B verbal adjective has usually *i*, but also *a* and *u*. (6) The finite forms of the B(tn) and N(tn) stems (except for the imperative and preterite N, where the vowel *i* is found) exhibit either a single vowel (*a,i* or *u*), or a set of two vowels (*u/a* or *i\a*); this is called "root vowel" (represented here by the symbol *V*), and its precise distribution will be described in greater detail presently. The complete scheme is tabulated in the following chart.



VOCALISM OF VERBAL PATTERNS: LAST VOWEL

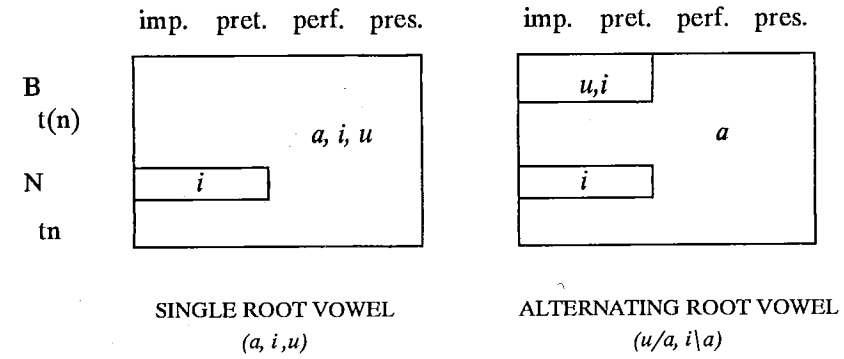
14.4 Root vowel

As indicated, the finite forms of the B(tn) and N(tn) stems, except for the imperative and preterite N, exhibit as their last vowel either a single vowel (*a,i,* or *u*) or a set of alternating realizations (*u/a* or *i\a*). This is traditionally called "root vowel," a term which will be retained here (but see below, 14.7).

If the root vowel is a single vowel, all finite forms in question exhibit one and the same vowel (*a*, *i*, or *u*) in final position.

If the root vowel is a set of alternating realizations (*u/a* or *i\a*[2]), the imperative and preterite B exhibit the first vowel (*u* or *i*), and all other finite forms in question exhibit *a*. The alternating set *u/a* is indicated in this grammar with the symbol /, and the alternating set *i\a* with the symbol \.

For examples see below, 17.2.



14.5 General vocalic shift *a* > *e*

Certain roots trigger an automatic shift of *a/ā* to *e/ē* within the core.[3] But for a few exceptions (for which see below, 37; 41.4), one cannot predict synchronically which roots require this shift, although there is a historical explanation which accounts in part for this phenomenon (see above, 5.1). As a result, the presence of such a shift must be indicated, for the most part, through a lexical listing. I will refer to this shift as "general vocalic shift" or simply "general vocalism *e*." Following are some examples of how the shift takes place within internal inflection and how it excludes external inflection (see below, 27.1 and 28.5, for the affixes of external inflection, and 45, for the inflection of the roots final weak):

ṣḫir	{*ṣaḫār-um*}	/*ṣeḫērum*/	(verbal noun)
	{*iṣaḫḫir-am*}	/*iṣeḫḫiram*/	(external inflection not affected)
šma:	{*išamma:*}	/*išemmē*/	(root vowel affected)
	{*t-aštanamma:*}	/*teštenemmē*/	(derived stem)

[2] The set *i\a* is found in a limited number of cases, all of them weak roots, namely *ʔl\k* "to go" and certain roots first Waw (see below, chapters 41.5; 43.1). For *Nzzi:* "to stand" and *Nt:il* "to lay down" see below, 48.1.

[3] For an occasional shift within external inflection see below, n. 4. There are several deviations to this shift, which cannot be predicted, and are found especially in deverbal patterns, e.g., *ṣuḫār-* instead of **ṣuḫēr-*.

14.6 A divergent interpretation of morphemic boundaries

What I consider in this grammar as the first vowel of the pattern, is traditionally considered as part of the morphemes of external inflection (for which see below, 27.1). The traditional interpretation (which is standard for Semitic linguistics in general) would appear at first to be supported by the distribution of forms in the indicative B(tn) and N(tn), where the alternation of the two allomorphs *a/i* (indicated by capital *I* in this grammar) is in fact determined by external inflection. The following chart, which gives the preterite pattern with the addition of external inflection, compares my understanding of morphemic boundaries with the traditional one:

		THIS GRAMMAR	TRADITIONAL
a after prefixes of	1st sing.	*ʾ-aprus*	*ʾa-prus*
	2nd sing.	*t-aprus(-ī)*	*ta-prus(-ī)*
	2nd plur.	*t-aprus-ā*	*ta-prus-ā*
i after prefixes of	1st plur.	*n-iprus*	*ni-prus*
	3rd sing.	*ʾ-iprus*	*ʾi-prus*
	3rd plur.	*ʾ-iprus-ū/ā*	*ʾi-prus-ū/ā*

Traditionally, then, the pattern is shorter by one syllable, and the prefixes are syllabic, rather than consonantal. Even though the resulting paradigm is obviously the same in either case, the interpretation proposed here is more economical, because it is not necessary to give two sets of prefixes in the discussion of external inflection (see below, 27.1). But there are more substantive reasons for my choice.

(1) The vowel in question serves a stem differentiating purpose, and as such it belongs logically with internal inflection, on which the stem system is based. This function is especially apparent in the D and Š stems, where there is a clear symmetry between the first vowel of verbal nouns and imperative (e.g., *purrus-, purris-*) and that of the indicative as I understand it (e.g., *-uparris-*).

(2) The general vocalic shift *a* > *e* (see above, 14.5) applies to all syllables of the core, but not to affixes,[4] hence *t-eppeš-am* "you make," *t-eppeš-ā-nim* "you (plur.) make." With the traditional understanding of morphemic boundary, and assuming a uniform application of the shift to all affixes, one would expect either **te-ppeš-em, *te-ppeš-ē-nim*, or **ta-ppeš-am, *ta-ppeš-ā-nim*, which are in fact nonexistent.

[4] Though it does occasionally extend to the afformative *-ān-*, e.g., *qerb-ēn-* "inside," and to the first vowel of the pronominal suffixes with the predicative state, e.g., *ṣeḫr-ēku* (OB) next to *ṣeḫr-āku* (SB) "I am small" (see *CAD Ṣ* 183f.) and even *ṣeḫr-ēte* (*Gilg.* Y v 10, OB) "you are small."

(3) Historically and comparatively there are reasons to believe that the first vowel of the indicative B(tn) and N(tn) was *a* for all persons, and that the differentiation between *a* and *i* is secondary (see below, 15.1). If so, the differentiation according to external inflection by person is not the primary function of the vowel in first position.

14.7 Review of non-predictable vocalic elements

We have seen a number of instances in which certain aspects of the vocalism of the patterns cannot be predicted on the basis of morphological mechanisms, and must be given lexically. They are:
(1) the root vowel, i.e., the last vowel of finite forms of B(tn) and N(tn) stems;
(2) the last vowel of the verbal adjective B;
(3) general vocalism *e*, i.e., the potential shift *a* > *e* for the entire paradigm;
(4) the first vowel of the imperative B.
It may be noted that the concept of "root vowel" applies in principle to all four cases, since in each instance the vocalism is an element which is intrinsically associated with a particular root; however, the term has come to be used for the first case only, and this use of the term is retained here.

The last category (the first vowel of the imperative B) is limited to the few roots mentioned in 14.2 and 45.3. The first three categories, instead, have a wide distribution, and it is useful to have a special notation for their respective characteristics. Following is a listing of representative examples, which gives in sequence the three vocalic elements in question; the notation given in this grammar; and the notation found in the dictionaries (*V* stands for root vowel, VA for verbal adjective, and GV for general vocalism; for the inflection of *šma:* see below, 45; for the inflection of *Wb\l* see below, 43).

V	VA	GV	THIS GRAMM.	DICTIONARIES	
a	*i*	*a*	*ṣbat*	*ṣabātu, iṣbat, iṣabbat, ṣabit*	to seize/hold
a	*i*	*e*	*šma: (e)*	*šemū, išmē, išemmē, šemī*	to hear
a	*u*	*a*	*mraṣ (u)*	*marāṣu, imraṣ, imarraṣ, maruṣ*	to be(come) sick
i	*a*	*a*	*rpiš (a)*	*rapāšu, irpiš, irappiš, rapaš*	to be(come) wide
i	*i*	*a*	*pqid*	*paqādu, ipqid, ipaqqid, paqid*	to guard
i	*i*	*e*	*ṣḫir (e)*	*ṣeḫēru, iṣḫir, iṣeḫḫir, ṣeḫir*	to be(come) small
i	*u*	*e*	*lmin (ue)*	*lemēnu, ilmin, ilemmin, lemun*	to be(come) bad
u	*u*	*a*	*tqun (u)*	*taqānu, itqun, itaqqun, taqun*	to be(come) organized
u/a	*i*	*a*	*kš/d*	*kašādu, ikšud, ikaššad, kašid*	to reach
?/a	*?*	*a*	*dr/ar*	*darāru, –, idarrar, –*	to move freely
i\a	*i*	*a*	*Wb\l*	*wabālu, ubil, ubbal, wabil*	to bring

? ? a klm *kullumu* to show.

The notation provided in the dictionaries gives the full forms of the infinitive, preterite and present B, from which the details of the vocalism can be derived.

The notation given in this grammar is as follows:

(1) the root vowel is placed between the second and the third radical, and the following symbols are used:
/ stands for *u/a*;
?/a stands for roots where only *a* for the present, is attested (so that in effect we do not know whether the root vowel is *u/a* or *a*;
\ stands for root vowel *i\a*;
lack of vowel in this position means that the root vowel is unknown;

(2) the second vowel of the verbal adjective B is given in parenthesis following the root when it is *a* or *u* (otherwise it is assumed that the vowel is *i*);

(3) the general vocalic shift *a* > *e* is indicated by a vowel *e*, also given in parenthesis after the root (otherwise, general vocalism *a* is assumed).

Chapter 15

Historical Excursus on the Vocalism of the Verbal Patterns

15.1 Original first vowel *a* of finite forms in the B and N stems

The alternation of the first vowel in the B(tn) and N(tn) stems may be explained assuming *a* as the original vowel, and *i* as its allomorph. The historical explanations presented here are based on the addition of the elements of pronominal external inflection, for which see below, 27.1 and 31.2.

The change to *i* may be explained phonologically in the third person singular and plural, where the prefix (of external inflection) was *y* and as such it affected the change *a* > *i*: **y-aprus* > **y-iprus* > *ʾ-iprus*.

The change to *i* in the first person plural may be explained analogically through the influence of the independent personal pronoun of the first plural, *nīnū*, which is the only independent personal pronoun (besides that of the third person feminine) with *i* as first vowel, hence **n-aprus* > *n-iprus*; the change may also have been favored by analogy with the verbal forms of the third person.

The retention of *a* in the first person singular and in the second person may be explained analogically, since the independent pronouns of the first singular and of the second person all have first vowel *a*, and partly also phonologically, since the prefix ʾ (of external inflection) favors the retention of vowel *a*.

To sum up in tabular form:

			change due to		retention favored by	
archaic form		historical form	phonolog. influence of	analogy with	phonolog. influence of	analogy with
* *y-aprus*	>	*ʾ-iprus*	*y*	*ši*		
t-aprus						*atta*
t-aprus-ī						*atti*
ʾ-aprus					ʾ	
* *y-aprus-ū*	>	*ʾ-iprus-ū*	*y*			
* *y-aprus-ā*	>	*ʾ-iprus-ā*	*y*	*šinā*		
t-aprus-ā						*attunū*
* *n-aprus*	>	*n-iprus*		*nīnū*		

15.2 Original morphological value of the root vowel

The original purpose of the last vowel was most likely that of expressing syntactical relations (transitivity and reflexivity vs. intransitivity) and scope (action vs. condition). A plausible reconstruction of the system may be tabulated as follows:

	transitive	reflexive	intransitive
verb of action (fientive)	*u/a*	*a*	*u*
verb of condition (stative)	–	–	*i*

To the extent to which this scheme obtained, the purpose of the last vowel would have been predictable, at least in the measure in which the function of the verb could be determined. Very little is left, however, of this system in historical times. The only distinction which survives is that verbs with alternating last vowel (*u/a*) do not include verbs of condition.[1] Thus the last vowel became lexicalized, at least as far as the B(tn) and N(tn) stems are concerned. In other words, the last vowel cannot be predicted for the stems in question, but rather has to be given lexically, hence its definition as root vowel.

[1] This result is confirmed by statistical computations which can be made on the materials conveniently collected by ARO 1964 *Vokalisierung.*

Chapter 16
Verbal Patterns: Notional Categories

16.1 Formal characteristics and notional categories

The formal system outlined above has a close correlation with semantic categories and syntactic values (for which see also below, chapter 70).

As indicated earlier (chapter 11), nominal patterns do not exhibit as complex a paradigm as the verbal patterns, because instead of a real matrix, they tend to have a more linear paradigm. The notional categories are correspondingly less rigorously distributed, in the sense that there is no systematic correlation between types of formal patterns and either semantic or syntactical values.

The formal characteristics on the horizontal axis are used to define various relationships among the categories of time and process. These relationships are essentially *semantic,* because they provide a statement about a given dimension of the extra-linguistic reality. They comprise verbal nouns and finite forms. Note how by definition the verbal nouns, alone among nominal patterns, share in the characteristics of both nominal and verbal internal inflection.

The formal characteristics on the vertical axis are used to define various relationships between the verbal form itself and other constituents within the sentence. These relationships are thus essentially *syntactical* because they serve as pointers to other components present in the discourse. They are known as stems (also "conjugations," "stirps").

In what follows, I will review the major notional categories which apply for each of the three categories – verbal and deverbal nouns; verbal nouns and finite forms; stems. A fuller syntactical analysis of the same forms will be given below in the syntax.

It should be noted that the term "process" is used in this grammar to refer in the most generic sense to the verbal nature of a root, subsuming in particular the notions of action and condition. Thus I will speak of *ṣbat* or *dmiq* as processes, for which the following translations will obtain: "to seize/hold," "to be(come) good."

16.2 Verbal and deverbal nouns: nouns of subject and description

Only one major distinction obtains, depending on whether or not there is a built-in reference to the subject of the verbal process. In the first case we have nouns of subject, e.g., *ḫabbātum* "robber," in the second, nouns of description (i.e., nouns which describe the process as such, without reference to a subject), e.g., *ḫubtum* "robbery." A more precise definition of this opposition may be given as follows: the noun of subject can always be predicated of a concrete and/or animate subject, while a noun of description cannot – for instance, one can say of a certain person that he is a "robber" (*ḫabbāt-*), but not that he is a "robbing" (*ḫubt-*). However, this formal test is often invalidated by the process of analogical extension and/or semantic shifts. For instance, while *migir-* is properly a noun of description with the meaning "act of favoring," it may be predicated (analogically) of an individual – meaning, for example, that he is the "very favor" of a god (e.g., *migir Šamaš*). Similarly, *riks-* is properly a noun of description meaning "binding" but is used commonly to refer, through a semantic shift, to a concrete "knot" or (metaphorically) a "treaty."

The categories of nouns of subject and description overlap to a large extent with the categories of adjective (see also below, 63.5) and abstract. All adjectives are nouns of subject, and all abstracts are nouns of description. The converse, however, is not true: not all nouns of subject are adjectives, nor are all nouns of description abstract. This is largely because of the semantic processes mentioned above. It must also be noted that the two terms "adjective" and "abstract" are not in logical opposition with each other, since the former is in opposition with "substantive" and the latter with "concrete." For these reasons I prefer to introduce the two terms "of subject" and "of description" as explained above.

It should be stressed that this distinction applies only to verbal and deverbal nouns. Unmotivated nouns are generally all concrete nouns of subject.

Within the two categories of noun of subject and noun of description, some further subdivisions can be made on the basis of semantic and syntactic implications, though for the most part the system remains undifferentiated. The chart on the following page gives a small selection of significant examples, arranged in tabular form according to the pertinent categories.

While the system as a whole is not productive, individual forms are. In particular, the following forms are found very frequently from a variety of roots: PARRA:S for nouns of profession, MAPRAS for place and instrument, PURUSSA:ʔ for planned action (more specifically, for legal terms).

Also note that certain patterns are specifically linked with the notional value of certain corresponding stems, namely: the TAPRI:S pattern with the factitive meaning of the D stem; the PITRA:S pattern with the reflexive meaning of the Bt stem; the TAPRA:S pattern with the reciprocal meaning of the Bt stem; the ŠAPRUS and ŠAPRAS patterns with the causative meaning of the Š stem; the ŠAPRUS pattern with the elative meaning of the Š stem.

		subject	description	pattern
undifferentiated		*karūb-* honorable *ṣuḫār-* youngster *sikkūr-* bolt *kunukk-* seal *zuqqaqīp-* scorpion	*ṣibt-* seizure *ʔikrib-* prayer *gimill-* favor *dumq-* goodness *sarūr-* splendor *ruṭīb-t-* dampness *ḫušaḫḫ-* hunger *namrīr-* brilliance *tapšuḫ-t-* rest	PIRS ʔIPRIS PIRISS PURS PARU:S PURA:S PURI:S PIRRU:S PURUSS PURASS PURRARI:S PARSI:S TAPRUS
semantic	profession	*eppēš-* active *ḫabbāt-* robber		} PARRA:S
	instrument	*markas-* rope		MAPRAS –[1]
	place	*maškan-* place *tarbaṣ-* enclosure *mūšab-* dwelling		MAPRAS –[1] TAPRAS –[2] MUPRAS –[3]
	time		*nubāt-t-* evening	MUPRAS –[3]
	planned action		*purussāʔ-* decision	PURUSSA:ʔ
syntactic	intensive	*ṣeḫḫer-* very small *rašubb-* incandescent *teleʔ-* very capable		PARRAS PARUSS TAPRAS –[2]
	elative	*šalbub-* ravaging		ŠAPRUS –[4]
	factitive	*talmīd-* pupil	*tēlīl-t-* purification	TAPRI:S
	reciprocal	*tamlāk-* counsellor	*tamḫār-* fight	TAPRA:S
	completive	*gitmāl-* heroic		PITRA:S
	causative		*šaḫluq-t-* destruction *šapšaq-* difficulty	ŠAPRUS –[4] ŠAPRAS

NOTIONAL CATEGORIES OF DEVERBAL NOUNS
(superscript numbers provide a link among identical patterns)

16.3 Verbal nouns and finite forms

The verbal forms along the horizontal axis of the paradigm express a variety of built-in references to various aspects of the process, either viewed in itself or in correlation to other extra-linguistic factors, i.e., the speaker, the listener, and the time frame. The first set of such correlations views process in relationship to the point in time of the speaker: this set subsumes the categories of position and range. The second set of correlations views process in relationship to its own possible limits within time, i.e., in relationship to its own beginning and/or end: this set subsumes the categories of scope, dimension and aspect. Finally, the last category, of mood, views process within the interaction of speaker and listener. The various types of references may be summarized as follows:

	process	extra-linguistic elements			nature of reference
		time	speaker	listener	
1. position	x	x	x		time position relative to speaker
2. range	x	x	x		degrees of above
3. scope	x	x			beginning/end of process
4. dimension	x	x			contiguity of beg./end
5. aspect	x	x			conclusion of process
6. mood	x		x	x	statement or summons

Of these various types of correlation, those of position, range, scope and mood are productive in Akkadian, whereas dimension and aspect are not, and are discussed here only for comparative purposes. While all concepts introduced below are present in traditional grammar, my analysis differs from it in two respects. First, the concepts are described in their proper nesting sequence, i.e., one which indicates to which wider class, or higher node, a particular concept may belong. Second, specific terms are given for each category, and all terms are explained in their import, where traditional grammar often presupposes a concept for which a corresponding term is missing, or else leaves both concept and term unexplained. Here I will: introduce a new term wherever one is missing; identify the pertinent extra-linguistic elements which enter into play; and describe in some detail each category. In my explanation, I refrain from generic notional paraphrases and aim instead to achieve a precise discrimination of formal elements, which are also those which have contributed to shaping (intuitively) the traditional concept.

(1) POSITION: presence or absence of a reference to the temporal position of the process, from the perspective of the particular point in time of the speaker.

This category subsumes finite and "infinite" forms (the latter being generally called "verbal nouns"), depending on whether the reference is present or absent.

With "infinite" forms the reference to temporal position is absent, that is, process is described in and of itself, without concern as to whether or not it is directed towards the particular point in time at which the utterance of the speaker takes place. Three forms belong to this series. *(A)* The infinitive refers to a description of the process (action or condition) without built-in reference to any subject (e.g., *alāk-* "to go"). – *(B)* The stative participle, or verbal adjective,[1] refers to the subject of a condition (e.g., *damiq-* "good,"). – *(C)* The fientive participle, or simply participle, refers to the subject of fientive action (e.g., *ṣābit-* "the one who seizes.").

A built-in reference to the subject is subsumed with every form other than the infinitive. Thus the infinitive is a plain, non-referential description of the process (*damāq-* "to be good"), whereas the verbal adjective, the participle and the finite forms are referential (*damiq-* "the *one* who is good," *ṣābit-* "the *one* who seizes," *iṣbat* "*he* seized"[2]).

With finite forms there is a greater variety of alternatives which I list below under the separate heading of "range."

(2) RANGE: specific degrees within the spectrum of possible temporal positions. This category subsumes the finite forms, i.e., the tenses of the indicative and the imperative. The term "tense," which is ultimately derived from the Latin term for time (*tempus*, by way of Old French "temps"), emphasizes the temporal directionality of the process; the terms "indicative" and "imperative" refer to a correlation which is independent of temporality, for which see below. The pertinent forms may be listed as follows.

(A) The present-future refers to an action which is either contemporary or posterior to the speaker's point in time, e.g., *ikaššad* "he reaches" or "he will reach." – *(B)* The preterite refers to an action which is prior to the speaker's utterance, e.g., *ikšud* "he reached." – *(C)* The perfect refers to temporal scalarity in the past or the future, i.e., an action which is subsequent to an earlier point in time or antecedent to a later[3] point in time, always with respect to the moment in which the speaker's utterance takes place, e.g., *iktašad* "(something happened and) then

[1] For some remarks on the nomenclature see above, 13.3.

[2] The plain core form of the indicative is identical to the form inflected with the pronominal affixes of the third personal singular, and that of the imperative is identical to the second masculine singular (see below, 27.1, for the full inflection), hence in Akkadian (and Semitic linguistics in general), these particular inflected forms are used as the standard of reference.

[3] This is less frequent; see for example *AbB* 2 70:20. – This value of the perfect applies only to the Old Babylonian period. In later periods, the perfect is used almost in a modal function to affirm past action in positive statements, while the preterite is used in negative or interrogative statements.

he reached"; "(by the time something will happen,) he will have reached". The paradigmatic translation in this grammar is of the type "he then reached." See also below, 86.2. – (*D*) The imperative refers to an action contemporary with the speaker, e.g., *kušud* "reach!"

The existence of the perfect as a separate morphological category is questionable. It is retained in this grammar with considerable reservations (see above, 13.5, and below, 16.5). Its main notional value is, in my view, to be understood as identical to the separative value of the Bt stem: an action is viewed as separating itself from another that has already taken (or will take) place. This is expressed by the term "scalarity" (which I am introducing here), which refers to that particular function of the Babylonian perfect whereby two steps on the temporal scale are subsumed at once under one and the same verbal form. In other words, the perfect has a built-in reference to a given interval; alternatively, the position in time vis-à-vis the speaker is mediated through an intermediate step (hence the term "scalarity" from "scale" in the sense of "ladder"). The term "perfect" may then be understood to refer to the fact that one of the two steps has to be completed before the other takes place. It is in this sense that I retain the term "perfect," which has become well entrenched in Akkadian grammar, following LANDSBERGER and VON SODEN. It must be stressed, however, that the Akkadian perfect, so understood, does not imply an aspectual notion, for which see presently.

The various combinations are shown below in diagrammatic form.

notional register	non-positional	positional			
		present	past	scalar (future in past/ past in future)	pres./fut.
formal register	verbal nouns	finite forms			
		imp.	preterite	perfect	present
symbols	○	◉	○●	[○] ○● / ●○ [○]	◉ / ●○
examples	*ṣabāt-,ṣābit-,ṣabit-* to seize,seizer,held to hold,–,holder	*ṣabat* seize!	*iṣbat* he seized	*iṣṣabat* he then seized, will have seized	*iṣabbat* he seizes, will seize

DISTRIBUTION OF VERBAL FORMS BY POSITION AND RANGE

A bullet (●) represents the point where the speaker stands in time, and a circle (○) represents the process; left position means anteriority, and right position means posteriority; square brackets enclose the intercalary temporal form which defines scalarity.

(3) SCOPE: presence or absence of a reference to beginning and/or end of the process. This category subsumes fientive and stative forms, depending on whether the reference is present or absent.

While the category of fientive and stative forms is well established in traditional grammar, its full import has not been adequately appreciated, nor has a proper formal definition generally been given. A general term for the conceptual node which subsumes both types of forms is also missing: I introduce here the term "scope" which seems apt to identify what in my view is the critical dimension of this category, i.e., the presence or absence of temporal limits to the process itself. Thus, both categories of position and scope identify the nature of process in temporal terms: but the former views process temporally in terms of the speaker, while the latter views process temporally in terms of the process itself. These categories cut across morphological, syntactic and semantic boundaries in a rather complex way: thus the verbal adjective *ṣabit-* "held/holder" is stative, and the participle *ṣābit-* "the one who seizes" is fientive; the root *dmiq* "to be(come) good" stative, and the root *rpud* "to run" is fientive. But a fuller explanation of these concepts must be left for the syntax (below, 70.4).

(4) DIMENSION:[4] presence or absence of (perceptual) contiguity between beginning and end of an action. This is a sub-category of fientive forms, and it subsumes punctual and durative forms, depending on whether such contiguity is envisaged or not.

Traditionally, the two terms are paraphrased so that "durative" is viewed as stretching or unfolding over an indefinite period of time, and "punctual" as taking place at a specific point in time; but this explanation depends more on the metaphor that lies behind the terminology than on proper analytical criteria; as a consequence, the distinction between the category of dimension and the category of scope is often blurred. The concept of contiguity between beginning and end seems to provide instead a more adequate explanatory mechanism (see below, 70.8, for a fuller discussion of this topic). For instance, *idgul* "he looked at" may be understood as punctual because the perception of the action is that it began and ended at once, whereas *īmur* "he saw" may be understood as durative because the beginning and the end are perceived as having spanned a certain period of time. This category is frequently mentioned in traditional grammar (under the name of

[4] This category is normally referred to by the German term "Aktionsart," but there is no compelling reason to retain this foreign word in English nomenclature. I owe the suggestion of the term "dimension" to my student ROBERT WEXLER.

Aktionsart), but it does not correspond to any actual grammatical mechanism of Akkadian, hence it will not be utilized in this grammar.

(5) ASPECT: presence or absence of a reference to a perceived conclusion of the process. This category subsumes the perfective and imperfective (also called perfect and imperfect).

The West Semitic verbal system (which in my opinion has wrongly influenced the current analysis of the Akkadian verbal system) rests in part on a different notional categorization, according to which the forms along the horizontal axis of the verbal paradigm are considered as aspectual rather than temporal. This means that instead of identifying the relationship in time between the process and the speaker (the "tenses"), these forms are taken to identify the relationship in time of the process to itself ("aspects"); hence in West Semitic the main opposition on the horizontal axis is between the two aspects of completed vs. incomplete process (perfect vs. imperfect or perfective vs. imperfective). This opposition is generally assumed to have obtained at some point in Akkadian as well, but I do not see any conclusive evidence that, historically, this has ever been the case. The aspectual distinction between perfect and imperfect is not productive[5] on the morphological level, in Akkadian. (Note that, as explained above, the Akkadian perfect, which expresses time scalarity, has nothing to do with the Semitic perfect, which expresses the aspect of completion.)

Graphically, the three categories which describe certain specific time limitations affecting process from the perspective of the process itself may be symbolized as follows (a vertical bar indicates beginning or end of the process, and an horizontal line indicates the process itself):

scope	fientive	⊢——⊣	stative	----------
dimension	punctual	| = |	durative	⊢——⊣
aspect	perfective	——⊣	imperfective	⊢——

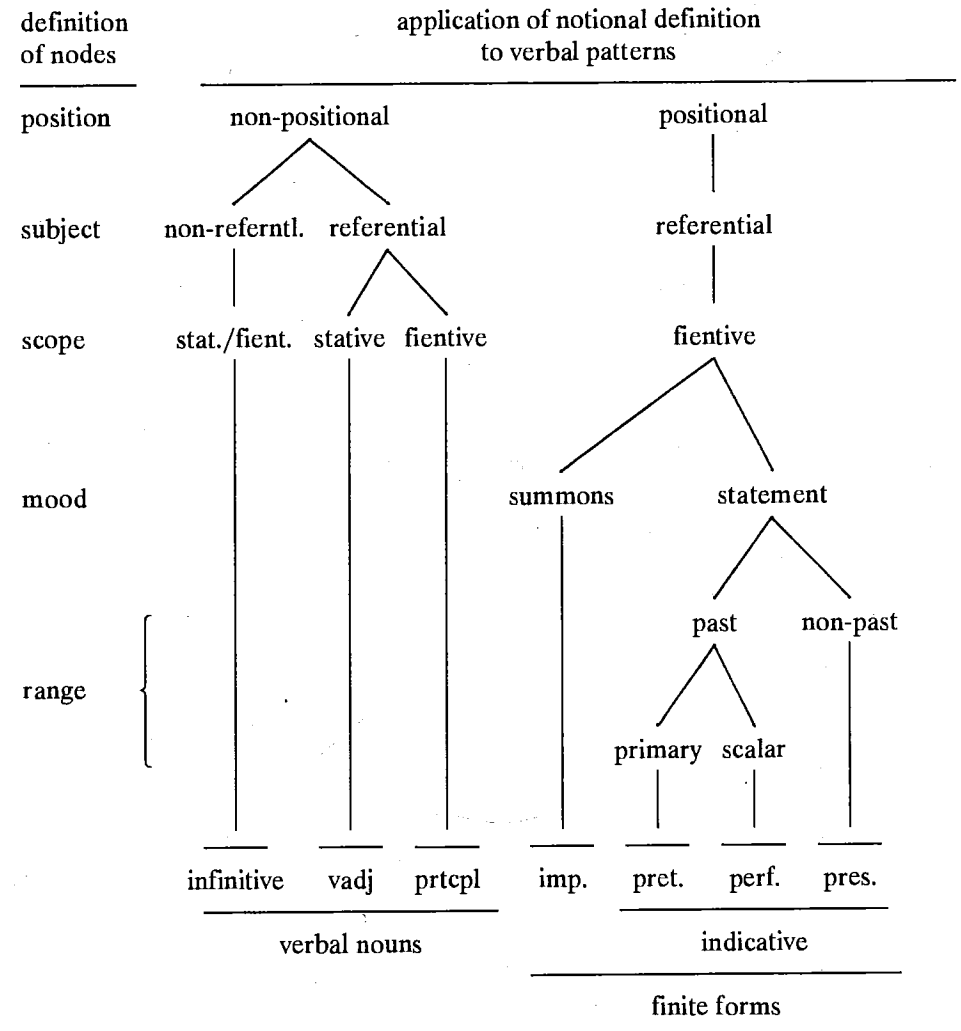
(6) MOOD: reference to the speaker's attitude vis-à-vis a listener, depending on whether the process is described in a statement, or solicited through a summons. The traditional terms used for these categories are "indicative" for the first and "imperative" for the second, the first being the node that subsumes the three tenses preterite, perfect, present.

It should be noted that the term "mood" is used to refer to two different types of formal categories. The first is that of the indicative and imperative, i.e., the moods derived through internal inflection, being considered here: these I call

[5] Except possibly for poetic texts, where the non-temporal alternation of preterite and present may best be explained in aspectual terms. This thesis has been advanced by my student RAJU KUNJUMMEN, who is currently developing it as the topic of his doctoral dissertation.

"primary moods." The second includes those derived through external inflection, which I call "secondary moods," for which see chapter 28: as I will indicate there, none of the secondary moods corresponds to the notional category of a correlation between speaker and listener, but either refer to a different attitude of the speaker, or do not contain any built-in reference to extra-linguistic factors.

The set of logical relationships explained above under the various headings (except of course for dimension and aspect, which are not applicable to Akkadian) may be represented in the form of a binary tree, as shown below.



NOTIONAL CATEGORIES ALONG HORIZONTAL AXIS OF PARADIGM

16.4 Stems

The stems, i.e., the verbal forms along the vertical axis of the paradigm, may be interpreted as expressing synthetically a set of relationships which can otherwise also be expressed analytically by discrete syntactical constituents. The major aspects of the system are described below; examples are generally given in the infinitive, except where a given form is attested rarely, in which case the actual form is cited. Where necessary, forms from weak roots are also cited (these will be otherwise treated below, in morphophonemics).

The B stem is used for the simple, or *B*asic, process, without additional relationships, thus, e.g., *damāq-* "to be or to become good."

The basic process is also expressed by other stems, generally under special conditions, e.g., in some cases when the root appears (defectively) only in the derived stems, without any corresponding B stem. This is the case, for instance, with the N stem of the root *prš* (*napruš-* "to fly away"), and with the N and B stems of the quadriradicals (see below, 19.3).

The other stems contain built-in references to different syntactical constituents, which will be discussed more at length in the syntax (chapter 72). Here a listing is provided, sorted by notional categories: for each category I give in parenthesis the current descriptive term(s) used to refer to this category, and the symbol of the stem(s) for which the category is applicable. The listing is divided into two major groups, depending on whether references are single or double.

(1) Basic process plus single reference to:

subject as object ("reflexive") – Bt
ḫitnuq- "to strangle oneself, to commit suicide"

subject and complement or adjunct ("pluralitive, quantitative") – D
ullulū "many (items) are hanging"
pulluq- "to slaughter many (individuals)"

subject and complement or adjunct: alternation ("reciprocal") – Bt, N
miṯḫuṣ- "to strike each other"
bitqur- "to claim from each other"
nanmur- "to see each other"
nēmud- "to lean on each other"

agent as different from grammatical subject ("passive") – N
namḫuṣ- "to be struck (by someone)"
neptē- "to be opened (by someone)"

adjunct: motion away from place ("separative"[6]) – Bt, Nt
atluk- "to go away from, to leave"
itapruš- "to fly away from"

adjunct: repetition of action ("frequentative, iterative, habitual") – Bt, Btn, Ntn
šitkun- "to place continuously"
atallak- "to go repeatedly, to walk about"
ittanabruq- "to flash repeatedly"
ittanapršū "they fly around"

adjunct: intensification of process ("intensive, elative, consecutive") – D, Š, Bt
muḫḫuṣ- "to hit severely, to mangle"
šumruṣ- "to be very painful"
ittarak "he became too long"
ḫitlup "he is fully clothed"

process: production of condition ("factitive," see below, 73.5) – D, DR, ŠD
puttū- "to cause to stay open, to leave open, ajar"
uddur- "to cause to be afraid, to render fearful"
tuzaqqaqqur- "to cause to be very high"
šumullu- "to cause to be full, to fill"

process: production of action ("causative," see below, 73.5) – Š, ŠD
šuptū- "to cause to become open, to open up"
šūdur- "to cause to become afraid, to frighten"
nušḫallaq "we cause to disappear, we destroy"

process: beginning of condition ("ingressive, inchoative," see below, 70.5) – N
nabšū- "to come into existence"

(2) Basic process plus double reference to:

production of action + beginning of condition ("causative of ingressive") – Št2
šutamruṣ- "to cause oneself to become troubled, to concern oneself"

[6] The separative function is either resumptive of an adjunct actually present in the sentence, or else it refers generically to an indistinct point of origin, e.g., *ittalak* "he went away from a certain (aforementioned or assumed) location." In this respect, its notional function is analogous to that of the ventive, see below, 28.5 and 66.6. – It is interesting to note how the separative value of *t* occurs as well in a semantic class of roots, where *t* alternates with *w* in first position within a root, with a resulting separative meaning, as in the following pairs:
wabālum "to bring" ~ *tabālum* "to take away"
waʾārum "to get in motion" ~ *tārum* "to get in reverse motion."
While *waʾārum* has a strong aleph as middle radical, *tārum* is a middle weak, so that ostensibly the two roots cannot be connected etymologically. It seems possible, however, that the middle radical in *waʾārum* is treated as strong only because the first radical is also weak. For the stative understanding of the latter two roots see below, 70.6.

production of action + alternation subject/object ("caus. of reciprocal") – Št2
šutamḫur- "to cause to meet each other, to raise (numbers) to the second power"
šutākul- "to cause to eat each other, to multiply (numbers)"

production of action + agent ("causative of passive," see below, 74.1) – Št
šutaṣbut- "to cause to be taken, to collect"

production of condition + agent ("factitive of passive," see below,, 74.1) – Dt
kutunn- "to make being placed, to assign"

repetition + beginning of condition ("iterative of ingressive") – Ntn
ittanabšū- "to come into existence repeatedly, to keep happening"
ittanakbur- "to become thick repeatedly, to be constantly puffed up"

repetition + production of condition ("iterative of factitive") – Dtn
ūtedduš- "to repeatedly make new, to keep renewing"

repetition + production of action ("iterative of causative") – Štn
šutērub- "to cause to enter repeatedly, to keep bringing in"

Since there is no one-to-one correlation between forms and notional functions, there are considerable overlaps, and no single logical tree can be drawn up to render the intended configuration, as was done for the verbal nouns and finite forms. It is for this reason that the labels used to refer to stems are usually derived from their formal characteristics (e.g., Š stem), although sometimes the most typical referential category is also used (e.g., causative). The major aspects of the system of notional relationships expressed by the stems is summed up in tabular form in the chart on pages 110-111.

16.5 The case against the "perfect": notional considerations

I have already described the formal reasons showing how the recognition of an independent morphological status for the perfect rests on very tenuous grounds at best (see above, 13.5): formally, the only reason for distinguishing the perfect as a separate morpheme is the occurrence of forms with double medial *t*,[7] one of which is understood as stem identifier, and the other as tense identifier. But the proposal to recognize the existence of the compound stems TR and TTN (above, 13.4) eliminates the need to load the paradigm with a distinct temporal form, for which,

[7] I prefer to avoid here the term "infix," which implies a type of segmental structure which I consider at odds with the notion of internal inflection. For external inflection see below, 20.4 and 20, n.1.

it must be stressed, so few examples are actually found. There are in any case more reasons than mere formal economy.

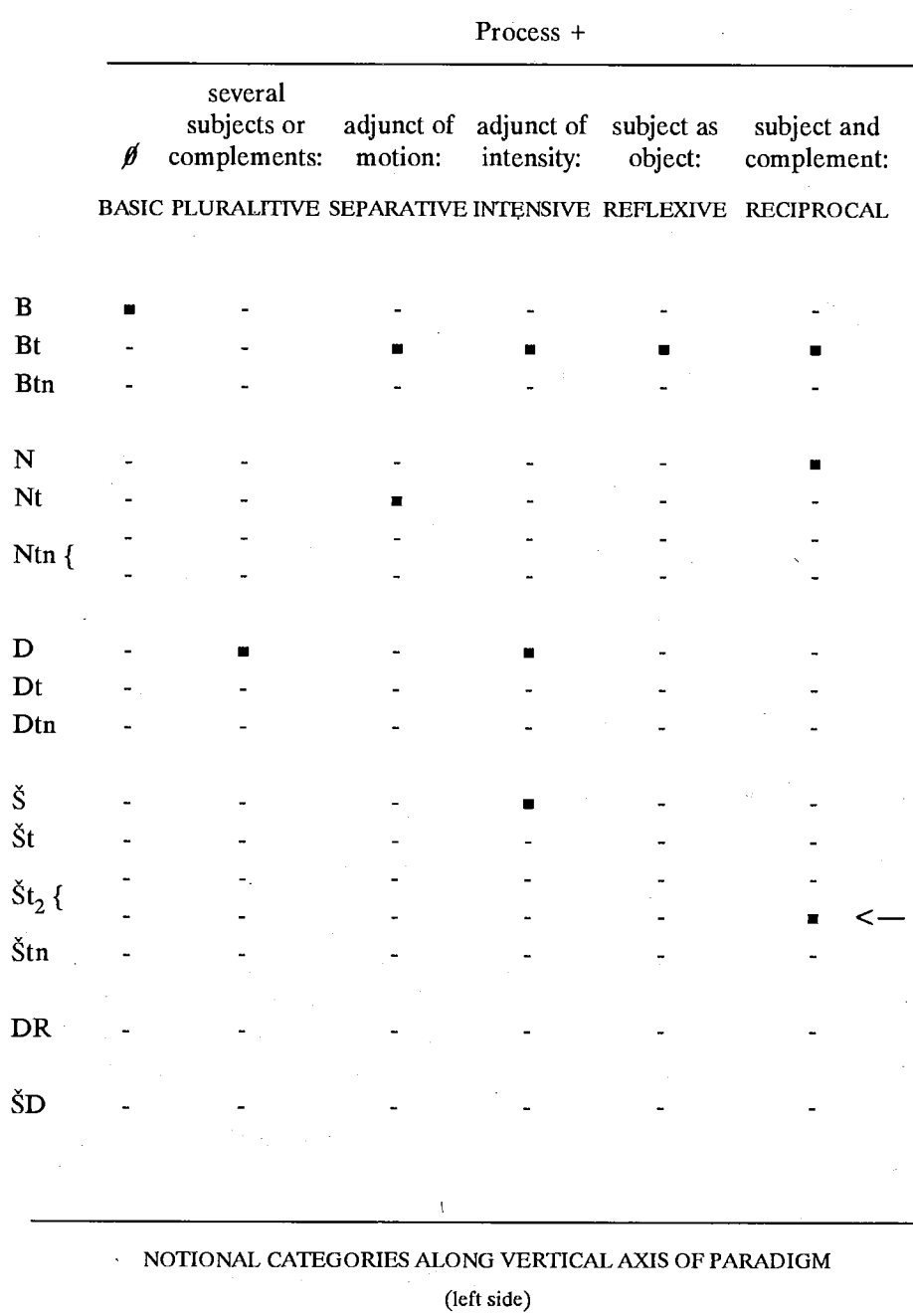
(1) A distinction between the preterite Bt and the perfect B is often subjective and, in my view, questionable. The only explicit argument that has been offered[8] is lexical: for verbs which do not exhibit the present or preterite forms in the Bt stem, a form of the pattern -IPTARVS- is to be understood as a perfect B, otherwise as a preterite Bt. This argument is neither plausible nor convincing. It is not convincing because in many cases the frequency of attestations is inadequate to justify drawing statistically valid conclusions. It is not plausible because it implies that the distribution in the occurrence of a tense is not paradigmatic, but root conditioned; in other words, whether a tense occurs or not is to be defined through a lexical list.

(2) Most importantly, there is a close relationship between the temporal function of the alleged perfect and the separative function of the medial *t* stem. The separative function expresses the gaining of distance in space; e.g., the form *ittalak* "he went away from" indicates that the subject is at one remove in space from the point of origin, i.e., it is at a given space having started out from another. The temporal function is analogous in that it expresses the gaining of distance in time; e.g., the form *ittalak* "he then went" indicates that the subject is at one remove in time from the point of origin, i.e., it is at a given moment viewed from another moment. In either case, the form explicitly brackets both source and target. This is what the term "scalarity" (see above, 16.3:2) is meant to convey: a temporal separateness that presupposes a built-in reference to a point of departure in time much as the separative presupposes a built-in reference to a point of departure in space. Hence an ambiguity arises which may well be viewed as intentional; a form like *aštapar*, very frequent in the epistolary genre, means both "I have sent from a point in space (different from the point of arrival)" and "from this point in time (different from another particular moment)," alternatively, "I have sent from here now."

(3) The interpretation of the perfect as a tense specializing in the expression of current relevance[9] is valid, but only in a secondary way. Relevance is implicit in the notion of close anteriority or scalarity, precisely because the two events are bracketed through the expression of a step-like relationship: the temporal meaning of *aštapar* "I have sent from my point in time (in relationship to yours)" expresses current relevance between the two moments; similarly, the spatial meaning "I have sent from here (in relationship to there)" expresses local relevance between the two places. It is significant that current relevance can be derived from scalarity, but not vice versa.

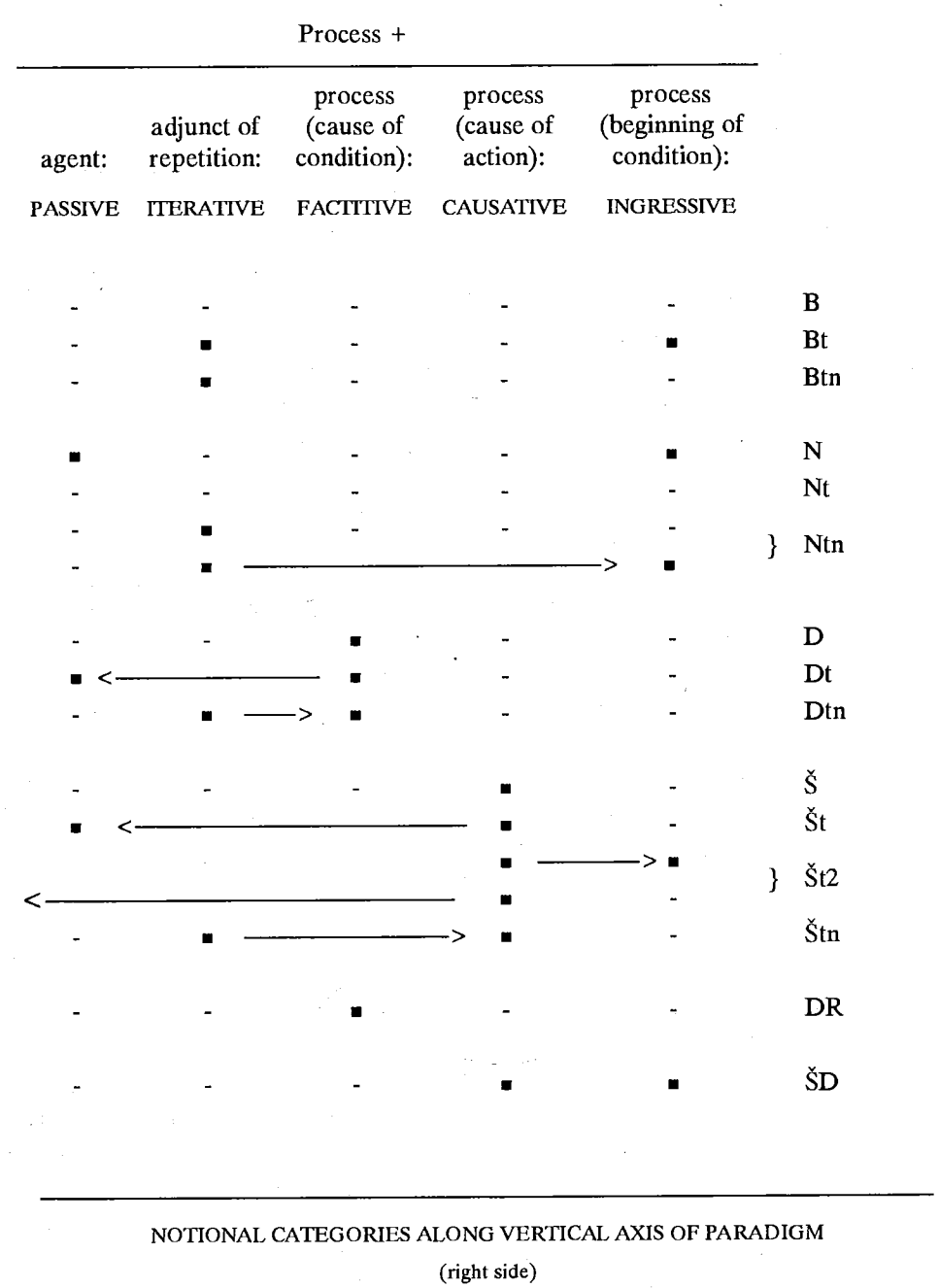
[8] MALONEY 1981 *T-Perfect* pp. 22-26.

[9] See most recently the Ph. D. dissertation by my student TIEN FOCK LEONG (1994 *Tense*), with whom I disagree on this issue.



NOTIONAL CATEGORIES ALONG VERTICAL AXIS OF PARADIGM

(left side)



NOTIONAL CATEGORIES ALONG VERTICAL AXIS OF PARADIGM

(right side)

(4) Current relevance is not, in my view, distinctly and uniquely tied to the so-called perfect, but to the preterite as well. Thus, in the sample corpus of Old Babylonian royal letters (see above, Introduction, n.2), there are 37 occurrences of *aṭṭarad(-)* "I sent from here/now" and 6 occurrences of *aštapar(-)* "I wrote from here/now," but not a single occurrence of *taṭṭarad(-)* or *taštapar(-)*; there are instead 4 occurrences of *taṭrud(-)* and 33 occurrences of *tašpur(-)*. Certainly the message being received is as currently relevant as the message being sent, so why is it that the "perfect" is omitted with the second person? In my understanding, the message being sent emphasizes the point of departure, i.e., in the case of this corpus, the king himself. For an analogous instance with the ventive see below, 29.3.

(5) The separative function of *t* as found in the lexical pair *waʾārum* ~ *tārum* noted above, n.6, exhibits an extension of meaning in a temporal direction analogous to the one proposed for the so-called perfect, since the verb *tārum* means both "to go back" in a locative sense and "to do a second time" in a temporal sense (for the latter, see below, 66.5).

(6) There are no good historical reasons in terms of comparative Semitics to assume the presence of a distinct tense with medial *t*, whereas a temporal extension of meaning for a t-stem is more consonant with comparative data.

In conclusion, I think it is questionable at best to distinguish a perfect from a *t*-stem preterite, because the formal criteria for the differentiation of a perfect as a separate morpheme are minimal (and adequately explained through the assumption of distinct compound stems), and because the meaning as temporal separative of the preterite of a *t* or *tn* stem is identical to the assumed meaning of the alleged perfect. As already mentioned, I retain the perfect as a regular tense in this grammar in deference to tradition, and also because more attention needs to be paid to the development of what is assumed to be a perfect in later dialects. The explanation of the notional value of the tense as expressing scalarity is an attempt on my part to underscore the functional identity of the two and thereby mitigate what I consider otherwise to be a misleading redundancy in the system.

16.6 A simplified overview of the stem system

The chart below gives a simplified overview of the most common notional values of the main derived stems as rendered by the paradigmatic translations used throughout this grammar; these values are also the ones which are given in the overall paradigm found below, 17.2. Since these values differ depending on whether the root is fientive-transitive, fientive-intransitive or stative (for which see below, 70.4), different examples are given for each of these categories. A long dash means that the stem does not occur for that particular root or root type. Note that

the basic distinction between factitive and causative is that the former expresses production of state, and the second production of action. Also note that the D stem expresses synthetically what in English is expressed analytically as a predicative complement, see below, 63.7).

		FIENT.TRANS.	FIENT.INTR.	STATIVE
		ʔḫ/z	*ʔl\k*	*dmiq*
B	BASIC	take	go	be(come) good
Bt	SEPARATIVE	take away	go away	–
N	PASSIVE	be taken	–	–
	INGRESSIVE	–	set out to go	–
D	FACTITIVE	make taken,inlay	–	make good,improve
Dt	PASSIVE OF FACT.	be inlaid	–	be improved
Š	CAUSATIVE	cause to take	cause to go	cause to become good
Št	CAUS.OF PASSIVE	cause to be taken	–	–

Chapter 17
The Triradical System as a Whole

17.1 Correlations within the matrix

In order to combine consonantism and vocalism into a single form and obtain the actual patterns of the paradigm, one further set of statements is necessary: we need to determine the relative position of vowels and consonants, and the resolution of clusters. The pertinent statements are as follows:

(1) The first vowel occurs *before* the first consonant (whether first radical or stem determinant) with the indicative, it occurs *after* the first consonant with the imperative and the verbal nouns.

(2) The last vowel occurs always before the last radical.

(3) The preferential order of clusters is as follows:

first preference: the first consonant clusters with t (stem or tense):
ptrs > *-Iptaras-*
Ntprs > *-INtapras-*
štprs > *-uštapras-*

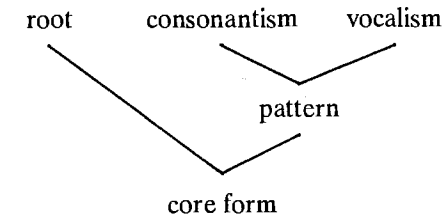
second preference: N (stem determinant) clusters with first radical:
Nprs > *-INparis-*

third preference: the first radical clusters with the second radical:
šprs > *-ušapris-*

except if the second radical is long, in which case the long consonant is retained:
štpr:s > *-uštaparras-* (Št2 stem, see above, 13.1; 16.4)
pr:s > *-uparras-*

17.2 The verbal paradigm

Combining all the data of consonantal and vocalic structure according to the combinatory rules just stated, we obtain the complete paradigm of the Akkadian verbal system. The interrelationship of consonantism and vocalism, within the normal system of interdigitation between root and pattern, and the resulting core form, may be represented as follows:



In the diagram on p. 116 one will find the matrix with the full notation of all the relevant data from the horizontal and vertical axis; on the facing page (p. 117) one will find the regular paradigm, derived from the correlation of the two axes. In this as in later paradigms, I give both the abstract patterns which use the symbolic PRS notation, and the actual core forms derived from specific roots. In this particular paradigm, core forms from derived stems are given only for the B(tn) and N(tn) stems, because only in this case do the patterns contain alternating realizations which need to be disambiguated in the actual core forms. These alternating realizations are subsumed under a single capital letter in the corresponding pattern. The specific cases where such disambiguation is necessary are:

(1) the verbal adjective of the B stem, where diverse realizations of the last vowel are possible – subsumed in the pattern by a capital *I* (the choice among them being determined by a lexical listing);

(2) the finite forms of the B(tn) and N(tn) stems, where diverse realizations of the root vowel are possible – subsumed in the pattern by a capital *V* (the choice being determined by a lexical listing, see above, 14.7);

(3) a partial exception to the preceding rule is represented by a limited set of imperatives from roots with root vowel *a*, which exhibit a first vowel *i* instead of *a* (according to a lexical listing, see above, 14.2);

(4) all indicative forms of the B(tn) and N(tn) stems, where diverse realizations of the first vowel are possible – subsumed in the patterns by a capital *I* (which stands for the alternating set *a/i*; the choice is determined by external inflection, see above, 14.5, and below, 27.1).

(5) all forms of the N(tn) stems, where diverse realizations of the stem determinant are possible – subsumed in the pattern by a capital *N* (which stands for the set *n/·/Ø*; the choice is governed by morphophonemic rules, see above, 13.2, and below, 35.1).

It should be stressed that the sample core forms given in this and other paradigms are not necessarily all attested as individual text occurrences. In later paradigms a distinction will be made between forms which are actually attested and

CONS. → / VOC. ↓	Stems	First Vowel	Nouns, Finite forms: Inf	VAdj	Part	Imp	Pret	Perf	Pres	
			∅	∅	∅ (B) *m* (NDŠ)	∅	∅	C_1t	R_2:	
→ VOC. ↓		Last Vowel				*a*	*a*	*a*	*a*	(BN)
			ā (B)	*i,u,a* (B)	*i*	*i*	*i*	*i*	*i*	
			u (NDŠ)	*u* (NDŠ)		*u*	*u*	*u*	*u*	
						u	*u*	*a*	*a*	
						i	*i*	*i*	*a*	(DŠ)
B	---	V,*a/i*								
Bt	-t--	*a/i,u*								
Btn	-tn--	*a/i,u*								
N	N---	*a/i*								
Ntn	Ntn---	*a/i,u*								
D	--:-	*u*								
Dt	-t-:-	*u*								
Dtn	-tn-:-	*u*								
Š	Š---	*u*								
Št	Št---	*u*								
Štn	Štn---	*u*								

COORDINATE MATRIX FOR THE COMPLETE VERBAL SYSTEM

	Inf	VAdj	Part	Imperative	Indicative: Preterite	Indicative: Perfect	Indicative: Present
B	*parās-*	*parIs-*	*pāris-*	*pVrVs-*	*-IprVs-*	*-IptarVs-*	*-IparrVs-*
▫	*kašād-*	*kašid-*	*kāšid-*	*kušud-*	*-Ikšud-*	*-Iktašad-*	*-Ikaššad-*
	paqād-	*paqid-*	*pāqid-*	*piqid-*	*-Ipqid-*	*-Iptaqid-*	*-Ipaqqid-*
	rapāš-	*rapaš-*	*[–]*	*ripiš-*	*-Irpiš-*	*-Irtapiš-*	*-Irappiš-*
▫	*rapād-*	*[–]*	*rāpid-*	*rupud-*	*-Irpud-*	*-Irtapud-*	*-Irappud-*
	maḫāṣ-	*maḫiṣ-*	*māḫiṣ-*	*maḫaṣ-*	*-Imḫaṣ-*	*-Imtaḫaṣ-*	*-Imaḫḫaṣ-*
	marāṣ-	*maruṣ-*	*[–]*	*maraṣ-*	*-Imraṣ-*	*-Imtaraṣ-*	*-Imarraṣ-*
▫	*kabāt-*	*kabit-*	*[–]*	*kibit-*	*-Ikbit-*	*-Iktabit-*	*-Ikabbit-*
	takāl-	*takil-*	*tākil-*	*tikal-*	*-Itkal-*	*-Ittakal-*	*-Itakkal-*
Bt	*pitrus-*	*muptaris-*		*pitrVs-*	*-IptarVs-*	*-IptatrVs-*	*-IptarrVs-*
▫	*kitšud-*	*muktašid-*		*kitšad-*	*-Iktašad-*	*-Iktatšad-*	*-Iktaššad-*
	pitqud-	*muptaqid-*		*pitqid-*	*-Iptaqid-*	*-Iptatqid-*	*-Iptaqqid-*
▫	*ritpud-*	*murtapid-*		*ritpud-*	*-Irtapud-*	*-Irtatpud-*	*-Irtappud-*
▫	*kitbut-*	*[–]*		*kitbit-*	*-Iktabit-*	*-Iktatbit-*	*-Iktabbit-*
Btn	*pitarrus-*	*muptarris-*		*pitarrVs-*	*-IptarrVs-*	*-IptatarrVs-*	*-IptanarrVs-*
▫	*kitaššud-*	*muktaššid-*		*kitaššad-*	*-Iktaššad-*	*-Iktataššad-*	*-Iktanaššad-*
	pitaqqud-	*muptaqqid-*		*pitaqqid-*	*-Iptaqqid-*	*-Iptataqqid-*	*-Iptanaqqid-*
▫	*ritappud-*	*murtappid-*		*ritappud-*	*-Irtappud-*	*-Irtatappud-*	*-Irtanappud-*
▫	*kitabbit-*	*muktabbit-*		*kitabbit-*	*-Iktabbit-*	*-Iktatabbit-*	*-Iktanabbit-*
N	*Naprus-*	*muNparis-*		*Napris-*	*-INparis-*	*-INtaprVs-*	*-INparrVs-*
▫	*nakšud-*	*[–]*		*nakšid-*	*-Ikkašid-*	*-Ittakšad-*	*-Ikkaššad-*
	napqud-	*[–]*		*napqid-*	*-Ippaqid-*	*-Ittapqid-*	*-Ippaqqid-*
▫	*narpud-*	*murrapid-*		*narpid-*	*-Irrapid-*	*-Ittarpud-*	*-Irrappud-*
▫	*namruṣ-*	*[–]*		*namraṣ-*	*-Immaraṣ-*	*-Ittamraṣ-*	*-Immarraṣ-*
Ntn	*Nitaprus-*	*muNtapris-*		*NitaprVs-*	*-INtaprVs-*	*-INtataprVs-*	*-INtanaprVs-*
▫	*ʾitakšud-*	*[–]*		*ʾitakšad-*	*-Ittakšad*	*-Ittatakšad-*	*-Ittanakšad-*
	ʾitapqud-	*[–]*		*ʾitapqid-*	*-Ittapqid*	*-Ittatapqid-*	*-Ittanapqid-*
▫	*ʾitarpud-*	*muttarpid-*		*ʾitarpud-*	*-Ittarpud*	*-Ittatarpud-*	*-Ittanarpud-*
	ʾitaṣbut-	*[–]*		*ʾitaṣbat-*	*-Ittaṣbat*	*-Ittataṣbat-*	*-Ittanaṣbat-*
D	*purrus-*	*muparris-*		*purris-*	*-uparris-*	*-uptarris-*	*-uparras-*
D{t, tn	*putarrus-*	*muptarris-*		*putarris-*	*-uptarris-*	*-uptatarris-*	*-uptarras-* *-uptanarras-*
Š	*šuprus-*	*mušapris-*		*šupris-*	*-ušapris-*	*-uštapris-*	*-ušapras-*
Š{t, tn	*šutaprus-*	*muštapris-*		*šutapris-*	*-uštapris-*	*-uštatapris-*	*-uštapras-* *-uštanapras-*

VERBAL PATTERNS AND SELECTED CORE FORMS FROM STRONG TRIRADICALS

(a small square ▫ indicates forms translated on the following two pages)

	Infinitive	Verb.Adjective	Participle	Imperative	Preterite	Perfect	Present
B basic							
kš/d	to reach	attained/reaching	one who reaches	reach!	he reached	he then reached	he reaches
rpud	to run	[–]	one who runs	run!	he ran	he then ran	he runs
kbit	to be(come) heavy	heavy	[–]	become heavy!	he became heavy	he then became heavy	he becomes heavy
Bt separative							
kš/d	to reach out	reached out	one who reaches out	reach out!	he reached out	he then reached out	he reaches out
rpud	to run away	[–]	one who runs away	run away!	he ran away	he then ran away	he runs away
kbit	to be(come) h'vy from	heavy from	[–]	become h'vy from!	he became h.fr.	he then became h.from	he becomes h.from
Btn iterative							
kš/d	to keep reaching	reached repeatedly	one who keeps reaching	keep reaching!	he kept reaching	he then kept reaching	he keeps reaching
rpud	to keep running	[–]	one who keeps running	keep running!	he kept running	he then kept running	he keeps running
kbit	to keep getting heavy	chronically heavy	one who keeps getting h.	keep getting h'vy!	he kept getting h.	he then kept getting h.	he keeps getting h.
N passive							
kš/d	to be reached	reached	[–]	be reached!	he was reached	he then was reached	he is being reached
	[intransitives do not normally occur with a passive value in the N stem]			[intransitives do not normally occur with a passive value in the N stem]			
ingressive							
	[transitives do not normally occur with an ingressive value in the N stem]			[transitives do not normally occur with an ingressive value in the N stem]			
rpud	to start running	[–]	one who starts running	start running!	he started rn'ng	he then started rn'ng	he starts running
mraṣ	to start getting sick	[–]	one who starts getting sick	start getting sick!	he start'd gt'ng s.	he then started gt'ng s.	he starts getting s.
D factitive							
kš/d	to make attained	made attained	one who makes attained	make attained!	he made attn'd	he then made attained	he makes attained
	[fientive intransitives do not normally occur in the D stem]			[fientive intransitives do not normally occur in the D stem]			
mraṣ	to make sick	made sick	one who makes sick	make sick!	he made sick	he then made sick	he makes sick
Dt factitive of passive							
kš/d	to make being reached	made being rch'd	one who makes being rch'd	make being rch'd!	he made being r.	he then made being r.	he makes being r.
	[intransitives do not occur with a passive value in the Dt stem]			[intransitives do not normally occur with a passive value in the Dt stem]			
Š causative							
kš/d	to cause to reach	caused to reach	one who causes to reach	cause to reach!	he caused to r.	he then caused to r.	he causes to reach
rpud	to cause to run	caused to run	one who causes to run	cause to run!	he caused to run	he then cause to run	he causes to run
mraṣ	to cause to get sick	caused to get sick	one who causes to get sick	cause to get sick!	he caused to g. s.	he then caused to g.s.	he causes to g.s.
Št causative of passive							
kš/d	to cause to be rch'd	caused to be rch'd	one who causes to be rch'd	cause to be rch'd!	he caused to be r.	he then caused to be r.	he causes to be r.
	[intransitives do not normally occur with a passive value in the Št stem]			[intransitives do not normally occur with a passive value in the Št stem]			

NORMALIZED TRANSLATION OF CORE FORMS
WITH EXAMPLES FROM TRANSITIVE, INTRANSITIVE AND STATIVE ROOTS
(left side)

NORMALIZED TRANSLATION OF CORE FORMS
WITH EXAMPLES FROM TRANSITIVE, INTRANSITIVE AND STATIVE ROOTS
(right side)

those which are only projected (see below, 17.5). Here, core forms of the B(tn) and N(tn) stems are all given indistinctly side by side, in order to illustrate the process whereby these forms are derived from the underlying template. Only forms which are missing for structural reasons with certain types of root (transitive, intransitive, stative; see presently) are omitted, and are represented instead by a dash within square brackets in the pertinent slot.

Following is a list of glosses for the roots from which the sample core forms are derived:

root vowel	vadj B	imp B	root	gloss
u/a	*i*		*kš/d*	"to reach"
a	*i*		*mḫaṣ*	"to strike"
a	*i*	*i-a*	*tkal*	"to trust"
a	*u*		*mraṣ*	"to be(come) sick"
i	*a*		*rpiš*	"to be(come) wide"
i	*i*		*pqid*	"to entrust"
i	*i*		*kbit*	"to be(come) heavy"
u	*[–]*		*rpud*	"to run"

On pp. 118-19 one will find a paradigm that gives a normalized translation for selected core forms in the paradigm. This translation is only to be understood as indicative of the main notional values which are possible for each form, out of those outlined in greater detail above in chapter 16. The pertinent notional value illustrated by the translation is given next to the label for the stem. Here, too, as in the formal paradigm, translations do not correspond necessarily to values that are to be found individually in the record for these particular roots, since they are meant primarily to show paradigmatic correlations rather than to provide idiomatic meanings. I omit the Ntn, Dtn and Štn stems, since they can easily be derived as iteratives from the N, D and Š stems. For the perfect, I give only the meaning corresponding to posteriority in the past (omitting anteriority in the future), and for the present, the meaning corresponding to present action (omitting the future).

Given the significance of the distinction among (fientive)-transitive, (fientive)-intransitive and stative roots,[1] the examples are selected from each of these categories, as follows: *kš/d* "to reach" for the transitive; *rpud* "to run" for the intransitive; *kbit* "to be(come) heavy" and *mraṣ* "to be(come) sick" for the stative. Forms which are structurally impossible for these roots are omitted in the paradigm of the core forms, and replaced by a dash within square brackets, even though the form could be generated in purely phonological terms (thus, e.g., **rāpiš-* or **rapid-*). These statements of impossibility are discussed in greater detail within the

[1] For more details, see below, 70.5. There one will also find an explanation of the occasional divergence in the translations given here, as in the case of "attained" used to render the stative value in lieu of "reached," or the periphrastic "is being reached" to render the fientive value of the passive.

syntax (see below, 70.5). Note also the following. The participle N(tn) of transitives seems possible in principle from a notional point of view as the nominalization of a fientive passive, i.e., *mukkašid-* "the one who is being reached (by someone)," but I do not know examples of this type. The verbal adjective of the N(tn) stem is found rarely, and then generally to serve the purpose of lexical differentiation from the plain B verbal adjective.[2]

As already noted above, the translation of the imperative renders the second person masculine singular, while for the indicative it renders the third person masculine singular: as we will see below when dealing with external inflection (27.1), these forms exhibit zero affixes, so that the core form is for all intents and purposes identical to the fully inflected form.

For the nomenclature used, see above, 13.3.

17.3 A note on alternative patterns

In a few instances, a deviation may occur in the choice of a pattern for a given slot. These deviations are all conditioned by the nature of the root, and will be treated below under morphophonemics (see especially below, chapter 39). Here I give a list which will serve as an addition to the paradigm presented above.

slot definition	root	pattern	example
B infinitive	double weak (3-rad.)	PIRU:S	*ʾidū:-* "to know"
" "	double weak (4-rad)	PIRUŠD	*ʾizuz:-* "to stand"
B verbal adjective	geminate	PARR	*dann-* "mighty"
" "	double weak	PIRAS	*ʾida:-* "knowing"
B participle	middle weak (3-rad.)	MUPIRS	*mudi:k-* "killer"
" "	double weak (4-rad)	MUPRAŠD	*muNzaz:-* "standing"

17.4 A note on the permansive

Akkadian grammars normally include another item among the finite forms of the verb, namely the "permansive" or "stative." Traditionally, this is considered on a par with the tenses, and listed regularly in the paradigms as a separate entry. In spite of the general acceptance of this form, it cannot in fact be shown to have any autonomous status. Morphologically, it is wholly subsumed under categories which are described independently: in terms of internal inflection, the patterns are identical to those of the stative participle or verbal adjective, while on the other hand external inflection is that of the noun in the predicative state bound with pronom-

[2] E.g., *nalputāku* "I have been entered (in a document, i.e., registered)" (OA) vs. *laptāku* "I am touched," see VON SODEN 1952 *Grundriss* §90 e.

inal suffixes. And syntactically, the so-called "permansive" is identical to a bound nominal sentence. It is thus redundant and uneconomical to add a special category which cannot be differentiated, on any distributional grounds of either form or function, from other existing categories. Accordingly, the "permansive" is omitted in this grammar from the paradigm of verbal forms, and its component parts are subsumed instead under these other categories: predicative state of the noun (chapter 25, especially 25.3); subject pronominal suffixes (31.1); nominal sentence (63).

17.5 A note on the template used in the paradigm

In the remainder of the grammar I will use a standard format for the verbal paradigm, which reflects my understanding of the verbal system as described above; a first example follows immediately at the end of this section (17.6). The format of the template used is explained schematically in the diagram below (numbers and letters are for ease of reference in the explanatory remarks appended below).

		Nominal Patterns			Finite Forms			
						Indicative		
		Inf	VAdj	Part	Imp	Pret	Perf	Pres
Verbal Patterns	(A)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
			(1a)					
			(B)			(C)		
Deverbal Patterns		Descr	Subject					
		(8)	(9)					
		(D)						

The block labeled with the letter (**A**) lists the stems for which forms are provided in the corresponding row to the right. Block (**B**) contains patterns which are both verbal and nominal; block (**C**) contains patterns which are only verbal; and block (**D**) contains patterns which are only nominal.

Within block (**B**), column (**1**) gives the infinitive, column (**2**) the verbal adjective, and column (**3**) the participle. In the derived stems, the forms of the infinitive and adjective are identical, and thus they will be found together in column (**1a**), which accordingly brackets columns (1) and (2).

Within block (**C**), the imperative and the three tenses of the indicative are given sequentially as columns (**4**) to (**7**).

In block (**D**) one will find the purely nominal patterns arranged in two columns, where column (**8**) includes the nouns of description, and column (**9**) the nouns of subject. The nouns of description share the same characteristics, and hence the same column, with the infinitive. Similarly, the nouns of subject share the same characteristics with the adjective and the participle, which is why the column of the nouns of subject (9) brackets the columns for adjective and participle (2 and 3).

17.6 The complete verbal-deverbal paradigm

An example of the application of this format is given in the chart at the end of this chapter. The two pages of the chart (pp. 124-25) are to be viewed as a single chart, to be read from top to bottom, and consisting of three parts. The first part is the template of the patterns from *prs* (or *pršd* for the quadriradical roots). The second part is a list of the roots used to form actual forms; it also gives the relative glosses for these roots and for semantically divergent deverbal nouns. The third part is the template of the core forms derived from the application of patterns to roots.

This paradigm differs from the one given above on p. 117 because (a) it includes deverbal as well as verbal patterns (though only those actually attested for a given root), and (b) places side by side complete listings of both patterns and core forms from a given root or root type. The paradigm given above on p. 117 served a different purpose: it showed all potential core forms for the B(tn) and N(tn) stems, using a variety of roots chosen to illustrate the peculiarities of vocalic realization when sets of such realizations are possible for any given slot in the paradigm. Here I give instead an indication of the actual occurrence of the core forms for any given root, and I present in effect two paradigms in juxtaposition – the first (the paradigm of patterns) being the template of the second (the paradigm of core forms). While this procedure may seem redundant, it has the advantage of making a clear distinction between patterns as universally applicable formulas of an abstract and essentially algebraic nature, on the one hand, and core forms as concrete applications of these formulas, on the other.

PATTERNS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*parās-*	*paris-*	*pāris-*	*pVrVs-*	*-IprVs-*	*-IptarVs-*	*-IparrVs-*
Bt	*pitrus-*		*muptaris-*	*pitrVs-*	*-IptarVs-*	*-IptatrVs-*	*-IptarrVs-*
Btn	*pitarrus-*		*muptarris-*	*pitarrVs-*	*-IptarrVs-*	*-IptatarrVs-*	*-IptanarrVs-*
N	*Naprus-*		*muNparis-*	*Napris-*	*-INparis-*	*-INparVs-*	*-INparrVs-*
Ntn	*Nitaprus-*		*muNtapris-*	*NitaprVs-*	*-INtaprVs-*	*-INtataprVs-*	*-INtanaprVs-*
D	*purrus-*		*muparris-*	*purris-*	*-uparris-*	*-uptarris-*	*-uparras-*
Dtn	*putarrus*		*muptarris-*	*putarris-*	*-uptarris-*	*-uptatarris-*	*-uptanarras-*
Š	*šuprus-*		*mušapris-*	*šupris-*	*-ušapris-*	*-uštapris-*	*-ušapras-*
Št	*šutaprus-*		*muštapris-*	*šutapris-*	*-uštapris-*	*-uštatapris-*	*-uštapras-*
Štn	*šutaprus-*		*muštapris-*	*šutapris-*	*-uštapris-*	*-uštatapris-*	*-uštaṇapras-*

Description	Subject
pirs-	
mapras-	
tapris-	
taprus-	

ROOTS AND GLOSSES

kš/d to reach (*kišd-* acquisition; *kišid-t-* conquest)
qrib (ue) to be(come) near, approach (*naqrab-t-* vicinity; *taqrib-t-* presentation ritual; *taqrub-t-* battle)

CORE FORMS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*kašād-*	*kašid-*	*kāšid-*	*kušud-*	*-Ikšud-*	*-Iktašad-*	*-Ikaššad-*
	qerēb-	*qerub-*	[–]	*qirib-*	*-Iqrib-*	*-Iqterib-*	*-Iqerrib-*
Bt	*kitšud-*		–	*kitšad-*	–	–	–
	qitrub-		–	–	–	–	–
Btn	–		–	–	–	–	*-Iktanaššad-*
	–		–	*qiterrub-*	–	–	*-Iqtenerrub-*
N	*(nakšud-)*		[–]	*(nakšid-)*	*-Ikkašid-*	*-Ittakšad-*	*-Ikkaššad-*
Ntn	–		–	–	–	–	*-Ittanakšad-*
D	*kuššud-*		*mukaššid-*	*kuššid-*	*-ukaššid-*	*-uktaššid-*	*-ukaššad-*
	qurrub-		*muqerrib-*	*qurrib-*	*-uqerrib-*	*-uqterrib-*	*-uqerreb-*
Dtn	–		–	–	*-uktaššid-*	–	*-uktanaššad-*
	–		–	–	*-uqterrib-*	–	*-uqtenerreb-*
Š	*šukšud-*		*mušakšid-*	*šukšid-*	*-ušakšid-*	*-uštakšid-*	*-uštakšad-*
	–		–	*šuqrib-*	*-ušaqrib-*	–	–
Št	–		*muštakšid-*	*šutakšid-*	–	–	–
	–		–	*šutaqrib-*	*-uštaqrib-*	–	–
Štn	*šuteqrub-*		–	*šutaqrib-*	–	–	–

Description	Subject
kišd-, kišid-t-	–
naqrab-	
taqrib-t-	
taqrub-t-	

SAMPLE COMPLETE VERBAL AND DEVERBAL PARADIGM OF TWO STRONG TRIRADICAL ROOTS

In the particular paradigm given here, two roots are chosen with a view to illustrate the contrast between inflection with and without the general shift *a* > *e*, and between two different types of vocalization of the participle B. Only patterns and core forms are given which are in fact attested or may be presumed for either root. Note that no deverbal patterns for nouns of subject are found with either of these roots. Alternative root vowels are attested occasionally (e.g., *qrab* in OB literary and *qrub* in NB and SB), but only the prevalent root-vowel (*qrib*) is given here. Also, the vocalic shift *a* > *e* is not found in all forms (e.g., *iqrab* OB, *iqarrib* MA, *iqarrib* Ug, *uqtarrib* NB), but such deviations are indicated in this paradigm only when an equivalent form with *e* is not attested (e.g., *ušaqrib* OB).

The following conventions are used in marking core forms which are not attested. (A) Forms which may in fact have existed in the language, and are presumed to be missing from the record only because actual textual occurrences for that particular root and stem are rare, are enclosed in parenthesis, e.g., *(nakšud-)*.[3] (B) Forms which may have existed in principle, but are not particularly likely to have been generated within normal speech, are indicated by a dash within square brackets in the pertinent slot in the paradigm (e.g., the forms of the Ntn of *kš/d* other than the present). (C) Forms which are presumed to be missing in the language for structural reasons (see below, 70.5), are indicated by a dash within square brackets in the pertinent slot in the paradigm (e.g., the participle B of *qrib*).

[3] Statements of non-occurrence cannot be made accurately without reference to a precise corpus, and generally not without recourse to a comprehensive electronic data-base. For our current purposes, a statement of non-occurrence is simply based on the references found in the major dictionaries.

SECTION C

PATTERNS FROM STRONG QUADRIRADICAL ROOTS

Chapter 18

Correlations to Triradical Roots

The patterns from quadriradical roots may be described with reference to those from triradical roots. Quadriradical roots are symbolized by PRŠD in the same way that triradicals are symbolized by PRS. The relevant statements for the correlation between the two are as follows:

(1) The vocalism is identical to that of triradical patterns, except that an extra vowel *a* is added whenever there would otherwise be a triconsonantal cluster. Examples are:

šup r us-	*-INpa rras-*
šup ršud-	*-INpar ššad-*
šuparšud-	*-INparaššad-*
šubalkut-	*-INbalakkat-*
"to cause to cross"	"(he...) crosses"

(2) When the triradical pattern includes lengthening of the middle radical (as in the D stem and the present N) this lengthening is applied to the third radical of a quadriradical (i.e., the second of the middle radicals). Examples are:

pu rrus-	*-INpa rras-*
pur ššud-	*-INpar ššad-*
puraššud-	*-INparaššad-*
šuqallul-	*-INbalakkat-*
"to hang"	"(he...) crosses"

(3) In the N and Š stems, the second and third radicals form a cluster; note that in the Š-stem no vowel is needed to resolve a cluster between the first two consonants of the quadriradical pattern, differently from the triradical patterns. Examples are:

šup r us-	*-ušap r is-*
šup ršud-	*-uš p ršid-*
šuparšud-	*-uš paršid-*
šubalkut-	*-ušbalkit-*
"to cause to cross"	"(he...) caused to cross"

(4) In the Ntn and Štn stems the first and second consonant form a cluster, and the third radical is lengthened (lengthening protects the preceding vowel from dropping when postfixes are added according to external inflection). Examples are:

šutap r us-	*-INtanap r as-*
šutapr ššud-	*-INtanapr ššad-*
šutapraššud-	*-INtanapraššad-*
šutablakkut-	*-INtanablakkat-*
"to cause to cross repeatedly"	"(he...) keeps crossing"

The main deviation from these derivation rules is that the present Š retains the lengthening of the middle radical (unlike the corresponding triradical form); the third radical functions as the middle radical, e.g., *-ušbalakkat-* "he causes to cross."

Note that the B stem is singularly unproductive, since it is attested only in the verbal adjective and the present. The deverbal nouns, too, may be connected with the B stem (the existing patterns being equivalent to the triradical patterns *mapras* and *parus*.)

An application of the above statements yields the paradigm given in the next chapter.

Chapter 19
The Quadriradical System

19.1 The two groups of quadriradical roots

It has long since been observed that the Akkadian quadriradicals exhibit a marked correlation between root structure and stem occurrence: a certain type of roots occurs only in the D (and to a very limited extent in the B) stems, while another type occurs only in the N and Š stems. Accordingly, quadriradicals may be divided into two groups as follows.

Group I. – The roots of this first group occur only with patterns of the D stem. There are only five roots in this group, of which the most common are *šqll* "to hang" and *šqmm* "to be very still." They all have the following two features in common: (1) the first radical is *š*, and (2) the third and fourth radicals are identical and are either a liquid or a nasal.

Rarely, roots of Group I can inflect for patterns of the B stem, specifically in the verbal adjective and the present (the latter attested only with the root *šqll*). Also, the deverbal pattern *paršad-* is linked in its notional value to the B stem.

Group II. – The roots of this second group occur primarily with patterns of N(tn) and Š(tn) stems. They are about a dozen, among which the most common roots *blkt* "to cross, go over," *prqd* "to lay on the back," *pršd* "to flee" (the last root is the one that traditionally provides the abstract notation for quadriradical patterns). These roots have in common the fact that the second radical is a liquid. An additional distinction concerning the structure of the root is found with weak quadriradicals, see below, chapters 47-48.

Limited evidence for the B stem from a root of Group II is found in the verbal adjective *paršum-/puršum-* "old." This root does not yield any other verbal or deverbal forms, and one wonders if the vocalism *u-u* (in *puršum-*) may reflect an analogical extension of the prevailing vocalism of the Š stem. Note also that the only attested deverbal pattern from roots of Group II (*maparšad-* ~ triradical *mapras-*) is linked in its notional value to the B stem.

The paradigms from both groups of verbs are given on the following two pages.

PATTERNS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B		*parušd-*					*-Ipraššad-*
D	*puraššud-*		*mupraššid-*	*puraššid-*	*-upraššid-*	*-uptaraššid-*	*-upraššad-*
	Description		Subject				
	paršad-t--						

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B		*paršud-*					
N	*Naparšud-*		*muNparšid-*	*Naparšid-*	*-INparšid-*	*-INtaparšad-*	*-INparaššad-*
Ntn	*Nitapraššud-*		*muNtapraššid-*	*NItapraššid-*	*-INtapraššad-*	*-INtatapraššad-*	*-INtanapraššad-*
Š	*šuparšud-*		*mušparšid-*	*šuparšid-*	*-ušparšid-*	*-uštaparšid-*	*-ušparaššad-*
Štn	*šutapraššud-*		*muštapraššid-*	*šutapraššid-*	*-uštapraššid-*	*-uštatapraššid-*	*-uštanapraššad-*
	Description		Subject				
			naparšad-t-				

ROOTS AND GLOSSES

blkt to cross, go over (*nabalkat-t-* ladder)
šḫrr to be rigid (*šaḫrar-t-* rigidity)
pršm to be old
šqmm to be quiet
šqll to hang

CORE FORMS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B		*šaqumm-*					*-Išqallal-*
D	*šuqallul-*		*(mušqallil-)*	*šuqallil-*	*-ušqallil-*	*-uštaqallil-*	*-ušqallal-*
	Description		Subject				
	šaḫrar-t-						

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B		*paršum-*					
N	*nabalkut-*		*mubbalkit-*	*nabalkit-*	*-Ibbalkit-*	*-Ittabalkat-*	*-Ibbalakkat-*
Ntn	*ʾitablakkut-*		*muttablakkit-*	*ʾitablakkit-*	*-Ittablakkat-*	*-Ittatablakkat-*	*-Ittanablakkat-*
Š	*šubalkut-*		*mušbalkit-*	*šubalkit-*	*-ušbalkit-*	*-uštabalkit-*	*-ušbalakkat-*
Štn	*šutablakkut-*		*(muštablakkit-)*	*(šutablakkit-)*	*-uštablakkit-*	*(-uštatablakkit-)*	*-uštanablakkat-*
	Description		Subject				
			nabalkat-t-				

19.2 An alternative interpretation of Group I

An alternative interpretation is possible for the D stem of some quadriradicals with first radical *š*. These forms may be interpreted as patterns of the ŠD stem of a triradical root, thus, e.g., *grr* ŠD instead of *šgrr* D, "to roll." This is the interpretation proposed by *CAD* s.v. *garāru* specifically for this root.

This triradical interpretation would in principle be preferable, because it makes for a more economical description of the data. However, it cannot be applied uniformly to all roots in Group I, since the verbal adjective *šaqumm-*, the present *-Išqallal-*, and the deverbal noun *šaḫrar-t-*, all presuppose a quadriradical interpretation.

19.3 A note on notional categories

Of the stems occurring with quadriradical roots, only the Š stem retains a meaning properly connected with this stem, i.e., the causative meaning. The D and N stems, on the other hand, express the simple process, which is otherwise expressed by the B stem. This is also occasionally the case with triradical roots (see above, 16.4).

PART II
EXTERNAL INFLECTION

SECTION A
THE NOUN

Chapter 20
Types of Nominal External Inflection

Nominal external inflection consists of affixes added after the core (which is derived from the interdigitation of root and pattern), or the base (which is proper of primary nouns and loanwords); the affixes may in turn be divided into infixes[1] and postfixes, depending on whether they are in medial or final position within the word. For the concepts of core, base and postfix, see above, 6.2. The affixes are all on line and continuous (as compared with the morphemes of internal inflection). There are two basic groups of affixes: the first consists of denominal afformatives, the second of markers for gender, number and case.

20.1 Denominal afformatives

A limited number of infixes serve a derivational function: added to any base or core, they alter its semantic value, by creating nouns of description (abstracts) and

[1] I restrict the use of the term "infix" to elements of external inflection as described here. I consider it, instead, inappropriate to describe elements of internal inflection, see above, 16.5, n.7, and below, 20.4.

of subject (substantives and adjectives) out of other nouns. Because of their derivational function, I call these infixes "afformatives." They occur immediately after the base or core, and they are in turn followed by the affixes for number, gender and case.

20.2 States of the noun

The markers for number, gender and case constitute an inflectional system which may be distinguished in four different types, depending on the degree to which each participates in the various inflectional categories. These four types are traditionally called "states" of the noun, and they will be so labeled in this grammar as well.

The first or "normal" state (e.g., *sinništum* "a[2] woman") exhibits the fullest range of variations, with a basic distinction between two genders, two basic numbers (plus one which appears only in frozen idioms), three basic cases (plus three secondary cases).

The second or "construct" state (e.g., *sinništi* "the woman of") exhibits the same range of gender and number morphemes as the normal state, but differs from it in the inflection for case, since it distinguishes only two basic cases (occurring in different combinations depending on the environment), and one frozen case form, plus the same three secondary cases as the normal state.

The third or "absolute" state (e.g., *sinniš* "woman") exhibits only a distinction between two genders and two numbers, and none for case.

The fourth or "predicative" state (e.g., *sinnišat* "she is a woman") is completely undifferentiated for case; when bound with a suffix *ø*, it distinguishes two numbers and two genders; with other suffixes, it is undifferentiated also for gender and number.

The states may also be distinguished on the basis of syntactical considerations, which will be briefly described below in chapter 26, and then more fully in the Syntax. The distinguishing traits may be briefly characterized as follows. The normal and absolute state are "free" in the sense that nouns in either one of these two states need not be immediately followed in the sentence by any particular element, except for such broader restrictions as can be derived from general syntactical

[2] Since Akkadian lacks a form corresponding to the article of other Semitic languages (or English, for that matter), the whole issue of determination has to be considered on syntactical terms, for which see below, 63. In the glosses given in this grammar, the use of the article is somewhat arbitrary, and depends largely on what seems to suit best the individual occasions. What needs to be stressed here is that, while the states of the noun do have a bearing on determination, they cannot be correlated unequivocally with it; the present gloss, for example, should be more appropriately given as "(a/the) woman," meaning that it could appear in context as "woman," "a woman," or "the woman."

considerations (rather than from the nature of the state in which the noun occurs). The other two states are "bound" in the sense that nouns in either one of these two states must be followed immediately by one of a limited set of elements. A noun in the construct state must be followed by one of the following: a pronominal suffix, a noun in the genitive or a clause with the verb in the subjunctive (with only few exceptions). A noun in the predicative state must be followed immediately by the pronominal subject in suffixed form.

The following chart sums up in tabular form the pertinent data.

state	morphology			syntax		
	gender	number	case	free	bound	
1. normal	2	2(+1)	3(+3)	+	–	
2. construct	2	2(+1)	2(+4)	–	+	with prononimal suffix, noun, or clause
3. absolute	2	2	–	+	–	
4. predicate	(2)	(2)	–	–	+	with pronominal suffix

20.3 Substantives and adjectives

As with internal inflection, so also with external inflection only a slight distinction exists between substantives on the one hand, participles and adjectives on the other. As we just saw (20.1), there is a difference between substantives and adjectives in the distribution of denominal afformatives. Another morphological difference between the two (to be discussed below, 22-23) is that the plural masculine of the substantive is *-ū* in both the normal and the construct state, whereas the plural masculine of participles and adjectives is *-ūtum* in the normal state and *-ūt* in the construct state. Also, the adjective seldom occurs in the construct state; this may be due to the particular semantic nature of the adjective, which refers essentially to the subject of a state or condition, so that only the genitive of limitation occurs regularly after it, e.g., *kabit kaspim* "heavy in silver" (see below, 77.2). The substantive and the participle, on the other hand, govern all other types of genitive (see below, Syntax, Section II). Finally, a certain distinction between substantives and adjectives obtains also in therms of syntactical predication (see below, 63.5).

These remarks show that a real distinction between substantives and adjectives may indeed be maintained in formal terms, though it is somewhat limited in its distributional characteristics. In this grammar both substantives and adjectives are grouped together under the heading of "noun."

20.4 Sequential configuration of elements of external inflection

The various elements which combine to form the paradigm of nominal external inflection exhibit a fixed sequential ordering.[3] The details of this sequential arrangement will be illustrated in the following chapters. Here it may be useful to summarize the key positional values of these elements.

The sequence of elements may be tabulated as follows:

$$\text{core/base} - \{\begin{smallmatrix}\text{afformatives}\\ \text{infixes}\end{smallmatrix}\} - \{\begin{smallmatrix}\text{gender, number, case}\\ \text{infixes,postfixes}\end{smallmatrix}\} - \text{suffix(es)} - \text{enclitic(s)}$$

Prefixes do not properly exist in noun formation; what is so described in the literature (e.g., *mu-* in *muparris-*) belongs in fact to internal inflection.

Similarly, the only infixes which may properly be considered as such are those used to form afformatives and those of gender, number and case; what is otherwise so described in the literature (e.g., *-t-* in *muptarris-*), also belongs to internal inflection (see above, 16.5 n.7; 20 n.1).

The term "postfix" is introduced here (see already above, 6.2) to identify a specific distributional class which differs appreciably from that of the "suffixes."

Finally, enclitics are considered within this sequential ordering of elements within a word, even though they are not inflectional because they do not modify the noun to which they are added, but serve rather a syntactical function.

Note that the terms "infix" and "postfix" describe the purely sequential nature of the inflectional element, while the terms "afformative," "gender," "number" and "case" describe the function (either derivational or inflectional) which they serve. Note also that the term "affix" is used to subsume infixes, postfixes and suffixes.

20.5 Derivation and inflection

The term "inflection" is used in a formal sense to describe distributional sets of mutually exclusive alternations (e.g., *-IprVs-/-IptarVs-/-IparrVs-* or *šarr-um/šarr-im/šarr-am*). The term "derivation" is used in a notional sense to refer to the process of word formation which links notionally certain classes of words (e.g., the causative to the basic meaning of a root, or the adjective to the name of a country). This notional process cross-cuts the two basic types of inflection: thus deverbal patterns, the vertical axis of the verbal system, and the afformatives of external inflection, are all derivational in nature.

[3] This has been studied in great detail by GELB 1969 *Sequential*.

It is a confusion of the formal and notional level that prompts traditional grammar to include denominal afformatives within internal inflection: since most of the derivational functions of Akkadian (or of Semitic, for that matter) are provided by internal inflection, the derivational function of the afformatives takes undue precedence over their formal distinctiveness. To stress the formal difference between patterns and afformatives, one may consider the following. The element *-ā'-* in *purussā'-* cannot be considered an affix because it occurs only in this particular configuration, and not as part of other cores, much less of unmotivated bases (hence, no **nādinā'-*, **qaqqadā'-*); by way contrast, a true affix like *-ān* may occur after any core or base (hence, *nādin-ān-*, *qaqqad-ān-*). Thus, while both the pattern PURUSSA:'- and the afformative *-ān-* are notionally analogous, in that they both serve a derivational function, they are formally quite distinct (in spite of a superficial similarity with regard to their position in the word), because they belong to internal and external inflection respectively.

20.6 A note on periphrastic derivation

The main process of derivational noun formation in Akkadian, as generally in Semitic, is clearly that of internal inflection. The use of afformatives, as we have just seen, is very limited, and is not, in and of itself, sufficient to produce the full derivational range that is needed. A supplementary mechanism that is highly productive is the use of a constructive, i.e., a noun in the construct state followed by a noun in the genitive (see below, 23.1) to express a notional value which cannot be rendered in Akkadian through a single word formation (unless one considers the constructive as an example of word composition, see above, 6.3). We may refer to this mechanism as periphrastic derivation. While it clearly does not belong here in terms of its formal characteristics, but rather to syntax (see below, Syntax, IIB), I will briefly describe here its notional aspects. Note that in other instances such periphrastic constructions are considered as specific morphological constructions in traditional grammar, e.g., with the so-called asseverative or prohibitive moods (see below, 28.6).

Primary nouns like *ālum* "city" or *ugārum* "agricultural irrigation basin," hence "cultivated countryside," cannot undergo internal inflection, hence no interdigitating adjective can be derived from them. Adjectival afformative derivation is possible in principle: *āl-ay-ī-* does in fact occur, with the meaning "belonging to the city, citizen, urban," but is rare; while a form like *ugār-ī-*, with a possible meaning "belonging to the countryside, peasant," does not in fact occur. In other words, there are semantic limitations to the applicability of afformative derivation, which restrict the range of actual new formations.

Periphrastic derivation is used in such cases. It consists of nominalized constructions, in which the noun in question, e.g., *ugārum*, is attached in the genitive to a noun in the construct state. Thus "peasant" is expressed in Akkadian by the constructive *mār ugārim*, literally "son of the cultivated countryside." Similarly *mār ālim* "son of the city" refers to an urban dweller, and *mār yamina* "son of the right hand (river-bank)" refers to a pastoralist.[4]

Further, periphrastic constructions are used with nouns which do admit interdigitation, but have acquired a specialized meaning that is no longer carried by the standard patterns of internal inflection. For example, the word *šiprum* "sending" is a PIRS pattern from the root *šp/r* "to send," but has acquired the specialized meaning of "(diplomatic) mission." Now any adjective derived through internal inflection from the root itself does not carry the derived meaning expressed by *šiprum*; hence a periphrastic construction is used, namely *mār šiprim* "son of the mission, messenger." Similarly, *awīl gimillim* is "a man of favor, through whom favors are possible, an influential man," whereas *awīlum gāmilum* is "a merciful man."

The nouns *mārum* "son" and *awīlum* "man" are in common use in periphrasitc contructions of the type just described. But any noun may be modified by a genitive in ways that correspond to an English attribute, e.g., *āl dannūtim* "strong city," and this has given rise to the mistaken notion that there is, in Akkadian, an attributive genitive. An attributive function, however, can only properly be identified in the English translation, and not in the Akkadian original (see below, 78.2; 79.3).

[4] This is my interpretation of a term which is at home on the Middle Euphrates. *Yamina* is an Amorite word which is used, in my understanding, to refer to the steppe on right side of the river, and which is borrowed, as a geographical name, in Akkadian; it is also used in the Amorite construction *banū yamina*, which is generally understood as a tribal name, but is in my view a generic term for "steppe dweller," hence "(semi)-nomad, pastoralist."

Chapter 21
Denominal Afformatives

21.1 Structural considerations

The denominal afformatives are only six (*-ūt-, -ān-, -āt-, -(a)t-, -ī(t)-, -āy-*), but some of them are very productive and in common usage. They are also structurally important on two counts.

First, they provide in some cases the only productive denominative device possible in Akkadian, namely in those cases where the base is an unmotivated noun, from which there is no possibility of deriving other nouns (in particular adjectives and abstracts) through internal inflection. This is partly analogous to the situation in other languages, which have no internal inflection at all, and thus have, correspondingly, an even higher incidence of very productive affixes to form abstracts and adjectives (see for instance in English: enmit-y, friend-ship, conscious-ness, Engl-ish, Mesopotam-ian, Arab-ic, Hitt-ite, fratern-izing, enjoy-able, etc.). As already noted above (20.5), denominal afformatives are derivational in nature, and to this extent they parallel, notionally if not formally, the function of internal inflection. The term "afformatives" refers specifically to their notional function, while the term "affixes" refers more generically to their morphological status.

Second, the outward simplicity of the system belies a structural complexity which has generally been overlooked in traditional grammar. This complexity is to be seen in the way in which affixes may be grouped together according to the correlation they exhibit with notional categories. Accordingly, the various afformatives may be reduced to three basic types. (1) A noun of description may be formed by adding the affix *-ūt-* to any base or core. (2) A substantive (see above, 20.3) may be formed by adding the affixes *-ān-, -āt-* or *-(a)t-* to any base or core. (3) An adjective may be formed by adding the affixes *-ī(t)-* or *-ay-* to any base or core.

Additionally, there are afformatives which are used only in onomastics, i.e., in the formation of personal names. These include some of the affixes used with normal nouns, but with a slightly different distribution, and with some additional structural peculiarities.

21.2 Nouns of description

The affomative *-ūt-* is used to form abstracts, i.e., nouns which describe a permanent condition referring to either a verbal root or a primary noun. This affomative occurs only in the feminine. Thus from the core *dann-* of the root *dnin* one obtains the abstract *dann-ūt-* "might," and from the primary noun *šarr-* one obtains the abstract *šarr-ūt-* "kingship." For an interesting (though peripheral) case of *-ūt-* being added to a proper name see *Ḫanigalbat-ūt-* "Hanigalbat-ship, i.e., Hanigalbat citizenship."

In the case of primary nouns with feminine marker, the abstract ending is normally added to the simple base without the feminine marker, e.g., *ʾaššat-* "wife" yields *ʾaššūt* "condition of being a wife" (although *aššat-ūt-* is also possible).

In peripheral and late Babylonian, the affomative affix *-ūt-* may also be added to a constructive (for which see below, 23.1, 2), e.g., *mār šipr-ūt-* "the condition of messenger (i.e., diplomatic relations)," *ērib bīt-ūt-* "the office of temple domestic."

21.3 Substantives

I consider the three affomatives *-ān-*, *-āt-* and *-(a)t-* as belonging structurally together. They are all used to form substantives, but not adjectives (see above, 20.3). For a possible affomative *-āʾ-* see below, 30.3.

(1) The affomative *-ān-* is used frequently to form a subject noun, and more specifically a substantive (generally animate), from another noun, from a pronoun or from a preposition. Its function is to emphasize the subject aspect, and as such it has long since been recognized as a "particularizing" affix, see, e.g., *šarrāq-ān-* "a particular thief" (from a deverbal noun) or *nādin-ān-* "a particular seller" (from a verbal noun).[1] It can also be added after a primary noun, in which case it results in the formation of a personal name, e.g., *qaqqād-ān-* "someone with a particular head" (this specific formation occurs only in onomastics), after a pronoun, e.g., *ayy-ān-* "in which (place), where" (used in the locative case, *ayyānūm*, see below 22.6), or after an invariable, e.g., *warkī-ān-ūm* "at a particular point behind (i.e., later on)," also construed with the locative case.

Syntactically, the use of this affomative may be related to a determinative function, for which see below, 63.6.

[1] I.e., a seller mentioned in a particular context, *CH* §9. Note how in this same context one finds an interesting example of syntactical transformation (for which see below, 59.2): *nādin iddinušum* "the seller who sold to him" is the exact equivalent of *nādinānum* "the particular seller."

A special distribution of this affomative with regard to number has created a misconception about an alleged special type of plural affix, for which see below, 22.2.

(2) The affomative *-āt-* is proposed in this grammar as a feminine alternant of *-ān-*: it forms an equally particularizing noun of subject (generally inanimate) from other nouns, primarily from adjectives, e.g., *damq-āt-um* "a particularly good event (i.e., good fortune; a diplomatic treaty)," *dār-ī-āt-um* "a particular continuity (i.e., unending future time, perpetuity)," *ṣī-āt-um* "a particular dawn,[2] i.e., a remote time," *kaṣī-āt-am* "at a particularly cool point (i.e., early in the morning)." Note the similarity in distribution between forms with *-ān-* and those with *-āt-*, see for instance *wark-ān-ūm* and *kaṣ-āt-am*, both referring to a particular point, and both construed with an adverbial ending (*-ūm* and *-am*). I presume that the noun derived with this affomative is feminine because of the distinctive function of *t* as a feminine marker; however, I do not know of a convincing case of agreement that can prove this interpretation (and see below, 21.5, for a masculine use of *t* in personal names).

My understanding of the affix as *-āt-* differs from traditional grammar in two respects, since words that I interpret in this manner are otherwise understood as containing either an affix *-att-*[3] or a feminine plural ending used as an abstract.[4] My reasons are as follows. (A) Most of the occurrences where the affix is understood as *-att-* are in fact written with single *t*, and the few cases with long *t* (all late) may be interpreted as due to a scribal lengthening of the consonant to mark long vowel.[5] (B) For words which have the particularizing meaning associated with this affix, I do not know of cases where either the accusative plural is used (whereby we would have a distinction between *damq-āt-am* for the accusative singular and *damq-āt-im* for the accusative plural), or the agreement is plural, while the reverse is true.[6]

[2] I derive *ṣī-āt* from *ṣī-t šamši* "the coming out of the sun, i.e., dawn"; for *ṣī-t-um* see below, 46.7.

[3] See especially Von Soden 1952 *Grundriss* §113.

[4] Such a usage of the feminine plural is in fact attested, but in such cases (a) there is no particularizing meaning, and (b) there should be a demonstrable plural agreement, see, e.g., *kīnātum šarkā* "just deeds are entrusted (to a king as a gift)" *Syria* 32 12 i 5 (OB). The form may be understood as an adjective agreeing with a deleted substantive such as *awātum* "words, deeds."

[5] For a special, and generalized, interpretation of this phenomenon see Reiner 1966 *Analysis* p.45f.

[6] For the use of the accusative see, e.g., *kaṣ-āt-am*. For agreement in the singular see, e.g., *salīmum u damqātum ... ittaškan* "a peace treaty and a normal diplomatic relationship has been established," *RA* 35 184:16-19 (OB); *damqāt Esagila ... liššakin šaptukka* "let (my) good attitude towards Esagila ... be placed on your lips (i.e., may you mention it often)," *CT* 34 34:18 (NB). The writing SIG_5.MEŠ (see *CAD D* 66b) appears on the face of it to be a logographic writing for the plural, but can be interpreted as a scribal pun. Words like *līlāt-* "night" or *šīnāt-* "urine" should, on the other hand, be considered as genuine forms occurring only in the plural (*plurale tantum*), rather than as a construction with the affomative *-āt-*. See also below, 23.4, note 3.

(3) The affix *-(a)t-* may also be recognized as a special type of afformative, though it is generally not so treated in traditional grammar. In spite of the similarity, *-(a)t-* is not directly related to *-āt-*, since it does not properly have a particularizing function. Nor is it the same as the normal gender marker for the feminine (see below 22.1; 26.2), because of the notional difference between the two. Instead, the afformative *-(a)t-* identifies a concrete object which is related to the item expressed by the base (for the most part a primary noun). For instance, *kakkabtum* is neither a particular type of star in the sky, nor a female star, but rather a concrete object fashioned in the shape of a star. Examples are (for other possible examples, cumulative with the affix *-ī-*, see presently, 21.4):

{aban-t-} /abatt-/	"slingstone, pestle, token"	~	*abn-*	"stone"
bāb-t-	"city quarter"[7]	~	*bāb-*	"door"
ḫamuš-t-um	"fifth thing, a five day period"	~	*ḫamuš-*	"fifth"
kakkab-t-	"star-shaped ornament"	~	*kakkab-*	"star"
nidī-t-	"uncultivated plot of land"	~	*nīd-*	"throwing down"
rēš-t-	"top"	~	*rēš-*	"head"
šamš-at-[8]	"sun-shaped ornament"	~	*šamš-*	"sun"
ṭāb-t-	"good thing, salt"	~	*ṭāb-*	"good."

21.4 Adjectives

I consider the two afformatives *-ī-* and *-ay-* as belonging structurally together. They are both used to form adjectives, but not substantives (see above, 20.3).

(1) The afformative *-ī-* is used frequently to form a subject noun, and more specifically an adjective from another noun or pronoun, e.g., *maḫr-ī-* "frontal, first" (from *maḫr-* "front"), *mimm-ī-* "any, all" (from *mimma* "anything"), *mīn-ī-um* "which," *ayy-ī-um* "which." It may also be added to another affix, e.g., *rēš-t-ī-* "topmost, first" (from *rēš-t-* "top").

While in principle the afformative *-ī-* may be added to any noun or pronoun, in practice it is especially frequent when added to a geographical name: in this case, the resulting adjective is called "gentilic" because it describes the affiliation of an individual with a given socio-political group (*gens* in Latin), e.g., *Aššur-ī-* "Assyrian."

[7] Literally, "a thing of doors," i.e., a cluster of doors (hence houses) opening onto a common space. In this sense a *babtum* need not be connected to a city gate (*abullu*), though it may be related to it secondarily.

[8] See J. LEWY, "Studies in Akkadian Grammar and Onomatology," *Or.* NS 15 (1946) p. 376 and 377, n. 1, where a diminutive function is suggested.

The afformative *-ī-* may be cumulative with both *-ān-* and *-āy-*, and it is also the only afformative which may be inflected for the feminine, see the following examples:

maḫr-ī-	*maḫr-ī-t-*	"frontal, first"
āl-ay-ī-	*āl-ay-ī-t-*	"belonging to the city, citizen"
bīt-ān-ī-	*bīt-ān-ī-t-*	"house-bound, interior"

The noun derived by means of the afformative affix *-ī-* is normally an adjective, but it may occasionally also be substantivized, particularly in conjunction with the feminine marker (though this may also be interpreted as a denominal afformative, see above, 21.3); examples are *mūš-ī-t-* "the nightly (period), night" (with the feminine marker after the afformative affix), and *nammaš-t-ī-* "the moving one, animal" (from *nmuš* "to move," with the feminine marker before the afformative affix).

(2) The afformative *-āy-* is used (rarely) to form an adjective from another noun, e.g., *kūṣ-āy-* "winterly." It does not occur in the feminine.

21.5 Onomastic derivation

Generally, afformatives used in personal names signal an abbreviated form of an original longer name. In this function, the afformative is called a "hypocoristicon," a term of Greek origin which means "caressing, endearing," and is used for any diminutive formation that produces a nickname or the like.

The afformative *-ān-* is frequently used in the formation of personal names. It may be derived from physical characteristics attributed to the name-bearer, e.g., *Qaqqad-ān-* "The-one-with-a-peculiar-head," or from an isolated component of a longer name, e.g., *Il-ān-um* from some such name as *Ilum-banī*. Note that in Akkadian onomastics this afformative, while very productive, may only be added to nouns, whereas in Amorite personal names (found very frequently in Akkadian texts), it can be added to verbs as well, e.g., *Yapḫur-ān-um*.

There are other hypocoristic afformatives which are productive, in Akkadian, only with personal names, and not with normal nouns. This is one of the few cases where Akkadian onomastic formation differs from the standard linguistic rules of Akkadian. These special afformatives are listed below. Note that those ending in *-a* do not admit any further inflectional markers, whereas the others do (the affix *-um* is often used as a frozen ending, i.e., without regard for the syntactical function of the name within the sentence). The affixes *-Ø-um, -a, -at-um* are the only afformatives that can be added to verbal forms in Akkadian. Note further that the

afformatives which include the element *-at-* are not feminine in gender, but rather masculine, in that they refer to male name bearers.

-ø-	e.g.	*Gimill-ø-um, Ikšud-ø-um*
-a		*Tarīb-a*
-ak-		*Bēl-ak-um*
-at-		*Tarīb-at-um*
-yat-		*Sin-yat-um /Siyyatum/* (see above, 5.2:9)
-iyya		*Ab-iyya*
-iyyat-		*Ab-iyyat-um*
-uyya		*Aḫ-uyya*
-uyyat-		*Aḫ-uyyat-um*

A hypocoristicon is generally used to the exclusion of the name from which it derives, i.e., a given person is generally known either by a full name or by its hypocoristicon. In a few cases, however, both names are attested for one and the same person, e.g., *Sīn-nāṣir* and *Sīn-at-um*.[9]

21.6 A note on a possible prefixal afformative

I will mention here a puzzling type of noun formation, which may or may not derive from affixation. The two words *andurār-* "remission of debts" and *andunān-* "substitute" share a similar shape, and may reflect a common, and anomalous, type of noun formation. These words occur in fact in a variety of different phonological realizations, for which see the dictionaries. Some of these variants (*durār-, dinān-, dunān-, dān-*) seem to imply that the structure of the word consists of an affixal part (the prefix *an-*), and a nominal component which is extended through reduplication of the final consonant (*dur-ār-* and *dun-ān-*; for the rare morphological phenomenon of reduplication see above, 6.4).

For the word *andurār-* there is a corresponding root (*dr/r*), so that one could posit a pattern ʔANPURA:R. But since there is no root that can be linked with *andunān-*, and since the structure of the noun as described above seems to suggest that the element *an-* is not an integral part of the base, the affixal interpretation appears to be more likely. See also below, 31.1, for the use of the affix *ʾan-* with personal pronouns.

Clearly, the paucity of attestations makes this suggestion tentative at best. If it is advanced at all, it is because of its structural interest.

[9] L. WATERMAN, *Business Documents of the Hammurapi Period*, London 1916, 78: Obv. 7 and *VS* 9 30:3, 142/143:1.

Chapter 22
The Inflection of the Normal State

22.1 The primary system

The normal state is characterized by the fullest range of inflectional variations. From a structural point of view it seems best to differentiate two subsystems, one for each of the two basic number alternations, i.e., one subsystem for the singular and another for the plural.[1]

In the singular, the masculine shows no special marker (alternatively, marker *ø*). The feminine is characterized by one of two markers, both occurring as infixes between the pattern and the case endings; they are *-at-* and *-t-*. (1) The infix *-at-* occurs after a shape ending in long consonant, e.g., *dann-at-um* "powerful," and after the shape *pars-*, e.g., *kalb-at-um* "bitch." The exceptions are few, e.g., *ediš-t-um* next to *ešš-et-um* from *ešš-um* "new,"{*aban-t-um*} */abattum/* "slingstone" from *abn-um* "stone" (see also above, 21.1), *napiš-t-um* "life" next to the plural *napš-āt-um*. (2) The infix *-t-* occurs in all other cases, e.g., *damiq-t-um* "good," {*bēl-t-um*} */beltum/* "lady." Following morphophonemic rules (see below, 52), when *-t* is added to the patterns *pirs-* and *purs-*, an auxiliary vowel *-i* is inserted between the second and third consonants of the pattern, e.g., {*sikl-t-um*} */sikiltum/* "gain" or {*ruṭb-t-um*} */ruṭibtum/* "swamp." With a few words of the pattern *pirs-* and *purs-* the feminine marker is *-at* without any auxiliary vowel, e.g., *ṣimd-at-um* "decree," to be distinguished from {*ṣimid-t-um*} */ṣimittum/* "crosspiece of the yoke." The difference in *pars-at-* on the one hand, *piris-t-* and *puris-t-* on the other, may be the result of the differentiation between primary nouns (*pars-*) and deverbal nouns (*pirs-* and *purs-*).

The basic case markers in the singular consist of a set of three alternant postfixes *-u(m), -i(m), -a(m)*, indicating respectively nominative, genitive and accusative. These postfixes are identical for both masculine and feminine. Final *-m* of the case endings, called "mimation" (for which see below, 22.3), occurs regularly in Old Babylonian only, but even in Old Babylonian it is dropped occasionally (see below, 22.5).

[1] From a historical point of view, GELB 1969 *Sequential* has offered a reconstruction where all inflectional variations are on line or sequential.

The subsystem for the plural is more complex. For gender, basically the same distinction obtains as with the singular, with no special marker (alternatively *ø*) for the masculine, e.g., *šarr-ø-ū* "kings," and the infix *-āt-* for the feminine, e.g., *šarr-āt-um* "queens." In the case of the masculine, however, one must distinguish between substantives and adjectives (see above, 20.3). The latter, including participles, exhibit regularly the infix *-ūt-*, e.g., *šarr-ū dann-ūt-um* "powerful kings" as opposed to *šarr-āt-um dann-āt-um* "powerful queens." The infix *ø*, however, is also found with substantivized participles and adjectives, e.g., *mušarbū* "those who make great." (It should be noted that the infixes *-ūt-* and *-āt-* are identical in form to those of two distinct denominal afformatives, for which see 21.1; this may point historically to a common origin.)

The basic case markers for the plural consist of a set of only two (vs. three in the singular) postfixes with vocalism *u* for the nominative and *i* for accusative and genitive. Some variations occur however with respect to length and mimation. After gender marker *ø*, the case postfixes are long, as in *šarr-ū* and *šarr-ī* "kings." After gender markers *-ūt* and *-āt* the case postfixes are short with mimation, as in *šarr-āt-um*, *šarr-āt-im* "queens" and *dann-ūt-um*, *dann-ūt-im* "powerful."

The data are tabulated in the following chart.

number	gender				case
	masc.		fem.		
	subst.	adj.	after *pars-*, *parr-*	after all other shapes	
singular	*-ø-*		*-at-*	*-t-*	*-um* (nom.) *-am* (acc.) *-im* (gen.)
plural	*-ø-*	*(-ø-)*	–		*-ū* (nom.) *-ī* (acc./gen.)
	–	*-ūt-*	*-āt-*		*-um* (nom.) *-im* (acc./gen.)

INFLECTIONAL SCHEME FOR NUMBER, GENDER AND CASE

It should be noted that the sequence of the cases as given here (nom./acc./gen.), instead of the usual one (nom./gen./acc.), is intended to reflect the peculiarity of the distribution shown in the construct state (see below, 23.1), where in certain cases the accusative and the nominative share the same markers, while the genitive is distinct from both. Also note that the adjective exhibits a special inflection only in the masculine; the feminine of the adjective inflects in the same way as the feminine of the substantive (thus, for example, *ṣeḫḫertum, ṣeḫḫerētum*).

Applying the inflectional scheme to actual bases, we obtain the paradigm given below; the glosses are: *šarrum* "king," *šarratum* "queen," *ṣeḫḫerum* "small," *ʾiltum* "goddess."

number	gender				case
	masc		fem		
	subst.	adj.	after *pars-*, *parr-*	after other shapes	
sing.	*šarr-ø-um*	*ṣeḫḫer-ø-um*	*šarr-at-um*	*ʾil-t-um*	nom
	šarr-ø-am	*ṣeḫḫer-ø-am*	*šarr-at-am*	*ʾil-t-am*	acc
	šarr-ø-im	*ṣeḫḫer-ø-im*	*šarr-at-im*	*ʾil-t-im*	gen
plur.	*šarr-ø-ū*	*ṣeḫḫer-ūt-um*	*šarr-āt-um*	*ʾil-āt-um*	nom
	šarr-ø-ī	*ṣeḫḫer-ūt-im*	*šarr-āt-im*	*ʾil-āt-im*	acc/gen

PARADIGM OF THE NORMAL STATE

22.2 The alleged plural *-ānu*

Akkadian grammars recognize one additional morpheme for the plural masculine, namely *-ānu/-āni*. For reasons stated in detail elsewhere,[2] I do not find this interpretation acceptable, and prefer to consider these forms as regular plurals of nouns with the denominal afformative *-ān-* (see 21.1(2)). Hence no special entry is required in the listing of plural markers, since the plural *šarr-ān-ū* is understood as a regular plural in *-ū* from a singular **šarr-ān-um*. For semantic reasons, several of these nouns occur in the plural only – and it is largely this fact which has led to posit a distinct plural morpheme. However, a proper distributional analysis shows clearly that the interpretation followed here is both more economical descriptively and more sound structurally. The plural *-ān-ū* is in fact in complementary distribution with the singular *-ān-um*, and exhibits no semantic or syntactic function that is distinct from it.

22.3 Mimation

The *-m* found at the end of the singular masculine and of the plural with infix (feminine and adjective masculine) is considered here an integral part of the case markers, but this requires some qualifications. This final *-m* is some times dropped in Old Babylonian, and then regularly in later dialects: since no particular contrast is apparent between forms with and without final *-m*, this feature is generally considered a free variant, called "mimation" after the Arabic name for the letter *m* (*mim*). The only positive interpretation which has been suggested for mimation pertains not to morphological function, but simply to positional value.[3] According to this interpretation, which is followed here, mimation is an optional overt marker of the free, or unbound, state: it signals explicitly the lack of a construent (whether nominal, pronominal or verbal – see below, 23.1), which would be bound, syntactically, with the noun in question. In other words, mimation is the overt marker of the normal state, except for the plural of masculine substantives (see presently): it occurs in the same position as the construent, and the two are mutually exclusive. (See below, 22.5, for some historical remarks which show how this distribution is especially applicable in Old Akkadian.)

A minimal degree of correlation seems to exist between mimation and determination, at least when the noun in question occurs as a predicate (see below,

[2] Buccellati 1976 "Alleged," with a review of earlier literature.

[3] Gelb 1969 *Sequential*, esp. pp. 15-16, 138-46.

63.6). The same cannot be convincingly argued for the normal state, although it is interesting to note that for the instance where mimation is missing in the normal state (the plural of masculine substantives) there seems to be a higher incidence in the use of the particularizing afformative *-ān-*, as if to suggest that the particularizing suffix is preferred in the plural to compensate for lack of mimation. But this is at best tentative.

22.4 The dual

Akkadian exhibits a dual marker in addition to singular and plural, but it has a very restricted distribution: already in Old Babylonian, it is used only for words implying duality, e.g., *killall-ān* "both," especially for parts of the body which occur in pairs, e.g., *šēp-ān* "the two feet," *ubān-ān* "the fingers (of the two hands)," *šapt-ān* "the two lips," *šinn-ān* "the two (rows) of teeth." Since parts of the body are generally feminine, dual markers occur in principle only for the feminine; this may or may not be marked (by means of *-(a)t-*), in ways which are unpredictable and must be given lexically. As for case, a distinction is made only between nominative on the one hand and accusative-genitive on the other (like the plural). The case postfixes are: *-ān-* (nominative) and *-ēn-* (accusative-genitive) in Old Babylonian, and uniformly *-ēn* in the later periods. The inflectional scheme is therefore:

	masculine	feminine	
		unmarked	marked
nom.	*killal-ān*	*šēp-Ø-ān*	*šap-t-ān*
acc./gen.	*kilall-ēn*	*šēp-Ø-ēn*	*šap-t-ēn*

The dual is not productive in a double way. (1) It is not used to express any two elements of a series, but rather the semantic category of coupling, i.e., a set which consists of only two elements. The dual used for parts of body is the better known, but other examples occur as well. Thus *ilān* would mean "twin gods" while *ilū šenā* would mean "two gods (in a series of several)"; and similarly: *ālikān* "twin messengers," *su'ēn* "a pair of hard stones." (2) Even with such a limitation, the dual occurs seldom in Old Babylonian, and even more so in later dialects, whereas it is more frequent in Old Akkadian and Old Assyrian.

Conversely, the use of the plural (instead of the dual) for parts of the body occurring in pairs is rare, for instance *īnū* and *īnātum* instead of *īnān*.

22.5 A note on the historical development of the primary system

As indicated above, mimation begins to disappear in Old Babylonian, and is present only as an archaism in later periods. In Old Akkadian it is found more regularly, though there, too, it is occasionally omitted;[4] it would appear that in Old Akkadian its function as marker of the normal state answered a more specific structural need than in Old Babylonian, since the Old Akkadian construct state exhibits inflection for case, so that mimation is the major morpheme distinguishing the two states. In Old Babylonian it had in fact lost its full structural distinctiveness, and its redundancy caused it eventually to be dropped, or to be preserved merely as an archaism, possibly only in the writing. This situation may be represented as follows:

	Old Akkadian	Old Babylonian	post Old Babylonian
norm.	*šarrum*	*šarru(m)*	*šarru*
constr.	*šarru ālim*	*šar āli(m)*	*šar āli*

A convincing answer to the question as to how regular mimation is in Old Babylonian, can only be found through a thorough statistical evaluation of the data. As an indication of possible results, the following figures will provide a useful indication. In the sample corpus described above in the introduction (note 2), there are 529 occurrences of nouns in which one would expect mimation (the nouns are written syllabically or with phonological indicators, and they occur in the singular masculine, singular and plural feminine, plural of the adjective masculine, all in the normal state). Of these, 504 do in fact have mimation, while only 25 (i.e., less than 5%) do not. These statistics would suggest that mimation is in fact fairly regular in Old Babylonian.

The primary case system as outlined applies regularly only to Old Babylonian. Beginning with Middle Babylonian and then especially in Neo-Babylonian and Standard Babylonian, after the loss of mimation, singular case markers also began to disappear (perhaps because final short vowel was dropped as a result of phonological change), while in the plural the ending *ī* (often changed phonologically to *-ē*) is used for all cases. As a result the basic case declension may be considered monoptotic in the later periods, with uniform endings *ø* for the singular and *-ī* or *ē* for the plural.

The dual exhibits a chronological distribution similar to that of mimation. It is still productive in the Old Akkadian period, it is sufficiently present in Old Babylonian to indicate that it was still felt as an operative inflectional category, and is preserved only in frozen idioms after Old Babylonian.

[4] In personal names only, see GELB 1961 *Grammar*, p.145.

22.6 The secondary case system: locative, terminative and gerundive

Three additional postfixes belong in some respects with the same distributional class as the case markers, although they are different in other respects. Paradigmatically, they may be represented as follows:

locative	*-ūm*	*bīt-ūm*	"in the house"
terminative	*-iš*	*bīt-iš*	"towards the house"
gerundive	*-ī*	*bīt-ī*	"while being the house"

Traditionally, only the locative and terminative are recognized as being related to the case system, while the case which I call here gerundive is considered separately under a variety of headings.[5] The concept, and the term, "gerundive" is introduced here, because it belongs in my view to the same distributional, and notional, class as the locative and terminative.

The terms locative, terminative and gerundive refer to a single component of what is otherwise a wider range of notional values. In other words, these categories subsume many other notional values besides those indicated by the terms chosen to label them. The relative notional undifferentiation of these forms is expressed in traditional terminology by the qualification "adverbial" added to the other term, e.g., "locative-adverbial." I will discuss below (26.3) the variety of notional values attached to these categories (one will also find there an explanation of the term "gerundive").

There are some fundamental structural differences between the secondary and the primary case systems. They are:

(1) the terminative is cumulative with respect to other cases, with the following combinations attested:
terminative + accusative, i.e., *-iš-am*, as in *ūm-iš-am* "daily,"
terminative + locative, i.e., *-iš-ūm*, as in *kir-iš-ūm* "into the orchard,"[6]
terminative + gerundive, i.e., *-išš-ī* attested only in the construct state, sometimes with unexplained lengthening of *-š*, as in *ēd-išš-ī-šu* "while his being like alone, i.e., while all alone, in his loneliness".

(2) The postfix *-iš* occurs also independently as a preposition *iš* though not in Old Babylonian.[7]

[5] See especially VON SODEN 1952 *Grundriss* §§ 71 a-b, 72 b-c, 113 k, 114-116.

[6] On this point see especially SPEISER 1953 "Terminative-Adverbial."

[7] GELB 1969 *Sequential*, 92f.; "Thoughts about Ibla," *SMS* 1 (1977) 9, 10, 12, 23.

(3) The locative *-ūm* may occur in the predicative state (which does not otherwise admit case inflection, see below 25).

(4) The function of the secondary cases may also be expressed analytically by means of a preposition and the genitive, namely the locative and gerundive correspond to a prepositional phrase with the preposition *ina*, the terminative to one with the prepositions *ana*, the locative and terminative to one with *kīma*, etc. A transformation of this type is not possible for any of the cases proper, except in some limited instances for accusative and genitive.

(5) As a result of the fact just mentioned, the secondary cases are redundant in the language and were never particularly productive (but see the historical note below, 22.7).

(6) In terms of the syntactical categorization presented below (57.6), it may be stated that the basic case system is used primarily for major constituents within the sentence, whereas the locative, gerundive and terminative are exclusively the equivalent of adjuncts.

(7) Considering the various features mentioned above, the secondary case endings may be more properly interpreted as postspositions than as inflectional postfixes. This is further corroborated by the observation that attributive agreement between two nouns in the secondary case does not seem possible: a sequence like *rīmāniš ezziš* would not mean "like a fierce bull," but rather "like a bull, fiercely" (see below, 63.7 n.17).

Final *m* of the postfix *-ūm* behaves like mimation in that it can be dropped, already in Old Babylonian. The vowel *ū* is considered here long following GELB's argumentation,[8] based primarily on a structural consideration, namely the need to differentiate formally the locative from the nominative, since the two are otherwise identical from the viewpoint of environment and sequential rank. Another consideration in favor of length is that the locative ending seems to have persisted even in later periods when the nominative ending had dropped, a phenomenon which may more easily be explained if the vowel of the locative was long.

The postfix *-iš* is used frequently in conjunction with a preceding infix *-ān-*, and in later periods the infix occurs in cases where it cannot be considered the same as the denominal afformative (for which see above, 21), e.g., *sinniš-ān-iš* "like a woman." The meaning is not particularizing, as in the case of the denominal afformative, and the marker is added to a feminine base, which does not occur with *-ān-*. Hence the form *-ān-iš* may be considered as an alternant for simple *iš*.

The locative and gerundive are less frequent in the normal than in the construct state, see below 23.4.

[8] GELB 1969 *Sequential*, p. 96-98.

The postfixes *-ūm, -iš* and *-ī* occupy the same sequential rank as the case endings proper, and they are attested only in the singular for both genders; in this they differ from the afformatives, especially the afformative *-ī-* which is identical in form to the gerundive ending. The various types of occurrence are tabulated in the chart on the following page.

		locative	terminative	gerundive
sing.	masc.	*šanī-ūm warḫ-ūm* in the 2nd month *amār-ūm-ma ul āmur* I did not see at all *awīlūm* like man	*il-iš* to god *damq-iš* well *kīr-iš-ūm* into the orchard *rīm-ān-iš* like a bull *ūm-iš-am* daily	*šalš-ūm-ī* the day before yesterday, lit. while it is the third day *amšalī* yesterday
	fem.	–	*šall-at-iš* as booty *sinniš-ān-iš* like a woman	–
plur.	masc	–	–	–
	fem.	–	–	–

DISTRIBUTION OF SECONDARY CASES IN THE NORMAL STATE

22.7 A note on the historical development of the secondary cases

The question of the productivity of the secondary "cases" just described requires further study (one which cannot be undertaken here), because both statistical and structural considerations seem to suggest that these cases may in fact have been more than frozen archaisms. First, a complete statistical computation would be needed to determine not only how frequent these forms are in the later periods, but also whether they occur with a fixed number or type of words (as is clearly the case for the dual) or whether the postfixes are added to a considerably larger

group of words than attested for the earlier periods.[9] Second, the locative and gerundive at least seem to exhibit a structural originality in Babylonian in that they are used for a function not attested in Old Akkadian, namely with the infinitive, as in *amār-ūm-ma ul āmur* "in *seeing* I did not see, i.e., I did not see at all" or *zēn-ī-ša izēn* "while she is hating she hates, i.e., when one hates the other hates as well, one will share in the other's hatred."[10] An interpretation of *-ūm-ma* as *-ī-ma*, on the basis of a phonological statement *-im-* > *-um-*[11] seems unlikely because both *i* and *ī* are retained in Babylonian in front of *m*, as in *il-im-ma* and *ilqī-ma*. For a fuller answer to this problem a thorough structural and statistical study is needed. The possibility may be considered that locative and terminative postfixes were perhaps even more operative in the late periods because, differently from the case endings proper, *-ūm* and *-iš* did not undergo the phonological change to zero which affected *-um*, *-am*, *-im*; as a result, the persisting notion of a case system may have been kept alive and operative (at least in literary texts) by the renewed system *ø*, *-ūm*, *-iš*, for the singular only.

22.8 Special forms

As indicated above in 10.1, there are several Akkadian primary nouns which do not have a feminine marker though they exhibit feminine agreement. The gender of these nouns cannot be predicted, and thus it can only be given through a lexical listing. An interesting structural and comparative observation (which I owe to a suggestion of R. HETZRON) can however be made: none of the relevant nouns seems to have a base of the shape *pars-*, i.e., primary nouns of the shape *pars-* are masculine. A possible exception is represented by *abn-um*, which is generally feminine; however, it can also have masculine agreement, and besides it occurs in the alternant feminine form {*aban-t-um*} /*abattum*/ as well (with specialized meaning, see 21.1). The interest lies in a comparative observation: nouns which are of the shape *pars* in other Semitic languages and are feminine, appear in Akkadian with the feminine marker, as with *erṣ-et-um* "earth" (~Arabic *arḍ-*) and *napiš-t-um* "life" (~ plur. *napš-āt-um* and Arabic *nafs-*); see also, though of a different shape, *iš-āt-um* "fire" (~Hebrew *ʾeš*).

Several nouns without a feminine marker in the singular show a feminine plural postfix, even nouns which in the singular are masculine in agreement. The occurrence of this postfix is not predictable, and must be given through a lexical

[9] See REINER 1966 *Analysis*, p. 69 for the interesting example *Idiglat-eš* "to the Tigris (river)."

[10] R. HARRIS, "The Case of Three Babylonian Marriage Contracts," *JNES* 33 (1974) 366:7, cf. 365:21f. For the syntactical function of this construction, see below, 66.5.

[11] GELB 1969 *Sequential*, p. 96.

listing, though they fall within the following broad semantic categories: (1) primary nouns for animate beings of feminine sex, e.g., *umm-um* "mother" ~ plur. *umm-āt-um*; (2) abstracts and nouns of action, especially of the patterns *pirs-* and *purs-*, e.g., *puzr-um* "secrecy" ~ plur. *puzr-āt-um*; (3) parts of the body which occur single or in pairs (for the latter the dual is used when referring to a single individual), e.g., *īn-um* "eye" ~ *īn-ān* "eyes (of one man)," ~ *īn-ū*, *in-āt-um* "eyes (of several men)." Some nouns which are masculine in agreement have a plural with feminine marker, e.g., *ikkar-um* "farmer" ~ plur. *ikkar-āt-um*.

The three primary nouns *ab-um* "father," *aḫ-um* "brother" and *iṣ-um* "wood" show additional regressive length in front of the plural ending, thus *abb-ū*, *aḫḫ-ū*, *iṣṣ-ū*; and *aḫ-um* shows progressive length in front of the feminine singular, and regressive length in front of the feminine plural postfixes: *aḫ:-at* > *aḫāt-um* "sister," *aḫḫ-āt-um* "sisters" (for the notions of progressive and regressive length see below, 39.2).

A unique plural feminine formed on a reduplicated basis is *alkak-āt-um* from *alak-t-um* "way" (see above, 6.4). Perhaps a related phenomenon is also found in *išāt-āt-um* from *iš-āt-um* "fire," *it-t-āt-um* from *it-t-um* "sign," *qaš-t-āt-um* from *qaš-tum* "bow."

Certain nouns occur only in the plural, both in the masculine, e.g., *mū* "water," and the feminine, e.g., *līl-āt-um* "night," (see also above, 21.3 with note 4; 22.2); some such nouns are feminine in agreement even though there is no feminine marker, e.g., *nišū* "people." These nouns cannot be predicted, and must be given through a lexical listing.

For an overview of the special uses of gender and number see below, 26.2. For the syntactical function of collective nouns, i.e., nouns singular in form, but plural in agreement, see below, 64.

The so-called "internal plural" (known from other Semitic languages, especially Arabic) does not exist in Akkadian; for a remote possibility in this sense see above, 9.2 (*šuššu*).

Chapter 23

The Inflection of the Construct State

23.1 Concepts and terms

A noun in the construct state is bound with another element which can be either a noun, or a pronominal suffix, or a clause. In the terminology followed here, "construct" refers to the noun in the construct state, "construent" to the element directly connected with the construct, and "constructive" to the pair construct-construent; thus, for example, *bēl bītim* "master of the house" is a constructive, of which *bēl* is the construct and *bītim* the construent. (The terms "regens" and "rectum" are also in use to refer to construct and construent, respectively.) The constructive is a "bound" formation in the specific (syntactic) sense that the construct may be followed by only one of two types of morphemes, either a genitive (of a noun or pronoun) or a subjunctive (of a verb in a clause).

Two types of boundary may be distinguished between construct and construent, the difference owing to the type of the construent which follows the construct. The first type, here called Construct I, occurs when the construent is a noun or a clause: in this case construct and construent are separated by word boundary with open juncture (except for occasional sandhi). The second type, here called Construct II, occurs when the construent is a pronominal suffix: in this case, construct and construent are separated simply by morphemic boundary in closed juncture. Examples are:

Construct I: *bēl bītim* "master of the house"
bēl ana bītim illiku "the master who went to the house"

Construct II: *bēl+šu* "his master"

As a result of inflection, morphophonemic rules may come into effect so as to alter the phonemic realization of a given morphemic structure. For example, morphemic {*bēl+šu*} is realized phonemically as */belšu/*, {*bēl-t-Ø*} as */bēlet/*, {*šarr-Ø-Ø*} as */šar/*, and so on. These rules are described in detail below, 56.2. In the following paradigms, all forms are given in their morphemic structure, not their phonemic realization.

23.2 The primary system

A noun in the construct state exhibits the same range of inflectional variations as the normal state, except that within that range the differentiation is less marked. Specifically the basic system of the construct state includes two numbers (but sometimes no number differentiation at all), two genders and two or three cases.

Affixes for gender and number are the same as for the normal state, and may be tabulated as follows (as in the normal state, here, too, the infix *-ūt-* is used for the plural of masculine adjectives):

		gender	
		masculine	feminine
singular		*-Ø-*	*-at-, -t-*
plural	without infix	*-Ø-*	
	with infix	*-ūt-*	*-āt-*

The affixes for case, instead, differ in their distribution from those of the normal state. A fully marked triptotic inflection (i.e., for all three cases) is found only exceptionally, and is treated separately below (23.6). Normally the declension is either monoptotic or diptotic. In the first instance, there is an undifferentiated set of zeroes for all three cases. In the second, two further alternatives may be distinguished: either the nominative and accusative (*Ø*) are differentiated from the genitive (*ī*), or the nominative (*ū*) is differentiated from the accusative and genitive (*ī*). Accordingly, we may distinguish the following three sets of case markers:

	Set 1	Set 2	Set 3
nominative	*Ø*	*Ø*	*ū*
accusative	*Ø*	*Ø*	*ī*
genitive	*Ø*	*ī*	*ī*

The choice among the three sets of case markers depends on two factors: the type of gender/number markers to which the specific set of case markers is added, and the nature of the constructive, i.e., whether the noun is in Construct I or Construct II. The full statement concerning case markers in the construct state may be formulated as follows. Construct I uses the case markers of Set 1 (*Ø Ø Ø*) in the singular and in the plural with infix (i.e., the plural of the feminine and the adjective masculine), and those of Set 3 (*ū ī ī*) in the plural with *Ø* (i.e., the plural of the masculine substantive). Construct II uses the case markers of Set 2 (*Ø Ø ī*) in the singular and those of Set 3 (*ū ī ī*) everywhere in the plural. The complete system is tabulated in the following chart and paradigms (see below, 31.3, for a paradigm with context):

		gender		case	
		masc.	fem.	Construct I	Construct II
sing		*-ø-*	*-at-,-t-*	Set 1	Set 2
plur	with infix	*-ūt-*	*-āt*	Set 1	Set 3
	w/o infix	*-ø-*	–	Set 3	Set 3

INFLECTIONAL SCHEME FOR NUMBER, GENDER AND SETS OF CASES

	Construct I			Construct II		
	masc.	feminine		masc.	feminine	
sing	Set 1	Set 1	Set 1	Set 2	Set 2	Set 2
	šarr-ø-ø	*šarr-at-ø*	*bēl-t-ø*	*šarr-ø-ø+*	*šarr-at-ø+*	*bēl-t-ø+*
	šarr-ø-ø	*šarr-at-ø*	*bēl-t-ø*	*šarr-ø-ø+*	*šarr-at-ø+*	*bēl-t-ø+*
	šarr-ø-ø	*šarr-at-ø*	*bēl-t-ø*	*šarr-ø-ī+*	*šarr-at-ī+*	*bēl-t-ī+*
plur with infix	Set 1	Set 1		Set 3	Set 3	
	dann-ūt-ø	*šarr-āt-ø*		*dann-ūt-ū+*	*šarr-āt-ū+*	
	dann-ūt-ø	*šarr-āt-ø*		*dann-ūt-ī+*	*šarr-āt-ī+*	
	dann-ūt-ø	*šarr-āt-ø*		*dann-ūt-ī+*	*šarr-āt-ī+*	
plur w/o infix	Set 3	–		Set 3	–	
	šarr-ø-ū			*šarr-ø-ū+*		
	šarr-ø-ī			*šarr-ø-ī+*		
	šarr-ø-ī			*šarr-ø-ī+*		

PARADIGM OF THE CONSTRUCT STATE

The glosses for the paradigm are found above in the section on the normal state (22.1). Note that the plural of *bēl-t-ø* and the plural of the feminine adjective are omitted from the paradigm above because they inflect like *šarr-āt-ø* (i.e., *bēl-ēt-ø* and *dann-āt-ø*). As already mentioned above, the resolution of forms with *ø* is treated within morphophonemics, see below, 56.2. There one will also find a more complete paradigm of the various environments in which the construct state may occur.

23.3 The dual

In its occurrence, the dual of the construct state is subject to the same limitations as that of the normal state. The gender markers are those of the feminine singular, and the case endings are *-ā-* and *-ē-* for both Construct I and II. The inflectional scheme is therefore:

		Construct I	Construct II
fem.,unmarked	nom.	*šēp-ā*	*šēp-ā+*
	acc.-gen.	*šēp-ē*	*šep-ē+*
fem.,marked	nom.	*šap-t-ā*	*šap-t-ā+*
	acc.-gen.	*šap-t-ē*	*šap-t-ē+*

23.4 The secondary case system: locative, terminative and gerundive

The postfixes *-ūm*, *-iš* and *-ī* are the same in the construct as in the normal state. The locative seems occasionally to occur in the construct state without *-m*, but it is more likely that we might have in these cases a phenomenon of sandhi, e.g., *libbūm ālim /libbu$^{>>}$ālim/* "in the heart of the city," *qabaltūm ṣēri /qabaltuṣṣēri/* "within the steppe." In some cases, we have frozen forms which develop into prepositions, see below, 26.3; 33.3. For morphophonemic alternations see below, 52.2.

There are certain forms which are not productive, especially in the plural. There is in fact a general tendency[1] to use the locative and gerundive predominantly in the construct state (see also below, 33.3), and the terminative predomi-

[1] Already noted by VON SODEN 1932-33 "Hymnisch-epische" p.102.

nantly in the normal state, so much so that it has been suggested[2] that *-ūm* and *-iš* may be two allomorphs of one and the same case, the first postfix being used in bound, the second in free forms. The extent to which the postfixes can really be considered to be in complementary distribution can only be determined by a thorough statistical study, which should carefully distinguish dialectal variations.

The following chart lists all main types of forms attested for the construct of the locative, gerundive and terminative. Construct I and Construct II are given together; special phonemic realizations occurring as a result of the application of morphophonemic rules (for which see below, 52.2) are given between virgules.

		locative	terminative	gerundive
sing	masc	*kittūm Enlil* in the justice of Enlil *libbū ālim* in the heart of the city, within the city *šēpūm + ʾa /šēpuᵓᵓa/* at my foot[4]	*dāriš ūmī,* *dārātiš*[3] *ūmī* for continuity of days, i.e., for ever *kakkabiš šamāmī* like the star of the heavens *puḫriš + šun* to their assembly	*rēqūtī + šu* while being his emptiness, i.e. empty-handed *šinī + šu* while being its two, i.e., a second time *zēnī + ša* while she is hating[5] *elī awīlim* upon a man *maḫrī + šu* in front of him *wēd-iš-ī-ya* in my being lonely, by myself
	fem	*qabaltū ṣēri* within the steppe *qibītūm + ša /qibītuššа/* at her command	*qātiš + šu* to his hand	–
plur	masc	–	–	–
	fem	*ana šīmātū awīlūtim* for the destinies of men *bīnātūm + šu /bīnātuššu/* over his creatures	–	–

DISTRIBUTION OF SECONDARY CASES IN THE CONSTRUCT STATE

[2] REINER 1966 *Analysis* p.69.

[3] The form *dārātum* is generally understood as a plural form (thus both *CAD* and *AHw* s.v.). For my interpretation as *dār-ī-āt-um* with an afformative see above, 21.3.

[4] Frequently in Assyrian royal inscriptions; the singular stands for the plural, "at my feet," see below, 23.6.

[5] See above, 22.6.

23.5 Construct state in *-a(m)*

A special ending *-a(m)* for the construct state is used in poetry, proper names and lexical lists. It is attested only for the singular masculine of Construct I, almost exclusively for the nominative, but occasionally also for vocative and accusative. It is never attested for the dual or the plural, nor for the genitive, nor for Construct II. In all cases but two, the ending *-a(m)* is used after adjectives of condition or verbal adjectives, and the suggestion has been advanced[6] that *-a(m)* is in fact the regular ending of the construct state with such adjectives. But the same adjectives are also frequently inflected in the regular inflection system of the construct state, as shown for example by the pair *rapš-am uzni* vs. *rapaš-∅ uzni* "broad of understanding" (for a tentative suggestion, see below, 77.1, n.4). Therefore, the ending cannot be considered predictable in its usage, and must be described as a free variant, rare in occurrence and possibly conditioned in its use by stylistic archaism.

23.6 Special forms

Proper names may also occur in the construct state, though this happens in fact quite seldom, both because proper names are not usually qualified by a genitive and because they are essentially viewed as frozen forms, not susceptible of inflection. When in the construct state, personal names follow the same rules as common nouns, e.g., *Ištar-∅ Ninua* "Ištar of Nineveh." (For alternative ways of expressing annexion with proper names see below, 82.4.)

An important feature of the construct state is that the singular may often stand for a plural, e.g., *ūm balāṭīya* "the days (literally: day) of my life," *šēpuᵓᵓa* "at my feet (literally: foot)."

In the dual, the unmarked form is often used for nouns which are marked as feminine in the singular, e.g., *dimā + šu* "tears of his (two eyes)" next to *dimtā + šu*. Also the nouns indicated above, 22.8, as having a feminine marker in the plural but not in the singular, show the same difference in the construct state.

The feminine construct of the participles is normally formed with the infix *-at* rather than *-t*, hence {*bānī-at*} */bānāt/* "builder of" (instead of *bānīt* as in the normal state *bānī-t-um*), and *šākin-at* "the one who places" (~ normal state *šākin-t-um*). A few other nouns besides participles also show *-at-* as a free variant next to normal *-t-*, e.g., *napš-at-∅* next to *napiš-t-i* "life of."

Case inflection presents certain occasional deviations, of which the three most significant ones are presented here.

[6] REINER 1966 *Analysis* pp. 125-27.

(1) The singular of the construct state occasionally shows the postfix *-u* for the nominative instead of *ø*, e.g., *šamšu Bābilim* "the sun (god) of Babylon."[7]

(2) The singular of a few words with a monosyllabic shape occasionally show a uniform vowel *-i* in Construct I and triptotic inflection in *ū ā ī* in Construct II. They are *pūm* "mouth," *abum* "father," *aḫum* "brother," *šumum* "name," *idum* "arm," *qātum* "hand," *mārum* "son," and nouns of the patterns *pirs* or *purs* from root final weak (see below, 45), e.g., *tībum* "rising" and *būšum* "property." The regular inflection in *ø*, however, is also attested, though it is perhaps rarer in the earlier periods. The two possibilities appear as free variants. The complete inflectional scheme for the singular of these words follows:

	Construct I	Construct II
nominative	*mār-i* or *mār-ø*	*mār-ū+* or *mār-ø+*
accusative	*mār-i* or *mār-ø*	*mār-ā+* or *mār-ø+*
genitive	*mār-i* or *mār-ø*	*mār-ī+* or *mār-ī+*

Perhaps under the influence of the words just listed, nouns of the patterns *pāris* or *paris* from roots final weak may occur in the masculine of Construct I not only with *ø* of case endings, but even with elision of the final vowel of the pattern itself. Thus *kalā-um* "all" and *bānī-um* "builder" form Construct I either as *kalā-ø*, *bānī-ø* (regular), or as *kal-ø*, *bān-ø* (free variant, like *aḫ*, *mār*).

(3) Triptotic declension is also found occasionally in Construct II when the construent, i.e., the pronominal suffix added to the construct, is monoconsonantal (see below, 31.3). Examples are *libb-u-š* "his heart" (nom.) and *awāt-a-k* "your word" (acc.).

[7] *CH* v 4-5. This is an archaism, since the construct state was more fully inflected in the Old Akkadian period.

Chapter 24

The Inflection of the Absolute State

24.1 The inflectional markers

The noun in the absolute state inflects only for number and gender. In the singular, the masculine is unmarked, the feminine has a marker *-at*; in the plural, only the feminine marker *-ā* is attested. The feminine singular is unmarked with nouns which have no feminine singular marker in the normal state, and which can be recognized as feminine because of agreement or because they have a feminine plural marker (e.g., normal state *ubān-ø-um* ~ *ubān-āt-um* "finger"; absolute state *ubān-ø* ~ *ubān-ā*). Primary nouns with a feminine singular marker in the normal state, and with no masculine counterpart occur in the absolute state either unmarked (e.g., *sinniš-t-um* "woman" ~ *sinniš-ø*) or with *-at* (e.g., *bām-t-um* "half" ~ *bām-at*; *kall-at-um* "daughter-in-law" ~ *kall-at*). Given the scarcity of examples it is difficult to determine whether the choice between the two alternatives (*sinniš-ø* vs. *bām-at*) is predictable or not; a tempting hypothesis is that *-at* is used regularly after monosyllabic patterns, *ø* otherwise. There is no inflection for case. The complete inflectional scheme therefore is quite simple:

		masculine	feminine		
(normal)		*(mār-ø-um)*	*(mār-t-um*	*sinniš-t-um*	*ubān-ø-um)*
absolute	singular	*mār-ø*	*mār-at*	*sinniš-ø*	*ubān-ø*
	plural	?	*mār-ā*	*sinniš-ā*	*ubān-ā*

24.2 Inflection of cardinal numerals

Numerals form a special class with respect to internal inflection (see above 9.2) and to agreement in nominalization (see below, 81.3). With respect to external inflection, on the other hand, they are treated exactly like nouns, so that the normal rules given in this chapter apply regularly to the bases described above in 9.2. Purely for practical considerations, i.e., to show at a glance how the system as a

whole is compact and homogeneous, it seems useful to give here a paradigm of the cardinals from 1 to 60: these are normally used in the absolute state, hence the inclusion in this chapter; for reference, also the forms in the normal state are added. Forms in square brackets are reconstructed, forms in parenthesis are poorly attested.

	absolute agreeing with:		normal agreeing with:	
	masculine	feminine	masculine	feminine
1 {		*ištīat*	*ištiānum*	
	ištēn	*iltēt*	*(ištēnum)*	*(ištētum)*
2	*šinā*	*šittā*	*šinā*	*šittā*
3	*šalāšat*	*šalāš*	*šalaštum*	*šalāšum*
4	*erbēt*	*erbē*	*erbettum*	*erbūm*
5	*ḫamšat*	*ḫamiš*	*ḫamištum*	*ḫamšum*
6	*šeššet*	*[šediš]*	*šedištum*	*šeššum*
7	*sebet*	*sebe*	*sebettum*	*sebūm*
8	*[samānat]*	*[samān]*	*[samānatum]*	*samānum*
9	*tišīt*	*(tišē)*	*tišītum*	*tišūm*
10	*ešret*	*ešer*	*ešertum*	*ešrum*
11	*ištenšeret*	*[išteššer]*		
12	*šinšeret*	*[šinšer]*		
13	*[šalaššeret]*	*[šalaššer]*		
14	*[erbēšeret]*	*[erbēšer]*		
15	*ḫamiššeret*	*[ḫamiššer]*		
16	*[šeššeret]*	*[šeššer]*		
17	*[šebēšeret]*	*šebēšer*		
18	*šamānešret*	*šamānešer*		
19	*[tīšēšeret]*	*[tīšēšer]*		
20	*ešrā*			
21 - 29	?			
30	*šalāšā*			
31 - 39	?			
40	*erbā*			
41 - 49	?			
50	*ḫanšā*			
51 - 59	?			
60			*šuššum*	

Chapter 25

The Inflection of the Predicative State

25.1 The inflectional markers

A noun in the predicative state is bound with pronominal suffixes in the nominative, the list of which is given below in 31.3. The distribution of the inflectional markers is conditioned by the pronominal suffix used. With pronominal suffixes of the third person (which are marked with suffix *ø*, and *a* in Old Akkadian, see below 31.1; 77.1), the predicative state inflects for gender and number; with the other suffixes, instead, the predicative state is undifferentiated. The predicative state does not inflect for case; however, nouns in the locative state of the normal state may also occur as predicate, at least when the meaning of the secondary case is comparative and the subject is of the third person.[1] The complete inflectional scheme is as follows:

		+ unmarked suffix (*ø* "he, she, they")		+ suffix (e.g., *āku* "I," *ānu* "we")	
sing {	masc	*šarr-ø + (ø)*	"he is king"	*šarr-ø + (āku)*	"I am king"
	fem	*šarr-at + (ø)*	"she is queen"	*šarr-ø + (āku)*	"I am queen"
plur {	masc	*šarr-ū + (ø)*	"they are kings"	*šarr-ø + (ānū)*	"we are kings"
	fem	*šarr-ā + (ø)*	"they are queens"	*šarr-ø + (ānū)*	"we are queens"
secondary		*šarr-ūm + (ø)*	"he is like a king"	–	–

It must be stressed that the predicative state of the feminine is unmarked even with primary nouns which are only feminine and which have the feminine marker *-(a)t* in all other states, e.g., *kall-at-um* "daughter-in-law" occurs in the predicative state as *kall-ø + (āku)*, not **kall-at-ø + (āku)*, "(I am) a daughter-in-law."[2] Such feminines represent the only case in which a complete inflectional differentiation may be noted among all states of the noun, as indicated in the following paradigm:

[1] On this see especially W. G. LAMBERT, *Or.* NS 38 (1969) 533-38; 40 (1971) 95-98, with the objections by W. VON SODEN *Or.* N.S. 38 (1969) 415-32; 39 (1970) 311-14; 40 (1971) 99-101.

[2] W. G. LAMBERT, "The Gula Hymn of Bullutsa-rabi," *Or.* N.S. 36 (1967) p. 120:65, and often with other nouns in the same text.

Normal:	*nidin-t-um*	"the gift"
Construct I:	*nidin-t-i*	"gift of"
Construct II:	*nidin-t-a+(šu)*	"gift of"
Absolute:	*nidin-at-ø /nidnat/*	"gift"
Predicative + *ø*	*nidin-at-ø+(ø) /nidnat/*	"it is a gift"
Predicative + suffix:	*nidin-ø+(āku) /nidnāku/*	"I am a gift"

25.2 A note on the interpretation of gender/number markers

The distinction of two sets of postfixes, one marked before unmarked suffix, and the other unmarked before marked suffix, may seem arbitrary because the two sets are obviously in complementary distribution. This situation may best be illustrated by listing all possible combinations with pronominal suffixes (the suffixes as such are discussed below in 31.3):

šarr-	*ø*	*+āku*	"I am (a) king/queen"
šarr-	*ø*	*+āta*	"you are (a) king"
šarr-	*ø*	*+āti*	"you are (a) queen"
šarr-	*ø*	*+ānū*	"we are kings/queens"
šarr-	*ø*	*+ātunū*	"you are kings"
šarr-	*ø*	*+ātinā*	"you are queens"
šarr-	*ø*	*+ø*	"he is (a) king"
šarr-	*at*	*+ø*	"she is (a) queen"
šarr-	*ū*	*+ø*	"they are kings"
šarr-	*ā*	*+ø*	"they are queens"

A glance at the list suggests immediately the possibility of combining the two sets of affixes into one, revising accordingly the list of pronominal suffixes and eliminating the differentiation for gender and number in the predicative state. The resulting paradigm would be as follows:

šarr + āku
šarr + āta
šarr + āti
šarr + ānū
šarr + ātunū
šarr + ātinā
šarr + ø
šarr + at
šarr + ū
šarr + ā

On the face of it, this paradigm is appealing inasmuch as it is more economical. I do not, however, consider it acceptable, partly because of historical reasons (*ø, -āt, -ū, -ā* are not pronominal elements[3]), but even more because of structural considerations. First, *+at, +ū, +ā* are identical to the postfixes of the absolute state, where they are clearly markers of gender and number, and not pronominal elements. Second, the postfixes of the subjunctive (*-u*) and ventive moods (*-am, -m, -nim,* see below, 28.2 and 28.5) are added to the predicative state of verbal nouns only when the subject is of the third person singular. This can best be explained by assuming that the modal ending could be added directly only to the verbal core, and not to a pronominal element, hence *-at, -ū, -ā* should not be considered pronominal. Thus *damq-ø+ø+am* and *damq-ū+ø+nim* "he/they is/are good for me" are possible because *+am/+nim* are directly in contact with a verbal noun, whereas **damq-ø+āku+nim* "I am good in this direction" is not possible (and not attested) because *+nim* would be in contact with a pronominal element.

25.3 Predicative state and permansive or stative

Traditionally, the predicative state of the verbal adjective, in its bound form with the pronominal suffixes in the subject case, is considered a tense of the verb, and included in the verbal paradigms (see above 17.4). This interpretation is uneconomical (because it accounts twice for the same phenomenon), and it is erroneous (because the predicative state is not restricted to the verbal adjective, see 25.4; see also 10.2). The predicative state must be considered uniformly as a special morphological realization of the predicate of a nominal sentence; this realization is conditioned by syntactical factors identified below in 63.3. Hence the term "permansive" may be retained to refer not to a tense of the verb, but to a special type of nominal sentence, i.e., the bound form resulting from the combination of (any) noun in the predicative state plus the pronominal suffix of the subject. A fuller description of the permansive, especially in its notional categories, will be found below in the syntax (63.3; 70.7).

Note that the term "permansive" describes a combination of two distinct morphemes in much the same way as the term "constructive" (see above, 23.1). The correlation is clearly brought out by the following diagram:

permansive	predicative state	+	pronominal suffix	
	šarr	+	*āku*	"I am king"
constructive	construct state	+	pronominal suffix	
	šarr	+	*ī*	"my king"

[3] But note that such a possibility is envisaged by GELB 1969 *Sequential*, p. 179 f.

The term "stative" is also used as an equivalent of "permansive" to refer to the same phenomenon. I prefer to retain the term "permansive," and use the term "stative" for a special type of root (see below, 70.4).

It may be noted that an overriding reason why the permansive has been included in the Akkadian verbal paradigm in the first place is the presumed historical and comparative connection with West Semitic: structurally, however, the two systems are altogether different, and the resemblance is only partial and superficial.

25.4 The base

Any noun may be inflected for the predicative state. In particular, it must be noted that unmotivated nouns, too, may inflect for this state. The list of possible bases may be tabulated as follows:

unmotivated {	primary:	*šarr-āku*	"I am (a) king/queen"
	loanword:	*ṭupšarr-āku*	"I am (a) scribe"
deverbal:		*šarrāq-āku*	"I am (a) thief"
verbal:		*dann-āku*	"I am powerful"

Of the verbal nouns, it is predominantly the verbal adjective that is inflected for the predicative state. (It should be noted that traditional grammar considers a form like {*ṣabit-āku*} /*ṣabtāku*/ to be the permansive "of the verb" *ṣabātum*. But even within the traditional understanding of the permansive, the form *ṣabit-āku* is specifically the permansive of the verbal adjective *ṣabit-um*, and not generically "of the verb.") Though not nearly as frequently, the participle in the predicative state is in fact attested often enough to remove any doubt as to its productivity, e.g., *muštēzib*[4] "he is one who saves, he is concerned about saving others," *bāšī* "he is existing."[5] Admittedly, the participle in a predicative function is limited to certain contexts,[6] and is not nearly as frequent as in other Semitic languages; it is however unquestionably present in Akkadian, and cannot be ignored in favor of a privileged status for the verbal adjective. The infinitive, on the other hand, is not found in the predicative state, for general semantic reason: the description of a process would not normally be viewed as a predicate for a specific subject.

[4] F. R. Kraus,"Ein Sittenkanon in Omenform," *ZA* 43 (1936) 94:57'.

[5] E.g., *adi šamū u erṣetu bāšū* (MB *CAD B* 150) "until heaven and earth are existing, as long as they continue to exist." This form is generally interpreted as the permansive of a verbal adjective, but see my objections below, 70.6.

[6] It may be interpreted as expressing a durative function, for which there is otherwise no morphological category in Akkadian, see below, 70.8.

Chapter 26
Notional Categories

26.1 Context-free categories: affomatives

Denominal affomatives, markers for number and gender, and secondary cases have a specific semantic value which is context-free; alternatively, they refer to extra-linguistic categories.

Affomatives serve the purpose of lexical derivation, and for this reason they have been associated with internal inflection in traditional grammar (see above, 20.5). However, this correlation is valid on the notional level only, while on the formal level affomative derivation and internal inflection are irreducible. Thus *Aššur-ī-um* "Assyrian" on the one hand and, on the other, *dann-um* "powerful" are identical in terms of derivational value (as adjectives), but presuppose completely different morphological processes.

The specific functions of the affomatives have already been mentioned above in chapter 21. They serve to generate abstracts, substantives and adjectives, primarily from unmotivated nouns.

26.2 Context-free categories: number, gender

Markers for number and gender correspond primarily to aspects of physical reality, i.e., the features of count and sex. Number distinguishes single, (double), and multiple items, thus resulting in the categories of singular, (dual), and plural. Gender distinguishes the male and female sphere, resulting in the formal categories of masculine and feminine. There are, however, several deviations.

First, there are cases where morphological marking does not correspond to the pertinent physical features, e.g., when a singular marker is used for items which are plural in count ("collective"), or when an item which is feminine in sex is not marked as feminine in gender. Second, there are cases where no sex differentiation is present in the pertinent items, e.g., with inanimates or abstracts. (I do not use the term "neuter" to refer to them since this term generally indicates a special

morphological expression of gender, parallel to masculine and feminine, which is missing in Akkadian. The afformative *-(a)t-* serves in a way to express such a neuter form, see above, 21.3.) Further, there are terms which subsume individuals of either sex (e.g., *nammaštū* "animal"), and inanimates which are not differentiated by sex (e.g., *eleppu* "boat").

The resulting permutations are shown in tabular form in the chart given on the following page; further study may well fill in some of the slots which are blank, but the chart is indicative of the nature of the correlations between morphological markers and the applicable extra-linguistic categories. Next to the indication for morphological markers, I also include a further differentiation which identifies whether the syntactical agreement is masculine or feminine (about which see below 64; 81.2). For the possible interpretation of *-t-* in the types *ṭabtum* and *ḫamuštum* as afformative rather than gender marker, see above, 21.3.

26.3 Context-free categories: secondary cases

Secondary cases exhibit a wide variety of notional values (see above, 22.6-7; 23.4, where one will also find examples for the various types discussed below). The terms used to define them (locative, terminative, gerundive) are derived from the notional value which seems most distinctive, but they do not exhaust their respective notional ranges. It is because of this polyvalence that the term is often expanded to include the qualification "adverbial" (e.g., "terminative-adverbial"). I will now discuss each term in sequence, explaining the notional value which it is meant to represent, and including some of the other meanings which are applicable for each particular secondary case. To some extent, these meanings may be derived through analogical extension of what is assumed as the primary meaning represented by the term; but it is not necessary to assume that every meaning should in fact be so derived from a single, common original notional value.

The term "locative" implies reference to a specific place (*locus* in Latin), and more specifically it indicates an overlapping ("in, within") or direct contiguity ("by, at, over, upon") with the area of that particular place. Analogical extensions include a temporal ("in the second month") and modal value ("in seeing I did not see"). The existence of a comparative value ("within the sphere of (?), i.e., like") for this form is also very probable (see above, 25.1, with note 1).

The term "terminative" implies reference to a specific place viewed as the target (*terminus* in Latin) of a given action. Thus it expresses primarily the relationship of the base "towards (something else)," and in this sense it is notionally related to the dative of the personal pronoun, see below, 31.3. Analogical extensions include a temporal value ("towards continuity of days, i.e., for ever") and a modal one ("towards good, i.e., well"). In addition, the terminative is also used to

sex	morphological markers	syntactical agreement	single individual marked as:		physical totality marked as:	
			singular	plural	singular (collective)	plural
male	ms	ms	*zikarum* male	–	*ṣābum* army	*zikarū* males
	fm	ms	–	–	–	*ikkarātum* farmers
female	fm	fm	*sinništum* woman	–	–	*sinnišātum* women
	ms	fm	*ummum* mother	–	–	–
bivalent (either male or female)	ms	ms	–	–	*ṣēnum* herd	–
		fm	–	–	–	*nišū* people
	fm	fm	*nammaštūm* animal	–	–	–
		ms	–	–	–	–
undiff. (neither male nor female)	ms	ms	*iṣum* tree	–	–	*iṣ(ṣ)ū* trees
		fm	*eleppum* boat	–	–	–
	fm	fm	*ṭabtum* salt	*līlātum* night	*ḫamuštum* five day period	*eleppētum* boats
		ms	–	–	–	–

CORRELATION OF MORPHOLOGICAL MARKERS FOR GENDER AND NUMBER TO EXTRA-LINGUISTIC CATEGORIES OF SEX AND COUNT

		state				
		normal		construct	absolute	predicative
		single noun in sentence	last elem. of noun phrase	first elem. of noun phrase	single n. in sent.	single noun in sentence
syntactical function	subject	nominative	genitive	nominative genitive		
	complement	accusative genitive	genitive	accusative genitive		
	adjunct	accusative secondary	genitive	genitive accusative secondary	no case	
	vocative	nominative		nominative	no case	
	predicate		nominative secondary			no case secondary

CORRELATION OF MORPHOLOGICAL MARKERS FOR STATE AND CASE TO SYNTACTICAL CATEGORIES

express a predicative complement, e.g., "he considered something as booty" (see below, 63.7), and frequently in a comparative value ("approaching (?) something, i.e., like").

The term "gerundive" (introduced in this grammar to describe a special secondary case) implies reference to a generalized process, affecting the base to which the case ending is attached, and contiguous in time with the main process expressed in the sentence. (The Latin term, derived from the verb *gerere* "to carry," is more specific in that it envisages the general description of action as it is "carried" by a specific verbal form.) This meaning fits well most of the productive uses of the case; a literal gerundive explanation may appear stilted, but it accounts well for the pertinent semantic derivations (*šalšumī* "while it is the third day: today being the third day since an earlier point in time, that point in time is the day before yesterday," *šinīšu* "being its two: this point in time is number two in a sequence, hence a second time"). A gerundive interpretation also fits well the use with the infinitive, e.g., *zēnī-ša izēn* "while hating she hates," see above, 22.7. Even if unproductive in historical times, a frequent use of this ending is found with particles from which prepositions were derived at an early stage of the language (see below, 33.3); an analogical extension from the gerundive value may be suggested in these cases as well (e.g., *elī* "while being up, upon," *maḫrī* "while being in front, before").

26.4 Context-bound categories: primary cases

The markers for state and case (tabulated according to their syntactical functions in the chart on the preceding page) do not have a specific semantic or extra-linguistic value; they serve, instead, as overt signals of certain syntactical correlations, and as such they are intrinsically context-bound. Inasmuch as they refer to syntactical categories, a full description of their notional value can only be given within the framework of syntax. A syntactical description, however, will sort the data from the viewpoint of syntactical categories, which do not correspond on a one-to-one basis with morphological markers. Hence it is useful here to index, as it were, the pertinent markers according to their value, leaving for the syntax a structural explanation of what this value really is.

In the paradigm below, the examples are listed first by the syntactical function that the element in question serves within the sentence or phrase, and within that by state and case, following exactly the same sequence as in the chart given above. In the examples, the word which illustrates the element in question is underlined.

syntact. category	state	case	single noun in snt	noun phrase first elem.	noun phrase last elem.	example
subject	nrm	nom	x			*šarrum illik* "the king went"
	nrm	gen			x	*alāk šarrim* "the going of the king"
	cnst	nom		x		*šar mātim illik* "the king of the land went"
	cnst	gen		x		*alāk šar mātim* "the going of the king of the land"
compl.	nrm	acc	x			*šarram āmur* "I saw the king"
	nrm	gen	x			*ina šarrim amārim* "in seeing the king"

	nrm	gen		x	*amār <u>šarrim</u>* "the seeing of the king"
	cnst	acc	x		*<u>šar</u> mātim āmur* "I saw the king of the country"
	cnst	gen	x		*ina <u>šar</u> mātim amārim* "in seeing the king of the country"
adjunct	nrm	acc	x		*<u>ūṃam</u> illik* "he went today"
	nrm	sec	x		*<u>šalšūmī</u> illik* "he went the day before yesterday"
	nrm	gen		x	*wašāb <u>ṣibittim</u>* "to sit in prison"
	cnst	gen	x		*wašāb <u>ṣibitti</u> ālim* "to sit in the city prison"
	cnst	acc	x		*<u>maḫar</u> ilim izziz* "he stood in front of god"
	cnst	sec	x		*<u>šēpuššu</u> iškun* "he placed at his feet"
	abs	–	x		*<u>kayyān</u> illik* "he went constantly"
vocative	nrm	nom	x		*<u>šarrum!</u>* "oh king!"
	cnst	nom	x		*<u>šar</u> mātim!* "oh king of the land!"
	abs	–	x		*<u>šar!</u>* "oh king!"
predicate	nrm	nom	x		*šū <u>šarrum</u> dannum* "he is a mighty king"
	cnst	nom		x	*šū <u>šar</u> mātim* "he is the king of the land"
	cnst	sec		x	*šū <u>qātuššu</u>* "he is in his hands"
	pred	–	x		*<u>šar</u>* "he is king"
	pred	sec	x		*ilū <u>awīlūm</u>* "the gods are like man"

SECTION B

THE VERB

Chapter 27

Inflection for Person, Gender and Number

27.1 The basic system

Inflectional affixes for person, gender and number may be divided in two subsets, one of prefixes for person, and the other of postfixes for gender and number. The two subsets are closely interrelated, and may be considered as one single set, to be stated as follows (the box indicates the core):

		singular			plural		
		pers.	core	gend. numb.	pers.	core	gend. numb.
3rd	masc.	ʾ-	■	*-Ø*	ʾ-	■	*-ū*
	fem.	ʾ-	■	*-Ø*	ʾ-	■	*-ā*
2nd	masc.	*t-*	■	*-Ø*	*t-*	■	*-ā*
	fem.	*t-*	■	*-ī*	*t-*	■	*-ā*
1st	comm.	ʾ-	■	*-Ø*	*n-*	■	*-Ø*

Note that the personal prefix of the first singular is distinct from that of the first plural, so that no specific number postfix is added. Also note that while the personal prefix of the first singular (ʾ) is identical to that of the third singular and plural, historically they are different, in that ʾ of the third person derives from *y* (see above, 14.6; 15.1). The difference between first and third persons singular is conveyed by the quality of the first vowel of the pattern in the case of the B/N stems (see *ibidem*), while the difference is completely lost in the D/Š stems.

The prefix ʾ in word initial position is shown regularly in the paradigms, though it is generally omitted in a connected text, for the reasons stated above, 2.1.

The first vowel of the indicative B/N is given as capital *I* in the paradigms of the patterns (above, 14.2; 17.2) to indicate that it stands for a set *i/a*. The actual realizations of this set are shown here according to the rule stated above (14.6), whereby *a* is found after the prefix of the first person singular and of the second person (singular and plural), and *i* is found after the prefix of the first person plural and of the third person (singular and plural).

Inflectional affixation for person, number and gender is complete with the patterns of the indicative. Those of the imperative, on the other hand, occur only in the second person (because of the notional value of this form as a command addressed to an interlocutor), hence personal prefixes are omitted.

The paradigm on the following page gives all the finite forms of the four major stems. Patterns are built on the PRS template. For the sake of simplicity, only forms with root vowel *u/a* are given. Vowels in square brackets reflect the application of the morphophonemic rule concerning syllabic structure, for which see below, 55.1. In the N stem, the phonemic realization of N is given following the morphophonemic rules given below, 38.3.

27.2 Special forms

The third feminine singular shows occasionally the prefix *t-* instead of ʾ-. Occurrence of this variant is unpredictable and it is found only rarely in archaic Babylonian, in poetry and (under Aramaic influence) in late Babylonian.

A special dual postfix *ā* is attested rarely in Old Babylonian, and then only in the third person, marked by the prefix ʾ- (hence the resulting form is identical to the third plural feminine), e.g., *qarrad-ān šinā ʾ-imutt-ā-nim* "the two heroes will die".[1] Otherwise the normal form of the verb is the plural, even when the subject is marked by a dual postfix, e.g., *kilall-ā-šunū ʾippal-ū* "both of them will answer for."[2]

[1] *YOS* 10 31: ix 25-27 (OB).

[2] *CH* § 152 rev. ix 59-60.

			imperative	preterite	perfect	present
B	sg.	3 cm.		*ʾ-iprus*	*ʾ-iptaras*	*ʾ-iparras*
		2 ms.	*purus*	*t-aprus*	*t-aptaras*	*t-aparras*
		fm.	*pur[u]s-ī*	*t-aprus-ī*	*t-aptar[a]s-ī*	*t-aparras-ī*
		1 cm.		*ʾ-aprus*	*ʾ-aptaras*	*ʾ-aparras*
	pl.	3 ms.		*ʾ-iprus-ū*	*ʾ-iptar[a]s-ū*	*ʾ-iparras-ū*
		fm.		*ʾ-iprus-ā*	*ʾ-iptar[a]s-ā*	*ʾ-iparras-ā*
		2 cm.	*pur[u]s-ā*	*t-aprus-ā*	*t-aptar[a]s-ā*	*t-aparras-ā*
		1 cm.		*n-iprus*	*n-iptaras*	*n-iparras*
N	sg.	3 cm.		*ʾ-ipparis*	*ʾ-ittapras*	*ʾ-ipparras*
		2 ms.	*napris*	*t-apparis*	*t-attapras*	*t-apparras*
		fm.	*napris-ī*	*t-appar[i]s-ī*	*t-attapras-ī*	*t-apparras-ī*
		1 cm.		*ʾ-apparis*	*ʾ-attapras*	*ʾ-apparras*
	pl.	3 ms.		*ʾ-ippar[i]s-ū*	*ʾ-ittapras-ū*	*ʾ-ipparras-ū*
		fm.		*ʾ-ippar[i]s-ā*	*ʾ-ittapras-ā*	*ʾ-ipparras-ā*
		2 cm.	*napris-ā*	*t-appar[i]s-ā*	*t-attapras-ā*	*t-apparras-ā*
		1 cm.		*n-ipparis*	*n-ittapras*	*n-ipparras*
D	sg.	3 cm.		*ʾ-uparris*	*ʾ-uptarris*	*ʾ-uparras*
		2 ms.	*purris*	*t-uparris*	*t-uptarris*	*t-uparras*
		fm.	*purris-ī*	*t-uparris-ī*	*t-uptarris-ī*	*t-uparras-ī*
		1 cm.		*ʾ-uparris*	*ʾ-uptarris*	*ʾ-uparras*
	pl.	3 ms.		*ʾ-uparris-ū*	*ʾ-uptarris-ū*	*ʾ-uparras-ū*
		fm.		*ʾ-uparris-ā*	*ʾ-uptarris-ā*	*ʾ-uparras-ā*
		2 cm.	*purris-ā*	*t-uparris-ā*	*t-uptarris-ā*	*t-uparras-ā*
		1 cm.		*n-uparris*	*n-uptarris*	*n-uparras*
Š	sg.	3 cm.		*ʾ-ušapris*	*ʾ-uštapris*	*ʾ-ušapras*
		2 ms.	*šupris*	*t-ušapris*	*t-uštapris*	*t-ušapras*
		fm.	*šupris-ī*	*t-ušapris-ī*	*t-uštapris-ī*	*t-ušapras-ī*
		1 cm.		*ʾ-ušapris*	*ʾ-uštapris*	*ʾ-ušapras*
	pl.	3 ms.		*ʾ-ušapris-ū*	*ʾ-uštapris-ū*	*ʾ-ušapras-ū*
		fm.		*ʾ-ušapris-ā*	*ʾ-uštapris-ā*	*ʾ-ušapras-ā*
		2 cm.	*šupris-ā*	*t-ušapris-ā*	*t-uštapris-ā*	*t-ušapras-ā*
		1 cm.		*n-ušapris*	*n-uštapris*	*n-ušapras*

FINITE FORMS WITH AFFIXES OF EXTERNAL INFLECTION

Chapter 28
Modal Inflection

28.1 Introductory

The term "mood" is traditionally used for a variety of heterogeneous phenomena. In this grammar the term is retained in the same meaning it has in traditional grammars, but with a clarification of the various levels to which the term applies.

The origin of the term itself depends on the application of notional categories, which I will discuss in the next chapter. Here I will only deal with formal, i.e., inflectional, categories. We have, accordingly, a threefold division. First, there are moods marked by internal inflection, i.e., the indicative and the imperative: these I call primary moods. Second, there are moods marked by external inflection, i.e., the desiderative, the subjunctive and the ventive: these I call secondary moods. Third, there are moods marked by the presence of adverbial particles, i.e., the asseverative and the prohibitive: these I call periphrastic moods.

The formation of the primary moods (imperative and indicative) has already been treated in the chapter on internal inflection (see above, 16.3:6). The secondary moods are cumulative with respect to the primary moods, i.e., their formation may be described in terms of affixation to the primary moods. Alternatively, one may consider imperative and indicative as unmarked in contrast with the affixal markers of the other moods. Secondary and periphrastic moods will be treated in this chapter for their formal, and in the next for their notional, characteristics.

In the paradigms on the following pages, I will use the core forms from the root *kš/d* rather than the patterns from *prs*; accordingly, only forms with root vowel *u/a* are given. Vowels in square brackets mark the application of the morphophonemic rule concerning syllabic structure, for which see below, 55.1. In the N stem, the phonemic realization of N is given following the morphophonemic rules given below, 38.3.

28.2 The subjunctive

The subjunctive or relative mood expresses a statement in all subordinate sentences (conditionals, introduced by *šumma,* are not considered subordinate clauses in Akkadian, and the indicative is used instead of the subjunctive; see below, 85.1). The subjunctive is derived from the indicative (in all its tenses) by means of the postfix *-u* added to forms that do not have any postfix of external inflection; in other words, the postfix of the subjunctive must be in contact with the verbal core itself.[1] The paradigmatic translation in this grammar is of the type "that he reached" (see below 29.4 for a fuller description of notional values).

Examples of all forms of the subjunctive from the B stem from *kš/d* are given in the following paradigm. For the derived stems, only the third person is given.

		pred.state of vb adj.	preterite	perfect	present
		that he is attained, etc.	that he reached etc.	that he then reached etc.	that he reaches etc.
B sg	3 ms	*kaš[i]d-∅-u* }	*ʾ-ikšud-u*	*ʾ-iktaš[a]d-u*	*ʾ-ikaššad-u*
	fm	*kaš[i]d-at-∅* }			
	2 ms		*t-akšud-u*	*t-aktaš[a]d-u*	*t-akaššad-u*
	fm		*t-akšud-ī-∅*	*t-aktaš[a]-ī-∅*	*t-akaššad-ī-∅*
	1 cm		*ʾ-akšud-u*	*ʾ-aktaš[a]d-u*	*ʾ-akaššad-u*
pl	3 ms	*kaš[i]d-ū-∅*	*ʾ-ikšud-ū-∅*	*ʾ-iktaš[a]d-ū-∅*	*ʾ-ikaššad-ū-∅*
	fm	*kaš[i]d-ā-∅*	*ʾ-ikšud-ā-∅*	*ʾ-iktaš[a]d-ā-∅*	*ʾ-ikaššad-ā-∅*
	2 cm		*t-akšud-ā-∅*	*t-aktaš[a]d-ā-∅*	*t-akaššad-ā-∅*
	1 cm		*n-ikšud-u*	*n-iktaš[a]d-u*	*n-ikaššad-u*
N sg	3 ms	*nakšud-u*	*ʾ-ikkaš[i]d-u*	*ʾ-ittakšad-u*	*ʾ-ikkaššad-u*
D sg	3 ms	*kuššud-u*	*ʾ-ukaššid-u*	*ʾ-uktaššid-u*	*ʾ-ukaššad-u*
Š sg	3 ms	*šukšud-u*	*ʾ-ušakšid-u*	*ʾ-uštakšid-u*	*ʾ-ušakšad-u*

PARADIGM OF THE SUBJUNCTIVE

[1] This formulation excludes the marking of the subjunctive after a postfix for gender or number, as in the subjunctive *par[i]s-at-∅* contrasted to *par[i]s-∅-u*, see presently. Particularly interesting is the contrast between the marked subjunctive *tabnī-∅-u /tabnū/* "that you (ms.) built" and the unmarked subjunctive *tabnī-ī-∅ /tabnī/* "that you (fm.) built," see below, 45.2. These considerations (which apply also in the case of the ventive, see below, n. 8) are significant for our understanding of the reality of the root (see above, 8.3), since they show that affixation for the subjunctive is sensitive to the morphemic nature, and not the phonemic manifestation, of the core.

The predicative state of the verbal noun is marked for the subjunctive in *-u* only in the third masculine singular; accordingly, this excludes both the feminine (which is *par[i]s-at-ø*, and not **par[i]s-at-u*) and deverbal or primary nouns. The resulting form, i.e., *par[i]s-u*, is identical to a noun in the nominative of the normal state without mimation. It should be noted that occasionally we actually find a noun with mimation where we would expect the subjunctive of the predicative state, e.g., *kīma kan[i]k-um* "as if it were sealed."[2] This supports the interpretation of the subjunctive as related to a nominal case ending.[3]

VON SODEN[4] has noted that in some forms the syllable preceding the subjunctive marker is lengthened, possibly with stress shift, e.g., Old Babylonian *tam-m'āru+šu* "that you saw him," Neo-Babylonian *ʾisb'ussu* 'that he was angry." Such lengthening is unpredictable and, in any case, exceptional.

A special postfix *a* for the subjunctive has been identified by GELB; in Old Babylonian it occurs only a few times at Mari (otherwise it is found in Old Akkadian only). The occurrence of *a* instead of *u* is extremely rare, and should be defined as a variant, unpredictable in its usage.[5]

28.3 The desiderative

The desiderative (which subsumes the precative, cohortative and vetitive; see below, 29.5, for an explanation of the terminology), is formed by prefixes preposed to the pattern of the preterite. The markers of the desiderative are combined with the personal markers as indicated in the scheme on the following page (prefixes are both for mood and person; the notation *[V...]* indicates that the first vowel of the pattern is omitted after the prefixes *lū-* and *lī-*). The paradigmatic translation in this grammar is of the type "may he reach" (see below, 29.5, for a fuller description of notional values).

The following chart shows the resulting contrast in vocalism between indicative and desiderative:

[2] *AbB* 6 54: 7.

[3] See especially FLEISCH 1966 "Phrase relative"; GELB 1969 *Sequential* pp. 96-107.

[4] VON SODEN 1952 *Grundriss* § 83 d.

[5] In addition, rare cases of an ending *-i* are also attested, explained by GELB 1960 *Sequential* p. 106 as "a form of affection in the speech or writing habits of women." Differently, JACOBSEN 1960 "*Ittallak*" p. 110 and 1963 "Ablative Accusative" pp. 27-28 has "tentatively suggested that the modus in *-a* presents the subject as 'willing,' 'approachable,' that in *-u* as 'under constraint,' 'forced'." VON SODEN 1961 "Akkusativ" p. 160 f. interprets the mood in *-i* as strongly emphatic.

	B stem		D stem	
singular	3rd	1st	3rd	1st
indicative	*ʾiprus*	*ʾaprus*	*ʾuparris*	*ʾuparris*
desiderative	*liprus*	*luprus*	*līparris*	*lūparris*

	desiderative		
	positive		negative
	precative	cohortative	vetitive
sing. 3rd	*lī-[V...]*		*ʾayy-*
2nd			*ʾēt-*
1st		*lū-[V...]*	*ʾayy-*
plur.3rd	*lī-[V...]*		*ʾayy-*
2nd			*ʾēt-*
1st		*ʾīn-*	*?*

MARKERS OF THE DESIDERATIVE

Because of phonotactic rules (for which see below, 55.1), I consider the prefix of the first person plural as long, i.e., *ʾīnuparris* (if short, phonotactic rules would require the apheresis of *u*, hence **ʾinparris* **/ʾipparris/*). Traditional grammar considers *ʾi* as a separate word with short vowel (hence *ʾi nuparris*). My preference for considering this particle as a prefix (with long vowel) is based on structural and partly on historical considerations. (1) All other forms of the desiderative are formed with a prefix, and there is no particular reason to assume that the situation is different with the first person plural. (2) A rare form of the third singular feminine uses a similar prefix *ʾīt-* (see presently). (3) Since there are reasons to believe that there was a difference in stress between desiderative and indicative preterite (*ʾiprus ~ lipr'us*), it seems logical to assume that the difference carried over to the first person plural; and this, too, would seem to be more easily explained assuming that the opposition in stress is linked to an opposition in prefixation element (*n'iprus ~ ʾīnipr'us*). Note that while the argument for difference in stress is historical in nature (see presently, 28.4), the assumed difference that is postulated between the two forms is synchronic, since it would result in a stress opposition.

Because of the same phonotactic rule, I consider the prefix of the vetitive 3rd and 1st person as having long *y* (it is traditionally considered short; but then a form like *ʾay-uparris* would be realized as **/ʾayparris/*). Long *y* is favored by historical considerations, for which see presently.

Positive wish for the second person is not expressed by the desiderative. In its place one finds (with different nuances in meaning) either (1) the imperative, or

(2) the independent particle *lū* followed by the present or the noun in the predicative state, e.g., *lū taḫassas* "you should think," *lū balṭ-āta* "may you be in good health."

Parallel to the rare use of *t-* as personal prefix of the 3rd feminine singular is the equally rare desiderative prefix *īt-* (alternatively *ʾīt-*) in place of normal *lī-[V]*, e.g., *ʾīt-uktabbit* (for *liktabbit*)"may she be honored."[6] This is similar in derivation to the first person plural (*ʾīnukabbit*).

Examples of the desiderative for all four main stems from *kš/d* follow. Forms are given in morphemic notation; through the application of morphophonemic rules (see below, 54), long vowel followed by cluster is realized as short.

		B	N	D	Š
Positive wish					
		may he reach	may he be reached	may he make reached	may he cause to r.
sg.	3 cm	*lī-kšud*	*lī-kkašid*	*lī-kaššid*	*lī-šakšid*
	2 cm	–	–	–	–
	1 cm	*lū-kšud*	*lū-kkašid*	*lū-kaššid*	*lū-šakšid*
pl.	3 ms	*lī-kšud-ū*	*lī-kkaš[i]d-ū*	*lī-kaššid-ū*	*lī-šakšid-ū*
	fm	*lī-kšud-ā*	*lī-kkaš[i]d-ā*	*lī-kaššid-ā*	*lī-šakšid-ā*
	2 cm	–	–	–	–
	1 cm	*ʾīn-ikšud*	*ʾīn-ikkašid*	*ʾīn-ukaššid*	*ʾīn-ušakšid*
Negative wish					
		may he not reach	may he not be r'd	may he not make r'd	may he not c. to r.
sg.	3 cm	*ʾayy-ikšud*	*ʾayy-ikkašid*	*ʾayy-ukaššid*	*ʾayy-ušakšid*
	2 ms	*ʾēt-akšud*	*ʾēt-akkašid*	*ʾēt-ukaššid*	*ʾēt-ušakšid*
	fm	*ʾēt-akšud-ī*	*ʾēt-akkaš[i]d-ī*	*ʾēt-ukaššid-ī*	*ʾēt-ušakšid-ī*
	1 cm	*ʾayy-akšud*	*ʾayy-akkašid*	*ʾayy-ukaššid*	*ʾayy-ušakšid*
pl.	3 ms	*ʾayy-ikšud-ū*	*ʾayy-ikkaš[i]d-ū*	*ʾayy-ukaššid-ū*	*ʾayy-ušakšid-ū*
	fm	*ʾayy-ikšud-ā*	*ʾayy-ikkaš[i]d-ā*	*ʾayy-ukaššid-ā*	*ʾayy-ušakšid-ā*
	2 cm	*ʾēt-akšud-ā*	*ʾēt-akkašid-ā*	*ʾēt-ukaššid-ā*	*ʾēt-ušakšid-ā*
	1 cm	?	?	?	?

PARADIGM OF THE DESIDERATIVE

[6] W. G. LAMBERT and A. R. MILLARD, *Atra-Ḫasīs. The Babylonian Story of the Flood*. Oxford 1969, p. 154.

28.4 Historical note on the desiderative

Though simple in its outward structure, the desiderative presupposes a complex historical development. A few remarks are in place here, because they help toward a better structural understanding. Three premises are necessary. (1) The marker of the precative is generally assumed to have been the same as the independent particle *lū* which occurs with the asseverative (see below). (2) The personal prefix of the third person, on the other hand, is generally assumed to have been *y* (see above, 15.1). (3) The pattern *-IprVs-* has two basic meanings one referring to the past (preterite), the other to the future (desiderative); the same polarity is also found in the other Semitic languages. A satisfactory explanation of this apparent contradiction has been advanced by HETZRON:[7] he proposes that Proto-Semitic had, instead of a single undifferentiated pattern *-IprVs-*, two patterns differentiated by stress, namely *-ˈIprVs-* and *-IprVs-*, the first of which would be behind the Akkadian preterite, the second behind the desiderative. (In this light, it is incorrect to reconstruct the desiderative as a form derived from the patterns of the preterite, since stress opposition would be operative not only on the historical, but on the synchronic level as well.)

On the basis of these premises, the following reconstruction of the Proto-Akkadian desiderative may be suggested (I omit the plural forms, which are identical, except for the postfix):

precative	3 sg.(/pl.)	**lū-y-apr'us*	> *lī-[a]pr'us /lipr'us/*
cohortative	1 sg.	**lū-ʾ-apr'us*	> *lū-[a]pr'us /lupr'us/*
	1 pl.	**ʾī-n-apr'us*	> *ʾīn-ipr'us*
vetitive	3 sg.(/pl.)	**ʾay-y-apr'us*	> *ʾayy-ipr'us*
	1 sg.	**ʾay-ʾ-apr'us*	> *ʾayy-apr'us*
	2 sg.(/pl.)	**ʾē-t-apr'us*	> *ʾēt-apr'us*

Note the following points. (1) The distinction (in Babylonian) between the forms *luprus* and *liprus* may be explained on the basis of the position of stress in final position. In both cases, the personal marker is an unstable consonant (ʾ and *y* respectively), and it is dropped – with assimilation resulting in the case of the third person, i.e., *lū-y-* > *lī-*. (2) The first vowel of the pattern drops whenever phonemically possible, i.e., whenever the resulting form does not yield a cluster with more than two consonants. Thus it drops in *lī[a]pr'us* but not in *ʾīnipr'us* (since **ʾīn[i]pr'us* would yield an impossible **ʾīnprus*) or *ʾayyipr'us* (**ʾayypr'us*). Exceptions to this rule occur in the derived stems (e.g., *ʾīnuparris*) and may be explained through analogy with the B stem. Phonetically, the apheresis of the first pattern vowel may be explained as resulting from the position of the stress in final

[7] HETZRON 1969 "*y'aqtul*."

position, which, as far as we know, is abnormal for Akkadian. (3) The form *ʾayyiprus* is the only instance in Babylonian where *y* is preserved as the overt marker of the third person in verbal external inflection. (4) With this reconstruction, the modal prefixes of the desiderative are all kept clearly distinguished from the personal prefixes. (5) Finally, this reconstruction seems to support the interpretation proposed above (28.3) of *ʾī-n-* as the marker of the cohortative plural (rather than a separate particle *ʾi*), since it provides for a uniform distribution of modal markers.

28.5 The ventive

The ventive, or allative (see below, 29.3; 66.6, for an explanation of the terms and for a discussion of the notional value), is characterized by postfixes which may be added after any finite form and after the predicative state of the verbal noun (but not after the predicative state of deverbal or primary nouns), when the latter is followed by a pronominal suffix unmarked for person. The postfixes are:

-m	after $+\bar{\imath}$[8]
-nim[9]	after $+\bar{u}$ and $+\bar{a}$
-ø	after $+at+\emptyset$ (i.e., after a feminine singular noun in the predicative state)
-am[10]	in all other cases, i.e., after consonant and after vowel not preceded by morphemic boundary, or alternatively when attached directly to the base.

The paradigmatic translation is of the type "he reached towards" (see below, 29.3 for a fuller description of notional values).

The ventive is cumulative with all moods which do not have modal postfixes, i.e., imperative, indicative and desiderative. Ventive and subjunctive, on the other hand, both being postfixal moods, seem to be incompatible. If there is some uncertainty in this respect, it results from the distribution of the postfixes of the two moods: ventive *-m* and *-nim* would occur after subjunctive *ø*, ventive *-am* would

[8] Note that this statement applies strictly as defined, i.e., to *ī* after morphemic boundary, which occurs only with the second singular feminine, e.g., *t-aprus-ī-m*. This excludes specifically the case of final weak verbs (see below, 45.2), where final *ī* does not occur after morphemic boundary, e.g., *ibnī-am*. See also above, n. 1.

[9] The element *ni-* is analyzed by JACOBSEN 1960 *"Ittallak"* p. 109 f. as a special morpheme, serving as marker "of plural subject near speaker but exclusive of him."

[10] The element *a* is analyzed by JACOBSEN, *loc. cit.*, as a separate modal marker presenting "the subject as 'willing', 'approachable'." The *a* marker would be the same as the one occurring without *-m* in Old Akkadian and analyzed as a subjunctive by GELB 1969 *Sequential* 96-107.

occur after subjunctive *-u*. The first type is not distinctive (since the subjunctive is identical to the indicative), the second would result in the contraction *-ām*, not shown in writing. The traditional assumption is that subjunctive and ventive are in fact mutually exclusive, and that the ventive may occur in place of the subjunctive in subordinate clauses. GELB, however, has argued[11] in favor of seeing a covert subjunctive marker in the ventive. He suggests that in this case the subjunctive marker is *-a* rather than *-u*; he also quotes a special form of the second person singular feminine with the subjunctive marker *-u* (instead of *ø*) followed by the ventive *-nim*: *tadammiq-ū-nim* "when you become good towards" = "when you are well again." This exceptional form (instead of *tadammiq-ī-m*) is the only one where subjunctive and ventive are in fact shown overtly. In this grammar the traditional position will be followed, whereby it is assumed that the ventive ending does not include covertly a subjunctive marker, hence *-am* will be transcribed short rather than long. For, if there did in fact exist a ventive-subjunctive postfix *-ām* < **-u-am*, then one would expect to find at least some uncontracted forms preserved in Old Babylonian (or any other dialect); while the suggestion that *-ām* or *-am* include a subjunctive marker *-a* presupposes a more productive usage of this marker than it is in fact possible to document.

Examples of all forms of the ventive from the B stem with root vowel *u/a* are given in the paradigm on the following page. Forms are given in morphemic notation; through the application of morphophonemic rules (see below, 54), long vowel followed by cluster is realized as short.

28.6 Asseverative and prohibitive

Two additional verbal constructions, sometimes regarded as moods, are not in fact inflectional categories, and thus not moods in a proper or morphological sense. They are instead periphrastic constructions, with an independent particle which acts as adverb adding a semantic nuance to the specific meaning of the verb.

The asseverative expresses an emphatic affirmation and consists of the particle *lū* with the meaning "indeed, certainly" in front of any verbal form, e.g., *lū ʾ-allik-am* "indeed I came." With the permansive, the periphrastic construction with *lū* may acquire a desiderative meaning, e.g., *lū balṭāta* "may you be in good health."

The prohibitive expresses negative command and consists of the particle *lā* in front of the present; it serves as the negative counterpart of the imperative, and is normally translated as "do not ...," e.g., *lā t-apallaḫ* "do not fear." It can also occur with the third person, expressing a negative command (whereas the vetitive expresses a negative wish) *lā ʾ-udabbab-ū* "let them not speak' (vs. *ʾayy-udabbab-ū* "may they not speak").

[11] GELB 1969 *Sequential* p. 105.

			imperative	preterite	perfect	present
			reach toward!	he reached toward	he then reached toward	he reaches toward
sg	3	cm		*ʾ-ikšud-am*	*ʾ-iktaš[a]d-am*	*ʾ-ikaššad-am*
	2	ms	*kuš[u]d-am*	*t-akšud-am*	*t-aktaš[a]d-am*	*t-akaššad-am*
		fm	*kuš[u]d-ī-m*	*t-akšud-ī-m*	*t-aktaš[a]d-ī-m*	*t-akaššad-ī-m*
	1	cm		*ʾakšud-am*	*ʾ-aktaš[a]d-am*	*ʾ-akaššad-am*
pl	3	ms		*ʾ-ikšud-ū-nim*	*ʾ-iktaš[a]d-ū-nim*	*ʾ-ikaššad-ū-nim*
		fm		*ʾ-ikšud-ā-nim*	*ʾ-iktaš[a]d-ā-nim*	*ʾ-ikaššad-ā-nim*
	2	cm	*kuš[u]d-ā-nim*	*t-akšud-ā-nim*	*t-aktaš[a]d-ā-nim*	*t-akaššad-ā-nim*
	1	cm		*n-ikšud-am*	*n-iktaš[a]d-am*	*n-ikaššad-am*

			verbal adjective
			reached toward
sg	3	ms	*kaš[i]d-∅ + ∅-am*
		fm	*kaš[i]d-at + ∅-∅*
pl	3	ms	*kaš[i]d-ū + ∅-nim*
		fm	*kaš[i]d-ā + ∅-nim*

			desiderative	
			positive	negative
			may he reach toward	may he not reach toward
sg	3	cm	*lī-kšud-am*	*ʾayy-ikšud-am*
	2	ms		*ʾēt-akšud-am*
		fm		*ʾēt-akšud-ī-m*
	1	cm	*lū-kšud-am*	*ʾayy-akšud-am*
pl	3	ms	*lī-kšud-ū-nim*	*ʾayy-ikšud-ū-nim*
		fm	*lī-kšud-ā-nim*	*ʾayy-ikšud-ā-nim*
	2	cm		*ʾēt-akšud-ā-nim*
	1	cm	*ʾīn-ikšud-am*	*?*

PARADIGM OF THE VENTIVE (B STEM)

28.7 Summary of the moods

The conditions of occurrence of all the "moods" is summarized in the following chart:

nature of construct.	form	markers	terms				
				predic.	indicative		
primary	primary moods & tenses	unmrk'd	imper.	state of vb adj.	pret.	perf.	pres.
	subj.	*-u*		(■)	■	■	■
secondary	desid.	*lī-, lū-, ʾīn-; ʾēt-, ʾayy-*			(■)		
	ventive	*-m, -nim, -∅, -am*	■	(■)	■	■	■
periphr.	prohib.	*lā*					■
	assev.	*lū*		■	■	■	■

Chapter 29
Notional Categories

29.1 Introductory

The notional categories of verbal external inflection may be divided into two types, depending on whether they are context-bound or context-free.

Inflection for person, gender and number are context-bound, inasmuch as the pertinent markers agree with the subject, considered as the topic to which the verb (as comment) adds a qualification.

Inflection for mood, on the other hand, is either context-bound or context-free, depending on the particular form. In both cases, there are considerable overlaps with notional categories based on internal inflection (for which see above, 16), so much so that the same term is used for both (primary and secondary "moods"). Here, I will refer briefly to internal inflection in order to explain these overlaps with external inflection by showing how these notional categories cut across morphological classes.

Context-free moods describe the attitude of the speaker toward the process, depending on whether there is a description of the process or a summons to the process, both being in turn qualified by a variety of nuances: the description may be a simple statement of process (indicative) or a verification of process (asseverative), the summons may be an order, either positive (imperative) or negative (prohibitive), or else it may be a wish, either positive (cohortative, precative) or negative (vetitive). These moods are context-free because the connotation rendered by the inflectional category is not conditioned by the presence or absence of other syntactic constituents in the sentence.

Two other moods are instead context-bound inasmuch as they must cooccur with, i.e., they are conditioned by, other constituents. The ventive is the correlative of an adjunct of motion toward a given point: it thus corresponds semantically to the separative (which is however not considered a mood, but a stem, see above, 16). The subjunctive is the correlative of subordination, i.e., it occurs whenever a verb is introduced by a conjunction or a relative pronoun: it thus corresponds to the state and case of the noun (see above, 26.2, 3).

In the rest of the chapter, I will discuss the notional values of the individual forms derived through external inflection. First, it may be useful to present in tabular form the correlation of all the moods, including those derived through internal inflection.

<table>
<tr><th colspan="3">contextual categories</th><th>terms</th><th>inflectional categories</th></tr>
<tr><td rowspan="7">context-free</td><td rowspan="7">attitude of speaker</td><td>statement</td><td>indicative</td><td rowspan="2">primary (int.infl.)</td></tr>
<tr><td>summons (positive order)</td><td>imperative</td></tr>
<tr><td>verification of statement</td><td>asseverative</td><td rowspan="2">periphrastic</td></tr>
<tr><td>summons (negative order)</td><td>prohibitive</td></tr>
<tr><td>summons (positive wish)</td><td>cohortative precative</td><td rowspan="3">secondary (ext.infl.)</td></tr>
<tr><td>summons (negative wish)</td><td>vetitive</td></tr>
<tr><td rowspan="2">context-bound</td><td>semantic correlations</td><td>motion towards</td><td>ventive</td></tr>
<tr><td>syntactic correlations</td><td>subordination</td><td>subjunctive</td></tr>
</table>

CLASSIFICATION OF THE MOODS

29.2 Reference to subject (person, number, gender)

All finite verbal forms contain a built-in reference to person and number, and in most cases to gender as well. The choice of the appropriate form is determined by the context, assuming that the topic is primary and the comment (expressed by the verb) is secondary.

It should be noted that there are multiple degrees of referentiality, of which the one expressed by verbal external inflection is the most generic. While this topic will be discussed in greater detail within syntax (see below, 66.6), the following may be said here. A simple finite verbal form such as *ʾiṣbat* "he seized" is a complete sentence, since the subject is expressed by the bound pronominal element *ʾ-*. This subject is, however, the most generic possible. A noun or a personal name would add a higher degree of specificity, while a pronoun would lie somewhere in-between. The situation is similar to that found in a modern language like English, except that here the pronominal element is not bound with the finite form of the verb, and thus can be omitted when a more explicit reference to the subject is present – hence the contrast between *awīlum ʾ-iṣbat* and its correlative "the man seized" (rather than *"the man he seized"). In this respect, the relationship between different degrees of referentiality in expressing the subject of a verb is parallel to the phenomenon of determination (see below, 66.6), which also renders a range of varying degrees of referentiality of a noun within the discourse.

29.3 Reference to adjunct of motion (ventive)

Notionally, the ventive contains a built-in reference to an adjunct of motion towards a point which is either explicitly given elsewhere in the sentence through an adjunct, or else it is assumed: *illikam* "he went in a certain (aforementioned or assumed) direction." Paradigmatically, then, the complete sentence would be something like *ana ālim illikam* "to the city he-went-towards"; if the adjunct *ana ālim* is not present in the sentence, then it may be assumed on the basis of the overall discourse. This so-called "mood" has nothing to do, therefore, with the common notional understanding of the category of mood, and it is simply a resumptive device, i.e., a morphological mechanism which recalls a specific syntactic element; for this reason, a proper understanding of the concept of ventive can only derive from the syntactical treatment of adjunct (for which see below, 66.6). This type of internal cross-reference (which may have been borrowed from Sumerian) is found frequently in Akkadian, e.g., with the separative (see above, 16.4), possibly with mimation (see above, 22.3), or with the resumptive pronoun (see below, 57.9).

The cross-referential value of the ventive should not be so understood that one should always expect the presence of an explicit adjunct of motion. In some cases, the referent is not immediately apparent, but it may be all the more rewarding to look for it carefully. For example, in the corpus described above in the Introduction (n.2), there are 54 occurrences of *ulammidanni/ulammidūninni* 'he/they informed-towards me," and only one without the ventive. All the instances from

the first group describe the sending of information from far away *towards* the capital, except for one case[1] where, however, there is an explicit correlation to a verb of motion ("they brought PN before me and he informed-towards me"). The single occurrence without ventive, on the other hand, is found in a text where the information is provided by individuals who are in the presence of the king:

PN's ša ittīya innamrū kīʾam ulammidūni[2]
"(the named individuals) who appeared in my presence gave me the following information."

Here direct face-to-face communication is envisaged, rather than locative transfer of information, hence no ventive is used. For a similar use of *iškun* see *AbB* 4 13:5.11. For an analogous case with the *t* stem see above, 16.5:4.

While the notional value just described is broadly applicable especially in the earlier periods, there are cases where such an explicit notional function is not apparent, and the form seems to have acquired an almost purely euphonic function. This is especially the case when the verb is followed by a pronominal suffix: thus, for example, the ventive form *imḫur-am-ni /imḫuranni/* "he received me" is prevalent over the non-ventive *imḫur-ni*, which ostensibly has the same meaning. But what does "euphonic" really mean? A more precise description of the phenomenon may in fact lead in a different direction: because of the presumed change in stress resulting from the addition of the ventive marker, which would result in *imḫurʾanni* instead of *imḫʾur-ni* (see below, 31.6), the form in *-ʾanni* would place a certain emphasis (see below, 66.8) on the pronominal suffix, in which case the difference might be described as follows:

imḫʾur-ni "he received me"
imḫur-ʾanni "he received *me*."

This is suggested in a hypothetical way. Only an extensive study, based on a comprehensive statistical analysis of given corpora, can presumably arrive at a safe determination of the nuances that may lie behind specific distributional patterns.

The term "ventive" is derived from the connotation indicated above, as applied specifically to the root *ʾl\k* "to go." In the ventive, this verb comes to mean in practice "to go towards the speaker or towards the subject," which in English is rendered by the verb "to come" (*venīre* in Latin, whence the term "ventive"; note that there is in Akkadian no root which has by itself this meaning).

An alternative term is also used for this form, namely "allative," which also derives from a Latin verb (*afferre*, from *ad-ferre*, "to bring to"; the term is derived from the past participle of this verb, *allatum*). From the point of view of nomenclature, this term may perhaps be more appropriate, because it conveys both

[1] *AbB* 2 2:9.

[2] *AbB* 2 10:9.

through its meaning and through its Latin derivation the same expressive structure as the Akkadian form (the preverbal element *ad* corresponds to the Akkadian affix, and the meaning of the Latin verb has a built-in reference to the direction towards a certain point). However, the term "allative" is also used appropriately for a type of adjunct (see below, 66.2), and thus may best be reserved for that purpose. Accordingly the term "ventive," which is in any case more commonly in use, will be retained here for the verbal mood.

29.4 Definition of syntactical role (subjunctive)

The subjunctive has properly no notional value, since it serves purely a formal function as marker of subordination. As such, it occurs after all subordinating conjunctions (see below, 66.3; 89.7) and within attributive or relative clauses (see below, 76.2). Note that conditionals are not subordinate clauses in Akkadian (see below, 86.2; 89.8), and do not accordingly occur with the subjunctive.

29.5 Attitude of speaker (summons)

A wide variety of forms may be combined under the single notional heading of summons, i.e., a request in the form of an order or a wish, expressed either positively or negatively. An order can be addressed only to a direct interlocutor, and it is called imperative when it is positive, prohibitive when it is negative. A positive wish, may be addressed to all persons, though it is not in fact attested when addressed to an interlocutor in the positive form. Traditionally, different terms are used for the first and second person of positive wish; the terms, which are retained here (though there is no inflectional distinction between the two), express the notions of self-encouragement or exhortation ("cohortative") for first person, and of polite request ("precative," from the Latin term for "praying") for the third person.

I use the term "desiderative" to subsume the various forms expressing positive or negative wish on the part of the speaker, which are normally rendered in English by the auxiliary "may" or "let" in front of the main verb, e.g., "I wish that he may (not) go" = "may he (not) go," "let him (not) go." When the subject of the main action is of the third person, and the action is positive, the desiderative is traditionally called precative (or optative or jussive); with a first person subject and positive action, the traditional term is cohortative; with negative action and any person as subject, the traditional term is vetitive. Since precative, cohortative

and vetitive are in complementary distribution, they should all be subsumed under the same category, which is here called "desiderative."

The complete scheme of notional relationships is tabulated in the following chart (see above, 28.6, for periphrastic forms):

	person	positive	negative
order	1 2 3	– imperative –	– prohibitive –
wish	1 2 3	cohortative – precative	} vetitive

While both the prohibitive and the asseverative are similar in the way in which they are derived (through the addition of an independent particle), only the prohibitive is notionally parallel to a mood proper, since it is the negative correlative of the imperative.

As mentioned above (28.6), the periphrastic construction *lū* + desiderative also has a desiderative function, whereas *lū* + indicative is considered as "asseverative." The asseverative can hardly be considered a mood, since the function of the independent particle *lū* (as in *lū iṣbat* "indeed he seized") may more closely be compared to that of an adverb or other analogous constructions (e.g., *ina kīnātim iṣbat* "in truth he seized," see below, 66.8). It is included in this chapter only because it is generally considered a mood in traditional grammar.

SECTION C
THE PRONOUN

Chapter 30
Types of Pronominal Inflection

30.1 Morphological vs. syntactical considerations

The term "pronoun" refers to an element which, in a sentence, is used in place of a noun or, more specifically, in place of a substantive. As such, the term defines primarily a syntactical, not a morphological category. Only implicitly does this entail a reference to morphology: if the element in question replaces the noun, it must be different from it. As it happens, an explicitly morphological definition of pronouns is in fact possible: to this end, the pronouns may be viewed partly as an alternative, and partly as a defective, system of nominal inflection. If viewed purely morphologically, we may speak of a "para-nominal," rather than a "pro-nominal" class of words, since their morphological characteristics is not so much that they replace nouns, but that their inflection is only in part similar to that of nouns. In point of fact, some of the words which share in the "pronominal" type of inflection, are not properly "pronouns" in the sense that they do not, syntactically, replace substantives, but are plain and simple adjectives (for the distinction between adjectives and substantives see especially above, 20.3, and below, 63.5). Here I will use the traditional term "pronominal" to refer to such a "para-nominal" morphological class, so that the term "pronoun" will subsume elements which function syntactically as both substantives and adjectives. Additionally, there are also semantic considerations which distinguish pronouns as a class by themselves: these will be referred to briefly below and in chapter 32.

As indicated, the inflectional characteristics of pronouns can be described as defective or alternative vis-à-vis nominal inflection. The main defective aspect is that pronouns do not, but for few exceptions, fit in the nominal system of states. This peculiarity is proper of all types of pronouns.

One further defective aspect is that certain pronouns do not inflect for gender, number or case. In this sense they may be considered as invariables, or as nouns occurring only in the absolute state. This group of pronouns is treated in the next section (30.2).

A first type of alternative nominal inflection is found with a class of pronouns which admit of nunation next to mimation. As it happens, they belong to two distinct semantic classes. (1) The demonstrative pronouns are adjectives which imply a built-in reference to degrees of proximity vis-à-vis the speaker ("this" implying close proximity, and "that" implying a relative distance). (2) The possessive pronouns are adjectives which imply a built-in reference to the speaker(s) ("mine, ours"), the interlocutor(s) ("yours"), or a third party ("his, hers, theirs"). This class of pronouns will be dealt with in 30.3.

A second, and more complex, system of alternative nominal inflection is discussed in the next chapter. The personal pronouns are based on two distinct, but parallel, sets of noun bases, which are related to their syntactical role as subject or non-subject, and which exhibit an altogether unique set of markers for number, gender and case. While here, too, there is no system of states, we have something which may be considered as its equivalent in a converse sort of way. Personal pronouns may occur either as independent words or as suffixed elements, and this distinction is proportional in part to their syntactical role – whereby the genitive occurs only as a suffix, while the nominative, accusative and dative occur in either form (but see below, 31.3, 8). There is also an unusual distribution vis-à-vis prepositions, since with independent pronouns either the accusative or the dative are used in lieu of the (missing) genitive forms.

30.2 Limited nominal inflection

The two interrogative pronouns *mann-um* "who?" and *mīn-um* or *mīnūm* (i.e., *mīn-ī-um* with afformative *-ī-*, see above, 21.4) "what?" inflect only for case (using the postfixes of nominal inflection *-um, -am, -im*), and not for gender or number. Both pronouns may occur in the construct state, according to the same rules that apply for the noun (e.g., *ana mannī-ya* "for whom among mine?" *mīn-ī* "what of mine?"). The absolute state is not attested in Babylonian (but see below under the discussion of the indefinite pronouns, and note that the Old Akkadian forms *man, min* may be interpreted as being in the absolute state), nor is the predicative state, the latter being impossible since interrogative pronouns cannot occur as predicate because of their semantic value. GELB[1] has noted that this is the only opposition in

[1] GELB 1969 *Sequential* p. 38.

Akkadian between animate and inanimate subjects; if this opposition were understood in a morphological sense, then this would also be the only case in which pronouns (or, for that matter, any noun not formed of a verbal root, other than numerals) exhibit interdigitation, for *man* and *mīn* could be considered as based on patterns *par* and *pīr*. (Note that the interrogative adjective *ayyū* "which" belongs entirely with the noun, and not with the pronoun; the inflection is *ayy-ī-u, ayy-ī-t-um*; **ayy-ī-ūt-um, ayy-ī-āt-um*.)

The determinative pronoun *ša* "the one of" occurs only in the construct state (because of its semantic value) and is undifferentiated, except in a few frozen expressions where it inflects for number and gender, i.e., fem. sing. *šāt* "the one of," as in *Šāt-Aya* "The one of the (goddess) Aya," and masc. plur. *šūt* "those of," as in *šūt rēši* "those of the head (i.e., attendants)."

The relative pronouns *ša* "who, which," and *mala* "whatever," are completely undifferentiated. Since in their syntactical environment the relative pronouns are parallel to a noun in the construct state, they, too, may be considered to occur in the construct state only.

The indefinite pronouns are also undifferentiated and they may be considered to occur in the absolute state: note in fact that in their formation they are identical to distributive expressions for which the absolute state of the noun is used, e.g., *ina kar kar-ma* "in every colony" (see below, 66.2). The pronouns are: *mamman, mamma* and *manman* "someone; whoever," with negation "none"; *mimma* "anything," with negation "nothing" (see above, 6.3). To the extent that it may be followed by a genitive, *mimma* may be said to occur in the construct state, e.g., *mimma annīm* "all of this." (Note the noun *mimmū* "everything, anything" derived from *mimma* by means of the denominal affix *ī* and declined regularly as a noun, with triptotic inflection in the construct state.)

The various types of limited inflection are summarized in the chart below, where only attested occurrences are checked.

		normal			construct				abs.	pred.
		nmb	gnd	case	nmb	gnd	case	undiff.		
interr.	*mannum*			x			x		(x)	
	mīnum			x			x		(x)	
determ.	*ša*				(x)	(x)		x		
relat.	*ša*							x		
	mala							x		
indef.	*mamman*								x	
	mimma							x	x	

30.3 Inflection with nunation

Two types of pronouns, demonstrative and possessive, have a double inflection: (1) a regular nominal inflection, and (2) variants with nunation (from *nūn*, the Arabic word for the letter n), added to postfixes of feminine and plural forms instead of mimation. Since nunation occurs only with the pronouns mentioned, it may be considered as a (partial) characteristic of pronominal inflection. The pronouns in question are the demonstratives *ʾanni-ī-um, ʾannūm*, and *ʾannimmū* "this," and the possessives *yūm* "mine," *kūm* "yours," *šūm* "his, hers," *nūm* "ours."[2]

The possessive pronouns are formed from the pronominal elements of Set II (for which see the next chapter) with the afformative *-ā*ʾ- (see above, 21.3), which is realized as *-at-(t-)* in the feminine:

*y-ā*ʾ-	*y-ā*ʾ*-um, yūm*	*y-ā*ʾ*-t-um /yattum/*	"mine"
*k-ā*ʾ-	**k-ā*ʾ*-um, kūm*	*k-ā*ʾ*-t-um /kattum/*	"thine"
*š-ā*ʾ-	**š-ā*ʾ*-um, šūm*	*š-ā*ʾ*-t-um /šattum/*	"his, hers"

Note that with the pronominal elements of the first singular and first plural the feminine occurs also as *yuttun* and *nuttum* respectively. Note also that the possessive pronouns, unlike the personal pronouns with which they share the same base, do not differentiate the gender of the subject, i.e., the possessor: a man or a woman would both say "*yūm*," just as with English "mine"; this applies to the third person as well, since one would use *šūm* to refer to something possessed by either a man or a woman, unlike English which differentiates between "his" or "her." Thus the possessive pronoun shows agreement for gender and case with the thing possessed, and no agreement with the possessor; conversely, pronominal suffixes show agreement for gender and case with the possessor, and no agreement with the thing possessed.

All attested forms are entered in the paradigm on the following page, including *ullūm* "that" and *šunūm* "theirs," because they belong semantically with demonstratives and possessives, although neither shows nunation postfixes. Where mimation and nunation are given side by side in the paradigm, one should obviously understand that either one or the other ending may be found. Long dash in square brackets represents an unattested form.

[2] Cf. JACOBSEN 1960 "*Ittallak*" p. 109.

		singular		plural	
		base	case	base	case
this	ms	*ʾann-ī-*	*-um* *-am* *-im*	*ʾann-ī-ūt-*	*-um -un* *-im -in*
	fm	*ʾann-ī-t-*	*-um* *-am* *-im -in*	*ʾann-ī-āt-*	*-um* *-im -in*
this	ms	*ʾannimm-ī-*	*-um* *-am*	*ʾannimm-ī-ūt-*	*-um* *-im -in*
	fm	*ʾannimm-ī-t-*	*-im*	[–]	
that	ms	*ʾull-ī-*	*-um* *-am* *-im*	*ʾull-ī-ūt-*	*-um* *-im*
	fm	*ʾull-ī-t-*	*-um* *-am* *-im*	*ʾull-ī-āt-*	*-um* *-im*
mine	ms	*y-ā*ʾ*-*	*-um* *-am* *-im*	*y-ā*ʾ*-ūt-*	*-um -un* *-im -in*
	fm	*y-at-t-*	*-um -un* *-am -an* *-im*	*y-āt-*	*-um -un* -
yours	ms	*k-ā*ʾ*-*	*-um* *-am*	*kutt-*	- - *-un* - *-in*
	fm	*k-at-t-*	*-um* *-am* *-im*	*k-āt-*	- - *-in*
his/ hers	ms	*š-ā*ʾ*-*	*-um* *-am* *-im*	*šutt-*	- *-un* -
	fm	*š-at-t-*	*-um*	*š-āt-*	- *-un*
ours	ms	*n(i)-ā*ʾ*-*	*-um*	*nutt-*	*-um* - *-in*
	fm	*n(i)-ā*ʾ*-t-*	*-um*	[–]	
theirs	ms	*šun-ā*ʾ*-*	*-um*	[–]	

PARADIGM OF DEMONSTRATIVE AND POSSESSIVE PRONOUNS

Chapter 31
The Personal Pronoun

31.1 The two sets of bases

The personal pronouns form a complex system, the consequence of an involved historical process. What may have been an original symmetry in the system has been altered, and as a result a purely descriptive understanding of the structure is difficult. Nevertheless an attempt can be made to isolate at least the basic lines of the system. The following description is heavily influenced by historical considerations, though it is presented in purely synchronic terms.

While inflection proper occurs only for gender, number and case (to be treated below), the alternation of forms for the different persons is not inflectional; rather different word bases are used to refer to the different subjects in the tripartite division of the speaker (first person: "I, we"), addressee (second person: "you"), and third party (third person: "he, she, they"). Akkadian possesses two different sets of words to refer to these "persons." They have been identified as separate sets by CASTELLINO and GELB,[1] and their conclusions are adopted here, though with some modifications and omissions, mostly due to the need of a synchronic description. (The utilization of different lexical bases to express an alternation which is otherwise rendered normally through morphological means, is similar to the alternation between "I am" and "I was" in English.)

The two sets of pronouns are characterized by the following consonants:

		Set I		Set II	
first person	sing.	*k*	I	*y, n, ʾ*	me
	plur.	*n*	we	*n*	us
second person		*t*	you	*k*	you
third person		*š, ∅*	he,she,they	*š*	him,her,them

As indicated by the glosses, Set I is used for the subject, Set II for the "object," or more generically the "non-subject." Note that all persons are characterized by a

[1] CASTELLINO 1962 *System*; GELB 1969 *Sequential*, pp. 171-186.

distinct element in each set, with the exception of the first person singular in Set II, which overlaps in part with the first person plural.

Elements of Set I are regularly preceded by a preformative. With the independent subject pronoun, the preformative is *ʾan*, and it occurs in word initial position (this preformative is perhaps the same deictic element as in the demonstrative *ʾann-ī-um* "this"; see also above 21.6 for a possible prefixal afformative); e.g., *ʾan-t-unū* (which is realized morphophonemically as /*ʾattunū*/) "you (pl. ms.)." With suffixes the preformative is *-ā*, e.g., *(šarr)+ā-t-unū* "you (are kings)." The preformative *ʾan* is missing only with the first plural independent, *nī-nu* "we," the form *anīnu* being a late loanword from Aramaic. (Historically the pronominal elements of Set I are the same as the personal prefixes of the verb, for which see above, 27.1, but the similarity is apparent only with the second person, e.g., *t-aprus*, and the first plural, e.g., *n-iprus*. However, since the personal prefixes are closely connected with verbal inflection, and do not retain independent pronominal force, they are discussed only as part of the personal inflection of the verb, and are omitted from the present description.)

Elements of Set II occur by themselves either as word initial with the independent non-subject pronoun, as in *š-u-āti* "him," or as suffixes, e.g., *+š-u* "of him."

31.2 Inflection for gender and number

The inflectional categories are the same as for the noun (number, gender and case), but the markers are largely different. All markers are postfixal, and their relative order is: gender (main), number, gender (secondary), case.

Differentiation for gender occurs only with the second and third person. There are two sets of markers, a main one occurring in both singular and plural, and a secondary one occurring only in the plural after the number marker. The main marker consists of the vowel *u* for the masculine and *i* for the feminine. Each one occurs immediately after the pronominal base, e.g., *š-i̲-nāti* "them (fem.)." The masculine shows a vowel *a* in the following forms: *ʾatta̲* "you (sing. subj.)," *+āta̲* "you (sing. subj.)," *+ka̲* "of you," *ka̲* "you (sing. obj.)." The feminine shows a vowel *a* in *+ša̲* "of her." Since the first person does not differentiate for gender, all forms of the first person are ambivalent, so that *ʾanāku* "I" may be said by a man or a woman.

The primary gender marker is represented by a short vowel throughout, except for the third singular and the first plural of the independent subject pronoun. We know from comparative considerations that length in this case may be understood

as compensation for an original consonant which has been dropped: *w* in the case of *šū*, *y* in the case of *šī*, and *ḥ* in the case of *nīnū*.

Following the application of morphophonemic rules (for which see below, 53.2), the final consonant of the preformative *ʾan* is realized as progressive length, i.e., it is assimilated to the following consonant, see for example *ʾan-t-a* /*ʾatta*/.

The singular is unmarked, and so is the plural of the first person non-subject and suffix subject (the distinction of number being conveyed by the difference in pronominal bases). Otherwise, the marker of the plural is *n*, affixed immediately after the main gender marker, e.g., *š-i-n-āti* "them (fem.)."

A secondary gender marker follows immediately the plural marker, and consists of the vowel *ū* for the masculine and *ā* for the feminine, e.g., *š-u-n-ū-ti* "them (masc.)." The secondary gender marker is traditionally considered long in non-final position, e.g., *šunūti*, because of phonotactic reasons, but short in final position. In this grammar it is considered long throughout.

31.3 Inflection for case

Case inflection shows the following markers:

		sing. suffix	sing. indep.	plural
nominative	Set I +	*ø*	*ø*	*ø*
genitive	Set II +	*ø*	*ø*	*ø*
accusative	Set II +	*ø*	*-āti*	*-ti*
dative	Set II +	*-m*	*-āšim*	*-šim*

Note that no ambiguity results between nominative and genitive because the postfixes are added to different sets of bases; whereas genitive and accusative are partly ambiguous.

In those cases where the case ending *-āti* or *-āšim* is in contact with a preceding vowel, the phonemic realization results often in contraction, e.g., *š-u-āti* /*šāti*/. Where contraction is not indicated in the writing, we may assume that either a semi-vowel or a glottal stop would be introduced to divide the two vowels, e.g., /*šuwāti*/ or /*šuʾāti*/, /*šiyāti*/ or /*šiʾāti*/. However, these are not generally indicated in the writing, and they are also omitted in traditional transcription. Such a transcription is also used here (e.g., *šuāti*), even though we cannot be sure that there was in fact a diptthong.

Note that the possessive forms are in fact nominal formations derived through the afformative *-āʾ-* from the bases of Set II (see above, 30.3; and below, 31.8). In the paradigm given below (31.5), only a simplified form of the masculine is given, in order to point out the structural parallelism with the genitive, with which the

possessive adjectives belong in terms of their notional value; in this sense the possessive adjective may be understood as the independent equivalent of the genitive suffix.

The use of the cases exhibits a syntactical distribution at variance with that of the noun. In the first place, we have a dative case which is missing from nominal inflection (unless one wishes to see a correlation between the dative pronoun and the terminative case of the noun, see above, 26.3). While the genitive suffix is added regularly to nouns and to a few prepositions (see below, 33), both the accusative and the dative independent pronoun may be added to all prepositions.

The distribution of the genitive forms of the first person singular depends on both the phonological environment and the syntactical function of the suffix. The genitive shows *+y-a* after *ī* (see above, 2.4); *+ʾ-a* after *u*, *-ūm*; and *+ø-ī* after consonant. The accusative shows *+n-i* uniformly. The dative shows *+n-i-m* after vowel, and *+ø-a-m* after consonant. All the data for the first singular are tabulated in the following chart:

Set I	independent:		*ʾan-ā-*	*k-u*
	suffix:		*+ā-*	*k-u*
Set II	independent	after noun:	*y-*	*āʾ-um*
		after prep.:	*y-*	*āti*
		after verb:	*y-*	*āšim*
suffix		after noun	+ *ʾ-a* (after *-ū, -ūm*)	
			+ *y-a* (after *-ī*)	
			+ *ø-ī* (after cons.)	
suffix		after verb/acc.:	+ *n-i*	
		after verb/dat.:	+ *n-i-m* (after vowel)	
			+ *ø-a-m* (after cons.)	

Here are some examples for the forms with suffixes:

kalbū-ʾa	my dogs
šēpūm-ʾa /*šēpuʾʾa*/	at my foot
kalbī-ya	my dogs (oblique plural); of my dog
kalb-ī	my dog (nominative or accusative singular)
imḫurū-ni	they received me
iddinū-nim	they gave to me
iddin-am	he gave to me

To clarify the overall use of the cases, I will give on the following page some examples for all major types of suffix occurrences, with a minimal syntactical context. The application of morphophonemic rules would yield slightly different realizations, e.g., *bēl+ka* /*belka*/ for which see below, 54; *imḫuram-ni* /*imḫuranni*/, *imḫuram+ka* /*imḫurakka*/, *imḫuram+šu* /*imḫuraššu*/ for which see below, 53.6. For the alternation *bēl+ēku* / *bēl+āku* see above, 14.6 n.4.

AFTER NOUN

predic. state + nominative suffix	construct state + genitive suffix		
"I am lord/lady" "you are lord" etc.	"my lord went" "your lord went" etc.	"I saw my lord" "I saw your lord" etc.	"to my lord" "to your lord" etc.
bēl+āku	*bēl+ī illik*	*bēl+ī āmur*	*ana bēlī+ya*
bēl+āta	*bēl+ka illik*	*bēl+ka āmur*	*ana bēlī+ka*
bēl+āti	*bēl+ki illik*	*bēl+ki āmur*	*ana bēlī+ki*
bēl+ø	*bēl+šu illik*	*bēl+šu āmur*	*ana bēlī+šu*
bēl-at+ø	*bēl+ša illik*	*bēl+ša āmur*	*ana bēlī+ša*
bēl+ānū	*bēl+ni illik*	*bēl+ni āmur*	*ana bēlī+ni*
bēl+ātunū	*bēl+kunū illik*	*bēl+kunū āmur*	*ana bēlī+kunū*
bēl+ātinā	*bēl+kinā illik*	*bēl+kina āmur*	*ana bēlī+kinā*
bēl-ū+ø	*bēl+šunū illik*	*bēl+šunū āmur*	*ana bēlī+šunū*
bēl-ā+ø	*bēl+šinā illik*	*bēl+šinā āmur*	*ana bēlī+šinā*

AFTER VERB

	transitives + accusative suffix "he met me, you, ..."		transitives + dative suffix "he gave to me, you...
indicative	ventive	subjunctive	indicative (ventive & subjunct. as with accusative)
imḫur+ni	*imḫuram+ni*	*imḫuru+ni*	*iddin+am*
imḫur+ka	*imḫuram+ka*	*imḫuru+ka*	*iddin+kum*
imḫur+ki	*imḫuram+ki*	*imḫuru+ki*	*iddin+kim*
imḫur+šu	*imḫuram+šu*	*imḫuru+šu*	*iddin+šum*
imḫur+ši	*imḫuram+ši*	*imḫuru+ši*	*iddin+šim*
imhur+niāti	*imḫuram+niāti*	*imḫuru+niāti*	*iddin+niāšim*
imḫur+kunūti	*imḫuram+kunūti*	*imḫuru+kunūti*	*iddin+kunūšim*
imḫur+kināti	*imḫuram+kināti*	*imḫuru+kināti*	*iddin+kināšim*
imḫur+šunūti	*imḫuram+šunūti*	*imḫuru+šunūti*	*iddin+šunūšim*
imḫur+šināti	*imḫuram+šināti*	*imḫuru+šināti*	*iddin+šināšim*

31.4 A note on secondary stress with pronominal suffixes

In spite of our meager knowledge in matters of Akkadian stress (see above, 1.5), it stands to reason that the phenomenon of suffixation should have had an impact on the overall word stress. Besides the fact that the addition of some of these suffixes produces words of considerable syllabic length, for which some secondary stress would seem phonologically necessary, there are two other considerations which lend weight to such a conclusion. (1) The writing does occasionally indicate extra length by adding a vowel sign before the suffix, e.g., *i-li-i-šu-nu*. This may represent a graphemic notation of a secondary stress with consequent secondary length *iʾīšunū*. (2) The phonotactic phenomenon of apheresis (for which see below, 55.1) is not applicable with pronominal suffixation, i.e., we do not find */ilšu/* as phonemic realization of *ili+šu*, even though there are two short syllables (*ili*) followed by a morphemic boundary plus another syllable. This, too, may suggest a secondary stress, with consequent secondary length, *iʾīšu*. Such secondary stress seems in fact to represent an unwritten rule in the prevailing modern pronunciation of Akkadian, as in the following examples: */šarrʾāšunūu/* for *šarrašunū*, */bēlʾīya/* for *bēliya*, */imḫurʾūšu/* for *imḫurušu*. See also above, 29.3.

31.5 The paradigm

The complete inflectional system may be summarized as follows:

		preform.	base	main gender	number	sec. gender	case
		ʾan,ā *ø*	*k, n, t* *y, n, k, š*	*u,i,a*	*ø,n*	*ø,ū,ā*	*ø* *(ā)ti* *(āši)m*
Examples:							
you	*atta*	*ʾan*	*t*	*a*			
you	*attunū*	*ʾan*	*t*	*u*	*n*	*ū*	
her	*ši*		*š*	*i*			
her	*šiāti*		*š*	*i*			*āti*
to you	*kunūšim*		*k*	*u*	*n*	*ū*	*šim*
them	*šināti*		*š*	*i*	*n*	*ā*	*ti*

The full paradigm of the main system of personal pronouns is found on the following two pages.

		inflect. categ.	INDEPENDENT markers prf bs g1 nb g2	INDEPENDENT form	SUFFIX markers prf bs g1 nb g2	SUFFIX form
SET I	NOMINATIVE	sg 1 cm	ʾanā k u	ʾanāku	ā k u	+āku
		2 ms	ʾan t a	ʾatta	ā t a	+āta
		fm	ʾan t i	ʾatti	ā t i	+āti
		3 ms	š ū	šū	ø	+ø
		fm	š ī	šī	ø	+ø
		pl 1 cm	n ī n ū	nīnū	ā n ū	+ānū
		2 ms	ʾan t u n ū	ʾattunū	ā t u n ū	+ātunū
		fm	ʾan t i n ā	ʾattinā	ā t i n ā	+ātinā
		3 ms	š u n ū	šunū	ø	+ø
		fm	š i n ā	šinā	ø	+ø
SET II	POSSESSIVE AND GENITIVE	sg 1 cm	y	y(ūm)	ʾ a	+ʾa
					y a	+ya
					ø ī	+ī
		2 ms	k	k(ūm)	k a	+ka
		fm			k i	+ki
		3 ms	š	š(ūm)	š u	+šu
		fm			š a	+ša
		pl 1 cm	n	n(ūm)	n i	+ni
		2 ms	[k]		k u n ū	+kunū
		fm			k i n ā	+kinā
		3 ms	š u n	šun(ūm)	š u n ū	+šunū
		fm			š i n ā	+šinā

PARADIGM OF PERSONAL PRONOUNS:
NOMINATIVE, POSSESSIVE AND GENITIVE
(see 31.8 for syntactical distribution)
prf = preformative; bs = base; g1 = main gender; g2 = secondary gender; nb = number

		inflect. categ.	INDEPENDENT markers bs g1 nb g2 cs	INDEPENDENT form	SUFFIX markers bs g1 nb g2 cs	SUFFIX form
SET I			–		–	
SET II	ACCUSATIVE AND AFTER PR.	sg 1 cm	y āti	yāti	n i	+ni
		2 ms	k (u) āti	k(u)āti	k a	+ka
		fm	k āti	kāti	k i	+ki
		3 ms	š (u) āti	š(u)āti	š u	+šu
		fm	š (i) āti	š(i)āti	š i	+ši
		pl 1 cm	n i āti	niāti	n i āti	+niāti
		2 ms	k u n ū ti	kunūti	k u n ū ti	+kunūti
		fm	k i n ā ti	kināti	k i n ā ti	+kināti
		3 ms	š u n ū ti	šunūti	š u n ū ti	+šunūti
		fm	š i n ā ti	šināti	š i n ā ti	+šināti
	DATIVE AND AFTER PREP.	sg 1 cm	y āšim	yāšim	n i m	+nim
					ø a m	+am
		2 ms	k (u) āšim	k(u)āšim	k u m	+kum
		fm	k āšim	kāšim	k i m	+kim
		3 ms	š (u) āšim	š(u)āšim	š u m	+šum
		fm	š (i) āšim	š(i)āšim	š i m	+šim
		pl 1 cm	n i āšim	niāšim	n i āšim	+niāšim
		2 ms	k u n ū šim	kunūšim	k u n ū šim	+kunūšim
		fm	k i n ā šim	kināšim	k i n ā šim	+kināšim
		3 ms	š u n ū šim	šunūšim	š u n ū šim	+šunūšim
		fm	š i n ā šim	šināšim	š i n ā šim	+šināšim

PARADIGM OF PERSONAL PRONOUNS (continued):
ACCUSATIVE, DATIVE AND AFTER PREPOSITION
(see 31.8 for syntactical distibution)
bs = base; g1 = main gender; g2 = secondary gender; nb = number; cs = case

Note that suffixes are mutually exclusive, except for those occurring after the verb, which are cumulative in the order dative-accusative, e.g., *iddin-am+kum+šu /iddinakkuššu/* "he gave + (ventive) + to you + it," i.e., "he turned it over to you."

For morphophonemic rules at the boundary between the suffix and the word to which it is attached see below, 53.6.

31.6 Special forms

First person singular. A form *ʾana* occurs seldom and is probably to be explained otherwise than as an alternative for the first independent subject.[2] The first suffix accusative occurs frequently as *-an-ni* than simple *-ni*; the particle *-an* is normally taken to be the ventive postfix of the verb (see above, 29.3).

Third person singular. The independent non-subject after verb shows two main variants: (1) the masculine form *šuāti, šuāšim* is also used for the feminine; (2) the final vowel *i* may occur as *u* in the masculine. The resulting range of variations for this pronoun (in the accusative) is as follows:

masc	*šuāti*	*šāti*	*šuātu*	*šātu*
fem	*šiāti*	*šuāti*	*šāti.*	

Mimation. The final *m* in the dative case endings is often missing, already in Old Babylonian.

Final vowel. The final vowel of the second and third person genitive suffix, and more rarely also of some forms of the accusative suffix, is often missing, especially in poetic texts. (In the plural this may be interpreted as omission of the secondary gender marker.) The resulting forms are as follows:

	genitive	accusative
sg 2 cm	*+k*	*+k*
3 cm	*+š*	*+š*
pl 2 ms	*+kun*	*+kunūt*
fm	*+kin*	
3 ms	*+šun*	
fm	*+šin*	*+šināt*

Rank rearrangement. In the late periods the independent pronouns of second and third person after verb are rearranged in their structure, so that the case ending, in the form *-āt-* and *-āš-*, occurs immediately after the pronominal base and before the gender marker. Hence the new inflectional scheme is as follows:

[2] See the discussion in *CAD A*/2, 110 f.

base	case	main gender	numb.	sec. gender
k	*āt*	*u, a*	*ø*	*ø*
š	*āš*	*i*	*n*	*ū, ā*

The resulting paradigm is as follows:

sg	2 ms	*k*	*āt*	*a*			*k*	*āš*	*a*	
	fm	*k*	*āt*	*i*			*k*	*āš*	*i*	
	3 ms	*š*	*āt*	*u*			*š*	*āš*	*u*	
	fm	*š*	*āt*	*i*			*š*	*āš*	*i*	
pl	2 ms	*k*	*āt*	*u*	*n*	*ū*	*k*	*āš*	*u*	*n*	*ū*
	fm	[*k*	*āt*	*i*	*n*	*ā*	*k*	*āš*	*i*	*n*	*ā*]
	3 ms	*š*	*āt*	*u*	*n*	*ū*	*š*	*āš*	*u*	*n*	*ā*
	fm	*š*	*āt*	*i*	*n*	*ā*	*š*	*āš*	*i*	*n*	*ā*

31.7 The anaphoric pronoun

The forms of the independent third person pronouns for the nominative and the accusative are used as adjectives in an anaphoric function (the term, derived from Greek, means "to carry over"), i.e., they contain a built-in reference to an element of the discourse which has already been explicitly mentioned. The proper English gloss is "the above-mentioned" (in a referential sense, see below, 63.6) although in practice a translation as a demonstrative ("this, that") is generally more idiomatic.

Though identical to the entries given above for the personal pronoun (31.5), the applicable forms of the paradigm are reproduced here for ease of reference. To emphasize the adjectival nature of this "pronoun" (see above, 30.1), I add the pertinent form of *šarrum*, and I use the equivalent demonstrative adjective in the English gloss.

		masculine		feminine	
sing	nom	*šarrum šū*	this king	*šarratum šī*	this queen
	acc	*šarram šuāti*	this king	*šarratam šiāti*	this queen
	gen	*šarrim šuāti*	of this king	*šarratim šiāti*	of this queen
plur	nom	*šarrū šunū*	these kings	*šarrātum šinā*	these queens
	oblique	*sarrī šunūti*	(of) these kings	*šarrātim šināti*	(of) these queens

31.8 A note on syntactical distribution

While the same terms are used for pronominal as for nominal case inflection, the corresponding syntactical distribution is in fact different. Even though belonging properly within syntax, I discuss this here because it is useful to correlate the diverse syntactical functions to the specific morphological markers.

The nominative is the only case which has the same distribution for both classes. The other cases are used differently largely because of four factors: (a) the absence of an independent genitive pronoun; (b) the presence of a possessive pronoun which replaces notionally the independent genitive pronoun; (c) the diverse role that prepositions take in governing either the independent or the suffix form of the pronoun; and (d) the essentially undifferentiated role of the dative in the independent form. The details are as follows.

When the construent is a noun, both prepositions and nouns in the construct state govern the genitive, e.g., *ana bītim* "to the house" or *bēl bītim* "master of the house." When the construent is a pronoun rather than a noun, a variety of permutations is possible, which may be described as follows. If a preposition governs pronominal suffixes (for which see below, 33), the pronominal suffix in the genitive is used, otherwise, the independent form of the pronoun is used, either in the accusative or the dative. The construct state of a noun governs only the pronominal suffix in the genitive, while conversely the determinative pronoun governs only the independent pronoun in the accusative or dative. The possessive pronoun replaces, notionally, the genitive of the independent pronoun after noun, with emphatic value (see below, 66.9); note that the possessive pronoun cannot occur with preposition or with the determinative pronoun. The distributional array is as follows (constructions in square brackets are not possible):

construct	+independent	+suffix	gloss
prep. I	*ana yāti/yāšim*	*[*anaya]*	to me
prep. II	*[*elī yāti/yāšim]*	*elīya*	upon me
noun	*[*bēl yāti/yāsim]*	*bēlī*	my lord
noun	*bēlum yā'um*	–	*my* lord (emphatic)
det. pron.	*ša yāti/yāšim*[3]	*[*šaya]*	that of me

It could be argued that the accusative/dative forms of the independent pronouns are in fact serving as the genitive, but the impossibility of constructions like **bēl yāti* indicates that the overlap is not complete.

[3] In the formulation *ša* PN *u yāti* "that of PN and of me" (OA, see *CAD I* 330); for the dative see *šayyāši ardīka* "that concerning me, your servant" (NA, sandhi, see *CAD I* 327).

The dative pronoun exhibits a proper dative function only in the suffixed form, e.g., {*iddin+šum*} /*iddiššum*/ "he gave to him." The independent "dative" pronoun, instead, never occurs in a properly dative function, i.e., a construction like **yāšim iddin* "he gave to me" is impossible. Thus the independent dative pronoun is for all intent and purpose a phonological variant of the independent accusative pronoun, since it is identical with it in distribution.

There is a clear formal correlation between the ventive mood of the verb (see above, 29.3), and the pronominal suffix in the dative. Ambiguity arises only with verbs which can govern the dative (see below, 65.6), e.g., *iddin+am* which can mean either "he gave to me" (dative) or "he handed over (in a direction otherwise known from the discourse)" (ventive). It is interesting to note that the dative pronominal suffix of the first person cannot be cumulative with the ventive, i.e., no such form as **iddin+am+am* is attested.

The following paradigm summarizes the various environments in which the personal (and possessive) pronouns can occur.

	independent governed by:				suffix governed by:			
	noun	det	prep I	verb	noun	dt	prepII verb	
gen	–	–	–	–	*bēl+ī*	–	*elī+ya*	–
poss	*bēlum yā'um*	–	–	–	–	–	–	
acc	–	*ša yāti*	*ana yāti*	*yāti īmur*	–	–	–	*īmur+ni*
dat	–	*ša yāšim*	*ana yāšim*	–[4]	–	–	–	*iddin+am*
gloss	*my* lord	of *me*	to *me*	he saw *me*	my lord		on me	he saw me he gave to me

[4] The use of *yāši* in lieu of *yāti* for the direct object of a verb is very rare and late, see *CAD I* 327, for some examples.

Chapter 32
Notional Categories

The syntactical concept conveyed by the term "pronoun" (for which see already above, 30.1), implies a type of transformational understanding of the type which is discussed below in the syntax (59.1). In this sense, a pronoun makes reference to other elements which are known from the discourse, and which are not repeated to avoid redundancy. As such, the term is properly applicable only to the relative and the personal pronouns, whose syntactical functions proper will be discussed below (see especially 63.1; 66.8; 89.4).

Semantically, the "pronouns" belong to three distinct classes. (1) Pronouns of the first class contain a built-in reference to the speaker; they may in turn be subdivided into two subgroups. The first (demonstrative pronouns) envisages different degrees of *proximity* vis-à-vis the speaker: "this" refers to close proximity, and "that" to a relative distance. The second subgroup (which includes possessive and personal pronouns) envisages the *identification* of a given sentence constitutent vis-à-vis the speaker: the pronoun of the first person implies identity of constituent and speaker; that of the second person identifies the interlocutor of the speaker; and that of the third person indicates that the constituent is neither the speaker nor the interlocutor.

Ostensibly, a personal pronoun of the second person refers to an interlocutor whom the speaker is physically addressing; however, in our documentation, which is limited to written texts, the contact between speaker and interlocutor is at best indirect (as in a letter), or it represents a special relationship between speakers, a relationship which is made manifest to an outside audience, as in the narrative frame reporting a dialog.

(2) Pronouns of the second class express the most limited range of semantic definition that is possible in Akkadian for a given sentence constituent. They include the indefinite interrogative pronouns, which differentiate only between the animate and the inanimate sphere (a distinction for which there is otherwise no specific type of morphological marker in Akkadian).

It may be noted here that the inanimate indefinite pronoun (*mimma*) seems to have for the most part a restrictive meaning ("anything"). The more generic indefinite meaning ("something") is more frequently expressed by the use of a special syntactical construction, the so-called internal accusative, for which see below (65.3).

(3) Pronouns of the third class do not have a distinct semantic value, but serve purely as place markers within the sentence, providing a correlative function to other known constituents. The relative pronouns links a previously identified constituent with a predicate (constituent + relative pronoun + predicate, e.g., *awīlum ša illiku* "the man who went"). The determinative pronoun links a previously identified constituent with a noun (constituent + determinative pronoun + noun, e.g., *awīlum ša ekallim* "the man, that of the palace"). The anaphoric pronoun, on the other hand, provides a nominalized link between a noun and a previously identified constituent (constituent ~ noun + anaphoric pronoun, e.g., *awīlum ...; awīlum šū* "a man [specified in a certain way]...; the above-mentioned man").

The notional treatment of pronouns as given here depends heavily on the concept of implicit referentiality, which will be discussed below in syntax (63.6).

SECTION D
INVARIABLES AND RECAPITULATION

Chapter 33
Morphological Invariability and Classes of Invariables

33.1 Types of juncture

By definition, invariables cannot be treated under morphology except for stating that they are not subject to morphological alternation. Thus they are, properly speaking, amorphic words, if by morph one understands the member of a set of (at least two) alternations. The treatment of invariables as is found traditionally in grammars is not morphological, but syntactic, etymological and semantic. Here I will propose two distinct ways of further distinguishing invariables into subgroups.

The first has to do with the concept of juncture. From this point of view, three classes of invariables may be distinguished, as shown in the following list (where ▪ stands for a given invariable, + for close juncture, and # for open juncture):

(1) #▪# the invariable occurs in free form, with word boundary initial and final; this class comprises all invariables except for the following.

(2) #▪+ the invariable is bound with a pronominal suffix; this class comprises the following prepositions:[1] *arkī* + "after," *aššumī* + "concerning," *elī* + "on," *ištī* + "with," *ittī* + "with," *kumī* + "instead of," *maḫrī* + "in front of," *qadū* + "with."

(3) +▪# the invariable is bound with a preceding word of any inflectional category; this class comprises all enclitics, namely *+ma* used for emphasis with nouns (see below, 66.8) and for coordination with verbs (see be-

[1] This was first noted by REINER 1966 *Analysis*, pp. 103-4.

low, 86.3); *+mi* for direct speech (see below, 65.5); *+man* for an unrealizable potential clause (see below, 73.4).

33.2 Traces of inflection

A second subdvision of the invariables distinguishes three subgroups on the basis of criteria that are at least partly morphological. The first type contains particles, i.e., words for which a vestigial type of inflection may be suggested and which occur each in a single type of environment – prepositions, which can only govern nouns, and conjunctions, which can only govern clauses. The second type contains proper names, i.e., words which are independent units whose internal structure may be subject to morphological inflection and syntactical government, but are otherwise embedded as frozen elements (hence invariables) in the larger environment of a regular sentence. The third class contains adverbs, enclitics and interjections, i.e., words which exhibit no historically recognizable trace of inflection.

33.3 Vestigial inflection: particles (prepositions and conjunctions)

Some considerations suggest that particles retain a vestigial type of inflection, which seems to have gone unnoticed. Consider the following correspondences (+ indicates that the preposition in that form may only be followed by a pronominal suffix; (+) indicates that suffix may or may not follow; lack of + indicates that no suffix is allowed; rare forms are in parenthesis):

(ad)	*aššum*	*(el)*	*išta+*	*itte+*	*kūm*	*maḫar*	
adī	*aššumī+*	*elī(+)*	*ištī*	*ittī(+)*	*kūmī+*	*maḫrī+*	*qadī+*
adū(m)			*ištū(m)*	*ittū(m)*	*kūmū+*		*qadū(m)*
		elīš				*maḫriš*	
up to	concerning	on	with	with	instead	before	with

Without going here into details (particularly with regard to the chronological and dialectal distribution of these forms, as well as the rarity of some forms), it seems that the forms in the second, third and fourth row represent respectively the gerundive, locative and terminative case (see above, 23.4; 26.3) of a form of which we have in the first row the absolute state. (It is on the strength of this assumption that I consider the final vowel of the forms in the second and third row to be long; it is otherwise generally given as short.) This kind of variability is not properly morphological, because the various forms do not exhibit any functional contrast that can be correlated to the formal patterns; but it may be viewed as a vestigial or frozen remnant of a historical stage when such correlation might have obtained.

A notional categorization of particles belongs properly outside of morphology. Note how the basic classification into prepositions and conjunctions is essentially syntactical. An area of study which seems particularly promising and which has not been properly investigated pertains to distributional correlations between particles and other parts of speech; see, for example, the distinction between *ittī* "with" used primarily adverbially and in a comitative meaning (with the element to the right of the preposition taking priority) vs. *qadūm* "with" used adnominally and in a cumulative meaning (with the element to the left taking priority)[2]; or the conjunction *aššum* which has both the meaning "in order to" when governing the present, and the meaning "concerning, because" when governing the preterite or perfect.

33.4 Occasional inflection: proper names

Proper names (including personal, divine and geographical names) constitute a class of words which belongs essentially with the invariables, but for a few exceptions in which a name is properly "morphic," in that it can be inflected as a noun. This occurs especially in two cases: (1) when the name is in fact a noun used as a personal name, e.g., *Gimillum* "favor," which occurs in the accusative *Gimillam* and the genitive *Gimillim*; (2) when the name is a nominalized compound (see above, 6.3), e.g., *Abī-ṭāb-um* or *Ikšud-um* which may also occur in the accusative and genitive. Even these names, however, may occur as invariables, e.g., *ana Gimillum* "to Gimillum," or *Abī-ṭāb-um āmur* "I saw Abi-tabum." All other names such as the (etymologically) Akkadian names *Abī-ṭāb*, *Sīn-iddinam*, *Dūr-Šarru-kīn* or such as the (etymologically) foreign names *Ḫammurapi* or *Urim* are always invariable, as summarized in the following paradigm:

Abī-ṭāb ṭāb "Abi-tab is good"
Abī-ṭāb āmur "I saw Abi-tab"
ana Abī-ṭāb "to Abi-tab."

It should be noted that names like *Abī-ṭāb* are inflected in themselves, if not within the syntactical context of the sentence in which they occur. Thus the preceding name may be analyzed as [*ab+ī ṭāb*] "My-father-is-good" (hyphens are used in the translation of proper names to emphasize the internal cohesiveness of the name). Invariability, therefore, applies to the name as a whole, not to its component parts. These component parts constitute, as it were, a micro-discourse of their own, and within those boundaries they follow largely the same general rules as for the language proper, though with occasional departures due in part to a general archaizing tendency in name formation.

[2] See EDZARD 1978 "Präpositionen."

33.5 Full invariables: adverbs, enclitics and interjections

The remaining class of invariables includes all other words which are truly and properly amorphic. Obviously, no further differentiation is possible within this class from a morphological point of view. Syntactically, one can distinguish adverbs and interjections. Adverbs qualify a predicate – hence, properly, they are adpredicative rather than adverbial; thus, for example, *annikī'am* "here" provides a locative, and *inanna* "now" a temporal, qualification. Interjections are, precisely, interjected in the syntactical flow, i.e., they are not governed by any other element of the sentence; thus, for example, *ū'a* "woe."

The term "adverb" is used in traditional grammar to refer to two distinct functions, morphological and syntactical; etymologically, the term refers to its syntactical function only. In this grammar I will restrict the use of the term to refer exclusively to the morphological category as described above (full invariables which can be identified syntactically as adpredicative), and will reserve the term "adjunct" for the syntactical function (see below, 66). Adjuncts, it should be noted, include a much broader range of expressions than just the (morphologically defined) adverbs; in this respect, a word like *ūmam* "today" is an adjunct but not an adverb (see especially below, 66.2).

Chapter 34

Recapitulation of Types of External Inflection

The various types of external inflection for noun, verb, pronoun and invariables may now be recapitulated and contrasted as follows. The chart below summarizes in diagrammatic form the major characteristics of the different morphological classes. The following symbols and abbreviations are used: the symbol # for word boundary or open juncture; the symbol + for close juncture; "aff." for denominal affformative; "nb" and "gd" for number and gender; "ps" for person.

	junct.	prefixes	base core	postifxes		junct.	
noun	#	ø	▬	aff.	nb,gd,case	#	normal
					nb,gd,case	#,+	construct
					ø	#	absolute
					nb,gd	+	predicative
verb	#	mood ps,nb,gd	▬	nb,gd mood		#,+	
pron.	#		▬	(nb,gd,case)		#,+	nominal
	#,+	(preformative)		nb,gd,case		#,+	personal
invar.	#	ø	▬	ø		#	all except:
				(case)		+	8 prepos.
	+			ø		#	enclitics

The noun admits two main systems of postfixes, which are both cumulative in their sequence, in a different order. The first system is that of denominal afformatives, while the second consists of four different subsystems (the states of the noun), each comprising postfixes for number, gender and case.

The verb admits two main systems, each one including both prefixes and postfixes; the two systems are cumulative in a reverse order. The affixes for person, number and gender occur in direct contact with the base, either before or after it; the affixes for mood occur in turn either before or after the affixes for person, number and gender.

The pronouns admit either an inflection of nominal type (characterized by either a limited inflection or the use of nunation in alternation to mimation), or else an inflection with markers which are completely different from nominal inflection. Another distinguishing feature of the personal pronouns is that they may occur not only as independent words, but also as suffixes. Most pronouns may in turn be followed by suffixes, but rarely.

Invariables admit no inflectional alternation, but may be considered as having a minimum of morphological alternation in terms of boundary.

MORPHOPHONEMICS

Chapter 35
Morphophonemic Alternations

35.1 Nature of morphophonemic alternations

Morphophonemic change[1] is different from historical change not only in that the former is conditioned morphologically on a synchronic level, whereas the second is automatic and diachronic; it is also different in that it does not necessarily presuppose a variation from a given, pristine form into another, but rather the coexistence of two distinct forms within the same morphological paradigm. In other words, this is not a "change" properly speaking, but rather an "alternation," e.g., the first element of *uššam-ma* "he dwells and" alternates within the same paradigm with *uššab* "he dwells" or *uššab-u* "that he dwells." Hence one may say that *uššam-* and *uššab*(-) are identical morphologically, and that they occur in complementary distribution, *uššam-* in front of *-ma*, *uššab*(-) in the other cases. The same relationship between the various forms may be stated by saying that *uššab*, as the basic form, occurs as *uššam-* in front of *-ma*, i.e., by stating that there is an alternation between *uššab* as the basic form, and *uššam-* as its allomorph in a given morphophonemic environment. This should not be taken to mean that **uššab-ma* "becomes" *uššam-ma*, as though a form **uššab-ma* were necessarily to be presupposed. If the word "change" is taken in this sense, it would often lead to a mistaken understanding of the facts. In this grammar the word "change" is meant in its most generic and neutral value of "variation," to include both morphophonemic alternation and historical development. Hence the notation used below for morphophonemic alternation, such as {*b*+*m*} = /*mm*/ should be understood in descriptive, not developmental terms, i.e., should be read "morphological *b*+*m* is realized as phonological *mm*," and not "a historically pre-existing *b*+*m* becomes *mm* at a later point in time." Note that, as elsewhere in this grammar, the symbol { } includes a morphological notation, the symbol // a phonemic notation (the phonemic rendering is also given in plain transcription, without virgules).

[1] A clear and consistent application of morphophonemics was first introduced into Akkadian by Reiner 1966 *Analysis*. Much of the categorization and exemplification given here, as far as it relates to external inflection, is largely derived from her presentation. I have, on the other hand, extended considerably the range of morphophonemics as applied to internal inflection, especially with regard to the weak verbs.

The morphological factors which condition morphophonemic alternations may be subsumed under two headings. (1) One type of alternation depends on internal inflection, i.e., on the interdigitation of roots and patterns. The conditioning factor is the type of root, and the conditioned alternation affects either the vocalism or the consonantism of the pattern. (2) The other type of alternation depends on external inflection, i.e., on the conjunction of bases and affixes. The conditioning factor is the presence of morphemic boundary, and the conditioned alternations affect (a) the consonantism of either the base, or the affix, or both, or else (b) the syllabic structure of the word.

35.2 A note on historical development

The insistence on the synchronic nature of morphophonemic alternations does not mean that there cannot be a phonological change affecting morphemes in a chronological sense. The main points which need stressing are as follows: (1) the notion of alternation is the only viable explanation within a synchronic system; (2) diachronic derivations should be proposed only when they are in fact documented; (3) diachronic derivations should not be used as ad hoc mechanisms to explain what are essentially synchronic phenomena. A problem with traditional grammar is that it has sometimes introduced a historical derivation which is not demonstrable historically, and which is used only as a pseudo-historical mechanism: what is in fact a synchronic statement is couched in historical terms for the sake of explanation, and not because of observable developmental stages in the history of the language. The two levels of analysis (synchronic and diachronic) must instead be kept rigorously distinct, and only those historical phenomena which can be described on the basis of specific historical documentation should be presented as diachronic changes within the framework of a historical grammar. A few such changes are described below.

All traditional terms which are used to describe phonological variations (such as assimilation, apheresis) seem to imply a diachronic dimension, since they describe a process of transformation from one stage to another. Where useful, I will retain them with the assumption that they may be taken to describe a synchronic phenomenon as well.

One change may be attributed to the transition from Proto-Semitic, and possibly from Old Akkadian,[2] to Babylonian. The prefix **y+* is dropped (alternatively, is changed to *ʾ+*), and the *a* which follows is changed to *i* (see above, 15.1), e.g., **y+amḫur* > *ʾ+imḫur* "he received." Note that in other cases *y* in word initial position is preserved, e.g., *yāti* "me."

[2] Gelb 1961 *Grammar*, pp. 164-65.

Another change which may have taken place at the time of the transition from Old Akkadian to Babylonian, or in some cases within Old Babylonian, is the assimilation of the first to the second vowel (regressive assimilation), e.g., *rabī+um* > *rabūm* "great." The very possibility of a vocalic cluster (see above, 2.4) arises in Akkadian almost exclusively as a result of external inflection (e.g., *īu* in the example given above); there is only one case resulting from internal inflection (e.g., *iqīaš* > *iqāš* "he gives as a gift," see below, 44.4). Both types are accordingly morphophonemic in nature. Note that instances of vocalic clusters outside of inflection occur only with semi-vowels and can only be reconstructed on the basis of comparative considerations, so that the original form is projected back to an archaic stage of the language, e.g., **bayt+um* > *bītum* "house" (see above, 5.2). These would not in any case be morphophonemic changes.

Within Babylonian, the most noticeable change is the drop of mimation, i.e., the drop of *m* postfix final, e.g.,

kalb+um > *kalb+u* "dog."

Note that this change never affects base final, e.g., *šulum* "greetings of," remains unchanged – which defines the change as properly morphophonemic in nature, since it affects only a morpheme *m*, and not any *m*, in word final position.

The following two changes appear to be examples of free variation, since they do not occur each time the pertinent conditions obtain; they are both morphophonemic in that the first is conditioned by external, and the second by internal inflection. Occasionally an alveolar fricative (*ṣ, s, z*) becomes palatalized (*š*) when in contact with *t* at morpheme boundary, e.g.,

maruṣ+t+um > *maruštu* "sickness"
piris+t+um > *pirištu* "secret"
mazzaz+t+u > *mazzaštu* "station."

Occasionally, a root with an initial voiced radical causes the pattern consonant *t* to be realized as *d*, e.g.,

igTamar > *igdamar* "he then became complete."

35.3 Regressive and progressive length

I will discuss here a concept and the correlative terms which I need to introduce in the discussion of morphophonemic phenomena which follows. This pertains to a particular understanding of the notion of length, viewed not in its phonemic characteristics (which have already been described above, 1.4), but rather in

its positional role vis-à-vis adjacent phonemes. It is because of such positional considerations that the topic belongs properly within morphophonemics.

Phonemic length is properly supra-segmental, i.e., the phonemic contrast is not carried by a separate segment in the articulatory stream, but rather by a diverse duration in the articulation of otherwise discrete ("segmental") phonemes. In this respect, the most appropriate notation for length is a macron.

It is however customary in linguistic notation to use a colon or a raised dot, instead of a macron, to represent length. The reason is that a colon or raised dot, as a segmental notation, is more apt to show the independent status of length as a morpheme, as in the following example:

/iprus/ "he divided"
/i:ḫuz/ or */iˑḫuz/* "he took" (notation which highlights parallelism of morphemic structure with *iprus*)
/īḫuz/ "he took" (standard phonemic notation with macron, where the morphemic parallel is obscured).

It must be stressed that *i:ḫuz* and *īḫuz* are in no way two distinct words, but are simply two distinct graphic notations of the one and the same word.

It should be noted that, while the suprasegmental (macron) notation makes explicit the correlation between length and its corresponding phoneme (the phoneme that is long is the one *above which* the macron occurs), the situation is not as explicit with the segmental notation (colon or dot). In the latter case, it is only an implicit and generally unstated rule that colon length applies to the phoneme that precedes it. In other words, the segmental notation (colon or dot) carries with it a virtual expression of directionality which we might make explicit, if it were so desired, in two ways. Terminologically, we may speak of "regressive" length, and notationally we may place an arrow on the raised dot:

/i˂ḫuz/.

As indicated above, this, too, is obviously nothing more than yet a different graphic notation for what is otherwise exactly the same word as the one rendered by the other two notations */i:ḫuz/* and */īḫuz/*.

As a matter of convenience in pointing out the correlations between patterns from roots with, and those without, morphophonemic alternations, I propose to carry further this concept of positional notation and introduce an alternate positional value for length, namely progressive length (˃). When so represented, length will apply to the following rather than the preceding phoneme, as in the pair:

/iprus/ "he divided"
/ik˃un/ = */ikūn/* "he stood firm."

It may well be objected that such a notion of progressive length is artificial, and that it is introduced purely as a gimmick to defend the parallelism between the two correlative systems of patterns from roots with or without morphophonemic alternation. Such an objection is correct, and is corroborated by the fact that there is no particular historical reason in favor of such a notion. It is, however, just as valid to say that all notations are by definition artifices used to show in its best possible light a given configuration of phenomena. So, for instance, a verbal paradigm is an artifice in the sense that it does not occur as such in the spoken language, but it serves to emphasize a meaningful set of relationships among the pertinent forms. Similarly, the two standard notations of length (macron for vowels and doubling for consonants, e.g., *ā* and *bb*, for which see above, 1.4) are artifices which, as it happens in this particular case, are simply derived through the inertia of tradition without serving any particular notational function other than marking syllable boundary in the case of the double writing of the consonant. On the other hand, the directional notation of length (˂ and ˃) provides an effective and simple artifice which can be used to account for a variety of linguistic phenomena, not only in Akkadian but also in Semitic.[3] In any case, it should be granted that progressive length is no more artificial than setting up pseudo-historical phonological rules to explain derivations such as **iwtabil* > *ittabil* (regressive assimilation) in contrast with **iwbil* > *ubil* (contraction). The advantage of the notion of progressive length is that it is only *one* artifice, and that with its help practically all patterns from "weak" roots may be derived from strong root patterns on the basis of clear morphophonemic statements. It certainly is a fact, as I hope the following chapters will make clear, that with the help of this notion the close structural connections among all classes of "weak" and "irregular" verbs are more clearly articulated and described.

In addition to the practical usefulness of the notion of progressive length, one should also note that such a conclusion concerning the positional variability of length is in fact inescapable if one starts from the consideration of length as segmental. Since length is not an autonomous phoneme, but one which, as it were, leans on another phoneme, the direction of such "leaning" has to be made explicit in its notation. The common linguistic notation with a dot or colon (e.g., *iˑḫuz* or *i:ḫuz*) contains a virtual positional notation which links length to the preceding phoneme, and must therefore be read automatically as regressive length (*i˂ḫuz*).

[3] In Hebrew, for instance, progressive length provides a useful notation to describe both the article (*ha˃-*) and the so-called waw conversive (*wa˃-*).

PART I

ALTERNATIONS CONDITIONED BY INTERNAL INFLECTION

Chapter 36

Pattern and Root as Conditioning Factors

A root may condition the realization of a pattern in one of two basic ways. (1) The structure of the pattern is altered by the root, but the root elements themselves (the radicals) remain stable. (2) Both the pattern and one or more root elements are altered.

The first type includes consonantal (i.e., strong) radicals, and is treated in section A. The alternations affecting the patterns may involve either vocalism (e.g., *qerēb-* as a realization of the pattern *parās-*) or consonantism (e.g., *napḫar-* as a realization of the pattern *mapras-*). In both cases, only pattern elements (i.e., *e/e* instead of *a/a*, and *n* instead of *m*) are involved, while root elements remain stable. This consonantal stability is traditionally described by the term "strong," which refers metaphorically to what is perceived as a resistance to (historical) change. While the appropriateness of this metaphor may be questioned (see below, 39.4), the term will be retained here. The morphophonemic rules pertinent to strong roots as given in section A apply equally to tri- and quadriradical roots.

Where root elements, too, are susceptible of alternate realizations, we have the so-called "weak" roots – using the same metaphor as for the "strong" roots (on this, too, see below, 39.4). Here the individual root elements (radicals) are susceptible of alternate realizations as much as the pattern elements. Thus the form *ʾerēš* is a realization of the pattern *parās-*, showing an *ʾ* as first radical element, while *-īriš-* is a realization of the pattern *-iprus-* showing length as first radical element. Distributionally, it is apparent that both *ʾerēs* and *-īriš* come from the same root.

Such root then may be said to exhibit a difference in the realization not only of the patterns, but also of one radical, depending on the pattern in which such a radical occurs. Such alternate realizations of radical elements show very clear distributional arrangements. The alternations which affect both pattern and root structure are treated below in section B, which includes weak triradicals and weak quadriradicals.

Finally, section C presents by way of a summary a tabular correlation among pattern formations of strong and weak roots.

Note that the phenomenon of incompatibility of the radicals (for which see above, 9.3), which may on the surface appear to be related to the notion of weak roots (since certain radicals are omitted in given root configurations), is in fact altogether different: incompatible radicals are so defined by virtue of their phonemic status, and neither do they affect, nor are they affected by, any type of morphemic variability, hence they are in no way to be considered as a morphophonemic phenomenon.

SECTION A

ALTERNATIONS AFFECTING PATTERNS (STRONG ROOTS)

Chapter 37

Alternation Affecting the Vocalism of the Patterns

The conditioning factor is a root with *r* as one radical and *i* as root vowel, e.g., *qrib* as in *qerēbum* "to approach," or *ṣḫir* as in *ṣeḫērum* "to be small." The alternation affects all patterns containing one or more vowels *a*, which undergo a general shift of *a* to *e* (see above, 14.5):

{*qarāb*} = /*qerēb*/ "approaching of"
{*ṣaḫir*} = /*ṣeḫir*/ "he is small"
{*ṣaḫir-am*} = /*ṣeḫram*/ "small."

In the last example, note that the morphophonemic alternation is limited to the pattern, resulting from internal inflection, and does not extend to the accusative postfix *-am*, resulting from external inflection;[1] also note the application of the rule concerning word syllabic structure, for which see below, 55.1.

The existence of words such as *maḫāru* "to receive"(not **meḫēru*) and *gamir* "it is complete" (not **gemir*) shows clearly that the alternation {*a*} = /*e*/ is truly morphophonemic. Both words are in fact from roots with root vowel *u*/*a*, and the simple presence of *r* as a radical, and even of *i* as a vowel other than root vowel (i.e., as a pattern vowel), without the concomitant factor of root vowel *i*, are not sufficient to cause automatically the alternation.

[1] See above, 14.5-6, where occasional exceptions to this rule are also noted, e.g., *ṣeḫr-ēku*.

Chapter 38

Alternations Affecting the Consonantism of the Patterns

38.1 The deverbal pattern MAPRAS

The conditioning factor is a root with a labial as a radical (in any position), e.g., *pḫ/r* (labial in first position) as in *paḫārum* "to gather," *šp/r* (labial second) as in *šapārum* "to send," *rkab* (labial third) as in *rakābum* "to ride." The alternation affects the pattern MAPRAS, which, when derived from these roots, is realized as NAPRAS:

{*mapḫar+um*} = *napḫarum* "gathering"
{*mašpar+t+um*} = *našpartum* "letter"
{*markab+t+um*} = *narkabtum* "chariot"
{*mabalkat+t+um*} = *nabalkattum* "ladder" (from a quadriradical root)

The purely morphophonemic nature of the alternation is substantiated by the existence in the language of words with initial *ma* and a labial in the remainder of the base – words, however, which are not formed from a pattern MAPRAS and therefore are not subject to the terms of the morphophonemic alternation as stated, e.g.:

mamītum "oath" (labial as first consonant after *ma*)
madbarum "desert" (labial as second consonant after *ma*)
maniduppum " cargo boat" (labial as third consonant after *ma*).

38.2 The verbal patterns of the perfect and the T(N) stems

The conditioning factor is a root with a dental (*d,ṭ*; the radical *t* does not qualify since it is identical to the pattern consonant), an alveolar (*s,z,ṣ*) or (partly) a palato-alveolar (*š*) as first or second radical. The alternations affect the patterns with *t* as pattern consonant, with a different realization of the sequence radical + pattern consonant. Two subtypes may be distinguished, depending on whether the radical is word intitial or not.

(1) When radical and pattern consonant are in contact, i.e., the radical is not word initial, the two consonants are realized as long consonant, the quality being that of the radical (alternatively: there is progressive or regressive assimilation of *t* to the radical). This applies to all sequences except *št*, which remains unchanged (e.g., *ištapar* "he has written"). Examples (with alternating *t* written as a capital letter):

T as second element of cluster:

{*dT*}	=	*dd*	{*idTabub*} = *iddabub* "he then spoke"
{*ṭT*}	=	*ṭṭ*	{*iṭTarad*} = *iṭṭarad* "he then sent"
{*sT*}	=	*ss*	{*isTanaḫḫur*} = *issanaḫḫur* "he keeps turning"
{*zT*}	=	*zz*	{*izTakar*} = *izzakar* "he then spoke"
{*ṣT*}	=	*ṣṣ*	{*iṣTabat*} = *iṣṣabat* "he then seized"

T as first element of cluster:

{*Td*}	=	*dd*	{*miTdud*} = *middud* "it is measured"
* {*Tṭ*}	=	*ṭṭ*	not attested
{*Ts*}	=	*ss*	{*ḫiTsas*} = *ḫissas* "think about!"
* {*Tz*}	=	*zz*	not attested
{*Tṣ*}	=	*ṣṣ*	{*kiTṣur+ū*} = *kiṣṣurū* "they fit together"
{*Tš*}	=	*šš*	{*piTšaš*} = *piššaš* "anoint yourself!"

The morphophonemic nature of the first set of examples is borne out by contrastive examples where a morpheme boundary intervenes between the two consonants, e.g., *rikis+t+um* "bond" (not **rikissum*), {*simid+t+um*} = *simittum* "crosspiece of the yoke" (not **simiddum*).

(2) When a dental or alveolar is word initial, the sequence radical + pattern consonant is inverted (alternatively, metathesis occurs). Note that the palato-alveolar does not cause such an inversion, e.g., *šitpurum* "to cover oneself with." Examples:

{*#diT*}	=	*tid*	{*diTkuš+at*} = *tidkušat* "it swells up"
* {*#ṭiT*}	=	*tiṭ*	not attested
* {*#siT*}	=	*tis*	not attested
{*#ziT*}	=	*tiz*	{*ziTkar*} = *tizkar* "speak!"
{*#ṣiT*}	=	*tiṣ*	{*ṣiTbut+um*} = *tiṣbutum* "to grasp one another"

Note that the resulting long consonant, when voiced, is subject to a diachronic change resulting in dissimilation, for which see above, 5.2:8.

The morphophonemic nature of the alternation may be verified by such contrasting examples as *ṣītu* "exit" (*t* is not part of the pattern, but is rather the feminine postfix), *ditānu* "bison" (primary noun).

38.3 The N stem

The morphemic marker of the N stem was given in the paradigms (see especially above, 17.2) as a capital N to indicate that it is susceptible of multiple phonemic realizations. The nature of these realizations is like that of weak radicals (for which see below, 39), since the pertinent choices depend on specific environments, which may be stated as follows (# stands for word boundary, and C for any consonant).

{#N*a*}	= *na*	{*Nakšud-um*}	= *nakšud-um*
{#N*i*}	= *ʾi*	{*Nitakšud-um*}	= *ʾitakšud-um*
{NC}	= *ʾ*C	{*iNparis*}	= *ipparis*
{N*ʾ*}	= *nˁ*	{*iNʾaḫiz*}	= *innaḫiz*

The paradigm on p. 117 (to which one should refer for the forms just cited; for the last form, *innaḫiz*, see below, 41.1) gives the morphemic notation for the template forms from *prs*, and the appropriate phonemic realizations for some pertinent actual roots. It should be noted that the phonemic realizations with /*n*/ are in fact very few, since in most cases the stem determinant is realized as length of the first pattern consonant. This feature is structurally parallel to the use of length for the second radical in the D stem, and could possibly be justified as such even on historical grounds. In any case, it is interesting to note that such a distribution of forms seems to corroborate from this point of view as well the arrangement of the stems as B N D and Š (see above, 13.2).

SECTION B

ALTERNATIONS AFFECTING ROOTS AND PATTERNS (WEAK ROOTS)

Chapter 39

The Notion of Weak Radical

39.1 The weak radical as a set of alternating realizations

Interdigitation of patterns and roots as described above (chapter 7) implies that both pattern and root are stable entities. In particular, the elements of the root (the radicals) may be described as stable both in themselves and in relationship to one another: they constitute a fixed sequence of three consonants, of which neither the quality, nor the quantity, nor the order, can be altered; the only variable factor is that the same radicals may or may not be in contact with each other, a phenomenon described above as "discontinuity."

There are, however, other roots which may be described as having unstable radicals. Such instability affects the quality and occasionally the quantity, though never the order. For example, the first radical of the root meaning "to bring" may occur as *w*,*ʾ* or length (variation as to quality) or it may not appear at all (variation as to quantity – only two radicals are left). The complete notation of this particular radical, therefore may be given as *w*/*ʾ*/:/∅, as exemplified respectively by the infinitive B *wabālum*, the infinitive Bt *ʾitbulum*, the perfect B *iṭṭabal*, the imperative B *∅bil*.

In the case just cited, the different ways in which the first radical may occur (*w*/*ʾ*/:/∅) form a set of allomorphs or alternating realizations, i.e., a set of possible phonemic renderings of the first radical morpheme – the choice (i.e., the rules of alternation) among these realizations being defined by certain conditions

which will be described presently (39.2). A proper identification of this root would require therefore listing the entire set as a notation for the first radical, e.g., in the following manner:

$$\begin{bmatrix} w \\ ʾ \\ \cdot \\ \emptyset \end{bmatrix} b\backslash l$$

This is obviously an awkward type of notation, so an index should be used in its place. To this end, the most distinctive realization may be used, which, according to the system used consistently in this grammar, is represented with a capital letter. For the root cited, the index is *W*, so that the root will be rendered as

Wb\l

and will be referred to as "root first *W*." With all the roots of this type, the realization chosen as index is the same phoneme which is used in traditional grammar to refer to the same root – though in traditional grammar this is understood as a historically early form from which the others are derived.

It should be noted that the phonemes which may in fact occur as elements of any given set are quite few in number: two consonants (ʾ and *n*); the two semivowels (*w* and *y*); length (*ˑ*); and, in addition, zero.

39.2 The environment as a discriminant among alternatives

The patterns from such roots with multiple realization radicals are substantially the same as those from regular triconsonantal roots, so that it will not be necessary to introduce a whole new system of patterns. The differences result only from the fact that while patterns may be considered the same, interdigitation has to take into account the variability of one (or more) of the radicals. Hence the need for a set of statements describing the different realizations of the weak radical(s) in terms of their particular environment.

The pertinent statements may be reduced to two main types, with two subtypes each, as follows:

(1) cluster: (a) the radical is the first element of the cluster
(b) the radical is the second element of the cluster

(2) non cluster: (a) the radical is intervocalic
(b) the radical is initial or final.

Occasionally it will be necessary to differentiate between verbal and nominal patterns, though normally the same statements apply to both categories.

A coincidental advantage of this procedure is that it puts in sharper relief the parallelism among the various sets of alternating realizations, i.e., among the various weak roots, as will be shown in detail in the following chapters.

In the presentation of the weak roots, I will give for each type of roots a synoptic chart which is arranged as follows (for the first occurrence of a chart of this type see below, 41.1). (1) The first row describes the pertinent environments for any given weak radical (marked by the capital letter of the corresponding radical in the template PRS, i.e., P for first radical, R for second, and S for third). (2) Below each environment, I indicate the realization expected for the radical in that position, e.g., ˂ (regressive length) for P in the First Aleph roots. (3) The next row gives one or more examples for each type of environment; the first line gives the BASIC forms according to the PRS template (e.g., *iPrus*), the second gives the APPLICATION of the environment rules (e.g., *i˂rus*), and the third gives the ACTUAL form for a particular weak root (e.g., *iḫuz*). Finally, (4) the last row gives the major deviations or exceptions, also divided into basic, applied and actual.

39.3 A note on geminate roots

Roots with identical second and third radical exhibit one minor deviation, when they belong to the semantic class of stative roots (or roots of condition, see below, 70.5): the verbal adjective of the B stem is built on the pattern PARR rather than PARIS, e.g., *sarr-Ø* "it is false." Fientive roots, instead, have the regular pattern PARIS, e.g., *madid-Ø* "it is measured."

The alternation between these forms is not due to morphophonemic rules, but simply to the choice of distinct patterns (see above, 17.3). Hence geminate roots do not properly belong with weak roots. They are mentioned here because other Semitic languages exhibit a much greater diversification which corresponds indeed to the category of weak roots.

39.4 A note on terminology

From the fact that some realizations are length or zero it is clear that the pertinent roots may not be considered as purely triconsonantal, precisely because one or more radicals are not consistently consonantal in nature. It is for this reason that such roots are traditionally known as "weak"; they are conceived as having one radical which does not succeed, as it were, to maintain its consonantal integrity, in contrast with the strong roots which remain triconsonantal throughout. This terminology has its disadvantages. In the first place it implies a historical

process whereby consonantal radicals have been weakened, a process which is by no means sure (the reverse process of expansion of an originally biconsonantal root may in fact be more likely). Secondly, there are some cases in which Akkadian does not show any consonant at all, as with the so-called "third weak" roots (see below, 45), so that the term "weak" appears rather improper descriptively. It would be more accurate to describe all roots which are not purely consonantal as "roots with length radical," since in all cases length appears as at least one realization of the unstable radical. Yet, in spite of these considerations, the term "weak root" will be retained here: for it presents the advantage of being immediately recognizable by anyone familiar with the traditional terminology of Semitic grammar, without at the same time being ambiguous except for the historical implications. However, it is understood that the specific meaning given in this grammar to the notion of "weak radical" is that of "set of alternating realizations."

The difficulty with the traditional interpretation just outlined (whereby one consonant is posited as the original phoneme, from which the others are assumed to have derived historically through specific phonological rules) is that all too often one has to operate with conflicting phonological statements. Thus intervocalic aleph is said to drop in one case (**iʾakkal* > *ikkal* "he eats"; note the irregular vocalic contraction $V_1V_2 > V_1$ instead of V_2), whereas in another case intervocalic aleph is introduced as a strong radical (*dāʾikum* "killer"). However, the real difficulty is not so much that the cumulation of such phonological rules is contrived and confusing, but rather that there is an underlying historical bias whereby given consonantal realizations are considered primary, without explicit justification.

As mentioned earlier (see above, 36), the term "strong" is used traditionally as the metaphorical counterpart of "weak": it refers to what is perceived as the ability to withstand phonological change, as it is presumed to take place instead with the "weak" roots. With the same caveat as for the latter term, the former will be retained here as well, for ease of reference.

I do not speak, instead, of weak or strong "verbs," because clearly what is affected is not just the level of verbal inflection, but rather the full range of internal inflection as a whole, including nominal as well as verbal patterns. For these reason I will speak consistently of weak or strong "roots," not "verbs."

Traditional nomenclature uses often Latin terms to indicate the positional value of the weak radical; it is inflected in the genitive feminine, referrring to an understood term such as *litterae* "letter," e.g., *primae infirmae* "of (i.e., characterized by) a first (letter) weak." Apart from the fact that the notion of "letter" is patently inadequate when used to refer to a radical (see above, 9.1, note 2), there is no particular need to employ a Latin term, so that I will use consistently an English equivalent, according to the following set of correspondences:

first weak	*primae infirmae*
first Aleph	*primae Aleph*
first Nun	*primae Nun*
first Waw	*primae Waw*
middle weak	*mediae infirmae*
last or final weak	*ultimae infirmae.*

It should be noted that the term "initial" is preferable to "first" because it is properly parallel to "middle" and "last." However, in this grammar I retain the term "first" simply because it is in more common use, possibly on account of the fact that it is the literal translation of the Latin term.

Chapter 40

Patterns from Triradicals with Weak First Radical

There are three main types of roots with first radical weak, each type being characterized by a different set of realizations, as follows:

(1) first radical realized as ʾ/:/∅ (index ʔ, First Aleph)
(2) first radical realized as *n*/ʾ/: (index *N*, First Nun)
(3) first radical realized as *w*/ʾ/:/∅ (index *W*, First Waw).

Schematically, the distribution of these realizations according to environment may be indicated as follows:

	environment				
	cluster		non-cluster		
				P initial	
	P as first element	P as second element	P inter-vocalic	*+i, V* in vb ptrns	in other cases
First Aleph	ʾ:	ʾ:	∅	ʾ *(i,V > a)*	ʾ
First Nun	ʔ	*n*	*n*	ʾ	*n*
First Waw	ʾ:, ʔ	*w*	*w*	ʾ	*w*

This table, which omits deviations (all minor) and examples, for simplicity sake, emphasizes the parallelism between the first Nun and first Waw, and the identical distinction in all cases in the treatment of P initial.

As I stressed above (39.1), it is clear that in calling these roots first Aleph, Nun and Waw I am using that particular realization which appears to be most distinctive (and which is in fact in common use); thus the term "first Aleph" and the notation with capital aleph (ʔ) are but an abbreviated way of referring to the entire set ʾ/:/∅, and neither is meant to imply (at least not in this grammar) a historical prevalence of aleph over the other realizations.

The paradigms of these and all weak roots are grouped together below in chapter 49.

Chapter 41

Patterns from Triradicals First Aleph

41.1 Derivational rules

		environment				
		cluster		non-cluster		
					P initial	
		P as first element	P as second element	P inter-vocalic	+*i*, *V* in vb ptrns	in other cases
realization		ʿ	ʿ	*ø*	ʾ*a*	ʾ
ex.: basic		*-IPrVs-*	*-INParis-*	*-uParris-*	*Pitrus-*	*Purrus-*
	applied	*-Iʿrus-*	*-Inʿaris-*	*-uørris-*	ʾ*atrus-*	ʾ*urrus-*
	actual	*-Īḫuz-*	*-Innaḫiz-*	*-uḫḫiz-*	ʾ*aṯuz-*	ʾ*uḫḫuz-*
	basic				*PVrVs-*	*Pirs-*
	applied				ʾ*arus-*	ʾ*irs-*
	actual				ʾ*aḫuz-*	ʾ*ilk-*
dev.:	basic	*-ušaPras-*				
	applied	*-ušarras-*				
	actual	*-ušaḫḫaz-*				
	basic	*NaPris-*				
	applied	*nanris-*				
	actual	*nanmir-*				

When the first radical occurs as the first element of a consonantal cluster, it is realized as regressive length. Thus the first radical *P* in *-IPrVs-*, being the first element of a consonantal cluster, is realized as regressive length, and the actual pattern is *-Iʿrus-*, as in ʾ*-īḫuz* "he took" (from *ʔḫ/z* "to take").

The first radical does not occur as the second element of a consonantal cluster proper, but an analogous environment obtains in the N stem, where the alternating set of realizations *N* occurs as the first element in the cluster (see above, 38.3). In this case, the realization of the stem determinant is consonantal (i.e., *n*). Thus the pattern *-INParis-* is to be rewritten *-InParis-*, and the first radical *P*, being the second element of a cluster, is realized as regressive length; the actual pattern is *-Inʿaris-*, as in ʾ*-innaḫiz* "he was taken.

When the first radical occurs intervocalically, it is realized as *ø*. Thus the pattern *-uParris-* will occur as *-uørris-* (e.g., ʾ*-uḫḫiz* "he took"). The non-occurrence of the vowel *a* after *ø* is easily explained if one calls to mind that internal vowels of verbal patterns serve purely the phonological function of resolving clusters (see above, 14.1), and that such cluster does not in fact occur when *P* is realized as *ø*.

When the first radical occurs initially, it is realized as ʾ. Thus *Purrus-* will occur as ʾ*urrus-* (e.g., ʾ*uḫḫuz-* "to make taken"). If the vowel immediately following *P* is either *i* or *V* (root vowel) and if the pattern is a verbal pattern, such vowel occurs uniformly as *a*. Thus *Pitrus-* will occur as ʾ*atrus* (ʾ*aṯuz-*, not **ʾiṯuz*, "to take away from"), *PVrVs* as ʾ*arVs* (ʾ*aḫuz-*, not **ʾuḫuz*, "take!"). No vocalic change occurs instead if the pattern is a nominal pattern (e.g., *Pirs-* occurs as ʾ*ilk-* "going; service") or the vowel is not a root vowel (e.g., *Purrus-*, just cited).

41.2 External inflection of selected forms

The paradigm that results from the application of these rules is given below, 49. The addition of the markers of external inflection takes place regularly as with the forms from strong roots, for which see above, 27-28. For ease of reference, I will give here a selection of a few representative forms from the B stem from the root *ʔḫ/z* (with the application of the phonotactic rule given below in 55.1).

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		ʾ*-īḫuz*	ʾ*-īḫuz-am*	ʾ*-īḫuz-u*	ʾ*-ītaḫaz*	ʾ*-iḫḫaz*	*līḫuz*
2	ʾ*aḫuz*	*t-āḫuz*	*t-āḫuz-am*	*t-āḫuz-u*	*t-ātaḫaz*	*t-aḫḫaz*	
	ʾ*aḫ[u]z-ī*	*t-āḫuz-ī*	*t-āḫuz-ī-m*	*t-āḫuz-ī*	*t-ātaḫ[a]z-ī*	*t-aḫḫaz-ī*	
1		ʾ*-āḫuz*	ʾ*-āḫuz-am*	ʾ*-āḫuz-u*	ʾ*-ātaḫaz*	ʾ*-aḫḫaz*	*lūḫuz*
p3		ʾ*-īḫuz-ū*	ʾ*-īḫuz-ū-nim*	ʾ*-īḫuz-ū*	ʾ*-ītaḫ[a]z-ū*	ʾ*-iḫḫaz-ū*	*liḫuz-ū*
		ʾ*-īḫuz-ā*	ʾ*-īḫuz-ā-nim*	ʾ*-īḫuz-ā*	ʾ*-ītaḫ[a]z-ā*	ʾ*-iḫḫaz-ā*	*liḫuz-ā*
2	ʾ*aḫ[u]z-ā*	*t-āḫuz-ā*	*t-āḫuz-ā-nim*	*t-āḫuz-ā*	*t-ātaḫ[a]z-ā*	*t-aḫḫaz-ā*	
1		*n-īḫuz*	*n-īḫuz-am*	*n-īḫuz-u*	*n-ītaḫaz*	*n-iḫḫaz*	ʾ*īn-īḫuz*

41.3 Systemic deviations

An analogical deviation occurs in the case of the present Š. In the pattern *ušaPras*, *P* is not realized as regressive length even though it is the first element of a consonantal cluster, i.e., it is not realized not as **-ušāras-* (e.g., **ušāḫaz-*); rather it is realized as progressive length, yielding *-ušarras-* (*ʾ-ušaḫḫaz*), possibly on the analogy of the present B *ʾiḫḫaz*.

In the infinitive/verbal adjective, imperative and perfect N, *P* is also occasionally realized as progressive length; when the second radical is a voiced consonant, the resulting long consonant is then dissimilated following the rules for historical change of voiced consonants for which see above, 5.2:8; e.g., *Naʾris-* ~ **nammir* > *nanmir* "become visible!"

41.4 Vocalic shift *a* > *e*

Several verbs of this class exhibit the vocalic shift *e* for *a*, for which see above, 14.5. (Historically, this is due to the fact that the ʾ was originally $ʾ_{3\text{-}5}$, for which see above, 5.1.) The change occurs regularly throughout, and no special additional statement is necessary. The identification of the root cannot be predicted and must be given lexically (see above, 14.7). By way of illustration the paradigm of the main stems of *ʔp/š* (*e*) "to make" is appended below:

inf	vadj	part	imp	pret	perf	pres
ʾepēš-	*ʾepiš-*	*ʾēpiš-*	*ʾepuš*	*īpuš*	*ītepeš*	*ippeš*
nēpuš-		*munnepiš-*	*nēpiš*	*innepiš*	*ittēpiš*	*inneppeš*
uppuš-		*muppiš-*	*uppiš*	*uppiš*	*ūteppiš*	*uppeš*
šūpuš-		*mušēpiš-*	*šūpiš*	*ušēpiš*	*uštēpiš*	*ušeppeš*

The full inflection of the finite forms of the B stem is as follows (with the application of the phonotactic rule given in 55.1):

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-īpuš*	*ʾ-īpuš-am*	*ʾ-īpuš-u*	*ʾ-ītepeš*	*ʾ-ippeš*	*līpuš*
2	*ʾepuš*	*t-ēpuš*	*t-ēpuš-am*	*t-ēpuš-u*	*t-ētepeš*	*t-eppeš*	
	ʾep[u]š-ī	*t-ēpuš-ī*	*t-ēpuš-ī-m*	*t-ēpuš-ī*	*t-ētep[e]š-ī*	*t-eppeš-ī*	
1		*ʾ-ēpuš*	*ʾ-ēpuš-am*	*ʾ-ēpuš-u*	*ʾ-ētepeš*	*ʾ-eppeš*	*lūpuš*
p3		*ʾ-īpuš-ū*	*ʾ-īpuš-ū-nim*	*ʾ-īpuš-ū*	*ʾ-ītep[e]š-ū*	*ʾ-ippeš-ū*	*līpuš-ū*
		ʾ-īpuš-ā	*ʾ-īpuš-ā-nim*	*ʾ-īpuš-ā*	*ʾ-ītep[e]š-ā*	*ʾ-ippeš-ā*	*līpuš-ā*
2	*ʾep[u]š-ā*	*t-ēpuš-ā*	*t-ēpuš-ā-nim*	*t-ēpuš-ā*	*t-ētep[e]š-ā*	*t-eppeš-ā*	
1		*n-īpuš*	*n-īpuš-am*	*n-īpuš-u*	*n-ītepeš*	*n-ippeš*	*ʾīn-īpuš*

41.5 Lexical deviations

Specific roots exhibit certain exceptions, of which the following are the most important.

(1) The verb *ʾalāk-um* "to go," exhibits two peculiarities. (a) The root vowel is *i\a*, with the same distribution as *u/a* (as with the verbs first Waw, see below, 43.1). (b) In the B preterite and perfect, *P* is realized as progressive, rather than regressive, length, i.e., *-Iʾlik-* (instead of **-Iʿlik-*), hence *illik* "he went" (instead of **īlik*), and *-Iʾtalak-* (instead of **-Iʿtalak-*), hence *ittalak* "he then went" instead of **ītalak*. The B stem is therefore as follows:

inf	vadj	part	imp	pret	perf	pres	desid/vent
ʾalāk-	–	*ʾālik-*	*ʾalik-*	*-Illik-*	*-Ittalak-*	*-Illak-*	*lillik-am*

(2) The verb *ʾabālu* "to be dry" exhibits an anomalous form in the Š infinitive: *šābal-* instead of **šūbul-*. This deviation may be explained as the result of the need to differentiate from *šūbul-* "to cause to bring" (from *wabālum*, see below, 43.5).

(3) Certain verbs realize the first radical as ʾ even outside of non-cluster initial environment, especially *ʾabātum* in the N stem, "to destroy," and *ʾadārum* also in the N stem, "to fear." They are known as "strong aleph" roots.

Chapter 42

Patterns from Triradicals First Nun

42.1 Derivational rules

	environment				
	cluster		non-cluster		
				P initial	
	P as first element	P as second element	P inter-vocalic	+*i*, *V* in vb ptrns	in other cases
realization	ʔ	ʕ	*n*	ʾ	*n*
ex.: basic	*-IPrVs-*	*-INParis-*	*-uParris-*	*PVrVs-*	*Pirs-*
applied	*-IʔrVs-*	*-InʕaVris-*	*-unarris-*	*ʾiris-*	*nirs-*
actual	*-Iqqur-*	*-Innaqir-*	*-unaqqir-*	*ʾidin-*	*nidin-t-*
basic				*PVrVs-*	*Purrus-*
applied				*ʾurus-*	*nurrus-*
actual				*ʾuqur-*	*nuqqur-*
dev.: basic	*-INtaPras-*				
applied	*-Ittanras-*				
actual	*-Ittanqar-*				

When the first radical occurs as the first element of a consonantal cluster, it is realized as progressive length. Thus the first radical *P* in *-IPrVs-*, being the first element of a consonantal cluster, is realized as progressive length, and the actual pattern is *-IʔrVs-*, as in *ʾ-iqqur* "he destroyed" (from *Nq/r* "to destroy").

The first radical does not occur as the second element of a consonantal cluster proper, but an analogous environment obtains in the N stem, where the alternating set of realizations *N* occurs as the first element in the cluster (see above, 38.3). The resulting realization is the same as with the roots first Aleph, in that the

realization of the stem determinant is consonantal (i.e., *n*). Thus the pattern *-INParis-* is to be rewritten *-InParis-*, and the first radical *P*, being the second element of a cluster, is realized as regressive length; the actual pattern is *-InʕVris-*, as in *ʾ-innaqir* "he was destroyed." Note that this pattern is therefore identical to the corresponding pattern from a root first Aleph.

When the first radical occurs intervocalically, it is realized consonantally as *n*. Thus the pattern *-uParris-* will occur as *-unarris-*, as in *ʾ-unaqqir* "he made destroyed."

When the first radical occurs initially, the same distinction obtains as for the roots first Aleph between verbal patterns in which the first radical is followed by *i* or root vowel, and all other patterns. In the first case, the first radical is realized as *ʾ* (but note that, differently from the roots first Aleph, the following vowel does *not* change to *a*). In the second case, the first radical is realized as *n*. Examples for the first alternative are *PVrVs-*, to be rewritten *ʾVrVs-*, as in *ʾidin* "give!" or in *ʾuqur* "destroy!" Examples for the second alternative are *Parās-*, to be rewritten *narās-*, as in *naqār-um* "to destroy," *Pirs-* (a nominal pattern with vowel *i*) to be rewritten *nirs-*, as in *nidn-* (found in the feminine *nidin-t-um* "gift"), or *Purs-*, to be rewritten *nurs-* (found in the feminine *nukur-t-um* "enmity").

42.2 External inflection of selected forms

The paradigm that results from the application of these rules is given below, 49. The addition of the markers of external inflection takes place regularly as with the forms from strong roots, for which see above, 27-28. For ease of reference, I will give here a selection of a few representative forms from the B stem of the root *Ndin* "to give" (with the application of the phonotactic rule given below in 55.1).

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-iddin*	*ʾ-iddin-am*	*ʾ-iddin-u*	*ʾ-ittadin*	*ʾ-inaddin*	*liddin*
2	*ʾidin*	*t-addin*	*t-addin-am*	*t-addin-u*	*t-attadin*	*t-anaddin*	
	ʾid[i]n-ī	*t-addin-ī*	*t-addin-ī-m*	*t-addin-ī*	*t-attad[i]n-ī*	*t-anaddin-ī*	
1		*ʾ-addin*	*ʾ-addin-am*	*ʾ-addin-u*	*ʾ-attadin*	*ʾ-anaddin*	*luddin*
p3		*ʾ-iddin-ū*	*ʾ-iddin-ū-nim*	*ʾ-iddin-ū*	*ʾ-ittad[i]n-ū*	*ʾ-inaddin-ū*	*liddin-ū*
		ʾ-iddin-ā	*ʾ-iddin-ā-nim*	*ʾ-iddin-ā*	*ʾ-ittad[i]n-ā*	*ʾ-inaddin-ā*	*liddin-ā*
2	*ʾid[i]n-ā*	*t-addin-ā*	*t-addin-ā-nim*	*t-addin-ā*	*t-attad[i]n-ā*	*t-anaddin-ā*	
1		*n-iddin*	*n-iddin-am*	*n-iddin-u*	*n-ittadin*	*n-inaddin*	*īn-iddin*

42.3 Systemic deviations

The main deviation is that the weak radical is realized occasionally as *n*, instead of progressive length, when it occurs as first element of a cluster. This occurs especially with the perfect N, e.g., *-INtaPras-* ~ *-Ittanras-* ~ *ʾ-ittanqar.*

42.4 Lexical deviations

A peculiarity found with the preterite B of the root *Ndin* may be considered a graphemic rather than a linguistic deviation. The form written syllabically *i-din-nam* (as in the personal name ^{d}EN.ZU-*i-din-nam*) should be understood as a frozen writing, in which lengthening of the consonant *d* is not shown graphically, while conversely the apparent lengthening of the final *n* results from the use of the sign *nam* as a phonological indicator, applied to the verb as if *i-din* were a logogram. Hence the name is to be understood phonemically as a regular *Sīn-iddin-am*.

Chapter 43
Patterns from Triradicals First Waw

43.1 Triradical and biradical realizations

Two different systems of inflection must be distinguished, depending on whether the root is realized as triradical or biradical. The inflection of the first type follows rules similar to those for roots first Aleph and first Nun. It applies to roots with root vowel *i*, which are all stative (see below, 70.5). It also applies to the derived stems from roots with alternating root vowel *i\a*.

The inflection of the second type is characterized by a peculiar biradical realization of certain forms of the B and Bt stems. This group includes roots with alternating root vowel *i\a* (which is otherwise found only with *ʾl\k*, for which see above, 41.5; for *Nt:il* and *Nzzi:* see below, 48.1). Most of these roots are fientive (see below, 70.5).

43.2 A historical note on vocalism

The finite forms of the B stem from roots with root vowel *i*, and some forms of the Š stem from both types of roots, exhibit a frequent vocalic shift *a>e*. The distribution of forms is unpredictable; in other words, they appear to be in free variation with forms that retain the *a* vocalism.

A possible explanation may be sought in the fact that some of the roots first Aleph that exhibit the same vocalic shift *a>e* are historically to be understood as roots first *y*, e.g., *ʾniq* "to suckle" for which the proto-Semitic form **ynq* may be posited. As a result of the (historical) similarity in the first radical (which is a semi-vowel in both instances), an analogical extension of the vocalic shift may have occurred, though it did never come to apply uniformly to any particular set of verbal forms, so that its distribution must be given lexically.

Another peculiarity of the vocalism is the realization as *u* of the first vowel in patterns of the B stem from roots with root vowel *i\a* (see below, 43.6) and of the

middle vowel in the preterite Š (see below, 43.5). This may be connected historically with the consonantal realization of the weak radical as *w*; in other words, this phenomenon would represent a vocalic reflex of a glide *w* occurring historically as first radical.

43.3 The triradical system: derivational rules

		environment				
		cluster		non-cluster		
					P initial	
		P as first element	P as second element	P inter-vocalic	+*i*, *V* in vb ptrns	in other cases
realization		ʿ	*w*	*w*	ʾ	*w*
ex.:	basic	*-IPrVs-*	*-INParis-*	*-uParris-*	*Pitarrus-*	*Pirs-*
	applied	*-Iʿris-*	*-Iʾwaris-*	*-uwarris-*	*ʾitarrus-*	*wirs-*
	actual	*-Īsim-*	*-Iwwalid-*	*-uwaššir-*	*ʾitabbul-*	*wilid-t-*
	basic					*Purrus-*
	applied					*wurrus-*
	actual					*wuššur-*
dev.:	basic	*-ušaPras-*		*-iParrVs-*		
	applied	*-ušarras-*		*-iØrrVs-*		
	actual	*-ušabbal-*		*-ittir-*		

When the first radical occurs as first element of a cluster, it is realized as regressive length, as with the roots first Aleph. Thus the first radical *P* in *-IPrVs-*, being the first element of a consonantal cluster, is realized as regressive length, and the actual pattern is *-Iʿrvs-*, as in *ʾ-Īsim* "he became fitting" (from *Wsim* "to be(come) fitting").

As with the first Aleph and first Nun roots, the first radical does not occur as the second element of a consonantal cluster proper, but an analogous environment obtains in the N stem, where the alternating set of realization *N* occurs as the first element in the cluster (see above, 38.3). Unlike roots first Aleph, the stem determinant *N* in roots first Waw is realized as progressive length, and the weak radical *W* is realized consonantally as *w*. Thus the pattern *-INParis-* is to be rewritten *-Iʾwaris-*, as in *ʾ-iwwalid* "he was born."

Similarly, when the first radical is intervocalic, it is also realized consonantally as *w*, e.g., in *-uParris-*, to be rewritten *-uwarris-*, as in *ʾ-uwaššir* "he set free."

When the first radical is initial, the same distinction obtains as for the roots first Aleph and first Nun. If the vowel immediately following the first radical is either *i* or the root vowel, and if the pattern is a verbal pattern, then the first radical is realized as ʾ (note that, differently from the roots first Aleph, the vowel does *not* change to *a*). With other vowels for verbal patterns, and with all vowels for nominal patterns, the first radical is realized as *w*. Examples for the first alternative are *Pitarrus-*, to be rewritten *ʾitarrus-*, as in *ʾitabbul*; for the second *Parās-*, to be rewritten *warās-*, as in *wabāl-um* "to bring," or *Pirs-*, to be rewritten *wirs-*, as in *wild-um* "that which is born."

43.4 External inflection of selected forms

The paradigm that results from the application of these rules is given below, 49. The addition of the markers of external inflection takes place regularly as with the forms from strong roots, for which see above, 27-28. For ease of reference, I will give here a selection of a few representative forms from the B stem of the root *Wtir* "to be(come) abundant" (with the application of the phonotactic rule given below in 55.1). Since roots of this type are stative in meaning, very few finite forms are attested, so that, in the paradigm that follows, most of the forms are reconstructed. In particular, it should be noted that forms with vocalic shift *a*>*e* seems to be found more frequently than forms without, except for the perfect, though considerable fluctuations may be observed. The paradigm below reflects this preference for the vocalic shift, except in the perfect (for the application of the phonotactic rule see below, 55.1).

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-ītir*	*ʾ-ītir-am*	*ʾ-ītir-u*	*ʾ-ītatir*	*ʾ-ittir*	*lītir*
2	*ʾetir*	*t-ētir*	*t-ētir-am*	*t-ētir-u*	*t-ātatir*	*t-ettir*	
	ʾet[i]r-ī	*t-ētir-ī*	*t-ētir-ī-m*	*t-ētir-ī*	*t-ātat[i]r-ī*	*t-ettir-ī*	
1		*ʾ-ētir*	*ʾ-ētir-am*	*ʾ-ētir-u*	*ʾ-ātatir*	*ʾ-ettir*	*lūtir*
p3		*ʾ-ītir-ū*	*ʾ-ītir-ū-nim*	*ʾ-ītir-ū*	*ʾ-ītat[i]r-ū*	*ʾ-ittir-ū*	*lītir-ū*
		ʾ-ītir-ā	*ʾ-ītir-ā-nim*	*ʾ-ītir-ā*	*ʾ-ītat[i]r-ā*	*ʾ-ittir-ā*	*lītir-ā*
2	*ʾet[i]r-ā*	*t-ētir-ā*	*t-ētir-ā-nim*	*t-ētir-ā*	*t-ātat[i]r-ā*	*t-ettir-ā*	
1		*n-ītir*	*n-ītir-am*	*n-ītir-u*	*n-ītatir*	*n-ittir*	*ʾīn-ītir*

43.5 Systemic deviations

As with roots first Aleph, an analogical deviation occurs in the case of the present Š. In the pattern *-ušaPras-*, *P* is not realized as regressive length even though it is the first element of a consonantal cluster, i.e., it is not realized not as **-ušāras-* (e.g., **ušābal-*); rather it is realized as progressive length, yielding *-ušarras-* (*ʾ-ušabbal*), possibly on the analogy of the present B *ʾubbal*. The present, too, is realized in the same way as the roots first Aleph: the first radical as *∅*, with the middle vowel being omitted, e.g., from the pattern *-iParrVs-* the applied form is *-i∅rrVs-* as in *ʾittir* "he became abundant."

The vocalic shift *a>e* is found in the finite forms of the B stem from roots with root vowel *i* and in the preterite of the Š stem of both types of root. The distribution is unpredictable, and in free variation with forms without vocalic shift. For a possible historical explanation see above, 43.2.

The middle vowel of the preterite Š of both types of root may occur as *u* instead of *a* (see above, 14.1, note 1). This, too, is unpredictable and in free variation with forms with vowel *a*. For a possible historical explanation see above, 43.2.

43.6 The biradical subsystem

Certain forms from roots with root vowel *i\a* show a realization that presupposes a biradical root. They include the imperative, preterite and present of the B stem[1] and the equivalent of the deverbal patterns *Pirs* and *Purs*. Since these forms constitute a compact and meaningful block, I prefer to consider this as a biradical subsystem, i.e., not just a group of deviating zero realizations of the weak radical, but rather a wholly separate inflectional subsystem, derived from biradical roots – a *sub*system, because it partly overlaps with the prevalent triradical system (in the preterite and the perfect); and truly *bi*radical, because the lack of an initial radical does not constitute (within the subsystem) any opposition to a true radical, so that the notion of zero is here meaningless. Given this premise, the normal statements based on environment do not apply: the patterns are based on a root not of the type *Prs*, but rather of the type *rs*. Hence, instead of derivational rules as for the other roots, I only give here correspondences for the each of the forms affected.

Besides biradicalism, a second peculiarity is that in the preterite and present of the *B* stem the vowel of the first syllable is *u* (see above, 43.2, for a historical note

[1] The traditional paradigm includes the forms *tabal-* and *-Itbal-* as a biradical imperative and preterite Bt from *Wb\l*. Since, however, this form would occur only with this particular root, I prefer to consider *tabal-* and *-Itbal-* as the imperative and preterite of the root *tbal*, which has the same meaning ("to take away") as the separative of *Wb\l*. See also below, 46.7, n.4.

on this phenomenon). It should be noted that the vowel *u* of the first syllable is attested both short and long, as evidenced by such pairs as *ublū* and *ūbilū* "they brought." I consider the short vowel as belonging to forms of the biradical subsystem, the long vowel to those of the triradical system (see presently).

A third trait which differentiates roots with root vowel *i\a* from those with root vowel *i* is in the treatment of the weak radical when it is retained as part of a triradical realization, and it occurs as the first element of a cluster: in such environment the weak radical is realized as progressive length (in contrast with roots first W with root vowel *i*, where it is realized as regressive length). Alternate triradical forms are attested for the preterite and the perfect *B* (next to biradical ones), and for the Bt and Btn stems.

In the verbal nouns, the triradical system obtains, and the weak radical is realized consonantally as *w*.

The derived stems are inflected like those from roots with root vowel *i*.

43.7 External inflection of selected forms

The paradigm that results from the application of these rules is given below, 49, together with forms from roots with root vowel *i*. The addition of the markers of external inflection takes place regularly as with the forms from strong roots, for which see above, 27-28. For ease of reference, I will give here a selection of a few representative forms from the B stem and the two biradical deverbal nouns from the roots *Wb\l* "to bring" and *Wš\b* "to be sitting" (with the application of the phonotactic rule given below in 55.1).

BIRADICAL REALIZATION

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-ubil*	*ʾ-ub[i]l-am*	*ʾ-ub[i]l-u*		*ʾ-ubbal*	
2	*bil*	*t-ubil*	*t-ub[i]l-am*	*t-ub[i]l-u*		*t-ubbal*	
	bil-ī	*t-ub[i]l-ī*	*t-ub[i]l-ī-m*	*t-ub[i]l-ī*		*t-ubbal-ī*	
1		*ʾ-ubil*	*ʾ-ub[i]l-am*	*ʾ-ub[i]l-u*		*ʾ-ubbal*	
p3		*ʾ-ub[i]l-ū*	*ʾ-ub[i]l-ū-nim*	*ʾ-ub[i]l-ū*		*ʾ-ubbal-ū*	
		ʾ-ub[i]l-ā	*ʾ-ub[i]l-ā-nim*	*ʾ-ub[i]l-ā*		*ʾ-ubbal-ā*	
2	*bil-ā*	*t-ub[i]l-ā*	*t-ub[i]l-ā-nim*	*t-ub[i]l-ā*		*t-ubbal-ā*	
1		*n-ubil*	*n-ub[i]l-am*	*n-ub[i]l-u*		*n-ubbal*	

deverbal nouns: *bil-t-um, šub-t-um*

TRIRADICAL REALIZATION

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-ūbil*	*ʾ-ūbil-am*	*ʾ-ūbil-u*	*ʾ-ittabal*		*lībil*
2		*t-ūbil*	*t-ūbil-am*	*t-ūbil-u*	*t-attabal*		
		t-ūbil-ī	*t-ūbil-ī-m*	*t-ūbil-ī*	*t-attab[a]l-ī*		
1		*ʾ-ūbil*	*ʾ-ūbil-am*	*ʾ-ūbil-u*	*ʾ-attabal*		*lūbil*
p3		*ʾ-ūbil-ū*	*ʾ-ūbil-ū-nim*	*ʾ-ūbil-ū*	*ʾ-ittab[a]l-ū*		*lībil-ū*
		ʾ-ūbil-ā	*ʾ-ūbil-ā-nim*	*ʾ-ūbil-ā*	*ʾ-ittab[a]l-ā*		
2		*t-ūbil-ā*	*t-ūbil-ā-nim*	*t-ūbil-ā*	*t-attab[a]l-ā*		
1		*n-ūbil*	*n-ūbil-am*	*n-ūbil-u*	*n-ittabal*		*īn-ūbil*

Chapter 44

Patterns from Triradicals Middle Weak

44.1 Derivational rules

		environment			
		cluster		non-cluster	
				R intervocalic	
		R as first element	R as second element	short	long
realization		*ˈ*	*ˀ*	*ø*	*ˀvˀs*
ex.:	basic	*puRs-*	*-IpRVs-*	*paRās-*	*-IpaRRVs-*
	applied	*puˈs-*	*-IpˀVs-*	*paøās-*	*-IpˀVˀs-*
	actual	*ṭūb-t-*	*-Ikūn-*	*kān-*	*-IkŪnn-*
	basic		*mapRas-*	*pVRVs*	*puRRus-*
	applied		*mapˀas-*	*pVøVs-*	*puˀuˀs-*
	actual		*makān-*	*kūn-*	*kūnn-*
dev.:	basic		*mapRas-*	*pāRis-*	*paRRās-*
	applied		*mapʾas-*	*pāʾis-*	*payyas-*
	actual		*namʾad-*	*dāʾik*	*dayyān-*
	basic		*-ušapRas-*		*pitaRRus-*
	applied		*-ušpaˀs-*		*pitayyus-, pitaʾʾus-*
	actual		*-ušmatt-*		*kitayyun-, šitaʾʾun-*

Middle weak radical is realized uniformly as length, and specifically as vocalic length affecting the last pattern vowel, without any consonantal equivalent for the middle radical; when the middle radical of the pattern is long, length is transferred

to the last radical. (Analogously final weak radical is realized as vocalic length of the last pattern vowel, without any consonantal equivalent for the final radical, see 45.1.)

The traditional term "hollow root" used to describe roots middle weak employs a metaphor which describes precisely the lack of a middle consonantal radical, as if there were a cavity or hole in the middle.

While the description given above is sufficient to define the actual realizations of the patterns, I will still give here, for the sake of completeness, a formulation of the same rules according to the environmental parameters used for the other weak verbs. It can be stated by saying that middle weak radical is always realized as progressive length, except if first element of a cluster, in which case it is realized as regressive length. In greater detail, the formulation would be as follows.

When the second radical occurs as the first element of a cluster, it is realized as regressive length. Thus the second radical *R* in *puRs-*, being the first element of a consonantal cluster, is realized as regressive length, and the actual pattern is *puʿs-*, as in *ṭūb-t-* "goodness," from the root *ṭ:ab* "to be(come) good."

When the second radical occurs as the second element of a cluster, it is realized as progressive length. Thus the second radical *R* in *-IpRVs-*, being the second element of a consonantal cluster, is realized as progressive length, and the actual pattern is *-Ipʾ Vn-*, as in *-Ikūn-*.

When the second radical is intervocalic, it is realized as progressive length; if it is long, an additional length is applied to the third radical. This results in a number of alterations in the actual configuration of the core forms, which, though predictable, may at times considerably obscure the relationship between pattern and core form. These alterations are as follows:

(1) Vowels that are in contact as a result of the absence of a consonantal middle radical are contracted according to the morphophonemic rules given below (55.2): a single long vowel results, the quality being that of the second vowel, as in *paRis-* ~ *paʾis-* ~ *pīs* (e.g., *kīn-* "firm" from *k:un*).

(2) The vowel *a* which is introduced in patterns from strong roots to resolve a pluriconsonantal cluster (e.g., *-IpaRRVs-*, see above, 14.1) is omitted, e.g., *-Ipʾ Vʾs-* ~ *-Ikūnn-* (this rule is redundant, because, even if present, the vowel *a* be contracted with the following vowel).

(3) If the pattern configuration defines an intervocalic second radical as long, then length is tranferred to the third radical (since obviously there cannot be a lengthening of length). That is why in the example just quoted (*-Ikūnn-*), the last radical is realized as long. This, however, introduces a potential ambiguity between the present *-Ikūnn-* and the preterite *-Ikūn-*: while with a vocalic postfix there would be an opposition between the two, e.g., *ikunnū* vs. *ikūnū*, with postfix *ø* the opposition would be lost, since both present and preterite would be, e.g., *ikūn* (on the basis of the morphophonemic rule stated below, 56.1). To avoid such potential homonymity, the present shows uniformly a vocalism *a* whenever the postfix is *ø*. Following my standard notation, I use the capital letter *Ū* to represent the set of alternations *ū/ā* and the capital letter *Ī* to represent the set of alternations *ī/ā* – hence the core forms given, e.g., below, 44.5, should properly be rendered as *-IkŪnn-* and *-IšĪmm-* (see below, 49.4).

44.2 Systemic deviations in the realization of patterns

Presumably under the analogy of the present B and of the D stem, the finite forms of the Š stem exhibit a secondary lengthening of the third radical, which is not otherwise required in terms of overall pattern configuration. Thus in the present Š *-ušapRas-*, for instance, the middle radical *R*, being second element of a cluster, is realized as progressive length (*-ušapʾ as-*); the middle *a* is no longer necessary (*-ušpās-*); and finally, as per the systemic deviation mentioned, the third radical is lengthened (*-ušpāss-*). The same occurs with the imperative, preterite and perfect.

In certain patterns, the weak radical is realized consonantally as either *y* or ʾ; the choice between the two is unpredictable, and may in fact be either in free variation or the result of graphemic, rather than phonemic, alternation.[1] The following types of patterns exhibit such consonantal realizations:

(1) the participle of the B stem (i.e., *pāRis-*, as in *dāʾik-* "killer" from *d:uk*);

(2) presumably all patterns of the Btn stems (e.g., *ḫitayyaṭ* "keep checking!" from *ḫ:iṭ*, or *ništanaʾʾam* "we keep buying" from *š:am*); note that patterns with the standard realization are also found, e.g., *iqtanīš* "he keeps giving as a gift" from *q:iš*;

(3) certain denominal patterns, in particular the following: *paRRas-* (e.g., *kayyan-* "regular"), *paRRās-* (e.g., *dayyān-* "judge" from *d:in*, or *šaʾʾām-ān-* "a particular buyer" from *š:am*), and *mapRas-* ({*maNyal-*} */mayyal-/* "bed" from *N:il* "to sleep," properly a double weak root, for which see see below, 46; or *namʾad-* "majority" from *m:ad* "to be numerous"); note that the pattern *mapRas-* is also found, though more seldom, with the expected realization of progressive length (e.g., *makān-* "place" from *k:un*).

[1] The uncertainty derives from the fact that a writing like *da-a-a-nu* may be equivalent to a writing like *da-ia-nu*, both attested, and both probably standing for */dayyānu/*. A decision in the matter is difficult because, in view of the relative scarcity of attestations (not so much as text occurrences, but rather as word occurrences), it is hard to investigate the possibility of a distribution along lexical, diachronic or dialectal lines.

44.3 Systemic deviation in the choice of patterns

An altogether different pattern (see above, 17.3) is found as an alternate for the participle B, namely *mupRis-* ~ *mup⁻is-*, as in *mudīk-um* "killer" (from *d:uk*), next to the regular *dāʾik-um*. Such a pattern with initial *mu*, analogous to the participles of the derived stems, is also found with other roots (see below, 48.3).

44.4 Lexical deviations and historical remarks

The tendency to realize the weak radical as a "strong" aleph, noted already for the Btn stem, is also found in selected forms from other roots, e.g., the B stem of *š:al* "to ask" (e.g., preterite *išʾal* next to *išāl*, present *išaʾʾal* next to *išāl*), or, from the Middle Babylonian period on, for the D stem from *z:uz* "to divide" (e.g., infinitive *zuʾʾuzum*, preterite *uzaʾʾiz*, and present *uzaʾʾaz*).

Special forms, found in Old Babylonian, are *ʾ-iqīaš* for *ʾ-iqāš* "he gives as a gift" (present B from *q:iš*), and *ʾ-iddūak* for *ʾ-iddāk* "he is killed" (present N from *d:uk*), *ʾ-iqqīap* for *ʾ-iqqāp* "he is entrusted" (present N from *q:ip*). These are the only forms in Babylonian in which the medial vowel of a verbal pattern (i.e., a vowel which is neither first nor final) is different from *a* (see above, 14.1; but see also 43.5). It should be noted that forms of this type are prevalent in Assyrian. These facts show convincingly that middle weak roots must be considered (in Akkadian at least) as consisting of two consonants and a long vowel, without a consonantal realization for the middle radical.

44.5 External inflection of selected forms

The paradigm that results from the application of these rules is given below, 49. The addition of the markers of external inflection takes place regularly as with the forms from strong roots, for which see above, 27-28. However, the various peculiarities in vocalization, noted above (44.2) result in a seemingly anomalous paradigm of external inflection. For ease of reference, it will be useful to give this paradigm in fuller detail than usual (see the chart on the next page). I will give a selection of a few representative forms from all stems; the roots used are *k:un* "to be(come) firm," *d:uk* "to kill" and *m:ut* "to die."

The roots chosen for the paradigm all have root vowel *u*. A similar distribution would of course occur with root vowel *i*, e.g., the root *š:im* "to establish" yields in the preterite the forms *išīm, išīmū* and in the present the forms *išām, išimmū*. Obviously, no opposition is possible with root vowel *a*, in which case the homonymy

of forms remains, e.g., the root *š:am* "to buy" yields in the preterite the forms *išām, išāmū* and in the present the forms *išām, išammū*. No middle weak triradicals occur with alternating root vowel *u/a*.

B

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-ikūn*	*ʾ-ikūn-am*	*ʾ-ikūn-u*	*ʾ-iktūn*	*ʾ-ikān*	*līkūn*
2	*kūn*	*t-akūn*	*t-akūn-am*	*t-akūn-u*	*t-aktūn*	*t-akān*	
	kūn-ī	*t-akūn-ī*	*t-akūn-ī-m*	*t-akūn-ī*	*t-aktūn-ī*	*t-akunn-ī*	
1		*ʾ-akūn*	*ʾ-akūn-am*	*ʾ-akūn-u*	*ʾ-aktūn*	*ʾ-akān*	*lūkūn*
p3		*ʾ-ikūn-ū*	*ʾ-ikūn-ū-nim*	*ʾ-ikūn-ū*	*ʾ-iktūn-ū*	*ʾ-ikunn-ū*	*līkūn-ū*
		ʾ-ikūn-ā	*ʾ-ikūn-ā-nim*	*ʾ-ikūn-ā*	*ʾ-iktūn-ā*	*ʾ-ikunn-ā*	*līkūn-ā*
2	*kūn-ā*	*t-akūn-ā*	*t-akūn-ā-nim*	*t-akūn-ā*	*t-aktūn-ā*	*t-akunn-ā*	
1		*n-ikūn*	*n-ikūn-am*	*n-ikūn-u*	*n-iktūn*	*n-ikān*	*ʾīn-ikūn*

N

s3		*ʾ-iddīk*	*ʾ-iddīk-am*	*ʾ-iddīk-u*		*ʾ-iddāk*	
2		*t-addīk*	*t-addīk-am*	*t-addīk-u*		*t-addāk*	
		t-addīk-ī	*t-addīk-ī-m*	*t-addīk-ī*		*t-addukk-ī*	
1		*ʾ-addīk*	*ʾ-addīk-am*	*ʾ-addīk-u*		*ʾ-addāk*	
p3		*ʾ-iddīk-ū*	*ʾ-iddīk-ū-nim*	*ʾ-iddīk-ū*		*ʾ-iddukk-ū*	
		ʾ-iddīk-ā	*ʾ-iddīk-ā-nim*	*ʾ-iddīk-ā*		*ʾ-iddukk-ā*	
2		*t-addīk-ā*	*t-addīk-ā-nim*	*t-addīk-ā*		*t-addukk-ā*	
1		*n-iddīk*	*n-iddīk-am*	*n-iddīk-u*		*n-iddāk*	

D

s3		*ʾ-ukīn*	*ʾ-ukinn-am*	*ʾ-ukinn-u*	*ʾ-uktīn*	*ʾ-ukān*	*līkīn*
2	*kīn*	*t-ukīn*	*t-ukinn-am*	*t-ukinn-u*	*t-uktīn*	*t-ukān*	
	kinn-ī	*t-ukinn-ī*	*t-ukinn-ī-m*	*t-ukinn-ī*	*t-uktinn-ī*	*t-ukann-ī*	
1		*ʾ-ukīn*	*ʾ-ukinn-am*	*ʾ-ukinn-u*	*ʾ-uktīn*	*ʾ-ukān*	*lūkīn*
p3		*ʾ-ukinn-ū*	*ʾ-ukinn-ū-nim*	*ʾ-ukinn-ū*	*ʾ-uktinn-ū*	*ʾ-ukann-ū*	*līkinn-ū*
		ʾ-ukinn-ā	*ʾ-ukinn-ā-nim*	*ʾ-ukinn-ā*	*ʾ-uktinn-ā*	*ʾ-ukann-ā*	*līkinn-ā*
2	*kinn-ā*	*t-ukinn-ā*	*t-ukinn-ā-nim*	*t-ukinn-ā*	*t-uktinn-ā*	*t-ukann-ā*	
1		*n-ukīn*	*n-ukinn-am*	*n-ukinn-u*	*n-uktīn*	*n-ukān*	*ʾīn-ukīn*

Š

s3		*ʾ-ušmīt*	*ʾ-ušmitt-am*	*ʾ-ušmitt-u*	*ʾ-uštamīt*	*ʾ-ušmāt*	*lišmīt*
2	*šumīt*	*t-ušmīt*	*t-ušmitt-am*	*t-ušmitt-u*	*t-uštamīt*	*t-ušmāt*	
	šumitt-ī	*t-ušmitt-ī*	*t-ušmitt-ī-m*	*t-ušmitt-ī*	*t-uštamitt-ī*	*t-ušmatt-ī*	
1		*ʾ-ušmīt*	*ʾ-ušmitt-am*	*ʾ-ušmitt-u*	*ʾ-uštamīt*	*ʾ-ušmāt*	*lušmīt*
p3		*ʾ-ušmitt-ū*	*ʾ-ušmitt-ū-nim*	*ʾ-ušmitt-ū*	*ʾ-uštamitt-ū*	*ʾ-ušmatt-ū*	*lišmitt-ū*
		ʾ-ušmitt-ā	*ʾ-ušmitt-ā-nim*	*ʾ-ušmitt-ā*	*ʾ-uštamitt-ā*	*ʾ-ušmatt-ā*	*lišmitt-ā*
2	*šumitt-ā*	*t-ušmitt-ā*	*t-ušmitt-ā-nim*	*t-ušmitt-ā*	*t-uštamitt-ā*	*t-ušmatt-ā*	
1		*n-ušmīt*	*n-ušmitt-am*	*n-ušmitt-u*	*n-uštamīt*	*n-ušmāt*	*ʾīn-ušmīt*

Chapter 45
Patterns from Triradicals Final Weak

45.1 Derivational rules

	environment	
	cluster	non-cluster
	S as second element	final
realization	$v^{\leftarrow}r\emptyset$	$\leftarrow$
ex.: basic	*pirS-*	*-IprVS-*
applied	*pi$^{\leftarrow}$rØ-*	*-IprV$^{\leftarrow}$-*
actual	*mīl-*	*-Ibnī-*
dev.: basic	*pirS-t-, purS-t-*	
applied	*piri$^{\leftarrow}$-t-, piru$^{\leftarrow}$-t-*	
actual	*qibī-t-, ḫidū-t-*	

The final weak type is the simplest of all weak roots. The weak radical is found almost exclusively in one environment, as non cluster final; it never occurs intervocalic, and only once in a cluster. It is realized uniformly as length, and specifically as length of the final pattern vowel, without any consonantal equivalent for the final radical. This statement covers also the one instance in which length occurs as second element of a cluster, in which case, too, length is transferred to the last vowel of the pattern, or, alternatively, to the only vowel of the pattern, since these are only monosyllabic patterns. (Analogously, middle weak radical is realized as vocalic length of the last pattern vowel, without any consonantal equivalent for the middle radical, see above, 44.1.)

While the description given above is sufficient to define the actual realizations of the patterns, I will give here, for the sake of completeness, a formulation of the same rules according to the environmental parameters used for the other weak verbs.

In final position, *S* is realized as regressive length, as in *-IprVS-*, to be rewritten *-IprV$^{\leftarrow}$-*, as in *ibnī* "he built," or *mapriS-*, to be rewritten *maprī-*, as in *nabnī-t-um* "image."

It is possible that final long vowel may have been shortened (see below, 54), so that *ibnī* "he built" would in fact be *ibni*, but there is no conclusive proof to this effect. This would, in any case, be a secondary phenomenon, and there is no question of the existence of length as final radical for these roots; this is shown by the feminine of the verbal adjective of the B stem *parī-t-*, as in *banī-t-um* "beautiful," where phonotactic considerations prove that the middle syllable was long (otherwise the syllabic structure would be altered, i.e., the vowel would drop, see below, 55.1). As a result, this type of root cannot be considered a biradical *pri*,[1] but rather as a regular weak triradical *pri:*.

As second element of a cluster the weak radical occurs only in the nominal patterns *pirS-* and *purS-*. Here, too, it is realized as regressive length, but with certain peculiarities. When the pattern is followed by the masculine endings (of external inflection), i.e., by vowel, length is transferred to the preceding vowel: thus *pirS-* is to be rewritten *pīr-* (which may be interpreted as a phenomenon of metathesis, i.e., *piSr-*), as in *mīl-um* "flood" (from *mla:* "to be full"). When the pattern is followed by the feminine ending (of external inflection), i.e., by consonant, the typical vowel of the pattern occurs after the second radical, with an auxiliary vowel *i* inserted between the first and the second radical: thus *pirS-t-* is to be rewritten *piriS-t-* ~ *pirī-t-*, as in *qibī-t-um* "command" (from *qbi:* "to speak"), and *purS-t-* is to be rewritten *piruS-t-* ~ *pirū-t-*, as in *ḫidū-t-um* "joy" (from *hdu:*).

45.2 External inflection of selected forms

The paradigm that results from the application of these rules is given below, 49. The addition of the markers of external inflection takes place regularly as with the forms from strong roots, for which see above, 27-28. Two points, however, need to be mentioned.

First, since the markers of the ventive and subjunctive are morpheme sensitive, and not phoneme sensitive (see above, 28.2), there is a distinction depending on whether the final vowels *ā* and *ī* of the indicative are the root vowel, or the markers of the second singular feminine or the second plural common respective-

[1] KIENAST 1963 "Zweiradikaligen" §18.

ly. This may best be shown in diagrammatic form as follows (for the possibility of alternative forms with contraction see presently):

2 sg ms ventive	*t-abnī-Ø-am*	*/tabnīam/* or */tabnām/*
2 sg fm "	*t-abnī-ī-m*	*/tabnīm/*
2 sg ms ventive	*t-amlā-Ø-am*	*/tamlām/*
2 pl cm "	*t-amlā-ā-nim*	*/tamlānim/*
3 sg ms subjunctive	*t-abnī-Ø-u*	*/tabnīu/* or */tabnū/*
2 sg fm "	*t-abnī-ī-Ø*	*/tabnī/*
3 sg ms subjunctive	*t-amlā-Ø-u*	*/tamlū/*
2 sg fm "	*t-āmlā-ī-Ø*	*/tamlī/*

The second way in which external inflection affects the phonemic realization of the actual forms of the paradigm occurs with postfixes of external inflection beginning with vowel, which cause normal contraction to occur (see below 55.2). In Old Babylonian, however, uncontracted forms exist side by side with contracted ones, and it is difficult to decide whether this is partial archaism in the language, archaism in the writing (historical spelling), or a phenomenon of morphographemics. The following diagram indicates some of the pertinent examples.

basic	*pariS-um*	*pariS-at*	*t-aprVS-ī*	*ʾ-iprVS-u*	*ʾ-iprVS-ū*	*ʾ-iprVS-am*
applied	*pariˁ-um*	*pariˁ-at*	*t-aprVˁ-ī*	*ʾ-iprVˁ-u*	*ʾ-iprVˁ-ū*	*ʾ-iprVˁ-am*
uncontr.	*rabīum*	*rabīat*	*tabnī*	*ʾibnīu*	*ʾibnīū*	*ʾibnīam*
contr.	*rabūm*	*rabāt*	*tabnī*	*ʾibnū*	*ʾibnū*	*ʾibnām*

For ease of reference, I will give here a selection of a few representative forms from the B stem of the root *bni:* "to build" (first without, and then with the application of the contraction rules just mentioned).

UNCONTRACTED

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-ibnī*	*ʾ-ibnī-am*	*ʾ-ibnī-u*	*ʾ-ibtanī*	*ʾ-ibannī*	*libnī*
2	*binī*	*t-abnī*	*t-abnī-am*	*t-abnī-u*	*t-abtanī*	*t-abannī*	
	binī-ī	*t-abnī-ī*	*t-abnī-ī-m*	*t-abnī-ī*	*t-abtanī-ī*	*t-abannī-ī*	
1		*ʾ-abnī*	*ʾ-abnī-am*	*ʾ-abnī-u*	*ʾ-abtanī*	*ʾ-abannī*	*lubnī*
p3		*ʾ-ibnī-ū*	*ʾ-ibnī-ū-nim*	*ʾ-ibnī-ū*	*ʾ-ibtanī-ū*	*ʾ-ibannī-ū*	*libnī-ū*
		ʾ-ibnī-ā	*ʾ-ibnī-ā-nim*	*ʾ-ibnī-ā*	*ʾ-ibtanī-ā*	*ʾ-ibannī-ā*	*libnī-ā*
2	*binī-ā*	*t-abnī-ā*	*t-abnī-ā-nim*	*t-abnī-ā*	*t-abtanī-ā*	*t-abannī-ā*	
1		*n-ibnī*	*n-ibnī-am*	*n-ibnī-u*	*n-ibtanī*	*n-ibannī*	*ʾin-ibnī*

CONTRACTED

	imp	pret	pret/vent	pt/subj	perf	pres	desid
s3		*ʾ-ibnī*	*ʾ-ibnām*	*ʾ-ibnū*	*ʾ-ibtanī*	*ʾ-ibannī*	*libnī*
2	*binī*	*t-abnī*	*t-abnām*	*t-abnū*	*t-abtanī*	*t-abannī*	
	binī	*t-abnī*	*t-abnī-m*	*t-abnī*	*t-abtanī*	*t-abannī*	
1		*ʾ-abnī*	*ʾ-abnām*	*ʾ-abnū*	*ʾ-abtanī*	*ʾ-abannī*	*lubnī*
p3		*ʾ-ibnū*	*ʾ-ibnū-nim*	*ʾ-ibnū*	*ʾ-ibtanū*	*ʾ-ibannū*	*libnū*
		ʾ-ibnā	*ʾ-ibnā-nim*	*ʾ-ibnā*	*ʾ-ibtanā*	*ʾ-ibannā*	*libnā*
2	*binā*	*t-abnā*	*t-abnā-nim*	*t-abnā*	*t-abtanā*	*t-abannā*	
1		*n-ibnī*	*n-ibnām*	*n-ibnū*	*n-ibtanī*	*n-ibannī*	*ʾin-ibnī*

45.3 Lexical peculiarities

The imperative from the roots *kla:* "to hold" and *šme:* "to hear" show a vocalism of the first syllable in *i* (hence *kilā*, *šimē*), like other strong roots with root vowel *a* (see above, 14.2).

Chapter 46
Patterns from Triradicals Double Weak

46.1 Introductory

Two weak radicals may occur together in the same root, but no new derivational rule is required: the same rules stated in the preceding chapters apply in a cumulative way to the realization of any weak radical in its environment. Hence the treatment accorded here to these roots is simply a recapitulation of the statements made earlier, except for a few deviations which will be pointed out as needed. The core forms are listed in tabular form below (49), where a listing of the patterns is omitted, since they can easily be derived from the patterns of the single weak roots.

46.2 Triradicals first Aleph and final weak (*ʔC:*)

Patterns from these roots follow regularly the standard derivational rules given above for each of the two weak radicals (chapters 41 and 45). For ease of reference, I give here a selection of a few representative forms from the B stem of the root *ʔli:* "to be(come) high"; for final weak, I give only contracted forms.

B stem *ʾelū*		imp/ desid	pret	perf	pres	pres vent	pres subj
sg	3 cm	*līlī*	*ʾ-īlī*	*ʾ-ītelī*	*ʾ-illī*	*ʾ-illām*	*ʾ-illū*
	2 ms	*ʾelī*	*t-ēlī*	*t-ētelī*	*t-ellī*	*t-ellām*	*t-ellū*
	fm	*ʾelī*	*t-ēlī*	*t-ētelī*	*t-ellī*	*t-ellīm*	*t-ellī*
	1 cm	*lūlī*	*ʾ-ēlī*	*ʾ-ētelī*	*ʾ-ellī*	*ʾ-ellām*	*ʾ-ellū*
pl	3 ms	*līlū*	*ʾ-īlū*	*ʾ-ītelū*	*ʾ-illū*	*ʾ-illūnim*	*ʾ-illū*
	fm	*līlā*	*ʾ-īlā*	*ʾ-ītelā*	*ʾ-illā*	*ʾ-illānim*	*ʾ-illā*
	2 cm	*ʾelā*	*t-ēlā*	*t-ētelā*	*t-ellā*	*t-ellānim*	*t-ellā*
	1 cm	*ʾinīlī*	*n-īlī*	*n-ītelī*	*n-illī*	*n-illām*	*n-illū*

46.3 Lexical deviations for triradicals first Aleph and final weak

The two roots *ʔdi:* "to know" and *ʔšu:* "to have" exhibit a number of deviations. A first set of deviations includes a variety of alternative patterns, for which see above, 17.3; three patterns are affected. (1) The regular pattern of the infinitive B PARA:S is found for the root *ʔdi:*, but an alternative pattern with initial vowel *i* (PIRA:S) occurs regularly for both roots (for another B infinitive pattern with vowel *i* in the first syllable, see below, 48.3). (2) Similarly, the pattern of the verbal adjective exhibits a first vowel *i*, hence PIRAS instead of PARAS (see above 17.3, and below, 46.6). The verbal adjective occurs especially in the predicative state, e.g., *išāku* "I have on hand" and *idāku* "I am knowledgeable." (3) The pattern of the participle B is MUPRIS instead of PA:RIS (for other occurrences of participles B with initial *mu-* see above, 44.3, and below, 48.3). The derivation of these forms is given in tabular form below.

	B inf.		B vadj.	B part.
regular pattern	*ParāS-*		*ParaS-*	*PāriS-*
alternative pattern		*PirāS-*	*PiraS-*	*muPriS-*
derived	*ʾere˂-*	*ʾire˂-*	*ʾire˂-*	*mu˂ri˂-*
actual *ʔdi:*	*ʾedē-*	*ʾidē-*	*ʾidē-*	*mūdī-*
actual *ʔšu:*	–	*ʾišē-*	*ʾišē-*	–

Another deviation appears in the D stem from *ʔdi:*, some forms of which exhibit a realization of the first radical as a strong *w*.[1]

Finally, the inflection of both *ʔdi:* and *ʔšu:* may be considered defective in that, in spite of their high frequency of occurrence, they do not exhibit any form of the present B; the preterite B for both roots appears regularly instead with a present meaning, hence *ʾidī* "he knows" (not "he knew"), and *ʾišū* "he has" (not "he had"). There is, however, no reason to consider these forms as having a stative value (they have even been called "prefixed statives"), because the overall distribution of forms conforms to that of regular fientive transitives (see below, 70.5).

A special type of root with first Aleph and final weak includes a potential weak vowel in medial position; such a root would be a triple weak triradical except for the fact that the middle radical is realized consistently as strong *w*, and as *m* in later periods. Only two triradicals belong to this type: *ʔwu: / ʔmu:* "to speak" and *ʔwi: / ʔmi: (e)* "to become." See for example the preterite B *ʾīwī* "he became," the present B *ʾimmi* "he becomes," the present Bt *ʾītawwū* "he speaks with."

[1] This is considered a separate root in *AHw* 1454-56, s.v. *(w)adū(m)*, whereas *CAD I* 20, considers these forms under *idū*.

46.4 Triradicals first Nun and middle weak (*N:C*)

Patterns from these roots follow regularly the standard derivational rules given above for each of the two weak radicals (chapters 42 and 44). Note that while the rules apply regularly, the specific environments may differ. Thus in the pattern *-IPRVs-* ~ *-IN$^{\circ}$Vs-* the radicals *P* and *R* are in fact not in contact: since *R* is realized as progressive length applied to the following vowel, the first radical *N* is in fact not first element of a cluster, but is rather intervocalic – and is therefore realized regularly as *n*. Possibly through analogical extension, in the imperative B the first radical is also relized as *n* (*nūḫ*, not **$^{\circ}$ūḫ*). For ease of reference, I give here a selection of a few representative forms from the B stem of the root *N:uḫ* "to rest."

nāḫu B stem		imp/ desid	pret	perf	pres	pres vent	pres subj
sg	3 cm	*līnūḫ*	*$^{\circ}$-inūḫ*	*$^{\circ}$-ittūḫ*	*$^{\circ}$-ināḫ*	*$^{\circ}$-inuḫḫ-am*	*$^{\circ}$-inuḫḫ-u*
	2 ms	*nūḫ*	*t-anūḫ*	*t-attūḫ*	*t-anāḫ*	*t-anuḫḫ-am*	*t-anuḫḫ-u*
	fm	*nūḫ-ī*	*t-anūḫ-ī*	*t-attūḫ-ī*	*t-anuḫḫ-ī*	*t-anuḫḫ-īm*	*t-anuḫḫ-ī*
	1 cm	*lūnūḫ*	*$^{\circ}$-anūḫ*	*$^{\circ}$-attūḫ*	*$^{\circ}$-anāḫ*	*$^{\circ}$-anuḫḫ-am*	*$^{\circ}$-anuḫḫ-u*
pl	3 ms	*lūnūḫū*	*$^{\circ}$-inūḫ-ū*	*$^{\circ}$-ittūḫ-ū*	*$^{\circ}$-inuḫḫ-ū*	*$^{\circ}$-inuḫḫ-ūnim*	*$^{\circ}$-inuḫḫ-ū*
	fm	*lūnūḫā*	*$^{\circ}$-inūḫ-ā*	*$^{\circ}$-ittūḫ-ā*	*$^{\circ}$-inuḫḫ-ā*	*$^{\circ}$-inuḫḫ-ānim*	*$^{\circ}$-inuḫḫ-ā*
	2 cm	*nūḫā*	*t-anūḫ-ā*	*t-attūḫ-ā*	*t-anuḫḫ-ā*	*t-anuḫḫ-ānim*	*t-anuḫḫ-ā*
	1 cm	*$^{\circ}$ininūḫ*	*n-inūḫ*	*n-ittūḫ*	*n-ināḫ*	*n-inuḫḫ-am*	*n-inuḫḫ-u*

Several roots first Nun exhibit a middle Aleph which is treated for the most part as a strong radical (see above, 44.4). See, for example, the following paradigm from the root *N$^{\circ}$id* "to pay attention"; for the sake of comparison, the equivalent weak forms from *N:ad (a)* "to praise" are also given (note, however, that the in D stem, *N:ad* exhibits strong Aleph as well, e.g., *nu$^{\circ\circ}$ud-, -una$^{\circ\circ}$id-*).

B	inf	vadj	part	imp	pret	perf	pres
N$^{\circ}$id	*na$^{\circ}$ād-*	*na$^{\circ}$id-*	*?*	*$^{\circ}$i$^{\circ}$id-*	*-I$^{\circ\circ}$id-*	*-Itta$^{\circ}$id-*	*-Ina$^{\circ\circ}$id-*[2]
N:ad	*nād-*	*nād-*	*?*	*?*	*-Inād-*	*?*	*-Inādd-*

Note that the root *N:a$^{\circ}$ (e)* "to turn away" retains strong Aleph throughout as final radical, so that it is not a triple weak triradical; see for example the preterite B *$^{\circ}$inē$^{\circ}$* "he turned away" and the present B *$^{\circ}$ine$^{\circ\circ}$ū* "they turn away."[3]

[2] Written often with signs containing *ḫ* or *$^{\circ}$*, e.g., *na-a$^{\circ}$-da-át, i-ḫi-id, at-ta-$^{\circ}$i-id, ta-na-ḫi-di,* but some times also with broken writing, e.g., *it-id, it-ta-id*, see *CAD N*/1, p. 1-6.

[3] A problem of interpretation arises with a writing like *i-ni-e* for the present B. If this is understood phonemically as */$^{\circ}$ine$^{\circ\circ}$ē/* (thus *CAD N*/2 198A), then the root would be final, rather than middle, weak, i.e., *N$^{\circ}$a: (e)*, the form *$^{\circ}$ine$^{\circ\circ}$ē* being like *$^{\circ}$išemmē*. Since, however, there is no explicit writing of the type *i-ni-e$^{\circ}$-e*, and since the writing *i-ni-e* may well stand for *$^{\circ}$inē$^{\circ}$*, I prefer to retain a regular middle weak interpretation.

46.5 Triradicals first Nun and final weak (*NC:*)

Patterns from these roots follow regularly the standard derivational rules given above for each of the two weak radicals (chapters 42 and 45). For ease of reference, I give here a selection of a few representative forms from the B stem of the root *Nbi:* "to call"; for final weak, I give only contracted forms.

nabū B stem		imp/ desid	pret	perf	pres	pres vent	pres subj
sg	3 cm	*libbī*	*$^{\circ}$-ibbī*	*$^{\circ}$-ittabī*	*$^{\circ}$-inabbī*	*$^{\circ}$-inabbām*	*$^{\circ}$-inabbū*
	2 ms	*$^{\circ}$ibī*	*t-abbī*	*t-attabī*	*t-anabbī*	*t-anabbām*	*t-anabbū*
	fm	*$^{\circ}$ibī*	*t-abbī*	*t-attabī*	*t-anabbī*	*t-anabbīm*	*t-anabbī*
	1 cm	*lubbī*	*$^{\circ}$-abbī*	*$^{\circ}$-attabī*	*$^{\circ}$-anabbī*	*$^{\circ}$-anabbām*	*$^{\circ}$-anabbū*
pl	3 ms	*libbū*	*$^{\circ}$-ibbū*	*$^{\circ}$-ittabū*	*$^{\circ}$-inabbū*	*$^{\circ}$-inabbūnim*	*$^{\circ}$-inabbū*
	fm	*libbā*	*$^{\circ}$-ibbā*	*$^{\circ}$-ittabā*	*$^{\circ}$-inabbā*	*$^{\circ}$-inabbānim*	*$^{\circ}$-inabbā*
	2 cm	*$^{\circ}$ibā*	*t-abbā*	*t-attabā*	*t-anabbā*	*t-anabbānim*	*t-anabbā*
	1 cm	*$^{\circ}$inibbī*	*n-ibbī*	*n-ittabī*	*n-inabbī*	*n-inabbām*	*n-inabbū*

Forms with an extra *e* vowel sign, such as *te-ep-pe-e* "you distrained," from *Npa: (e)*, or *li-is-se-e* "may he withdraw," from *Nsa: (e)*, need not be interpreted as having a final strong Aleph (*teppe$^{\circ}$, lisse$^{\circ}$*), but rather as regular final weak (*teppē, lissē*); the vowel sign *e* serves in this case only to disambiguate the signs PI and SI by marking explicitly the quality of the root vowel (*e* instead of *i*).

46.6 Triradicals first Waw and middle weak (*W:C*)

There is only one root that belongs properly to this type, namely *W:iṣ* "to be little." The first radical *W* is realized mostly as strong *w* (or as *m* in later periods). The main deviation is the verbal adjective B, where the pattern is either PI:S or PE:S (equivalent to PIRIS, PARIS; for initial *i* see above 17.3; 46.3; the pattern PE:S is Assyrian and NB), and the first radical can be realized as *w, m* or *$^{\circ}$* (or *ø*). Since it occurs almost exclusively in the B stem, no paradigm is given below in chapter 49, and instead only the following list of attested forms is given below.

B stem		vadj	desid	pret	pres
sg	*W=w*	*wīṣ-*	*līwīṣ*	*$^{\circ}$-iwīṣ*	
	W=m	*mīṣ-*	*līmīṣ*	*$^{\circ}$-imīṣ*	*$^{\circ}$-imāṣ*
	W=$^{\circ}$	*$^{\circ}$īṣ-, $^{\circ}$ēṣ-*			
pl	*W=w*		*līwīṣ-ū*	*$^{\circ}$-iwīṣ-ū*	*$^{\circ}$-iwiṣṣ-ū*
	W=m		*līmīṣ-ū*		

The root *W²ir* "to go by" is treated for the most part as having strong middle Aleph, thus for instance regularly in the D stem ("to cause to go," hence "to order"). In the B stem, it appears in some forms with strong *w* (*m* or *ø* in later periods, occasionally with an unexplained shift *i* > *e*), and in others with strong ². The major forms are listed below; *W* refers to the first radical, and *R* to the second

B stem			inf	pret	perf	pres
sg	*W=w*	*R=:*	*wa²ār-*	*²-iwīr*		
	W=m	*R=:*		*²-imēr*	*²-ītemer*	
	W=²	*R=:*	*²a²ār-*	*²-i²īr*		*²-i²ār*
pl	*W=²*	*R=:*				*²-i²irr-ū*
D stem						
sg	*W=w*	*R=²*	*wu²²ur-*	*²-uwa²²er*		*²-uwa²²ar*

Note that the root *W²:* (rare, and only in the D stem *wu²²ūm* "to identify wrongly") retains strong Aleph in the few attested forms, so that it is not a triple weak triradical.

46.7 Triradicals first Waw and final weak (*WC:*)

Patterns from these roots follow regularly the standard derivational rules given above for each of the two weak radicals (chapters 43 and 45). For ease of reference, I give here a selection of a few representative forms from the B stem of the root *Wṣi:* "to go out"; for final weak, I give only contracted forms.

waṣū B stem		imp/ desid	pret	perf	pres	pres vent	pres subj
sg	3 cm	*līṣī*	*²-ūṣī*	*²-ittaṣī*	*²-uṣṣī*	*²-uṣṣām*	*²-uṣṣū*
	2 ms	*ṣī*	*t-ūṣī*	*t-attaṣī*	*t-uṣṣī*	*t-uṣṣām*	*t-uṣṣū*
	fm	*ṣī*	*t-ūṣī*	*t-attaṣī*	*t-uṣṣī*	*t-uṣṣīm*	*t-uṣṣī*
	1 cm	*lūṣī*	*²-ūṣī*	*²-attaṣī*	*²-uṣṣī*	*²-uṣṣām*	*²-uṣṣū*
pl	3 ms	*līṣū*	*²-ūṣū*	*²-ittaṣū*	*²-uṣṣū*	*²-uṣṣūnim*	*²-uṣṣū*
	fm	*līṣā*	*²-ūṣā*	*²-ittaṣā*	*²-uṣṣā*	*²-uṣṣānim*	*²-uṣṣā*
	2 cm	*ṣā*	*t-ūṣā*	*t-attaṣā*	*t-uṣṣā*	*t-uṣṣānim*	*t-uṣṣā*
	1 cm	*²inūṣī*	*n-ūṣī*	*n-ittaṣī*	*n-uṣṣī*	*n-uṣṣām*	*n-uṣṣū*

deverbal noun: *ṣī-t-um*

Note that all roots of this class exhibit a biradical subsystem as reflected in the paradigm above, regardless of root vowel (differently from the regular roots first Waw, for which see above, 43.3); there are, however, occasional exceptions, e.g.,

the preterite *-Īpī-* (instead of **-ūpī-*) from *Wpi:*[4]. Also note that in the Š stem some roots exhibit the same unusual forms with *ē* and *ū* as the regular first Waw roots, e.g., *-ušēṣī-* and *-ušūpī-* (the latter from *Wpi:* "to be apparent").

46.8 Triradicals middle Aleph and final weak (*C²:*)

There are no roots which are properly middle and final weak. A number of roots with final weak, however, have strong Aleph as a middle radical, which is dropped, however rarely, resulting in contraction. The distribution of forms with strong Aleph vs. contracted forms seems to be the result of free variation. Thus the present B from *l²i:* "to be able to" is realized regularly with strong Aleph (*²ile²²ī* "he is able to"), whereas the preterite B occurs either with strong Aleph or with apheresis resulting in contraction (*²il²ī* or *²ilī* "he was able to").

[4] In line with what has been said above, 43.6, n.1, I prefer to consider *-Itrū-* as a preterite from *tarū* rather than as a perfect from *Warū*.

Chapter 47
Patterns from Quadriradicals Single Weak

47.1 Introductory

The correlation between root structure and stem occurrence, noted in the treatment of strong quadriradicals (see above, 19.1), applies for the weak quadriradicals as well. The same distinctive features obtain for both groups, and one more feature may be added: the first group, with patterns of the D stem, consists of middle weak roots; the second, with patterns of the N(tn) and Š(tn) stems, consists of final weak roots; each group, however, includes also one root which is both middle and final weak (for which see the next chapter).

47.2 Quadriradicals middle weak (Group I)

There are only three quadriradical roots with middle weak radical that are in common use, and all three belong to group I (D stem only plus deverbal nouns). They are: *šk:n (e)* "to throw oneself down," *šp:l (e)* "to change," and *šm:l (e)*, occurring only as the deverbal noun of description *šumēl-* "left side" (which may, however, also be interpreted as a primary noun). Note that the noun *šumēlum* is derived from a B deverbal pattern PURAŠD (equivalent of a triradical pattern PURS) because of its notional value, though in form it is identical to the pattern of the infinitive/verbal adjective of the D stem.

The following derivational rules apply. The weak radical is realized regularly as regressive length, and the final vowel of the pattern is dropped, in spite of its distinctiveness. As with middle weak triradicals, the last radical of the present is lengthened.

In the paradigm on the following page one will find a list of all attested forms for these roots. The first row gives the patterns from strong quadriradicals, and the second row gives the weak patterns obtained through the application of the derivational rules. The lower rows give the core forms as attested.

D stem	inf/vadj	part	imp	pret	perf	pres
	puraŠŠud-	*mupraŠŠid-*	*?*	*-upraŠŠid-*	*-uptaraŠŠid-*	*-upraŠŠad-*
	puraᵗd-	*mupraᵗd-*	*?*	*-upraᵗd-*	*-uptaraᵗd-*	*-upraᵗdᵗ-*
šp:l	*šupēl-*	*mušpēl-*	–	*-ušpēl-*	*-uštepēl-*	*-ušpēll-*
šk:n	*šukēn-*	*muškēn-*		*-uškēn-*		

B stem	description
	puraŠd-
	puraᵗd-
šm:l	*šumēl-*

47.3 Quadriradicals final weak (Group II)

All quadriradical roots with final weak radical belong to group II (N and Š stems only, except for the B verbal adjective). The two which are used here paradigmatically are: *plk:* "to be(come) wide" and *prk:* "to stop working."

A single derivational rule applies, as with triradicals: final weak radical is always realized as regressive length.

The following paradigm lists patterns and core forms in the same format as given above for middle weak quadriradicals.

	inf/vadj	part	imp	pret	perf	pres
B stem	*paršuD-*					
	paršuᵗ-					
	palkū		–			
N stem	*naparšuD-*	*mupparšiD-*	*?*	*-Ipparšid-*	*-IttaparšVD-*	*-Ipparaššad-*
	naparšuᵗ-	*mupparšiᵗ-*	*?*	*-Ipparšiᵗ-*	*-IttaparšVᵗ-*	*-Ipparaššaᵗ-*
	naparkū-	*mupparkī-*	*?*	*-Ipparkī-*	*-Ittaparkū-*	*-Ipparakkū-*
Š stem	*šuparšuD-*	*mušparšiD-*	*?*	*-ušparšiD-*	*?*	*-ušparaššaD-*
	šuparšuᵗ-	*mušparšiᵗ-*	*?*	*-ušparšiᵗ-*	*?*	*-ušparaššaᵗ-*
	šupalkū-	*mušpalkī-*	*?*	*-ušpalkī-*	*?*	*-ušpalakkā-*

Chapter 48

Patterns from Quadriradicals Double Weak

48.1 Derivational rules

There are two roots which are treated as irregular in traditional grammar, but which must in fact be considered as double weak quadriradicals. The first root is first Nun and middle weak (*Nt:il* "to lie down to sleep"), and the second is first Nun and final weak (*Nzzi:* "to stand"). For the definition of the root vowel see presently. The derivational rules are identical to those for first Nun (see above, 42.1), middle weak (see above, 44.1) and final weak (see above, 45.1), respectively. For ease of reference, they are summarized below.

		environment				
		cluster			non-cluster	
		P as first element	Š as first element	D as second element	P initial +*i*	P initial +*a*
realization		ʾ	ʿ	ʿ	˃	*n*
ex.:	basic	*-IPrVŠd-*	*-IPrVŠd-*	*-IPrVšD-*	*PirušD-*	*ParušD-*
	applied	*-IʾrVʿd-*	*-IʾrVʿd-*	*-IʾrVšʿ-*	*˃irušʿ-*	*narušʿ-*
	actual	*-Ittīl-*	*-Ittīl-*	*-Izzizz-*	*˃izuzz-*	*nazuzz-*
dev.:	basic	*-ušaPrišD-*		*muPrašD-*		
	applied	*-ušØrišD-*		*muʾrašØ-*		
	actual	*-ušzizz-*		*muzzaz-*		

It is clear from the configuration of the radicals that these two roots are quadriradical in nature.[1] If they have not been so understood in the past it is possibly for two main reasons. (1) The particular type of distribution of stems that has been observed for all other quadriradicals (see above, 19.1; 47.1) does not apply with these roots, since they occur in both B and the Š stems, and the second radical is not a liquid. (2) Certain alternative patterns are used which place the system of internal inflection somewhat apart from that of the other roots. However, it must be noted that such alternative patterns are found, however rarely, with other roots as well (see above, 17.3), so that their occurrence here is not altogether exceptional.

Because of the structural differences between patterns from the B stem and patterns from the derived stems, a new clustering rule is needed (see above, 18, for those applicable to the derived stems). It states that the third and fourth radical form a cluster (in terms of the usual template, we may say that the *s* of *prs* corresponds to *šd* of *pršd*). This rule extends to both patterns from the B stem and patterns from the Š stem. With this proviso, the derivational rules are identical to those already stated for the individual types of weak radical.

The root vowel may appear at first to be *i**a*, since it occurs as *i* in the imperative and preterite, and as *a* in the present. However, since the perfect exhibits *i* instead of *a*, we must understand the root vowel as *i*, with a variation of the vocalism in the present to avoid homonymy with the preterite. This shift is the same that is found with roots middle weak (see above, 44.1), except that with these two quadriradical roots the vowel *a* is retained in all forms of the present (hence *t-azzazz-ī* rather than **t-azzizz-ī*). The reason is that, differently from what is the case with the triradicals middle weak, the preterite also exhibits final long consonant (*t-azzizz-ī* is in fact the preterite second person singular feminine).

Initial weak radical exhibits exactly the same type of realizations as roots first Nun, as follows. When the first radical *P* occurs as the first element of a cluster, it is realized as progressive length. Thus *-IPrVŠd-* is to be rewritten as *-IʾrVŠd-*, as in *-Ittīl-*. When it occurs in initial position, *P* is realized as ˃ in front of *i*, and as *n* in front of *a*. Thus *PiruŠd-* is to be rewritten *˃iruŠd-*, as in *˃itūl-*, and *ParušD-* is to be rewritten *narušD-* as in *nazuzz-*.

When the middle radical *Š* occurs as first element of a cluster, it is realized as regressive length. Thus *-IPrVŠd-* is to be rewritten as *-IPrVʿd-*, as in *-Ittīl-*.

When the last radical *D* occurs as second element of a cluster, it is realized as regressive length. Thus *-IPrVšD-* is to be rewritten as *-IPrVšʿ-*, as in *-Izzizz-*.

For the paradigms of patterns and core forms from both roots see below, chapter 49.

[1] Note that while the root *N:il* "to lie down" may be understood as a double weak triradical equivalent of *Nt:il*, forms from the two roots are nevertheless clearly separate and distinct.

48.2 Systemic deviations

One of the radicals may be realized as *ø* when the pattern includes a separate syllable in front of the first radical, i.e., in the Š stem, in the participle B and with two deverbal patterns.

In the Š stem, the first radical is occasionally realized as *ø*. Thus *šuPrišD-* is to be rewritten as *šuørišD-*, as in *šuzizz-ā* "set up! (plur.), and *-ušaPrišD-* is to be rewritten as *-ušørišD-* (the *a* is omitted because it is not required to resolve the cluster), as in *ʾ-ušzizz-ū* "they set up." This realization is in free variation with regular forms, since forms like *ʾ-ušazzizz-ū* are also attested.

The participle B exhibits the alternative pattern *muPrašD-* (see presently), and accordingly the last radical *D* is regularly realized as *ø*. Thus the pattern is to be rewritten as *muPrašø-*, and the corresponding core form is *muzzaz-*.

Analogously, the final vowel in the two deverbal patterns *maPrašD-* and *šaPrušD-* is realized as *ø*, hence *maʾraršø- ~ mazzaz-um* "stand" (more frequently realized as *manzaz-um*, see above, 5.2:8), and *šaʾrušø- ~ šazzuz-t-um* "representation."

The perfect B of both roots exhibits last vowel *i* instead of *a*.

48.3 Alternative patterns

The infinitive B of both roots exhibits the pattern *PiruŠD-*, which is also otherwise found with *idū* and *išū* (see above, 17.3, and 46.3).

The participle B (attested only from *Nzzi:*) exhibits the pattern *muPrašD-*, similar to the pattern *mupris-* from roots middle weak and from *idū* (see above, 17.3, 44.3, and 46.3).

The complete paradigm from both roots is given in chapter 49.

SECTION C
PARADIGMS AND CORRELATIONS IN PATTERN FORMATION

Chapter 49
Paradigms from Weak Roots

For ease of reference, the paradigms of forms from the major classes of weak roots are given together on the following pages. The title of each paradigm includes a reference to the chapter above in which that particular type of root is discussed.

All paradigms follow the same format (for which see above, 17.6). Paradigms for roots single weak are given (sideways) over a two page spread for each class of root. The top of the paradigm (on the left page) lists the patterns with the standard template symbols *prs*. Capital letters mark weak radicals (i.e., radicals which are susceptible of multiple realizations), e.g., *Prs* indicates a root first weak. The patterns are given with an indication of the pertinent morphophonemic realization.

For roots double weak only the paradigms with core forms are given, omitting the pattern templates; this is because patterns are but combinations of the rules and patterns already given for roots single weak.

For the two quadriradicals double weak I give both the template of the strong pattern and the patterns derived through the application of the derivational rules. Since there are only few forms from a single root in each paradigm, I give the core forms immediately below the two patterns.

Forms marked by an asterisk correspond to systemic deviations discussed in the pertinent chapters above.

Glosses are given for the actual roots chosen to derive core forms. As much as possible, the exemplification extends to include different verbal roots, representatives of different morphophonemic conditions.

PATTERNS (ʔcc)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*ʔarās-*	*ʔaris-*	*ʔāris-*	*ʔarVs-*	*-Iʿrvs-*	*-Iʿtarvs-*	*-IØrrVs-*
Bt	*ʔatrus-*		*muʿtaris-*	*ʔatrVs-*	*-Iʿtarvs-*	*-Iʿtatrvs-*	*-Iʿtarrvs-*
Btn	*ʔatarrus-*		*muʿtarris-*	*ʔatarrVs-*	*-Iʿtarrvs-*	*-Iʿtatarrvs-*	*-Iʿtanarrvs-*
N	*Naʔrus-* / *Nanrus-* *		*muNʿaris-*	*Nanris-* *	*-INʿaris-*	*-INtanrVs-* *	*-INʿarrVs-*
Ntn	*Nitaʿrus-*		*muNtaʿris-*	*Nitaʿrvs-*	*-INtaʿrvs-*	*-INtataʿrvs-*	*-INtanarrVs-*
D	*ʔurrus-*		*muØrris-*	*ʔurris-*	*-uØrris-*	*-uʿtarris-*	*-uØrras-*
Dtn	*ʔutarrus-*		*muʿtarris-*	*ʔutarris-*	*-uʿtarris-*	*-uʿtatarris-*	*-uʿtanarras-*
Š	*šuʿrus-*		*mušaʿris-*	*šuʿris-*	*-ušaʿris-*	*-uštaʿris-*	*-ušaʔras-* *
Št	*šutaʿrus-*		*muštaʿris-*	*šutaʿris-*	*-uštaʿris-*	*-uštataʿris-*	*-uštaʔras-* *
Štn	*šutaʔrus-*		*muštaʔris-*	*šutaʔris-*	*-uštaʔris-*	*-uštataʿris-*	*-uštanaʔras-* *

Description	Subject
ʔirs-	*ʔarras-*
ʔurs-	*ʔarris-*
maʿras-	*ʔarrās-*

ROOTS AND GLOSSES

ʔbal to be(come) dry *ʔḫ/z* to take *ʔl\k* to go *ʔm/r* to see *ʔpir* to cover
ʔrik to be(come) long *ʔšuš* to be(come) disturbed *ʔziz (e)* to be(come) angry

CORE FORMS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*ʔakāl-*	*ʔakil-*	*ʔākil-*	*ʔakul-*	*-Īkul-*	*-Ītakal-*	*-Ikkal-*
				ʔapir-	*-Īpir-*	*-Ītapir-*	*-Ippir-*
				ʔašuš-	*-Īšuš-*	*-Ītašuš-*	*-Iššuš-*
				ʔabal-	*-Ībal-*	*-Ītabal-*	*-Ibbal-*
Bt	*ʔatpul-*		–	*ʔatpal-*	*-Ītapal-*	*-Ītatpal-*	*-Ītappal-*
Btn	*ʔatakkul-*		*mūtakkil-*	*ʔatakkal-*	*-Ītakkal-*	*-Ītatakkal-*	*-Ītanakkal-*
				ʔatappir-	*-Ītappir-*	*-Ītatappir-*	*-Ītanappir-*
				ʔataššuš-	*-Ītaššuš-*	*-Ītataššuš-*	*-Ītanaššuš-*
N	*nākul-*		*munnakil-*	*nanmir-*	*-Innakil-*	*-Ittanmar-*	*-Innakkal-*
Ntn	–		–	–	–	–	*-Ittanakkal-*
D	*ʔuḫḫuz-*		*muḫḫiz-*	*ʔuḫḫiz-*	*-uḫḫiz-*	*-ūtaḫḫiz-*	*-uḫḫaz-*
Dt	*ʔutaḫḫuz-*		*mūtaḫḫiz-*	*ʔutaḫḫiz-*	–	–	*-ūtaḫḫaz-*
Dtn							*-ūtanaḫḫaz-*
Š	*šūḫuz-*		*mušāḫiz-*	*šūḫiz-*	*-ušāḫiz-*	*-uštāḫiz-*	*-ušaḫḫaz-*
Št	*šutākul-*		*muštākil-*	*šutākil-*	*-uštākil-*	*-uštatākil-*	*-uštakkal-*
Štn	*šutakkul-*		*muštakkil-*	*šutakkil-*	*-uštakkil-*	*-uštatakkil-*	*-uštanakkal-*

Description	Subject
ʔilk-	*ʔarrak-*
ʔuzz-	
mālak-	

GLOSSES

arrakum very long
ilkum going, service
mālakum going, passage
uzzum anger

49.1 Triradicals first Aleph (see chapter 41)

PATTERNS (Ncc)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*narās-*	*naris-*	*nāris-*	*ʾVrVs-*	*-IˀrVs-*	*-IˀtarVs-*	*-InarrVs-*
Bt	*ʾitrus-*		*muˀtaris-*	*ʾitrVs-*	*-IˀtarVs-*	*-Iˀtatrvs-*	*-Iˀtarrvs-*
Btn	*ʾitarrus-*		*muˀtarris-*	*ʾitarrVs-*	*-Iˀtarrvs-*	*-Iˀtatarrvs-*	*-Iˀtanarrvs-*
N	*naˀrus-*		*munˁaris-*	*Naˀris-*	*-Inˁaris-*	*-INtanrVs-* *	*-Inˁarrvs-*
D	*nurrus-*		*munarris-*	*nurris-*	*-unarris-*	*-uˀtarris-*	*-unarras-*
Š	*šuˀrus-*		*muša ˀris-*	*šuˀris-*	*-ušaˀris-*	*-ušta ˀris-*	*-ušaˀras-*

Description	Subject
nirs-	*narris-*
nurs-	*naruss-*
maˀras-	*narrās-*

ROOTS AND GLOSSES

Nbuḫ to bark *Ndin* to give *Nkir* to be(come) hostile *Nkis* to cut *Nmir* to shine *Np/ḫ* to blow *Nq/r* to destroy *Nqip* to gore *Ns/q* to choose *Ns/r* to protect *masṣarum* guard *namurrum* awesomely resplendent *nappāḫum* smith *nassiqum* choosy *nidintum* gift *nukurtum* hostility

CORE FORMS

	Inf	VAdj	Part	imp	Pret	Perf	Pres
B	*naqār-*	*naqir-*	*nāqir-*	*ʾuqur-*	*-Iqqur-*	*-Ittaqar-*	*-Inaqqar-*
				ʾikis-	*-Ikkis-*	*-Ittakis-*	*-Inakkis-*
				ʾubuḫ-	*-Ibbuḫ-*	*-Ittabuḫ-*	*-Inabbuḫ-*
Bt	*ʾitkup-*		*muttakip*	*?*	*-Ittakip-*	*[-Ittatkip-]*	*-Ittakkip-*
Btn	*ʾitaqqur*		*muttaqqir*	*ʾitaqqar*	*-Ittaqqar-*	*-Ittataqqar-*	*-Ittanaqqar-*
				ʾitakkis-	*-Ittakkis-*	*-Ittatakkis-*	*-Ittanakkis-*
				ʾitabbuḫ-	*-Ittabbuḫ-*	*-Ittatabbuḫ-*	*-Ittanabbuḫ-*
N	*naqqur-*		*munnaqir-*	*naqqir-*	*-Innaqir-*	*-Ittanqar-* *	*-Innaqqar-*
				nakkis-	*-Innakis-*	*-Ittankis-* *	*-Innakkis-*
D	*nuqqur-*		*munaqqir-*	*nuqqir-*	*-unaqqir-*	*-uttaqqir-*	*-unaqqar-*
Š	*šuqqur-*		*mušaqqir-*	*šuqqir-*	*-ušaqqir-*	*-uštaqqir-*	*-ušaqqar-*

Description	Subject
nidin-t-	*nassiq-*
nukur-t-	*namurr-*
maṣṣar-	*nappāḫ-*

49.2 Triradicals first Nun (see chapter 42)

PATTERNS (Wcc)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B *i* TRIRADICAL	*warās-*	*waris-*	*wāris-*		*-IˇrˇVs-*	*-IˇtarˇVs-*	*-IrrVs-*
i|a TRIRADICAL	*warās-*	*waris-*	*wāris-*		*-ūris-*	*-Ittaras-*	
i|a BIRADICAL				*ris-*	*-uris-*		*-urras-*
Bt						*[-IˇtatrˇVs-]*	*-IˇtarrˇVs-*
Btn	*ˀItarrus-*		*muˇtarris-*	*ˀitarrVs-*	*-IˇtarrˇVs-*	*-IˇtatarrˇVs-*	*-IˇtanarrˇVs-*
N					*-Iˇwaris-*		*-Iˇwarras-*
D	*wurrus-*		*muwarris-*	*wurris-*	*-uwarris-*	*-uˇtarris-*	*-uwarras-*
Š	*šuˇrus-*		*mušaˇris-*	*šuˇris-*	*-ušaˇris-*	*-uštaˇris-*	*-ušaˇras-* *
Št Štn	} *šutaˇrus-*		*muštaˇris-*	*šutaˇris-*	*-uštaˇris-*	*-uštataˇris-*	{ *-uštaˇras-* * *-uštanaˇras-* *

Description	Subject
ris-	
rus-	
wurs-	
muˇras-	
taˇris-	

ROOTS AND GLOSSES

Wb\|l to bring
Wl\|d to bear
Wriq to be(come) green
Wsim to be(come) fitting
Wš\|b to dwell
Wšr to release (D only)

CORE FORMS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B *i* TRIRADICAL	*wasām-*	*wasim-*	*wāsim-*		*-Īsim-*	*-Ītasim-*	*-Issim-*
i|a TRIRADICAL	*walād-*	*walid-*	*wālid-*		*-ūlid-*	*-Ittalad-*	
i|a BIRADICAL				*lid-*	*-ulid-*		*-ullad-*
Bt	*[ˀitbul-]*					*[-Ittatbal-]*	*-Ittabbal-*
Btn	*ˀitabbul-*		*muttabbil-*	*ˀitabbal-*	*-Ittabbal-*	*-Ittatabbal-*	*-Ittanabbal-*
N					*-Iwwalid-*		*-Iwwallad-*
D	*wuššur-*		*muwaššir-*	*wuššir-*	*-uwaššir-*	*-ūtaššir-*	*-uwaššar-*
Š	*šūbul-*		*mušābil-*	*šūbil-*	{ *-ušābil-* *-ušēšib-* * *-ušūšib-* * }	*-uštābil-*	*-ušabbal-* *
Št Štn	} *šutābul-*		*muštābil-*	*šutābil-*	*-uštābil-*	*-uštatābil-*	{ *-uštabbal-* * *-uštanabbal-* *

Description	Subject
sim-t- (BIRADICAL)	
šub-t- (BIRADICAL)	
wuriq-t	
mūšab-	
tālid-t-	

PATTERNS (c:c)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*paØās-*	*paØis-*	*pā>is-*	*pVØVs-*	*-Ip→Vs-*	*-Ipt→Vs-*	*-Ip→V→s-*
Bt	*pit→us-*		*[mupt→is-]*	*[pit→Vs-]*	*-Ipt→Vs-*	*?*	*-Ipt→V→s-*
Btn	*[pit→us-]*		*?*	*[pit→Vs-]*	*-Ipt→Vs-*	*?*	*-Iptan→V→s-*
	pita>>us-		*?*	*[pita>>Vs-]*	*-Ipta>>Vs-*	*?*	*-Iptana>>Vs-*
	pitayyus-		*?*	*pitayyVs-*	*[-IptayyVs-]*	*?*	*-Iptanayy Vs-*
N	*?*		*?*	*?*	*-Ipp→is-*	*?*	*-Ipp→a→s-*
D	*pu→u→s-*		*mup→i→s-*	*pu→i→s-*	*-up→i→s-*	*-upt→i→s-*	*-up→a→s-*
Dt	*put→u→s-*		*mupt→i→s-*	*put→i→s-*	*-upt→i→s-*	*-uptat→i→s-*	*-upt→a→s-*
Dtn							*-uptan→a→s-*
Š	*šup→us-*		*mušp→is-*	*šup→i→s-*	*-ušp→i→s-*	*-uštap→i→s-*	*-ušp→a→s-*
Št	*šutap→u→s-*		*muštap→i→s-*	*[šutap→i→s-]*	*-uštap→i→s-*	*[-uštatap→i→s-]*	*-uštap→a→s-*
Štn							*[-uštanap→a→s-]*

Description	Subject
pi←s-	*payyas-* *
pu←s-	*payyās-* *
map→as-	*pa>>ās-* *
map>as-	

ROOTS

b:aš be(come) ashamed
b:it spend the night
d:in judge
d:uk kill
ḥ:iq be(come) mixed
ḥ:iṭ investigate
k:un be(come) firm
m:ad be(come) much
m:ut die
q:ip entrust
q:iš give as a gift
š:im determine

CORE FORMS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*kān-*	*kīn-*	*dā>ik-*	*kūn-*	*-Ikūn-*	*-Iktūn-*	*-IkŪnn-*
				šīm-	*-Išīm-*	*-Ištīm-*	*-IšĪmm-*
				bāš-	*-Ibāš-*	*-Ibtāš-*	*-Ibāšš-*
Bt	*šitūm-*		*?*	*?*	*-Ištīm-*	*?*	*-Ištimm-*
Btn	*?*		*?*	*?*	*-Iktūnn-*	*?*	*-IqtanĪšš-*
	šita>>um-		*?*	*?*	*-Išta>>im-*	*?*	*-Ištana>>am-*
	ḫitayyuṭ-		*?*	*ḫitayyaṭ-*	*?*	*?*	*-Ibtanayyat-*
N	*?*		*?*	*?*	*-Iqqīp-*	*?*	*-IddŪkk-*
D	*kūnn-*		*mukīnn-*	*kīnn-*	*-ukīnn-*	*-uktīnn-*	*-ukānn-*
Dt	*kutūnn-*		*muktīnn-*	*[kutīnn-]*	*-uktīnn-*	*[uktatīnn-]*	*-uktānn-*
Dtn							*-uktanānn-*
Š	*šumūt-*		*mušmīt-*	*šumītt-*	*-ušmītt-*	*-uštamītt-*	*-ušmātt-*
Št	*šutaḫūqq-*		*muštaḫīqq-*	*?*	*-uštaḫīqq-*	*?*	*-uštamātt-*
Štn							*[-uštaḫḫāqq-]*

Description	Subject
šīm-t-	*kayyan-* *
mūt-	*dayyān-* *
makān-	*da>>ān-* *
nam>ad-	

GLOSSES

dayyānum judge
kayyanum regular
makānum place
mūtum death
nam>adum majority
šimtum fate

49.4 Triradicals middle weak (see chapter 44)

PATTERNS (cc:)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*parā‹-*	*pari‹-*	*pāri‹-*	*pVrV‹-*	*-IprV‹-*	*-IptarV‹-*	*-IparrV‹-*
Bt	*pitru‹-*		*muptari‹-*	*pitrV‹-*	*-IptarV‹-*	*-IptatrV‹-*	*-IptarrV‹-*
Btn	*pitarru‹-*		*muptarri‹-*	*pitarrV‹-*	*-IptarrV‹-*	*-IptatarrV‹-*	*-IptanarrV‹-*
N	*napru‹-*		*muppari‹-*	*napri‹-*	*-Ippari‹-*	*-IttaprV‹-*	*-IpparrV‹-*
Ntn	*ʾitapru‹-*		*muttapri‹-*	*?*	*-IttaprV‹-*	*-IttataprV‹-*	*-IttanaprV‹-*
D	*purru‹-*		*muparri‹-*	*purri‹-*	*-uparri‹-*	*-uptarri‹-*	*-uparra‹-*
Dt Dtn	*putarru‹-*		*muptarri‹-*	*putarri‹-*	*-uptarri‹-*	*-uptatarri‹-*	*-uptarra‹-* *-uptanarra‹-*
Š	*šupru‹-*		*mušapri‹-*	*šupri‹-*	*-ušapri‹-*	*-uštapri‹-*	*-ušapra‹-*
Št Štn	*šutapru‹-*		*muštapri‹-*	*šutapri‹-*	*-uštapri‹-*	*-uštatapri‹-*	*-uštapra‹-* *-uštanapra‹-*

Description	Subject
pi‹r-	*pura‹-*
piri‹-t- *	*parra‹-*
piru‹-t- *	
mapra‹-	
tapra‹-	
tapri‹-	

ROOTS

bni: build
ḫdi: rejoice
kla: hold back
mḫu: be(come) frenzied
mla: fill
mnu: count
qbi: speak
ql?: burn
rbi: be(come) great
šme: (e) hear

CORE FORMS

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*banā-*	*banī-*	*bānī-*	*binī-*	*-Ibnī-*	*-Ibtanī-*	*-Ibannī-*
	manā-	*manī-*	*mānī-*	*munū-*	*-Imnū-*	*-Imtanū-*	*-Imannū-*
	kalā-	*kalī-*	*kālī-*	*kilā-* *	*-Iklā-*	*-Iktalā-*	*-Ikallā-*
	šemē-	*šemī-*	*šēmī-*	*šimē-* *	*-Išmē-*	*-Ištemē-*	*-Išemmē-*
Bt	*bitnū-*		*mubtanī-*	*bitnī-*	*-Ibtanī-*	*-Ibtatnī-*	*-Ibtannī-*
Btn	*bitannū-*		*mubtannī-*	*bitannī-*	*-Ibtannī-*	*-Ibtatannī-*	*-Ibtanannī-*
N	*nabnū-*		*mubbanī-*	*nabnī-*	*-Ibbanī-*	*-Ittabnī-*	*-Ibbannī-*
Ntn	*ʾitabnū-*		*muttabnī-*	*?*	*-Ittabnī-*	*-Ittatabnī-*	*-Ittanabnī-*
D	*bunnū-*		*mubannī-*	*bunnī-*	*-ubannī-*	*-ubtannī-*	*-ubannā-*
Dt Dtn	*butannū-*		*mubtannī-*	*butannī-*	*-ubtannī-*	*-ubtatannī-*	*-ubtannā-* *-ubtanannā-*
Š	*šubnū-*		*mušabnī-*	*šubnī-*	*-ušabnī-*	*-uštabnī-*	*-ušabnā-*
Št Štn	*šutabnū-*		*muštabnī-*	*šutabnī-*	*-uštabnī-*	*-uštatabnī-*	*-uštabnā-* *-uštanabnā-*

Description	Subject
mīl-	*rubā-*
qibī-t- *	*šemmē-, maḫḫā-*
ḫidū-t- *	
maqlā-	
tašmā-	
tarbī-t-	

GLOSSES

ḫidūtum joy
maḫḫūm ecstatic
maqlūm burning
mīlum flood
rubūm prince
qibītum command
šemmūm constant listener
tarbītum pupil
tašmūm listening

49.5 Triradicals final weak (see chapter 45)

CORE FORMS (ʔc:)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*ʔelē-* *ʔedē-* *ʔidē* *	*ʔelī-* *ʔide-*	*ʔēlī-* *mūdī-* *	*ʔelī-* *?*	*-Īlī-* *-Īdū-*	*-Ītelī-* *?*	*-Illī-* *?*
Bt	*ʔetnū-*		*?*	*?*	*-Ītelī-*	*-Ītetlī-*	*-Ītellī-*
Btn	*ʔetellū-*		*muttellī-*	*ʔetellī-*	*-Ītellī-*	*-Ītetellī-*	*-Ītenellī-*
N	*?*		*?*	*?*	*?*	*?*	*-Inneššī-*
D	*ʔullū-*		*mullī-* *muweddī-*	*ʔullī-* *wuddī-*	*-ullī-*	*-ūtellī-* *-uweddī-* *	*-ullē-*
Dt Dtn	*?*		*?*	*?*	*-ūteṭṭī-*	*-ūteteṭṭī-*	*-ūteṭṭē-* *?*
Š Št	*šūlū-*		*mušēlī-*	*šūlī-*	*-ušēlī-*	*-uštēlī-*	*-ušellē-* *-uštenellē-*
	Description	Subject					

GLOSSES

ʔdu: know
ʔli: be(come) high
ʔni: change
ʔšu: have
ʔṭʔ: be(come) dark

49.6 Triradicals first Aleph and final weak (see chapter 46.2)

CORE FORMS (N:c)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*nāḫ-* *nāl-* *nād-*	*?*	*?*	*nūḫ-* *nīl-* *nād-*	*-Inūḫ-* *-Inīl-* *-Inād-*	*-Ittūḫ-* *-Ittīl-* *-Ittād-*	*-InŪḫḫ-* *-InĪll-* *-Inādd-*
D	*nūḫḫ-*		*munīḫḫ-*	*nīḫḫ-*	*-unīḫḫ-*	*-uttūḫḫ-*	*-unāḫḫ-*
	Description	Subject					
	nēḫ-t- *nūḫ-t-* *tanēḫ-t-*						

GLOSSES

N:ad praise
N:il lay down
N:uḫ rest

49.7 Triradicals first Nun and middle weak (see chapter 46.4)

CORE FORMS (Nc:)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*nabā-*	*nabī-*	*nābi-*	*ʾibī-*	*-Ibbī-*	*-Ittabī-*	*-Inabbī-*
	nagā-	*nagī-*	*nāgi-*	*ʾugū-*	*-Iggū-*	*-Ittagū-*	*-Inaggū-*
	nesē-	*nesī-*	*nēsī-*	*ʾesē-*	*-Issē-*	*-Ittesē-*	*-Inessē-*
N	*?*		*?*	*?*	*-Innabī-*	*?*	*-Innabbī-*
D	*nubbū-*		*?*	*?*	*-unabbī-*	*?*	*-unabbā-*

Description	Subject
nīb-	
nibī-t-	

GLOSSES

Nbi: call *Ngu:* sing joyously
Nse: be(come) far

49.8 Triradicals first Nun and final weak (see chapter 46.5)

CORE FORMS (Wc:)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*waṣā-*	–	*wāṣī-*	*ṣī-*	*-ūṣī-*	*-Ittaṣī-*	*-uṣṣī-*
	wapā-	*wapī-*	*?*	*?*	*-Īpī-*	*?*	*?*
	watā-	*watī-*	*?*	*?*	*-ūtā-*	*?*	*-uttā-*
	warā-	*?*	*?*	*rū-*	*-ūrū-*	*?*	*?*
Š	*šūṣū-*		*-mušēṣī-*	*šūṣī-*	*-ušēṣī-*	*-uštēṣē-*	*-ušeṣṣē-*
					-ušāṣī-	*-uštāṣē-*	*-ušaṣṣē-*
					-ušūpī-		

Description	Subject
ṣī-t-	

GLOSSES

Wpi: appear *Wru:* lead
Wṣi: go out *Wta:* find

49.9 Triradicals first Waw and final weak (see chapter 46.7)

PATTERNS AND CORE FORMS (Nti:l)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*PiruŠd-*			*PiriŠd-*	*-IPrVŠd-*	*-IPtarVŠd-*	*-IPrVŠd-*
	ʾiruˑd-	*?*	*?*	*ʾiriˑd-*	*-IˑrVˑd-*	*-IˑtatVˑd-*	*-IˑrVˑd-*
	ʾitūl-	–	–	*ʾitīl-*	*-Ittīl-*	*-Ittatīl-*	*-Ittāl-*

PATTERNS AND CORE FORMS (Nzzi:)

	Inf	VAdj	Part	Imp	Pret	Perf	Pres
B	*PirušD-*	*ParušD-*	*muPrašD-*	*PirišD-*	*-IPrVšD-*	*-IPtarVšD-*	*-IPrVšD-*
	ʾirušˑ	*narušˑ-*	*muʾraš∅-*	*Pirišˑ-*	*-IˑrVšˑ-*	*-IˑtarVšˑ-*	*-IˑrVšˑ-*
	ʾizuzz-	*nazuzz-*	*muzzaz-*	*ʾizizz-*	*-Izzizz-*	*-Ittazizz-*	*-Izzazz-*
Š	*šuPrušD-*			*šuPrišD-*	*-ušaPrišD-*	*-uštaPrišD-*	*-ušaPrašD-*
	šu∅rušˑ-			*šu∅rišˑ-*	*-ušaʾrišˑ-*	*-uštaʾrišˑ-*	*-ušaʾrašˑ-*
	šuzuzz-			*šuzizz-*	*-ušzizz-*	*-uštazizz-*	*-ušzazz-*
					-ušazzizz-		*-ušazzazz-*

Description	Subject
šaPrušD-t-	*maPrašD-*
šaʾruš∅-t-	*maʾraš∅-*
šazzuz-t-	*mazzaz-*

GLOSSES

Nti:l sleep *Nzzi:* stand up

49.10 Quadriradicals double weak (see chapter 48)

Chapter 50

Correlations in the Realization of Weak Radicals

50.1 Introductory

Both from a structural and a paedagogical point of view it may be useful to review the material surveyed in the chapters on internal inflection. The various correlations which can be established in the formation of patterns from various roots emphasize the deeper structural identity which underlies all the patterns in spite of the phonological variations which on the surface are so striking. From a paedagogical point of view, correlations of this type should help clarify the overall picture of the verbal system, and hence facilitate the learning process.

The correlations given here will also help to understand an important point which has been raised indirectly on a number of occasions. The formal presentation given here might seem to suggest that there is an almost unlimited quantity of possible permutations – and the algebraic nature of the correlations given in the form of abstract patterns would seem to encourage this impression. In point of fact, however, it is proper of a natural language such as Babylonian to impose severe limitations on any undue proliferation of forms. It is for this reason that lexical lists are, indirectly, to be understood as an integral part of grammar, since they indicate what such limitations will in fact be. By way of example, one may consider how a form like *ubbal* may belong both to the B present of the root *Wb\l* and the D present of the root *ʾbal*, whereas a form like *uḫḫaz* belongs only to the D stem of a root *ʾḫ/z*, simply because a root **Wḫ\z* does not historically exist (however possible this might appear structurally).

50.2 Correlations of realizations by environment

The first set of correlations, given in this chapter, summarizes the different realizations of weak radical in given environments. In the first column of the following chart, capital letter indicates weak radical. In the last column the total of

deviations is given: their relatively low number, and in general the relatively low number of variant realizations within the chart as a whole emphasize the basic regularity of the system. For it must be noted that this chart includes the entire Akkadian verbal system from weak roots, with the exclusion only of variations affecting individual roots, and hence non-systemic (e.g., *alākum*, see above, 41.5); but even the latter type of variations is in fact quite limited in number. Also excluded are the triradical double weak roots which exhibit mostly combinations of the single weak roots.

		environment							
		cluster		non-cluster					
		radical as 1st elemnt	radical as 2nd elemnt	intervocalic		initial		final	deviat.
				short	long	+*i*,*V* vb ptrn	+other		
Prs	P/ʾ P/N P/W	ʾ ʾ ʾBtn V=i\a ʾ other	ʾ *n* *w*	*ø* *n* *w*	*ø* *n* *w*	*ʾa* ʾ ʾ	ʾ *n* *w*		2 1 4+subs.
pRs	R/:	ʾ	ʾ	ʾ	*ʾVʾS*				4
prS	S/:		*(ʾ)*					ʾ	
prŠd	Š/:				ʾ or ʾ				1
pršD	D/:							ʾ	
PrŠd	P/N Š/:	ʾ	ʾ			ʾ	*n*		
PršD	P/N D/:	ʾ	ʾ			ʾ	*n*		1 1

REVIEW OF WEAK ROOTS REALIZATIONS

Chapter 51

Correlations in Pattern Formation

51.1 Verbal patterns

The charts on pages 294-297 give the patterns and core forms of verbal nouns and finite forms of strong and major weak roots. These four charts are to be read as a single paradigm, spread over the first two facing pages and continuing into the next two facing pages.

Only the four major stems are given, without the derived *t* and *tn* stems. As for core forms, only one representative root is selected for each given entry; thus, for instance, of the strong triradicals, only the root *kš/d* is given, omitting therefore roots with different root vowels.

The pattern is given in small type on the left of each column, and the core form is given on the right in larger type. Where a core form is not known, two dashes represent both the missing core form and its corresponding pattern.

51.2 Nominal patterns

The charts on pages 298-303 illustrate the correlations among the nominal patterns from all types of root; the patterns are those of both verbal and deverbal nouns. When a given pattern corresponds to a specific function, this is indicated in the left column. The pattern template is given only in terms of the triradical PRS for strong triradicals, even where no core forms from strong triradicals are known (e.g., PIRU:S is given for PIRUŠD).

The chart unfolds over a number of pages, but it is to be read as a single paradigm whose width corresponds to the width of two facing pages, and whose length scrolls continuously from the first two to the last two pages of the chapter.

		Infinitive		Verb. Adjective		Participle		Imperative	
B	prs	*parās-*	*kašād-*	*paris-*	*kašid-*	*pāris-*	*kāšid-*	*pVrVs-*	*kušud-*
	ʔrs	*ʔarās-*	*ʔakāl-*	*ʔaris-*	*ʔakil-*	*ʔāris-*	*ʔākil-*	*ʔarVs-*	*ʔakul-*
	Nrs	*narās-*	*naqār-*	*naris-*	*naqir-*	*nāris-*	*nāqir-*	*ʔVrVs-*	*ʔuqur-*
	Wrs	*warās-*	*wabāl-*	*waris-*	*wasim-*	*wāris-*	*wābil-*	*rVs-*	*bil-*
	p:s	*paØās-*	*kān-*	*naØis-*	*kīn-*	*pāʔis-*	*dāʔik-*	*pʔVs-*	*kūn-*
	pr:	*parāt-*	*banā-*	*parit-*	*banī-*	*pārit-*	*bānī-*	*pVrVt-*	*binī-*
	ʔr:	*ʔarāt-*	*ʔelē-*	*ʔarit-*	*ʔelī-*	*ʔārit-*	*ʔēlī-*	*ʔarVt-*	*ʔelī-*
	N:s	*naØās-*	*nāḫ-*	–	–	–	–	*nVʔVs-*	*nūḫ-*
	Nr:	*narāt-*	*nabā-*	*narit-*	*nabī-*	*nārit-*	*nābī-*	*ʔVrVt-*	*ʔibī-*
	Wr:	*warāt-*	*waṣā-*	*warit-*	*waṣī-*	*wārit-*	*wāṣī-*	*rVt-*	*ṣī-*
	pršd	–	–	–	–	–	–	–	–
	pr:d	–	–	–	–	–	–	–	–
	prš:	–	–	–	–	–	–	–	–
	Nr:d	*ʔirutd-*	*ʔitūl-*	–	–	–	–	*ʔVrVtd-*	*ʔitūl-*
	Nrš:	*ʔirušt-*	*ʔizuzz-*	*naruštʰ*	*nazuzz-*	*muʔrašØ-*	*muzzaz-*	*ʔVrVšt*	*ʔizizz-*
N	prs	*naprus-*	*nakšud-*	*muʔparis-*	*mukkašid-*	*napris-*	*nakšid-*
	ʔrs	*natrus-*	*nākul-*	*muntaris-*	*munnakil-*	*natris-*	*nākil-*
	Nrs	*naʔrus-*	*naqqur-*	*muntaris-*	*munnaqir-*	*naʔris-*	*naqqir-*
	Wrs	–	–	–	–	–	–
	p:s	–	–	–	–	–	–
	pr:	*naprut-*	*nabnū-*	*muʔparit-*	*mubbanī-*	*naprit-*	*nabnī-*
	ʔr:	–	–	–	–	–	–
	N:s	–	–	–	–	–	–
	Nr:	–	–	–	–	–	–
	Wr:	–	–	–	–	–	–
	pršd	*naparšud-*	*nabalkut-*	*muʔparšid-*	*mubbalkit-*	*naparšid-*	*nabalkit-*
	pr:d	–	–	–	–	–	–
	prš:	*naparšut-*	*naparkū-*	*muʔparšit-*	*mupparšī-*	–	–
	Nr:d	–	–	–	–	–	–
	Nrš:	–	–	–	–	–	–

51.1 CORRELATIONS IN PATTERN FORMATION: VERBAL PATTERNS
1A. VERBAL NOUNS AND IMPERATIVE OF THE B AND N STEMS

Preterite		Perfect		Present			
-IprVs-	*-Ikšud-*	*-IptarVs-*	*-Iktašad-*	*-IparrVs-*	*-Ikaššad-*	prs	B
-IʔrVs-	*-Īḫuz-*	*-IʔtarVs-*	*-Ītaḫaz-*	*-IØrrVs-*	*-Iḫḫaz-*	ʔrs	
-IʔrVs-	*-Iqqur-*	*-IʔtarVs-*	*-Ittaqar-*	*-InarrVs-*	*-Inaqqar-*	Nrs	
-utrVs-	*-ūbil-*	*-IʔtarVs-*	*-Ittabal-*	*-uØrrVs-*	*-ubbal-*	Wrs	
-Ipʔ Vs-	*-Ikūn-*	*-Iptʔ Vs-*	*-Iktūn-*	*-IpʔVʔs-*	*-IkŪnn-*	p:s	
-IprVt-	*-Ibnī-*	*-IptarVt-*	*-Ibtanī-*	*-IparrVt-*	*-Ibannī-*	pr:	
-ItrVt-	*-Īlī-*	*-ItarVt-*	*-Ītelī-*	*-IØrrVt-*	*-Illī-*	ʔr:	
-InʔVs-	*-Inūḫ-*	*-IʔtʔVs-*	*-Ittūḫ-*	*-InʔVʔs-*	*-InŪḫḫ-*	N:s	
-IʔrVt-	*-Ibbī-*	*-IʔtarVt-*	*-Ittabī-*	*-InarrVt-*	*-Inabbī-*	Nr:	
-utrVt-	*-ūṣī-*	*-IʔtarVt-*	*-Ittaṣī-*	*-uØrrVt-*	*-uṣṣī-*	Wr:	
–	–	–	–	–	–	pršd	
–	–	–	–	–	–	pr:d	
–	–	–	–	–	–	prš:	
-IʔrVtd-	*-Ittīl-*	*-IʔtarVtd-*	*-Ittatīl-*	*-IʔrVtd-*	*-Ittāl-*	Nr:d	
-IʔrVšt-	*-Izzizz-*	*-IʔtarVšt-*	*-Ittazizz-*	*-IʔrVšt-*	*-Izzazz-*	Nrš:	
-Iʔparis-	*-Ikkašid-*	*-IʔtaprVs-*	*-Ittakšad-*	*-IʔparrVs-*	*-Ikkaššad-*	prs	
-Intaris-	*-Innakil-*	*-IʔtatrVs-*	*-Ittākal-*	*-IntarrVs-*	*-Innakkal-*	ʔrs	
-Intaris-	*-Innaqir-*	*-IʔtaʔrVs-*	*-Ittaqqar-*	*-IntarrVs-*	*-Innaqqar-*	Nrs	
-Iʔwaris-	*-Iwwalid-*	–	–	*-IʔparrVs-*	*-Iwwallad-*	Wrs	
-Iʔpʔis-	*-Iqqīp-*	–	–	*-IʔpʔVʔs-*	*-IqqĪpp-*	p:s	
-Iʔparit-	*-Ibbanī-*	*-IʔtaprVt-*	*-Ittabnī-*	*-IʔparrVt-*	*-Ibbannī-*	pr:	
–	–	–	–	*-IntarrVt-*	*-Inneššī-*	ʔr:	N
–	–	–	–	–	–	N:s	
-IntarVt-	*-Innabī-*	*-IʔtatrVs-*	*-Ittabbī-*	*-IntarrVt-*	*-Innabbī-*	Nr:	
–	–	–	–	–	–	Wr:	
-Iʔparšid-	*-Ibbalkit-*	*-IʔtaparšaD-*	*-Ittabalkat-*	*-IʔparaššaD-*	*-Ibbalakkat-*	pršd	
–	–	–	–	–	–	pr:d	
-IʔparšVt-	*-Ipparkū-*	*-IʔtaparšVt-*	*-Ittaparkū-*	*-IʔparaššVt-*	*-Ipparakkū-*	prš:	
–	–	–	–	–	–	Nr:d	
–	–	–	–	–	–	Nrš:	

51.1 CORRELATIONS IN PATTERN FORMATION: VERBAL PATTERNS
1B. INDICATIVE OF THE B AND N STEMS

		Infin./Verb.Adj.		Participle		Imperative	
D	prs	*purrus-*	*kuššud-*	*muparris-*	*mukaššid-*	*purris-*	*kuššid-*
	ʔrs	*ʔurrus-*	*ʔuḫḫuz-*	*muØrris-*	*muḫḫiz-*	*ʔurris-*	*ʔuḫḫiz-*
	Nrs	*nurrus-*	*nuqqur-*	*munarris-*	*munaqqir-*	*nurris-*	*nuqqir-*
	Wrs	*wurrus-*	*wuššur-*	*muwarris-*	*muwaššir-*	*wurris-*	*wuššir-*
	p:s	*puʔuʔs-*	*kūnn-*	*mupØʔiʔs-*	*mukīnn-*	*puʔiʔs-*	*kīnn-*
	pr:	*purruʿ-*	*bunnū-*	*muparriʿ-*	*mubannī-*	*purriʿ-*	*bunnī-*
	ʔr:	*ʔurruʿ-*	*ʔullū-*	*muØrriʿ-*	*mullī-*	*ʔurriʿ-*	*ʔullī-*
	N:s	*nuʔuʔs-*	*nūḫḫ-*	*munØʔiʔs-*	*munīḫḫ-*	*nuʔiʔs-*	*nīḫḫ-*
	Nr:	*nurruʿ-*	*nubbū-*	–	–	–	–
	Wr:	–	–	–	–	–	–
	pršd	*puraššud-*	*šuqammum-*	–	–	*puraššid-*	*šuqallil*
	pr:d	*puraʿd-*	*šupēl-*	–	–	–	–
	prš:	–	–	–	–	–	–
	Nr:d	–	–	–	–	–	–
	Nrš:	–	–	–	–	–	–
Š	ccc	*šuprus-*	*šukšud-*	*mušapris-*	*mušakšid-*	*šupris-*	*šukšid-*
	ʔcc	*šuʿrus-*	*šūḫuz-*	*mušaʿris-*	*mušāḫiz-*	*šuʿris-*	*šūḫiz-*
	Ncc	*šuʔrus-*	*šuqqur-*	*mušaʔris-*	*mušaqqir-*	*šuʔris-*	*šuqqir-*
	Wcc	*šuʿrus-*	*šūbul-*	*mušaʿris-*	*mušābil-*	*šuʿris-*	*šūbil-*
	c:c	*šupʔuʔs-*	*šumūtt-*	*mušpʔiʔs-*	*mušmītt-*	*šupʔiʔs-*	*šumītt-*
	cc:	*šupruʿ-*	*šubnū-*	*mušapriʿ-*	*mušabnī-*	*šupriʿ-*	*šubnī-*
	ʔr:	*šuʿruʿ-*	*šūlū-*	*mušaʿriʿ-*	*mušēlī-*	*šuʿriʿ-*	*šūlī-*
	Nrs	–	–	–	–	–	–
	Nr:	–	–	–	–	–	–
	Wr:	*šuʿruʿ-*	*šūṣū-*	*mušaʿriʿ-*	*mušēṣī-*	*šuʿriʿ-*	*šūṣī-*
	cccc	*šuparšud-*	*šubalkut-*	*mušparšid-*	*mušbalkit-*	*šuparšid*	*šubalkit-*
	cc:c	–	–	–	–	–	–
	ccc:	*šuparšuʿ-*	*šupalkū-*	–	–	*šuparšiʿ*	*šupalkī-*
	Nc:c	–	–	–	–	–	–
	Ncc:	*šuØrušʿ-*	*šuzuzz-*	–	–	*šuØrišʿ-*	*šuzizz-*

51.1 CORRELATIONS IN PATTERN FORMATION: VERBAL PATTERNS
2A. VERBAL NOUNS AND IMPERATIVE OF THE D AND Š STEMS

Preterite		Perfect		Present			
uparris-	*-ukaššid-*	*uptarris-*	*-uktaššid-*	*-uparras-*	*-ukaššad-*	prs	D
uØrris-	*-uḫḫiz-*	*uʿtarris-*	*-ūtaḫḫiz-*	*-uØrras-*	*-uḫḫaz-*	ʔrs	
unarris-	*-unaqqir-*	*uʔtarris-*	*-uttaqqir-*	*-unarras-*	*-unaqqar-*	Nrs	
uwarris-	*-uwaššir-*	*uʿtarris-*	*-ūtaššir-*	*-uwarras-*	*-uwaššar-*	Wrs	
upʔiʔs-	*-ukīnn-*	*uptʔiʔs-*	*-uktīnn-*	*-upʔaʔs-*	*-ukānn-*	p:s	
upariʿ-	*-ubannī-*	*uptariʿ-*	*-ubtannī-*	*-uparaʿ-*	*-ubannā-*	pr:	
uØriʿ-	*-ullī-*	*uʿtariʿ-*	*-ūtellī-*	*-uØraʿ-*	*-ullē-*	ʔr:	
unʔiʔs-	*-unīḫḫ-*	*uʔtʔiʔs-*	*-uttīḫḫ-*	*-unʔaʔs-*	*-unāḫḫ-*	N:s	
unariʿ-	*-unabbī-*	–	–	*-unaraʿ-*	*-unabbā-*	Nr:	
–	–	–	–	–	–	Wr:	
–	–	–	–	*-upraššad-*	*-ušqammam-*	pršd	
–	–	*-uptaraʿd-*	*-uštenēl-*	*-upraʿd-*	*-ušpēl-*	pr:d	
–	–	–	–	–	–	prš:	
–	–	–	–	–	–	Nr:d	
–	–	–	–	–	–	Nrš:	
-ušapris-	*-ušakšid-*	*-uštapris-*	*-uštakšid-*	*-ušapras-*	*-ušakšad-*	prs	Š
-ušaʿris-	*-ušāḫiz-*	*-uštaʿris-*	*-uštāḫiz-*	*-ušaʔras-*	*-ušaḫḫaz-*	ʔrs	
-ušaʔris-	*-ušaqqir-*	*-uštaʔris-*	*-uštaqqir-*	*-ušaʔras-*	*-ušaqqar-*	Nrs	
-ušaʿris-	*-ušābil-*	*-uštaʿris-*	*-uštābil-*	*-ušaʔras-*	*-ušabbal-*	Wrs	
-ušpʔiʔs-	*-ušmītt-*	*-uštapʔiʔs-*	*-uštamītt-*	*-ušpʔaʔs-*	*-ušmātt-*	p:s	
-ušapriʿ-	*-ušabnī-*	*-uštapriʿ-*	*-uštabnī-*	*-ušapraʿ-*	*-ušabnā-*	pr:	
-ušaʿriʿ-	*-ušēlī-*	*-uštaʿriʿ-*	*-uštēlī-*	*-ušaʔraʿ-*	*-ušellē-*	ʔr:	
–	–	–	–	–	–	N:s	
–	–	–	–	–	–	N:s	
-ušaʿriʿ-	*-ušēṣī-*	*-uštaʿriʿ-*	*-uštēṣī-*	*-ušaʔraʿ-*	*-ušeṣṣē-*	Wr:	
-ušparšid-	*-ušbalkit-*	*-uštaparšid-*	*-uštabalkit-*	*-ušparaššad-*	*-ušbalakkat-*	pršd	
–	–	–	–	–	–	pr:d	
-ušparšiʿ-	*-ušpalkī-*	–	–	*-ušparašša-*	*-ušpalakkā*	prš:	
–	–	–	–	–	–	Nr:d	
-ušØrišʿ-	*-ušzizz-*	*-uštaØršʿ*	*-uštazizz-*	*-ušØraš-*	*-ušzazz-*	Nrš:	

51.1 CORRELATIONS IN PATTERN FORMATION: VERBAL PATTERNS
2B. INDICATIVE OF THE D AND Š STEMS

specific function	PRS template	3S	First Weak	Middle Weak	Final Weak	Double Weak	4S	4W
	PIRS	*ṣibt-*	*ʾilk-* *nidn-* *bil-t-*	*rīm-*	*mīl-* *qibī-t-*	*ṣī-t-* *dī-at-*		
	ʾIPRIS PIRISS	*ʾikrib-* *gimill-*						
	PURS	*dumq-*	*šub-t-*	*ṭūb-t-*	*ḫidū-t-*			
inf.B	PARA:S	*ṣabāt-*	*ʾalāk-* *nadān-* *wabāl-*	*kān-*	*banā-*	*waṣā-*		
	PARU:S	*šarūr-*	*ʾemūq-*					
inf. B	PIRU:S							*ʾizuzz-*
	PURA:S PURI:S PURU:S	*dumām-* *ruṭib-t-* *rukūb-*			*supā-* *kusī-t-*			

51.2 CORRELATIONS IN PATTERN FORMATION: NOMINAL PATTERNS
DESCRIPTION OF ACTION OR CONDITION (A)

specific function	PRS template	3S	First Weak	Middle Weak	Final Weak	Double Weak	4S	4W
vdj B	PARR	*dann-*						
vdj B	PARAS	*rapaš*		*ṭāb-*			*paršum-*	*palkū-*
vdj B	PARIS	*damiq-* *zanin-*	*ʾaḫiz-* *nadin-* *wabil-*	*kīn-*	*banī-*			
vdj B	PARUS	*maruṣ-*		*rūq-*				*nazuzz-*
	PARU:S	*karūb-*						
vdj B	PIRAS						*ʾidē-*	
	PURA:S	*ṣuḫār-*			*rubā-*			*šumēl-*

51.2 CORRELATIONS IN PATTERN FORMATION: NOMINAL PATTERNS
SUBJECT OF ACTION OR CONDITION (A)

specific function	PRS template	3S	First Weak	Middle Weak	Final Weak	Double Weak	4S	4W
inf D	PURRUS	*šubbur-*	*ʾubbub-* *nuqqur-*	*kunn-*	*puḫḫū-*		*šuqammum-* *šupēl-*	
PIRISS		[see above, after PIRS]						
PARRARA:S PURRARI:S		*dabbabāb-*			*tummamī-t-*			

51.2 CORRELATIONS IN PATTERN FORMATION: NOMINAL PATTERNS
DESCRIPTION OF ACTION OR CONDITION (B)

specific function	PRS template	3S	First Weak	Middle Weak	Final Weak	Double Weak	4S	4W
ptcpl B	PA:RIS	*ṣābit-*	*ʾāḫiz-* *nādin-* *wābil-*	*dāʾik-*	*bānī-*			
habitual; superlat.	PARRAS PARRIS	*ṣeḫḫer-* *zabbil-*	*ʾeppeš-* *ʾarrak-* *ʾekkim-* *nassiq-*		*šemmē-*			
vdj D	PURRUS	*šubbur-*	*ʾuḫḫuz-* *nussuq-*	*kunn-*			*šuqammum-* *šupēl-*	
profess.	PARRA:S PIRRU:S	*gallāb-* *sikkūr-*	*ʾerrēš-*	*dayyān-*	*maḫḫā-*			
superlat.	PARUSS	*rašubb-*	*ʾaḫuzz-at-* *namurr-*				*šaqumm-*	
	PURUSS PURASS	*kunukk-* *ḫušaḫḫ-*						
	PARRARA:S PURRARI:S	*zuqqaqīp-*		*tammamā-*				
place or instrum.	MAPRAS	*maškan-* *mīšar-* *maṣṣar-*	*mālak-*	*narām-*	*maqlā-*	*mēlē-*	*nabalkat-t-* *mazzazz-* *mayyāl-*	
time or place; ptcpl B	MUPRAS	*mušpal-*	*mūrak-* *mūšab-*	*nubāt-t-* *mudīk-*		*mūṣā-* *mūdī-*	*muzzazz-*	

51.2 CORRELATIONS IN PATTERN FORMATION: NOMINAL PATTERNS
SUBJECT OF ACTION OR CONDITION (B)

specific function	PRS template	3S	First Weak	Middle Weak	Final Weak	Double Weak	4S	4W
inf N	NAPRUS	*naplus-*	*naʾbut-*		*našmū-*			
	ŠAPRUS	*šaḫluq-t-*	*šēbul-t-*					
	ŠAPRA:S	*šapšāq-*						
inf Š	ŠUPRUS	*šukšud-*	*šūkul-*	*šuṭūbb-*	*šubnū-*	*šūṣū-*	*šubalkut-*	*šupalkū-*
			šuqqur-					
			šūbul-					
inf Štn	ŠUTAPRUS		*šutānuḫ-*		*šutabrū-*			
			šutaddun-					
			šutābul-					
	TAPRAS			*tanād-t-*				
	TAPRUS	*tamḫuṣ-*	*tāluk-*	*tanūq-at-*				
			tassuḫ-					
recipr.	TAPRA:S	*tamḫār-*	*tāḫaz-*		*tašmā-*			
descr. D	TAPRI:S	*talmīd-*	*tēnīq-*	*takīn-t-*	*tarbī-t-*	*tēr-t-*		
		tamšīl-			*tašnī-*	*tēšī-*		
vdj Bt	PITRUS		*ʾatluk-*		*šitnū-*			*ʾitazzuzz-*
vdj Btn	PITARRUS		*ʾatalluk-*	*qitayyul-*	*šitassū-*			
vdj Dtn	PUTARRUS		*ʾutedduš-*	*kutūnn-*			*ʾuteqqū-*	

51.2 CORRELATIONS IN PATTERN FORMATION: NOMINAL PATTERNS
DESCRIPTION OF ACTION OR CONDITION (C)

specific function	PRS template	3S	First Weak	Middle Weak	Final Weak	Double Weak	4S	4W
ptcpl N	MUPPARIS	*muppaqid-*		*munnabit-*			*mubbalkit-*	*mupparkī*
ptcpl D	MUPARRIS	*mušebbir-*		*mullil-*	*mukīnn-*	*mubannī-*		*muškēn-*
ptcpl Š	MUŠAPRIS	*mušakšid-*		*mušākil-*		*mušēlī-*	*mušbalkit-*	*mušpalkī-*
ppl Btn	MUPTARRIS			*muttalik-*		*muttarrī-*		*muttazzizz-*
ppl Ntn	MUTTAPRIS							*muttablakkit-*
ppl Štn	MUŠTAPRIS	*muštamkir-*				*muštamī-*		
vdj N	NAPRUS	*nalbub-*	*naʾdur-*					
elative	ŠAPRUS	*šalbub-*						
	ŠAPRA:S	*šalbāb-*						
vdj Š	ŠUPRUS	*šulput-*	*šūtuq-*		*šurbū-*	*šūṣū-*		
			šūtur-					
vdj Štn	ŠUTAPRUS		*šutēmud-*					
place	TAPRAS	*tarbaṣ-*	*tābal-*					
	TAPRA:S	*tamlāk-*				*telēʾ-*		
	TAPRI:S	*talmīd-*	*tēnīq-*	*takīn-t-*	*tarbī-t-*	*tēr-t-*		
			tālik-t-			*tēṣī-t-*		
vdj Bt	PITRUS	*mitgur-*	*ʾetpur-*		*bitrū-*			
	PITRA:S	*gitmāl-*	*ʾitpēš-*					
vdj Btn	PITARRUS							
vdj Dtn	PUTARRUS							
planned action	PURUSSA:ʾ	*purussāʾ-*		*ʾukullāʾ-*		*muddāʾ-*		

51.2 CORRELATIONS IN PATTERN FORMATION: NOMINAL PATTERNS
SUBJECT OF ACTION OR CONDITION (C)

GLOSSES

ʾaḫiz-	taken
ʾāḫiz-	taker
ʾaḫuzz-at-	marriage
ʾalāk-	go
ʾālik-t-	current
ʾarrak-	very long
ʾatalluk-	go back and forth
ʾatluk-	go back
ʾekkim-	thievish
ʾemūq-	strength
ʾeppeš-	crafty
ʾerrēš-	cultivator
ʾetpur-	covered with tiara
ʾidē-	know
ʾilk-	going
ʾitazzuzz-	stand around
ʾitpēš-	smart
ʾizuzz-	stand
ʾubbub-	purify
ʾuḫḫuz-	inlay
ʾukullāʾ-	food ration
ʾutedduš-	keep renewing
ʾuteqqū-	pay attention
bāb-	door
banā-	build
bānī-	builder
banī-	beautiful
bil-t-	bringing
bitrū-	outstanding
dāʾik-	killer
dabbabāb-	long talk
dayyān-	judge
dī-at-	notice
ḫidū-t-	joy
kān-	be(come) firm
kīn-	firm
kunn-	make firm
kusī-t-	well thread (garment)
kutūnn-	be confirmed
mayyāl-	bed
mālak-	march
maqlā-	burning
maṣṣar-	watch
mazzazz-	station
maḫḫā-	ecstatic
mēlē-	height
mīl-	flood
mīšar-	justice
mubannī-	builder
mubbalkit-	traitor
muddāʾ-	knower
mūdī-	knowing
mudīk-	killer
mullil-	purifier
mukīnn-	establisher
munnabit-	fugitive
mupparkī-	idle
mūrak-	length
mūṣā-	exit
mūšab-	dwelling
mušākil-	feeder
mušbalkit-	instigator
mušēlī-	lock
muškēn-	homesteader
mušpalkī-	opener
muštamī-	considerate
muštamkir-	trader
muttablakkit-	rebellious
muttalik-	movable
muttarrī-	caravan leader
muttazzizz-	vagrant
muzzazz-	attendant
naʾbut-	to flee
naʾdur-	darken
nabalkat-t-	ladder
nadān-	give
nadin-	given
nādin-	giver

namurr-	awesome
narām-	beloved
nassiq-	choosy
našmū-	hearing
nazuzz-	standing
nidn-	gift
nubāt-t-	evening
nuqqur-	destroy
nussuq-	select
palkū-	wide
paqid-	protected
paršum-	old
puḫḫū-	close
purussāʾ-	decision
qibī-t-	command
qīp-	entrusted
qitayyul-	daze
rīm-	love
rubā-	great
rūq-	distance
supā-	prayer
ṣī-t	exit
ṣibt-	seizure
šaqumm-	still
šēbul-t-	transport
šemmē-	listener
šitassū-	scream
šitnū-	become contrary
šubalkut-	cause to go over
šubnū-	cause to build
šūbul-	cause to carry
šūkul-	cause to eat
šumēl-	left
šupalkū-	make wide
šupēl-	exchange
šuqammum-	be(come) very quiet
šurbū-	make great
šūṣū-	cause to go out
šutabrū-	delay
šutābul-	cause to be carried
šutaddun-	cause to be given
šutānuḫ-	cause to be tired
šutēmud-	caused to lean
šūtuq-	outstanding
šūtur-	very precious
šuṭūbb-	cause to make good
tābal-	dry land
tāḫaz-	battle
takīn-t-	confirmation
tāluk-	way
tammamā-	one who swears often
tanād-t-	praises
tanūq-at-	battlecry
tarbī-t-	education
tašmā-	hearing
tašnī-	repetition
telēʾ-	very smart
tēnīq-	suckling
tēr-t-	direction
tēṣī-t-	battle
tēšī-	confusion
tummamī-t-	oath
ṭāb-	good
ṭūb-t-	goodness
wabāl-	bring
wabil-	brought
wābil-	one who brings
waṣā-	go out

PART II

ALTERNATIONS CONDITIONED BY EXTERNAL INFLECTION

Chapter 52

Introductory

Morphophonemic alternations occurring as a result of external inflection (affixation and suffixation) may be divided in two groups. In the first, the alternation affects the quality of individual phonemes, whereas in the second the syllabic structure of the word is affected. Also, in the first the alternation takes place at morpheme boundary, whereas in the second it takes place in the syllable adjacent to morpheme boundary.

Two general questions pertain to this type of alternations. The first is whether internal inflection plays a role or not. The only instance where this seems to be likely is with the phonotactic rule of apheresis (see below, 55.1). Otherwise, the noticeable prevalence of motivated forms may just be the result of the fact that certain suffixes or enclitics are more frequently found with verbs than with nouns. For instance, while a form like {*kalab+ma*} "he is a dog and thus" is possible, I have not found actual attestations to indicate whether or not in such a case the phonological realization would be *kalamma* as in the case of {*īrub+ma*} *īrumma* (see below, 53.3). Except where otherwise indicated, I will assume that the alternations listed are only sensitive to external, and not internal, inflection.

The second question is more significant. It appears that some of the alternations affecting phonemes in contact at morphemic boundary (treated in section A) may in fact be applicable even outside of morphophonemic constraints. For instance, the alternation {*m+š*} ~ *šš* applies also to contexts without morphemic boundary, in which case the rule could be stated as {*ms*} ~ *šš* (see below, 53.6). A conclusion is made difficult by virtue of the fact that to obtain adequate docu-

mentation one would have to produce statistical computations of relative frequencies within a representative corpus. Short of that, I can only indicate isolated examples of deviation. The simple fact that at least several such deviations occur may imply that the phenomenon was more widespread than it might appear at first. One may even wonder if some of the rules which are considered here as morphophonemic alternations, might not in fact have been pervasive historical changes of the type mentioned above in chapter 5.

SECTION A
ALTERNATIONS AFFECTING PHONEMES IN CONTACT AT MORPHEMIC BOUNDARY

Chapter 53
Alternations Affecting Consonants

53.1 Introductory

In all types subsumed under this heading the alternation appears as long consonant in place of a morphological sequence of two different consonants. In four cases, the resulting long consonant is identical in quality to the first of the two consonants of the morphological sequence (regressive assimilation). In the other case, the resulting long consonant is different from either of the consonants of the morphological sequence.

I will divide the material depending on the morphemic nature of the two elements which come in contact: the first may be a radical or a postfixal element, and the second a postfixal or a suffixal element. In tabular form, the sequence of pertinent combinations is as follows:

base		postfix		suffix/enclitic
dental	+	*t* (feminine)		
labial, nasal			+	*m* (enclitic)
dental-nasal			+	*k, š* (pronominal suffix)
dental, fricative			+	*š* (pronominal suffix)
		m (ventive, locative)	+	*ʾ,n,k,š* (pronominal suffix)

53.2 Dental followed by postfixal *t*

{*d*, *ṭ*, *n* + *t*} ~ *tt*

At morpheme boundary, the morphological sequence consisting of a dental stop and *t* is realized as long *t* (alternatively, there is regressive assimilation of *d*, *ṭ* and *n* to *t*). Examples:

{*wilid*+*t*+*um*} ~ *wilittum* "progeny"
{*muballiṭ*+*t*+*um*} ~ *muballittum* "the one who gives life"
{*kīn*+*t*+*um*} ~ *kittum* "justice"
{*lemun*+*t*+*um*} ~ *lemuttum* "evil."

One should also note cases like *ʾatta* which is derived, historically, from *ʾan-t-a* (see above, 31.2). In some cases, however, the assimilation does not take place, or at least it is not shown in the writing, e.g., {*nidin*+*t*+*um*} ~ *nidintum* "gift."

53.3 Labial or nasal followed by enclitic *m*

{*p*, *b*, *n* + *m*} ~ *mm*

At morpheme boundary, the morphological sequence consisting of radical labial or nasal and *m* is realized phonologically as long *m*. (Alternatively: there is regressive assimilation of labial or nasal to *m*). Examples:

{*īrub*+*ma*} ~ *īrumma* "he entered and then"
{*anaddin*+*ma*} ~ *anaddimma* "I will give and then."

The morphophonemic nature of the alternation is borne out by such contrastive examples as *Iddin-Marduk* "Marduk-gave" (personal name). Note how the invariable *enma* "thus" (Old Akkadian only) would represent another contrastive example if viewed as a single word without internal boundary, but would otherwise be an exception if viewed in its etymological derivation from *en*+*ma*; after Old Akkadian, the word occurs regularly as *umma*, which exhibits the application of the morphophonemic rule (and a secondary labialization of the vowel *e* to *u*). For a similar alternation see *mamman* "whoever" (see above, 6.3).

Occasionally, this alternation may also apply when no morpheme boundary is present. Some of the occurrences, too scarce to allow a firm conclusion as to the regularity of alternation, are *ammuš* "I set out," next to *anmuš*, or *nammaštū* ~ {*manmaš*+*t*+*ī*+*u*} "animal." (For the converse phenomenon of dissimilation, as in *nanmuru* "to be seen," see above, 5.2(8).)

53.4 Dental followed by suffixal *k* or *š*

{*n* + *k*} ~ *kk*
{*n* + *š*} ~ *šš*

At morpheme boundary, the morphological sequences *nk*, *nš* are realized as *kk*, *šš* (alternatively: there is regressive assimilation of *n* to *k* or *š*). Examples:

{*iddin*+*kum*} ~ *iddikkum* "he gave to you"
{*ḫarrān*+*ka*} ~ *ḫarrakka* "your caravan"
{*idin*+*šu*) ~ *idinšu* "sell him!"

The morphophonemic nature of the alternation is borne out by contrastive examples such as *kank*+*um* "sealed" or *enš*+*um* "weak." Often, assimilation is not shown overtly in the writing: without a full statistical study, we do not know whether this is a case of morphographemic writing, or a a case of free variation. On the other hand, we also find, occasionally, realizations like *kakk*+*um* (with assimilation outside of morphemic boundary); here, too, no clear distributional statement can be given, hence it may be considered a free variation.

53.5 Dental or fricative followed by suffixal *š*

{*t*, *d*, *ṭ*, *s*, *z*, *ṣ*, *š*+ *š*} ~ *ss*

At morpheme boundary, the following radicals – dental stops (*t*, *d*, *ṭ*) alveolar fricatives (*s*, *z*, *ṣ*) and alveo-palatal (*š*) – in contact with *š*, are realized as long *s*.[1] Examples:

{*balāṭ*+*šu*} ~ *balassu* "his life"
{*īpuš*+*šu*} ~ *īpussu* "he treated him like"
{*iḫḫaz*+*ši*} ~ *iḫḫassi* "he marries her."

The morphophonemic nature of the alternation {*š*+*š*} ~ *ss* is borne out by such contrastive examples as *ibašši* "there is" (no morpheme boundary between *s* and *s*), *qātiššu* "to his hand" (the word is to be analyzed as {*qāt*+*iš*+*šu*}, hence the first *š* is not a radical), or *išpuraššum* "he wrote to him" (*š* and *š* are divided by morpheme boundary, but they are in turn the result of morphophonemic alternation, for {*išpur*+*am*+*šum*}, see below, 53.6).

No clear contrastive example exists, on the other hand, for the sequences other than {*š*+*š*}, because they are rare. But from the few examples available, it would seem that at least the sequence {*d*+*š*} (not at morpheme boundary) was realized

[1] For a possible historical explanation, which presupposes a consonant *ś* for the pronominal suffix, see above, 1.2; 5.1.

as *šš*, see {*ediš+um*} ~ *eššum* "new" (for the loss of *i* see below, 55.1), and {*qadš+at+um*} ~ *qaššatum* "pure" besides the treatment of patterns of the type {*pitšaš*} ~ *piššaš* (see above, 38.2). Note that the masculine {*qadš+um*} occurs with the alternation *qašdum*, not **qassum*.[2]

A divergent type of assimilation is of particular interest, because it is of a regressive type as is otherwise normal in Akkadian. These are exceptional cases, and they may occur in one of two instances. Within a word (hence not at morpheme boundary) {*šs*} is realized *ss*, as in {*išsī*} *issī* "he cried" (preterite of *šsi:*). In a case of sandhi (hence at word, not properly morpheme, boundary) {*tš*} is realized *šš*, as in {*ṣīt šamši*} *ṣiššamši* "the going out of the sun, sunrise" (see above, 4).

53.6 Postfixal *m* followed by pronominal suffix

{+(*C*) + *Vm* + *n*} ~ (*C*)*Vnn*
{+(*C*) + *Vm* + *š*} ~ (*C*)*Všš*
{+(*C*) + *Vm* + *k*} ~ (*C*)*Vkk*
{+(*C*) + *V̄m* + ʾ} ~ (*C*)*V*ʾʾ

At morpheme boundary, and if *m* is part of an inflectional affix, the morphological sequences *mn*, *mš*, *mk* and *m*ʾ are realized as *nn*, *šš*, *kk* and ʾʾ respectively (alternatively, there is regressive assimilation of *m* to the following consonant). Examples:

{*ašr+ūm+ni*} ~ *ašrunni* "at our place"
{*ašr+ūm+ka*} ~ *ašrukka* "at your place"
{*ašr+ūm+šu*} ~ *ašruššu* "at his place"
{*išpur+am+niāšim*} ~ *išpuranniāšim* "he wrote to us"
{*išpur+am+kum*} ~ *išpurakkum* "he wrote to you"
{*išpur+am+šum*} ~ *išpuraššum* "he wrote to him"
{*išpur+ū+nim+niāšim*} ~ *išpurūninniāšim* "they wrote to us"
{*išpur+ū+nim+kum*} ~ *išpurūnikkum* "they wrote to him"
{*išpur+ū+nim+šum*} ~ *išpurūniššum* "they wrote to him"
{*šēp+ūm+ʾa*} ~ *šēpuʾʾa* "at my foot/feet"

The morphophonemic nature of the alternation is borne out by such contrastive examples as *lumn+um* "evil," *ramk+um* "a priest," and *šamš+um* "sun" (all of them with no morpheme boundary), as well as *ukallim+šu* "I showed him," *šulum+ka* "your peace" and *ukallim+ka* "I showed you" (morpheme boundary does not come after inflectional affix, but after base). I do not know of a Babylonian example with *m* before a suffix beginning in *n*, such as *ukallim+niāti* "he showed us";[3] in such instances, Babylonian seems to use regularly the ventive, as in {*ukallim+am+niāti*} ~ *ukallimanniāti*.[4]

[2] See on this REINER 1966 *Analysis* 50-51.

[3] Attested in Old Assyrian, *JCS* 14, 15:7.

[4] See also JACOBSEN 1960 "*Ittallak*" 105-6.

Chapter 54
Alternations Affecting Vowels

{V:C +C} ~ VCC / VC:

When as a result of affixation or suffixation a consonantal cluster or long consonant results after long vowel, the vowel is realized as short, for example:

{bēl+t+um} ~ *beltum* "lady"
{šēp+ūm+ʾa} ~ *šēpuʾʾa* "at my foot."

This of course does not change the quantity of the syllable, which remains long because of position, i.e., because followed by two consonants or long consonant.

At morphemic boundary with *ø*, a long vowel was perhaps realized as short:

{rabi:-ø} ~ *rabī* or *rabi* "he is great."

This is suggested by the historical observation that in later periods the final vowel is sometimes, though not regularly, dropped, e.g., *rab*, and this would seem more likely phonologically if the final vowel is short.

Note that final long vowel *not* at morphemic boundary, seems to have remained long at all times, since it is never dropped, e.g.,

{awil+ū} ~ *awīlū* "men."

SECTION B
ALTERNATIONS AFFECTING SYLLABIC STRUCTURE (PHONOTACTICS)

As a result of certain morphophonemic changes conditioned by external inflection, there are alternations that affect the syllabic structure of the word, where the number of syllables is either decreased (55; 56.1) or increased (56.2). This rearranging of syllabic configuration is a special part of morphophonemics, called "phonotactics."

Chapter 55
At Morphemic Boundary with Vowel

55.1 Apheresis

{RVRVR+V(:C)} ~ *RVRRV(:C)*

When an affix added to a core results in a sequence of three syllables of which the first two are short, the vowel of the middle syllable is omitted. Note the limitation to a core, i.e., a base derived from internal inflection: this is expressed in the formula given above by the use of the letter R (for radical) instead of C (for consonant). For example:

{damiq+um} ~ *damqum* "good"
{iktašad+am} ~ *iktašdam* "he has reached towards"

The terms of this rule (which are generally stated incompletely or incorrectly in traditional grammar) are particularly interesting because they highlight the sensitivity of morphophonemics for a very specific combination of internal and external morphemes. This rule is also quite distinctive of Akkadian vis-à-vis other Semitic languages. Specific exclusions include the following.

(1) Unmotivated nouns. This includes primary nouns, e.g., *ʾišar+um* "normal" (not */ʾišrum/*),[1] and loanwords, e.g., *ʾuruk-ī-um /ʾurukūm/* "Urukean" (not */ʾurkūm/*), from the city name Uruk.

(2) Compounds. This affects especially Akkadian personal names, e.g., *Puzur-+ʾabi* "In-the-secret-of-Father, i.e., Under-the-protective-shadow-of-Father," with sandhi */puzurabi/* (not */puzrabi/*).[2] Other instances of compounds include unmotivated nouns, such as primary nouns, e.g., *šinipū* "two thirds" (see above, 6.3, n.5) and loanwords, e.g., *gabadibbu* "battlement" from Sumerian *gaba+dib*, or *Ḫammurapi* from Amorite *ʿammu+rapiʿ*, a personal name. In some cases, a secondary lengthening was introduced, e.g., *gabandibbu* (for *gabaddibbu*). This may or may not represent an analogical extension of the rule to cases outside internal inflection; it seems quite unlikely that such lengthening could have taken place in all cases and would simply not have been indicated in writing.

(3) Affixation with suffixes and enclitics. In this case the morpheme boundary is obviously of a different nature than the boundary occurring before postfixes, e.g., *šarra+kunū* "your king" (not **šarraknū*) or *iṣbatu-šu* "that he seized him" (not *iṣbassu* – which exists as a correlate of {*iṣbat-šu*}). Here, too, one can occasionally observe secondary lengthening of the last vowel before the suffix, especially with the genitive construct in front of suffixes, e.g., *ina libbi+kunū* realized as */libbīkunū/* "in your midst."

(4) Internal inflection without affixation. It is questionable whether this particular environment is or is not subject to the rule. Consider the following cases:

|*da-ba-ba-bum*| "long talk" (see 51.2): */dabbabābum/* or */dababābum/*[3]
|*zu-qa-qí-pu*| "scorpion" (see 16.2): */zuqqaqīpu/* or */zuqaqīpu/*
|*li-da-na-ni-in*| "may he strengthen" (13.4): */līdannannin/* or */līdanannin/*

[1] Goetze 1946 "Sequence" presented a full list of words of this type. He explains the largest group of exceptions by assuming the presence of a special sonant *r°*. This may well be true historically. But for the phenomenon to be operative synchronically, one would have to postulate the existence of a distinct phoneme *r°*, for which there is otherwise no evidence. Given the terms of the rule as formulated here, the question is neatly resolved within morphophonemics, without recourse to phonemics.

[2] Written PU_3.ŠA-*ra-bí*, see *AHw* 885. Note, however, that as a result of sandhi the rule may extend to personal names as well, e.g., *Damiq+ʾilī+šu /damiq+ʾilīšu/* "Good-of-his-god, i.e., Well-treated-by-his-god," (see Stamm 1939 *Namengebung*, p. 258) realized as */damqilīšu/*, *CAD D* 72b. This may possibly be more regular than suspected, but still only with motivated nouns; cases like *ʾabu-ṭāb* "Father-is-good" never alternate with **/ʾabṭāb/*.

[3] Thus *CAD D* 1f (suggesting the possibility of a scribal mistake for *dabābum*); *AHw* 147.

|*tu-za-qa-qu-ru*| "to build very high" (13.4): */tuzaqqaqquru/* or */tuzaqaqquru/*
|*i-nu-pa-ar-ri-is*| "may we decide" (28.3): */ʾinuparris/* or */ʾinuparris/*

From a graphemic point of view, either phonemic rendering is possible. In this grammar I prefer the first solution, which avoids the possibility of three short syllables within a core form by assuming some extra length. It is however possible that, as envisaged in the second alternative, the core form itself may have tolerated three short syllables as with unmotivated bases.

55.2 Contraction

$\{V_1 + V_2\} \sim \bar{V}_2$

Two vowels in contact at morphemic boundary, whether short or long, are realized as a single long vowel, the quality being that of the second vowel. Examples are:

{rabī+um} ~ *rabūm* "great"
{rabī+ān+um} ~ *rabānum* "a particular great one, mayor"
{iqbī+am} ~ *iqbām* "he spoke to me"
{iqbī+ū} ~ *iqbū* "they spoke"
{ann+ī+um} ~ *annūm* "this."

In this grammar I assume that length resulting from contraction (e.g., *ū* in *iqbū*) is phonemically identical to morphemic length (e.g., *ū* in *iprusū*), and to base length (e.g., *ū* in *būru* "well"); see above, 1.4.

For a rare case where contraction obtains within internal inflection, yielding the same type of resolution (i.e., with long vowel assuming the quality of the second vowel of the vocalic cluster), see above, 44.4.

For a possible divergent case, where the resulting vowel assumes the quality of the first vowel of the vocalic cluster, see above, 28.4.

Chapter 56
At Morphemic Boundary with Ø

56.1 Outside of the construct state

Long consonant followed by *ø* at morphemic boundary is realized as short, e.g. {*dann-ø*} ~ *dan* "he is powerful."

56.2 The construct state

When *ø* occurs after simple consonant, no problem arises as to its realization in Construct I, e.g., {*bēl-ø-ø*} or {*šarr-at-ø*} occur simply as *bēl* "lord of" and *šarrat* "queen of." In Construct II the consonant in contact with pronominal suffixes undergoes the morphophonemic changes described above in 53.5, e.g., {*šarr-at-ø-šu*} *šarrassu* "his queen."

When *ø* occurs after a vowel, i.e., with masculines of patterns from roots final weak, the forms of Construct I exhibit the simple pattern with final long vowel, e.g., {*bānī-ø-ø*} *bānī* "builder of" (in all three cases). In Construct II, the same postfixes are used as in the normal state, i.e., with triptotic declension, e.g., *bānū+šu*, *bānā+šu*, *bānī+šu* "his builder/creator."

When *ø* occurs after cluster in a monosyllabic base, the realization is characterized by the use of an epenthetic vowel within the cluster, the quality of the vowel being that of the vowel of the base, e.g.:

{*kalb-ø-ø*} ~ *kalab* "dog of"
{*šipr-ø-ø*} ~ *šipir* "message of"
{*ʾuzn-ø-ø*} ~ *ʾuzun* "ear of."

When *ø* occurs after long consonant in a polysillabic base and in Construct I, it is realized as *ø*, and the long consonant is shortened, e.g., {*kunukk-ø-ø*} *kunuk* "seal of."

In the other cases, *ø* is realized as a vowel rendered in the writing either as *i* or as *a*,[1] which may have been an indistinct vowel (*ə*, see above, 1.3). The specific realization depends on the syllabic structure of the noun, including gender postfixes, and on whether *ø* is preceded by consonantal cluster or long consonant. Construct I is characterized by the use of the vowel *i* after cluster or length, and Construct II by the use of the vowel *a*.

All possible realizations are tabulated in the following chart.

final conson.	syllabic structure	example	realization of *ø* in Construct I nom	Construct I acc	Construct I gen	Cnstrct II nom	Cnstrct II acc	examples Cnst.I	Cnst.II
long	polysyll.	*kunukk-ø-ø*	*cø*	*cø*	*cø*	*a*	*a*	*kunuk*	*kunukka+*
	monosyll.	*libb-ø-ø*	*i*	*i*	*i*	*a*	*a*	*libbi*	*libba+*
cluster	polysyll.	*nidin-t-ø-ø*	*i*	*i*	*i*	*a*	*a*	*nidinti*	*nidinta+*
	monosyll.	*kalb-ø-ø*	*cvcø*	*cvcø*	*cvcø*	*cvcø*	*cvcø*	*kalab*	*kalab+*

Note that the above rules apply only, as expected, when long consonant or cluster are word final (e.g., {*kalb-ø-ø#*} *kalab awīlim* "the dog of the man") or else are in front of another consonant (e.g., {*kalb-ø-ø+šu*} *kalab+šu* "his dog"). If in front of a vowel, no special resolution is needed, e.g., {*kalb-ø-ø+ī*} *kalb+ī* "my dog."

More explicit examples of all variations occurring in the resolution of *ø* are brought together in the chart on the following page. To facilitate the understanding of each example, they are all given in the same brief syntactical context: when the construct is in the nominative, it is followed by the predicate *ṭāb* "is good"; when the noun occurs in the accusative, it is followed by the verb *āmur* "I saw"; when the noun occurs in the genitive, it is preceded by the preposition *ana* "to." The genitive of Construct II is in parenthesis because the case ending is not *ø*, but *i*; it is entered in the chart for the sake of completeness.

[1] See Von Soden 1952 *Grundriss* 64e; Matouš and Petracek 1956 "Liquiden" 7; Von Soden 1960 "Status Rectus-Formen" 166, 170-71: the original vowel of the construct may have been *a*, retained in the *-am* ending (see above, 23.5).

pattern with gender infixes	word	resolution of ∅	
		Construct I	Construct II
ends in simple consonant	*bēl-um*	*bēl bītim ṭāb* *bēl bītim āmur* *ana bēl bītim* the master of the house	*bēl-šu ṭāb* *bēl-šu āmur* *(ana bēlī-šu)* his master
ends in vowel	*kala-um*	*kala ilī ṭābū* *kala ilī āmur* *ana kala ilī* all of the gods	*kalū-šunū ṭābū* *kalā-šunū āmur* *(ana kalī-šunū)* all of them
polysyllabic, ends in long consonant	*kunukk-um*	*kunuk šarrim ṭāb* *kunuk šarrim āmur* *ana kunuk šarrim* the seal of the king	*kunukka-šu ṭāb* *kunukka-šu āmur* *(ana kunukkī-šu)* his seal
monosyllabic ends in long consonant	*libb-um*	*libbi ālim ṭāb* *libbi ālim āmur* *ana libbi ālim* the heart of the city	*libba-šu ṭāb* *libba-šu āmur* *(ana libbī-šu)* his heart
polysyllabic, ends in cluster	*nidint-um*	*nidinti šarrim ṭāb* *nidinti šarrim āmur* *ana nidinti šarrim* the gift of the king	*nidinta-šu ṭāb* *nidinta-šu āmur* *(ana nidintī-šu)* his gift
monosyllabic, ends in cluster	*kalb-um*	*kalab awīlim ṭāb* *kalab awīlim āmur* *ana kalab awīlim* the dog of the man	*kalab-šu ṭāb* *kalab-šu āmur* *(ana kalbī-šu)* his dog

PARADIGM OF CONSTRUCT STATE IN SYNTACTICAL CONTEXT

SYNTAX

Giorgio Buccellati

A Structural Grammar of Babylonian

Harrassowitz Verlag · Wiesbaden

pattern with gender infixes	word	resolution of ∅	
		Construct I	Construct II
ends in simple consonant	*bēl-um*	*bēl bītim ṭāb* *bēl bītim āmur* *ana bēl bītim* the master of the house	*bēl-šu ṭāb* *bēl-šu āmur* *(ana bēlī-šu)* his master
ends in vowel	*kala-um*	*kala ilī ṭābū* *kala ilī āmur* *ana kala ilī* all of the gods	*kalū-šunū ṭābū* *kalā-šunū āmur* *(ana kalī-šunū)* all of them
polysyllabic, ends in long consonant	*kunukk-um*	*kunuk šarrim ṭāb* *kunuk šarrim āmur* *ana kunuk šarrim* the seal of the king	*kunukka-šu ṭāb* *kunukka-šu āmur* *(ana kunukkī-šu)* his seal
monosyllabic ends in long consonant	*libb-um*	*libbi ālim ṭāb* *libbi ālim āmur* *ana libbi ālim* the heart of the city	*libba-šu ṭāb* *libba-šu āmur* *(ana libbī-šu)* his heart
polysyllabic, ends in cluster	*nidint-um*	*nidinti šarrim ṭāb* *nidinti šarrim āmur* *ana nidinti šarrim* the gift of the king	*nidinta-šu ṭāb* *nidinta-šu āmur* *(ana nidintī-šu)* his gift
monosyllabic, ends in cluster	*kalb-um*	*kalab awīlim ṭāb* *kalab awīlim āmur* *ana kalab awīlim* the dog of the man	*kalab-šu ṭāb* *kalab-šu āmur* *(ana kalbī-šu)* his dog

PARADIGM OF CONSTRUCT STATE IN SYNTACTICAL CONTEXT

SYNTAX

Chapter 57
Minimal Units

57.1 Syntactical structure

The traditional approach to Akkadian (and Semitic) syntax has been to discuss the relationships among classes of words looking at each individual class of words in itself. Hence one finds, in traditional grammars, chapters devoted, for example, to the "syntax of the cases," where the cases are described with respect to all environments in which they may occur, regardless of how heterogeneous such environments may be. If a similar approach were followed in morphology, it would result in such chapters as one devoted to "nouns ending in *-am*": it is obvious that, while such a chapter would include many examples of the accusative case, it could not be presented as a chapter dealing with the morphology of the cases, even just the accusative case. Just as we do not use phonemic classes as primary sorting criteria for morphological analysis, thus we should not use morphological classes as the primary sorting criterion for syntactical analysis.

Accordingly, in this grammar I reverse the traditional procedure, and study the relationships among the various classes of words starting from the relationships themselves. Primacy will be given to the environments, which will be classified according to intrinsic criteria (to be specified later), and then it will be noted how the morphological classes may occur in given environments. Thus the two accusatives *ūmam* and *kaspam* in the sentence *ūmam kaspam amḫur* "today I received the money" will be treated separately, because their similarity in terms of inflection is not as relevant to a syntactical treatment as their dissimilarity in terms of syntactical categories. In other words, the method followed here is more germane to syntax because it does not base syntactical analysis on categories derived from morphological analysis. As a result, greater emphasis will be placed on the delineation of the structure of Akkadian syntax rather than on the functional use of syntax understood as a phrasebook arranged according to inflectional keywords.

Needless to say, the reconstruction offered here takes fully into consideration the results achieved by the traditional approach. Many a conclusion remain as they had been perceived by the scholars who first developed a comprehensive theory of Akkadian syntax, especially UNGNAD and VON SODEN – my indebtedeness being underscored by the use I often make of their exemplification. At the same time it may be noted that the different method employed here has served importantly in a heuristic fashion, because several new points are in fact made below – for instance the definition and description of transitive verbs, prepositional and non-prepositional adjuncts, non-pronominal attributive (= relative) clauses, the description of passive constructions, the definition of emphasis, or the analysis of coordination into reversible and irreversible types.

57.2 Immediate constituents

The initial procedure for a structural analysis of the type proposed is the identification of the constituents of a sentence. One way in which to arrive at such an identification is to compare sentences which are structurally equivalent, and to isolate the segments which fill the same functional slots. Let us look at the following paradigm:

(1)	*awīlum* the man	*ša* who	*elīšu kišpī iddū* threw sorcery on him	*ina libbi bītīšu* inside his house	*iddāk* will be killed
(2)	*awīlum* the man	*ša* who	*elīšu kišpī iddū* threw sorcery on him	*annikīʾam* here	*iddāk* will be killed
(3)	*awīlum* the man	*ša* who	*illikam* came	*annikīʾam* here	*iddāk* will be killed
(4)	*awīlum* the man	*šū* above mentioned		*annikīʾam* here	*iddāk* will be killed
(5)	*awīlum* the man	*šū* above mentioned		*iddāk* will be killed	
(6)	*awīlum* the man			*iddāk* will be killed	

Note that the last sentence may in turn be substituted by the simple verbal form *iddāk*. This however is deceptive, since the verbal form contains in fact a double

morph (i.e., {ʾ-*iddāk*}), one of which ({ʾ}) gives explicit expression to the subject, and is thus equivalent to *awīlum*.

All the above sentences may be considered structurally equivalent, in that the various component segments, or blocks, may be substituted in the manner indicated. The fact that the length of the segments is progressively reduced in size is meaningful: the substitution of *ina libbi bītīšu* by the single word *annikīʾam* indicates that the phrase *ina libbi bītīšu* forms a compact block of intimately connected words. The same would not apply if we were to consider the sequence *bītīšu iddāk*: no single word can be substituted for such a segment, hence it cannot be considered a block of the same consistency as *ina libbi bītīšu*.

The listing of examples as given above is also indicative of another fact, namely that the degree of immediacy between the words varies depending on the point of view or level of analysis. Thus *awīlum* is closely related to *ša elīšu kišpī iddū* because the two blocks may ultimately be replaced by a single word, *šū*. In turn *ša elīšu kišpi iddū* consists of two blocks (*ša* and *elīšu kišpī iddū*) which are more closely related with each other than with *awīlum*. Conversely, the two words *iddū ina*, though in immediate sequential contact, are not closely related to each other: the formal test is that the sequence *iddū ina* cannot be replaced by any structurally equivalent word or word phrase. Thus the degrees of immediacy vary depending on the point of view from which the sentence is analyzed. The more words in a sentence, the more possibilities there are for the establishment of such correlations of immediacy. The members of each correlation are called "immediate constituents" and the same word may be an immediate constituent in many different correlations, or from a multiple number of points of view. In the examples given above, *iddāk* as an immediate constituent is in correlation with the following other immediate constituents:

in (1) with *ina libbi bītīšu*
in (1)-(6) with *awīlum*
in (2)-(4) with *annikīʾam*.

Note that the degree of physical proximity of the segments is not an index of their degree of immediacy. In sentence 1, for instance, the two words *iddū* and *ina* are in direct juxtaposition, but they are the farthest apart in terms of syntactical structure; they are, as it were, the most "mediated" constituents (as different from "im-mediate"), because they require the highest number of intervening steps for their syntactical relationship to be established. It must be stressed that immediate physical or sequential contact does not in any way imply an immediate structural relationship: string immediacy is not to be equated with structural immediacy. In other words, immediate constituents are by no means immediately juxtaposed segments. Such a "mediation" of relationships is aptly rendered by the graphic sym-

bolism of a tree, for which see the next paragraph: the syntactical distance, or "mediation," among constituents is measured in terms of the mumber of branches one must assume in order to arrive at a common node. Immediate constituents are then those elements which are subsumed under the same node. Branching, rather than segmental proximity, is the criterion for hierarchical arrangement. In the spoken language, a phonological expression of such degrees of immediacy was to be found in intonation (see below, 59.3); in our example, for instance, it may be assumed that the boundary between *iddū* and *ina* was marked by a shift in intonation and a longer pause.

57.3 Graphic notation – modern

The complexity of such interrelations and the multiplicity of immediate constituents within the same sentence may be rendered graphically in different manners. For instance, one may wish to render graphically the notion of blocks:

(A) [*awīlum*] [*ša*] [*elīšu kišpī iddū*] [*ina libbi bītīšu*] [*iddāk*]

Such block notation could be abbreviated in one of two ways, using either the horizontal or the vertical lines only:

(B) *awīlum* *ša* *elīšu kišpī iddū* *ina libbi bītīšu* *iddāk*

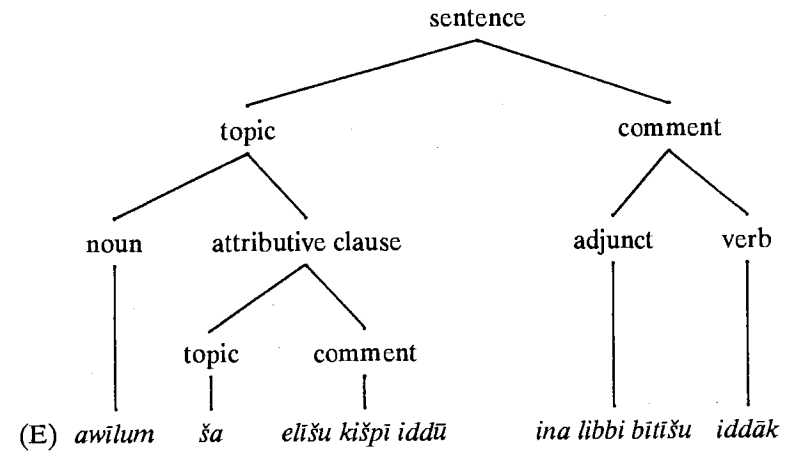
(C) *((awīlum) ((ša) (elīšu kišpī iddū)))* *((ina libbi bītīšu) (iddāk))*

However, of these three types of notation, the first two are not in use, while the latter (similar in nature to algebraic notation) is complicated and obscure even for relatively simple structures like the one represented by the sentence used here for exemplification.

Yet another type of notation is to indicate with a single vertical stroke the most basic division among syntatical units (i.e., the one running from top to bottom in the listing of examples given above), with two strokes the following division, and so on, until a representation is obtained which is the exact converse of type (C) above:

(D) *awīlum* || *ša* ||| *elīšu kišpī iddū* | *ina libbi bītīšu* || *iddāk*

But this symbolism, too, can easily become too complex to retain an effective notational purpose. The more transparent symbolism, and the one which is in fact common in modern linguistic practice, is a graphic diagram or tree, which joins immediate constituents by means of lines deriving from single points of origin (nodes) which are hierarchically distributed from top to bottom as shown next.



One distinct advantage of this notation, besides its graphic transparence, is that the nodes may be given names, thus greatly facilitating the structural comparison of sentences.

There is a significant correlation between the first three types of symbolic notation and the tree symbolism. The number of lines which separate the elements in the first set of symbols are proportional to the number of nodes which intervene among elements in the second. Under representation (A), for instance, *iddū* is separated from *ina* by five vertical lines because the two words are separated on a tree by a factor of five nodes (or tiers of nodes).

57.4 Graphic notation – ancient

It should be noted at this juncture that the ancient cuneiform system of writing is almost completely devoid of notations for syntactical features. Such elements as are found in modern writing systems, especially capitalization and punctuation, are missing in cuneiform. Essentially the only assistance which is provided is the identification of the beginning and end of whole texts and larger sections.

The beginning and end of an individual text is obviously marked by the physical boundaries of the document on which it is written. While this phenomenon is so

obvious as to appear meaningless, it must nevertheless be mentioned not only to point out the nature of the problem, but also because of the existence in the archaeological record of documents which are physically very small, and thus textually very short, sometimes limited in effect to a single sentence. Meager as it may be, this is the clearest evidence found in the writing system for sentence boundaries in Akkadian.

Similarly, larger sections of a text are sometimes marked off by blank spaces or horizontal lines, which coincide with major logical breaks within the text, and thus correspondingly with major syntactical boundaries within the discourse. It should be remembered that physical line boundaries on documents correspond to word boundaries, but not necessarily to syntactical boundaries, even in documents where the lines are long enough to contain a number of words.

Another graphic convention which may be mentioned, although it is not immediately pertinent to our present topic, is the existence of special cuneiform signs used for distinguishing certain categories of words – the so-called determinatives or semantic indicators. While these are not marked graphically as being different from the other cuneiform signs occurring in a document, and while they do not signal a syntactical feature as such, they serve a purpose comparable to that of capitalization in a modern writing system: a word is marked as being a noun, and a noun of a special category; to this extent, any special syntactical role which may be associated with such nouns may also be considered as indirectly marked.

Finally, I may refer to a cuneiform sign used to introduce special sections of the discourse. Known by the German term "Glossenkeil," and similar in shape to a colon, this sign is used seldom and in special categories of texts. For example, it is used in poetic texts to separate certain prosodic units, or in Akkadian texts written in a non-Akkadian milieu (such as Ugarit) to introduce non-Akkadian words drawn from one of the local dialects.

57.5 A note on substitution tests

At first view, the method followed here implies that the language under consideration be spoken at the moment of analysis. Ideally, in fact, the researcher would ask a living informant if sentences such as the ones given above do exist as complete sentences: such a possibility to test with an informant the authenticity of sentences generated by the researcher presupposes what is known as the "competence" of the speaker. How, then, can we we use such a model of syntactical analysis in the case of dead languages for which there are, by definition, no living informants? And specifically, how can we propose substitution tests, which imply an awareness of structural equivalence between two sentences?

The answer is that we can tap the competence of the ancient speakers through the channel of existing texts, provided that (a) the documentary base is statistically relevant, and (b) there is an adequate understanding of the structural types into which sentences fall. If we cannot elicit a sentence existing as such in the texts, we can at least elicit the underlying pattern and by extension we can extrapolate the authenticity of the generated sentence if it matches the pattern.

A statement of substitution, then, implies the assumption that the underlying patterns as we understand them are identical in both the original sentence and the one which is substituted for it. The logical procedure on which this assumption rests is similar to the one which lies behind the substitutions which we effect regularly in morphology: when we say that both *īmur* "he saw" and *iṣbat* "he seized" are the third person singular common of the preterite B we are implying that they belong to the same slot in the verbal paradigm, i.e., that they can be substituted for each other as examples for that particular paradigmatic slot. It is in just the same vein that we can say that sentences (1) and (6) above are interchangeable, i.e., can be substituted for each other in terms of a sentence structure paradigm.

57.6 A note on syntactical paradigms

While the procedure whereby we create grammatical paradigms tends to be regarded as arbitrary when it comes to syntax, it is quite defensible from a theoretical point of view, and flows naturally from what has just been said. Here, too, a justification of the procedure may be advanced with reference to what is commonly done in morphology. Whether or not a form such as *immarānim* "they (fem.) see towards" is in fact attested in the texts, we extrapolate it as authentic ("correct") because the underlying pattern is otherwise attested in such forms as *iṣabbatānim* "they (fem.) seize towards." In practice, we go through a two-stage process. First, through an imperfect competence which we have developed as researchers, we postulate intuitively the form *immarānim*. Second, through the various steps of morphological analysis, we verify our assumed competence by checking the individual categories: present of verb, etc.

This is much the same procedure that is employed in generating sentences: we extrapolate syntactical patterns and fill in the slots with suitable elements, i.e., with elements which take into account all necessary constraints on cooccurrence (for which see presently). It is on the basis of such procedure that we can generate syntactical paradigms – in the same way that all grammars generate morphological paradigms. Sequences of sentences like the one given above (57.2), are obviously not attested in the texts (just as not all forms given in morphological paradigms are attested). Yet each sentence is projected on the basis of a pattern which

can be identified and documented (just as the non-attested forms of morphological paradigms). The practical advantage of such a procedure, as with all paradigms, is that it highlights points of convergence and points of divergence, along predetermined axes. Paradigms are in fact useful not only descriptively at the level of the presentation of the data, but also heuristically at the level of analysis. In this respect they point out patterns of complementary distribution and call for the verification of possible structures which are suggested by a given paradigmatic trend. Cases in point are, for instance, the interpretation of the infinitive after construct state or determinative pronoun (see below, 78.2), or the correlation of different modes of emphasis as belonging to a specific pattern of adjunctivation (see below, 66.5-6).

57.7 Major and minor constituents

In sentence (6) given in the paradigm above (57.2), only two constituents are left, each one being an immediate constituent:

awīlum iddāk.

Since this sentence cannot be further reduced (except in the special circumstance of deletion, for which see below (87-89), these constituents are also called nuclear or major constituents.

Minor constituents are then, conversely, the elements in a sentence which can be eliminated through a process of substitution as the one outlined above. Minor constituents are either attributes, as the clause *ša elīšu kišpī iddū* in sentence (1), or (non-essential) adjuncts, as the phrase *ina libbi bītīšu*, also in (1), or the adverb *annikīʾam* (2).

Major constituents in Akkadian fall under three types, which are called (in terms of government analysis, for which see below, 58.2) subject, predicate and complement.

Note the following sentences:

(7)

awīlum the man	*alpam* an ox	*ana diʾāšim* for threshing	*īgur* hired

(8)

awīlum the man	*alpam* an ox	*īgur* hired

(9)

awīlum the man	*ø* *ø*	*īgur* hired

The major constituents of (7) are *awīlum, alpam* and *īgur.* The reason why *ana diʾāšim* is not a major constituent is because it can be eliminated as shown in (8). On the other hand, elimination of *alpam* in (9), can only occur through a process of deletion (for which see below, 87-89): hence the notation *ø* in (9), which identifies the deletion as a "meaningful zero," whereas the lack of *ana diʾāšim* in 9 is a simple absence for which no notation is needed.

In (7) or (8), the major constituent *alpam* will be found only with predicates of a given semantic type. In other words, a predicate like *īgur* requires a correlative constituent like *alpam* (this correlative constituent is called "complement," and the type of predicate which requires a complement is called "transitive"); but other types of predicate exclude such correlation, e.g.,

(10)

awīlum the man	*illikam* came

Whether or not a predicate requires a complement is not predictable syntactically, but depends rather on the nature of the verb – in other words, it must be given lexically as a feature for each given verb (see below, 70). Transitive verbs are also called one-place verbs because they require one complement (for the possible existence of two-place verbs, see below, 65.6). It appears that there is a minimum of two, and a maximum of three major constituents (or a maximum of four if one accepts the possibility of two-place verbs with two complements). In every case, subject and predicate must appear as major constituents (if only two major constituents are present, for instance, they cannot be predicate and complement at the exclusion of the subject), hence they may be called necessary or context-free major constituents. Complements, on the other hand, are required or not depending on the semantic nature of the predicate, hence they can be called context-bound major constituents.

57.8 Sentence, clause, phrase

The notion of immediate constituents identifies the linguistic units which are subject to syntactical analysis. Thus syntax will not study a word sequence like *bītīšu iddāk*: these words may in fact cooccur in just this order in the language, as in sentence (1) above, but they are not immediate constituents, and no syntactical relationship may be established between them. The empirical test of substitution determines the units and types of relationships with which syntax is concerned. Thus the two words *bītīšu iddāk* are not considered immediate constituents not only because these two particular words never cooccur as major constituents, but also because no

other two words which are structurally similar may cooccur as major constituents in any other context, such as *ekallīšu iddāk* or *bītīšu immaḫḫaṣ* (though these words may occur in just such a sequence in a broader context).

Depending on the nature of the immediate constituents, different types of syntactical units may be distinguished. Whenever a sequence includes all possible major constituents, the resulting unit is either a clause if the unit is embedded in another syntactical unit, or a sentence if it is not so embedded. In practice there are only subordinate and coordinate clauses, of which the first ones are here treated in 65.4 (objective clauses), 81 (attributive clauses), 66.3 (adjunct clauses), and the latter in 84-86 (compound sentences).

A phrase is a combination of words which may be considered as immediate (though not major) constituents.

Thus in sentence (1) above we can distinguish the following:

phrase	*ina libbi bītīšu*
clause	*ša elīšu kišpī iddū*
sentence	*awīlum ša elīšu kišpī iddū ina libbi bītīšu iddāk.*

57.9 A note on discourse analysis

Discourse analysis, or rhesiology,[1] is an important aspect of linguistic analysis which is closely linked with syntax. Just as syntax deals with the structure of the single sentence, so discourse analysis deals with the structure of the discourse understood as the interconnection of sentences. In many respects, discourse analysis is independent of syntax and rests on its own discrete criteria (thus, for instance, as it pertains to the study of metrics). There are, on the other hand, certain syntactical phenomena which can best be understood in the light of discourse analysis. While I will not be able to deal fully in this grammar with such "rhesiological" phenomena, it may be useful to make special mention here of two of them which will be referred to in my discussion below.

The first, deletion, is treated extensively in the last section of the syntax: the omission of one or more major constituents is possible because they can easily be supplied from the immediate context, which may or may not be included within the immediate boundaries of the sentence.

The second, cross-referencing, is particularly productive in Akkadian and seems to have developed a significant stylistic relevance. Here, too, the phenomenon may

[1] I have introduced the term "rhesiology" (Buccellati 1990 "On poetry") as the etymological equivalent of "discourse analysis." The term is particularly useful when used as an adjective, since "discourse analytical" is awkward. – There are of course many other important elements of linguistic analysis which are omitted in this grammar, such as a discussion of style or of semantics.

or may not straddle sentence boundaries. The general notion of referentiality is important in itself for an understanding of certain major syntactical items, such as determination (see below, 63.6) and emphasis (see below, 66.8-9). As for other specific phenomena of the same type which have already been discussed at various junctures above, see especially the use of the resumptive pronouns (29.3; 76.2), the anaphoric pronoun (31.7), the ventive (29.3), the separative (16.5).

Chapter 58
Distributional Classes

58.1 Limitations on correlation of constituents

A comparison of different sentences with either identical or different constituent structure will soon show that there are a number of limitations with respect to the environments in which words and phrases may occur. Compare for example the following sentences:

(1) *awīlum* *alpam* *ana diʾāšim īgur*
(2) *awīlum* *narkabtam* *ana rakābim īgur*
(3) *awīlum* *ina bītīšu imūt*

(1) "the man hired an ox for threshing"
(2) "the man hired a chariot for riding"
(3) "the man died in his house."

The word *narkabtam* in (2) can be replaced by *alpam* but not by any such word or phrase as *awīlum*, *ina libbi bītīšu* or *imūt*. Conversely, the word *awīlum* cannot be replaced, in any of the three sentences, by any such word or phrase as *alpam*, *ana diʾāšim* or *īgur*.

The more sentences are compared, the more it will become clear that, in sentences like (1) - (3), relatively few words or phrases may occur in place of *awīlum*. Lexically, for instance, all words occurring in this position will normally have the feature "human"; and inflectionally, a great number will end in *-um* (more specifically it will appear that *-um* occurs regularly unless the word is an invariable, as with personal names). It will also appear that such limitations are dependent on the cooccurrence of certain other words in the same sentence. For instance it will appear that *awīlum* does not occur in sentences (1) or (2) if the final word of the sentence is *īgurū* instead of *īgur*. In addition one will find that while the other constituents may occur in alternate positions, the words *īgur* and *imūt* occur almost exclusively at the end of the sentence; pushing further the comparison with other sentences, one will notice that final position in a sentence may be occupied by a

rather limited class of words, generally excluding, for instance, a word such as *awīlum*.

It is clear, then, that there are definite limitations on the possibility of cooccurrence of words in the same sentence, and that these limitations depend on the nature of the correlations. Much of the following syntactical description of Akkadian will essentially be *a comprehensive statement detailing these limitations*. In every case, the statement will be in distributional terms, i.e., it will be based on the contrast between sentences equivalent in structure.

The following may be stated by way of a terminological clarification. The term "cooccurrence" refers to the simple presence of two elements within the boundaries of the same sentence. The term "correlation," on the other hand, implies a reference to the limiting factors which condition such a cooccurrence. Thus we may observe in sentence (1) above that the two words *iddū* and *ina* "cooccur" but without any "correlation" among them, whereas *ina libbi* "cooccur" with a meaningful correlation.

58.2 The operative factors

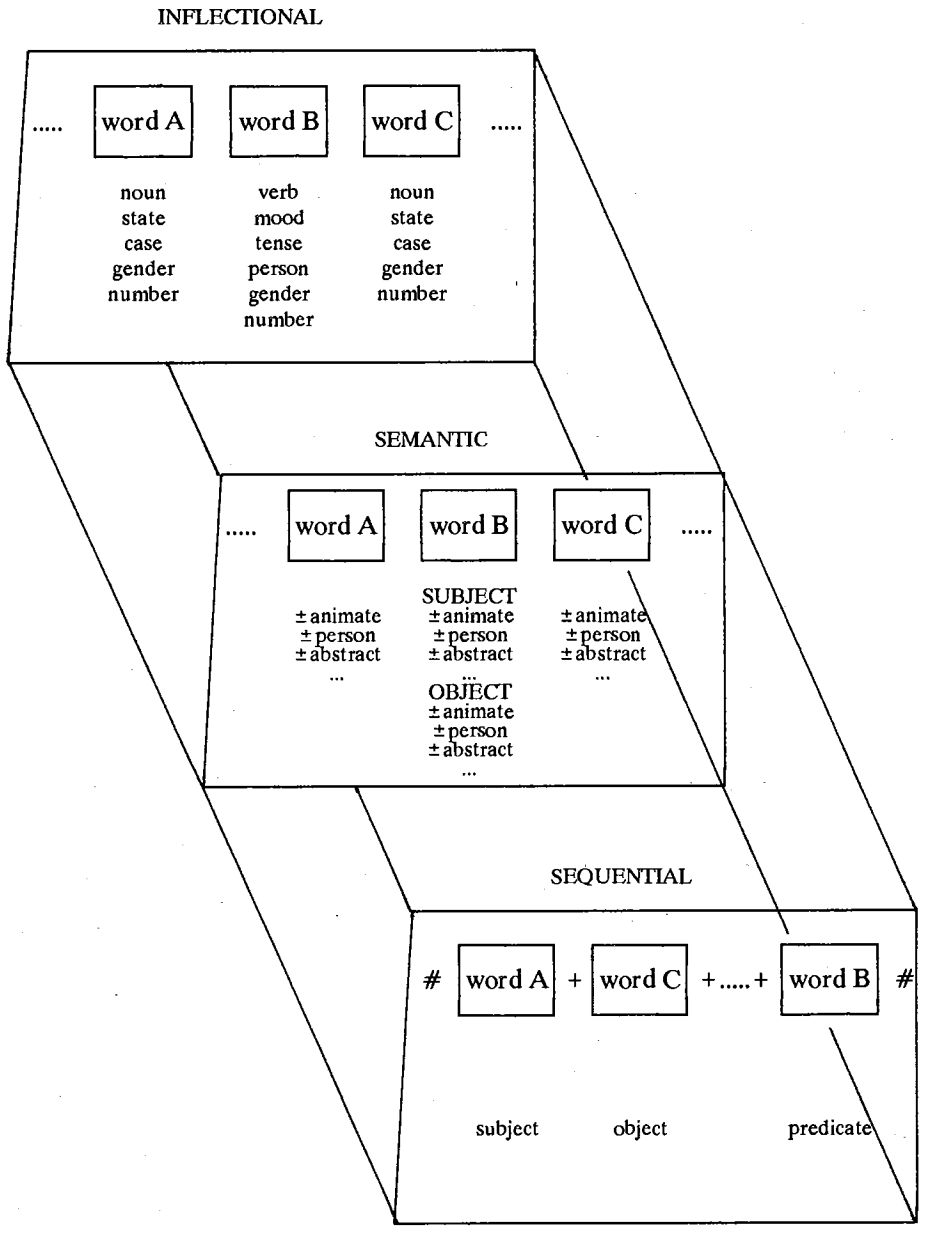
The factors which are operative in imposing constraints on the cooccurrence of elements may be grouped under three categories: inflectional, semantic and sequential.

Inflectional correlations refer to categories under morphology, i.e., internal and external inflection. Let us assume a case where a nominal pattern cooccurs with a verbal pattern: if the nominal pattern is inflected externally for the nominative singular, the verbal pattern will be inflected externally for the third person singular. E.g., given the noun *awīlum*, a correlated verb could only be of the type *imūt*, not *imūtū* or *tamūtī*.

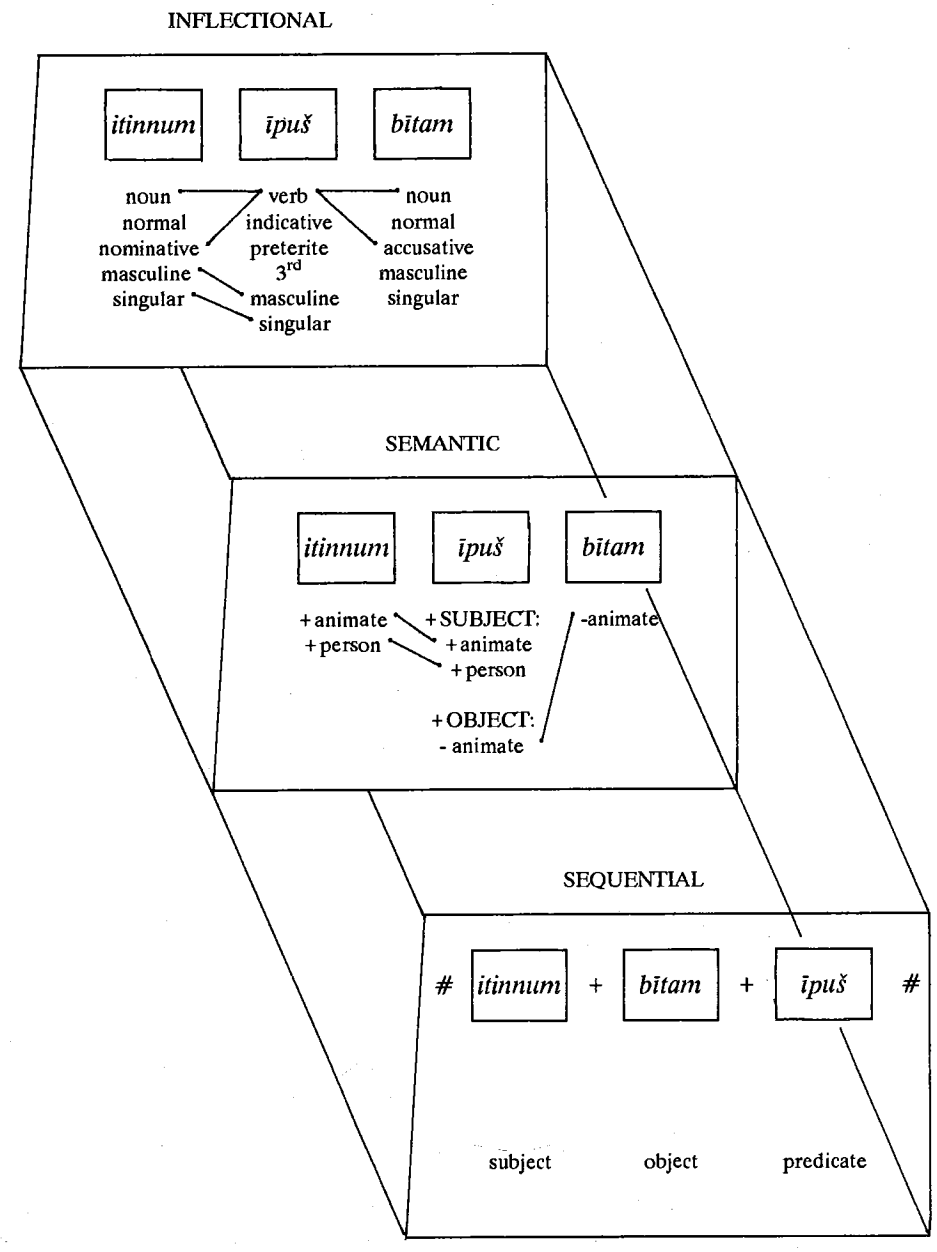
Semantic correlations refer to categories identified as sets of lexical features (which will be described below). Thus, given the feature "inanimate" for *abnum* "stone," and the feature "animate" for *imūt* "he died," it will be impossible to find a correlation of the words *abnum imūt*, since a concord of lexical features is required between a noun in the nominative and a verb agreeing with it (i.e., both must be marked for either animate or inanimate).

Sequential correlations refer to the reciprocal position of individual elements within a sentence. Given a correlation between two words which can be identified morphologically as noun and verb, a sequential rule may be stated according to which the verb will appear in last position.

Clearly, these three factors must be viewed concomitantly in terms of a full syntactic description: a sentence cannot be generated without reference to all



OVERLAY OF OPERATIVE FACTORS:
POTENTIAL CATEGORIES



OVERLAY OF OPERATIVE FACTORS:
ACTUAL EXAMPLES

three factors together. *A syntactical construct is then a three-way match of the three sub-types of correlation – inflectional, semantic and sequential.* The possible range of correlations is represented three-dimensionally in the diagram on p. 336.

The selection process triggered by the interaction of these mechanisms is presented schematically in the diagram on p. 337. Given a set of three words such as *epēš-* "to build," *itinn-* "builder" and *bīt-* "house," they may be correlated syntactically with the following restrictions:

(1) Given the semantic restrictions inherent in a word like *epēš-* (i.e., the requirement of an animate/personal subject and an inanimate/impersonal object), a word like *itinn-* may correlate with *epēš-* only as its subject, and a word like *bīt-* may correlate with *epēš-* only as its object.
(2) Given the above, certain inflectional restrictions will be triggered, according to which the subject must be in the nominative, and the object in the accusative. Further, the nominative must correlate with the verb in number and gender.
(3) Sequentially, the verb must occur at the end, and the subject at the beginning of the string.

Note on the other hand that certain restrictions cannot be mapped syntactically, for example the number or gender of the object are unpredictable in terms of syntax, i.e., no correlation can be established among any of the constituents in the configuration envisaged by this particular example.

Two of the correlation classes described (inflectional and sequential) have already been treated in other works on Akkadian syntax, although in a rather implicit and vague manner. The terms currently used are *government* (for inflectional correlations) and *word order* (for sequential correlations). The third type of correlation (semantic) has not been applied to Akkadian except in the most indirect way (for instance, the dictionaries will describe a few very specific limitations for certain individual words); it is generally referred to in general linguistics by the term *lexical features*.

The term "government" requires some elucidation. It conveys the notion that one term in a given relationship is primary so that it conditions, or "governs," the other term. Such primacy is in fact verifiable only in term of notional, and not formal, categories. Given a certain topic, about which we want to make a comment, it will appear that the topic is primary, and the comment is conditioned by it. In this sense, the topic "governs" the comment: if the topic is one man, the comment will be about one man, if three, then about three. Formally, however, we cannot single out the topic for a privileged primacy status: the distributional classes we establish can only be described in terms of a bidirectional relationship between its elements. This means that the "direction" of the disagreement between, say, subject and

predicate goes as much from subject to predicate as from predicate to subject. Formally, therefore, we can only state conditions of agreement or disagreement between elements, without any rule stating a directional thrust within the relationship. Note further that the (notional) category of government is normally understood to apply narrowly to the relationship among inflectional classes, although in principle it could be extended to include semantic and sequential relationships as well (in such case, "government" would become in practice synonymous with "syntax").

The term "agreement," on the other hand, is formally valid in that it describes a bidirectional correlation. It is, however, limited in that it describes only a correlation of identity (e.g., with regard to gender and number in the inflection of subject and verb), but not a correlation of diversity (e.g., with regard to state in the inflection of subject and nominal predicate: *awīlum damiq* "the man is good").

Chapter 59
Surface and Deep Structure

59.1 The notions of surface and deep structure

The correlations noted in the preceding chapter deal with the form of words and the constraints placed on the use of such forms. To some extent, then, one may say that the structure of the sentence is dependent on the formal characteristics of words and their reciprocal combinations. But an analysis conducted in such terms is not sufficient to elucidate, for example, the contrast between the following two phrases, which are identical in form and yet markedly different in structure

(1) *maḫṣam igarim*
(2) *damqam īnim*
(1) "hurt through (the collapse of) a wall" (for this form see above, 23.5)
(2) "good with respect to eyes."

The notions of formal correlation (government, concord, etc.) are even more inadequate to explain the existence of two radically different meanings for one and the same combination of words, e.g., a phrase with ambiguous meaning such as:

(3) *ṣibissu {ṣibit-šu}*
(3) "his taking hold of" or "his possession."

The ambiguity inherent in this type of noun phrase is readily recognized and has been traditionally explained by recourse to two equally possible sentences, such as:

(3a) *(murṣu) iṣbassu*
(3b) *šū (eqlam) iṣbat*
(3a) "a disease took hold of him"
(3b) "he took hold of a field."

A choice between the two alternatives is possible only with reference to a wider context. If *ṣibissu {ṣibit-šu}* is the equivalent of (3a), then the suffix *-šu* is considered an "objective" genitive, because it corresponds to the object of the fuller sentence. If on the other hand *ṣibissu* is the equivalent of (3b), then the suffix *-šu* is

considered a "subjective" genitive, because it corresponds to the subject of the fuller sentence.

Such a traditional solution to the problem is in fact transformational in nature, and general linguistic theory has expanded on, and formalized, this intuition of traditional grammar. In this syntax I will try to develop an approach to Akkadian which makes ample usage of basic transformational concepts, even though the standard formalization of transformational grammar has not been adopted.

A recognition basic to transformational theory (and already utilized, though implicitly, in the discourse so far) is the distinction between two levels of syntax, called respectively surface and deep structure. Surface structure is determined by formal correlations of the type mentioned in the preceding chapter – government, concord, word order and feature analysis. Deep structure, on the other hand, refers to relationships underlying such a surface formal arrangement of the words. Thus the distinction between objective and subjective genitive is attendant upon the fact that under the surface identity of form there are two markedly different, underlying structures. If this recognition of a set of relationships deeper than the one revealed on the surface is carried through in a systematic fashion, very illuminating connections emerge, some of which were already intuitively present in traditional grammars (see, e.g., the notion of "pro-noun," above, 32), while others either are quite new, or else place in a better perspective previously held conceptions. It will especially be possible to correlate in a systematic and clear manner phenomena which are structurally related, though formally distinct, and to differentiate on the other hand phenomena which are structurally distinct, though formally related.

59.2 Correlations between deep and surface structure

The two types of structure are obviously intimately interrelated, and specific mechanisms must be invoked to express such interrelation, and to allow for the transition from one level to the other. Such mechanisms are provided by transformational rules or "transformations." Thus the sentence

(4) *qištum innadin*
"the gift was given"

may be explained in terms of a passive transformational rule. Starting from a base structure expressed by a sentence such as

(5) *qištam iddin*
"he gave a gift,"

one may formulate the rule that the sentence object *qištam* in (5) corresponds to the phrase subject *qištum* in (4), with a change in stem for the predicate from the root *Ndin*. The reason for calling this a rule is that it will apply all the time and in the same manner, given structurally identical sentences. That transformations of this sort may be vastly different in Akkadian from other languages (e.g., English) is obvious, and the passive transformation is an excellent case in point. For in Akkadian the agent may not be expressed in the passive transformation.[1]

Such being the circumstances, what criteria are available to establish the validity of transformational correlations? If no living informant can testify for the deep structure correlation between *innadin* and *iddin*, how can we in fact postulate such identity? An answer to the problem is made difficult by the fact that contemporary linguistic theory has been concerned primarily with living languages, where identity could easily be determined by means of tests with living informants. For a dead language such as Akkadian one can only use, as already mentioned above in 58, the test of contextual and distributional analysis. Thus one would never find in the corpus a case where the empty slot in

qištum – Ištar

is filled by a verb in the N stem such as *innadin*, confirming the impossibility of the use of the agent, whereas one would find innumerable correlations which are structurally identical to that between (4) and (5). Exact correlations between transforms within identical context are difficult to come by in our corpora,[2] but some may be pointed out, especially for the more common transformations, such as deletion, for which see below.

In any case, it must be stressed that transformations are conceptual schemes which appear to be particularly suitable for an explanation of syntactical structure. They should not be understood in terms of a temporal progression as though the speaker were first to formulate sentences in terms of deep structure, and only then could translate them into the actuality of surface structure (this even though transformations can be, and are in fact used, in a generative sense). The formulation of deep structure correlations is meant to provide a viable model for analysis, and success in their employment may be gauged in terms of their efficacy. And indeed application of transformational rules allows for a more efficient, i.e., for a clearer and more economic analysis of many types of Akkadian sentences than it would be possible with procedures of constituent analysis as outlined in the preceding chapter developed. It may be said that transformational analysis is a way to reduce all

[1] For deceptive examples of agents in noun phrases of the type *nadin Ištar* (when understood as "given by Ishtar") or *maḫṣam igarim* (when understood as "struck by the wall") see below, 70.7; 74.1; 77.1.

[2] For an interesting example, see the two parallel expressions *nādinānum* and *nādin iddinušum*, above, 21.3, n. 1.

syntactical elements to the level of major constituents. The argumentation for this conclusion need not be introduced here; the actual discussion of transformations in part 2 of this Syntax will hopefully show the validity of this approach, at least as one workable approach among others.

The notion of transformations as conceptual schemes is meant to emphasize specific elements of the syntactical structure. The abstractness of deep structure is emphasized by standards of transcriptions which are common in general linguistics. These transcriptions, formalized to the utmost, have the distinct (and intended) advantage of emphasizing structure, thereby making comparisons considerably more transparent. Normally these transcriptions do not presuppose those rules of phonology and morphology (called "morphophonemic rules," in a somewhat different sense from morphophonemic alternation as introduced above) which allow for the transition from deep to surface structure. Hence the sentence in question might be formalized as

(5a) *qištam Ndin*

where the symbol *Ndin* would indicate any tense of the root *Ndin*. In turn, if the preterite is meant as a specific tense this might be represented as

(5b) *qištam Ndin* + preterite,

whereupon attendant morphophonemic rules would yield the actual sentence

(5c) *qištam iddin*.

The formalized symbolism of type (5a) or (5b) is omitted in this syntax, in favor of type (5c) which has a more concrete appearance, even though it is transformationally less adequate.

59.3 Intonation

One element which is missing from the available textual notation, but which was certainly fully operative at the normal level of linguistic expression, is intonation. The notations used for such purpose in modern writing systems (especially punctuation and capitalization, but also special markers such as accents, underscoring, bold face, change of type face, etc.) are altogether missing from cuneiform. Intonation would presumably have provided explicit markers for the level of surface structure, which would in turn have been a clue to deep structure. Thus if we can assume a shift of intonation and an extra long pause between the words *iddū* and *ina* in sentence 1 from paragraph 57.2, this would signal a longer sequence of nodes and branches between the elements separated by the shift and pause.

We have no way of reconstructing Akkadian intonation. If we presume to understand Akkadian syntactic structures in spite of such ignorance, it is because we assume that intonation was an auxiliary and redundant marking system.

Chapter 60

Excursus on Historical Development

There are no studies on the historical development of Akkadian syntax, and the brief remarks which follow can only be considered as preliminary in nature and indicative of general trends at best.

It is surprising to note how, from a cursory review of the data, it would appear as though there is relatively little development over the entire period from Old Akkadian to Neo-Babylonian. It seems clear, for instance, that some of the basic and most distinctive features of Akkadian syntax (such as the use of the permansive, the nature of determination and the corresponding lack of a definite article, the function of irreversible coordination with *-ma*) remain very productive all the way from beginning to end. Such a degree of continuity is especially remarkable if one considers two factors which one would expect to have caused a greater degree of change. The first is the fact that in morphology certain changes took place which would normally have triggered at least some degree of syntactical realignment: this is especially true of the virtual loss of case endings by the end of the second millennium. The second factor is the close interaction between Akkadian speaking and Aramaic speaking individuals from the end of the second millennium on, to the point that some degree of bilinguism can certainly be assumed by the early first millennium: and yet, hardly any Aramaic influence can be detected in Akkadian syntax, a phenomenon which may perhaps indicate that Akkadian became a dead language at a relatively early stage in the development of the language.

Part of the problem may of course depend on the fact that many of the texts which were written down in the later periods were actually copied from earlier originals, especially literary and canonical religious texts: while graphemic and phonemic details tend to be adjusted to what had become prevalent in later times, syntactical details were more likely to remain unchanged in this process.

I will note here two syntactical constructions which seem to have changed over time, possibly as a result of the loss of case endings. The first is the use of an attributive clause governed by a construct state with deletion of the relative pronoun (see below, 89.4). Such constructions seem to be rare in later perdiods, though examples are found especially in poetry, see, e.g., two such clauses found side by side

in a wisdom text dated to the end of the second millennium, each one with a different syntactical role given to the construent:

gēʾiš qerbētim irḫiṣu "the goring (wild animal) which overruns the fields"
gillat nēšu īpušu "the crime which the lion committed."[1]

The second type of construction for which there may be fewer or no parallels in later times is a noun phrase with a verb in the infinitive correlated to a subject in the nominative and the object in the accusative, such as

dannum enšam ana lā ḫabālim
"in order for the mighty not to oppress the weak."[2]

Other differences may better be attributed to style than to syntax. Thus, for example, the complex nesting of subordinate and coordinate clauses found in some Old Babylonian texts of political literature[3] does not seem to have any real counterpart in the Assyrian Annals (written in Standard Babylonian).

[1] *BWL* p. 74, 60.62. In the first example the noun in the construct state is the subject of the relative clause, while in the second it is the object. – Note how in Biblical Hebrew such constructions are common only in poetry, B. K. WALTKE and M. O'CONNOR, *Biblical Hebrew Syntax*, Winona Lake 1990, 19.6.

[2] *CH* rev. xlvii 59-60.

[3] As I argued briefly in BUCCELLATI 1990 "On Poetry" pp. 118f, the entire Code of Hammurapi can be viewed as a sequence of five overlong sentences, and a text like the Sippar inscription of Hammurapi consists of a single sentence, *ibid.* pp.116f.

PART I
CONSTITUENT STRUCTURE

Chapter 61
Introductory

The first part of the syntax deals with the relationships among constituents (both major and minor) in terms of surface structure. My goal here is to articulate in detail all the constraints which limit the correlation range among classes of words. The resulting distributional classes are in effect the categories which are germane to syntax.

The data are sorted according to the operative factors which have been identified above in chapter 58: inflectional, sequential, and semantic correlations.

From an observation of the data, the resulting distributional classes of correlation may be represented diagrammatically as in the chart on the following page.

If, and whenever, conditions 1 through 8 are observed, there results a "correct" Akkadian syntactical construct of the type "sentence." The labels given to the resulting cluster of traits ("subject," "predicate") refer both to the clusters themselves and to their mutual relationship. Thus the "subject" is defined formally as a word characterized by having

1. nominal internal inflection correlated to another word that has certain special elements of verbal internal inflection
2. case external inflection for the nominative
3. gender external inflection
   etc.

	word A	nature of relation	word B
1.inflection:internal	nominal pattern	ø	verbal pattern
2. " external:case	nominative	–	–
3. " " mood/tense	–	–	indic.,preterite
4. " " gender	masculine	=	masculine
5. " " number	singular	=	singular
6. " " person	–	–	third
7. sequence	1	– >	2
8. semantic	animate	=	animate
	subject		predicate
	sentence		

Symbols: = agreement – > linear sequence
ø disagreement – not applicable

This may seem an unnecessarily elaborate way of explaining what is known already: a subject is a subject. The only reason for the procedure is the desire for formal analysis. To simply say that we already know what a subject is, so much so that we have a term for it which everybody understands already, is a tautonymy which begs the question. Worse yet, it ascribes to Akkadian categories which are untested in terms of Akkadian. The formal analysis exemplified above, on the other hand, details sets of formal conditions which are verified as occurring repetitively in the language, so as to produce a pattern, or a distributional class, which will retain its identity regardless of what label we affix to it.

The next step in distributional analysis is to determine the range of such constructs: how many such possibilities (i.e., distributional classes) are attested in the language? And how many permutations and internal differentiations?

I will not in fact produce tabular renderings of syntactical constructs in the way I have done here for exemplification purposes, and sketchily at that. Such formalization is indispensable for purposes other than those adopted in this grammar, for instance for digital coding suited for electronic analysis. Here I will proceed in a style which is more normally discursive, but where the substance of the presentation is in fact based on an argumentation structured along the lines shown.

SECTION A
INFLECTIONAL CORRELATIONS: GOVERNMENT

Chapter 62
Introductory

The major constituents of a sentence, for which see above (57.7), are subject, predicate and complement. These constituents are all characterized in their interrelationship by disagreement in certain respects and agreement or concord in others. The main disagreement is that the subject never agrees in case with the complement (a relationship of case is not applicable to the predicate). Also, the subject does not agree with the predicate in state, when the predicate is a simple noun.

While agreement is necessary in certain other respects between subject and predicate (to be discussed below in chapters 63-64), none is necessary between predicate and complement, nor between subject and complement.

In one case only is government dependent upon word order, namely where the complement of an infinitive occurs between a preposition and the infinitive, in which case the complement is in the genitive rather than the accusative.

Except for the case just mentioned, the first complement (or direct object) occurs always in the accusative, and can never be substituted by a prepositional phrase. Similary the subject occurs always in the nominative (unless indeclinable), and cannot be substituted by a prepositional phrase.

Adjuncts, on the other hand, are characterized by the fact that they may occur as prepositional phrases, as noun phrases, as clauses, or in some other non-lexical formation.

Chapter 63

Subject and Predicate: Discord

63.1 Subject

The subject may be a noun (either a substantive or a substantivized adjective), a pronoun or an invariable. If a noun, the subject occurs regularly in the nominative of the normal or construct state. If a pronoun, the subject occurs regularly as a subject type, whether independent or affixed. The only invariables which occur regularly as subject are personal and divine names: to the extent to which these names are indeed invariable, they are of course unmarked; when case inflection is possible, they also occur in the nominative. Examples of various types of subjects follow.

inflectional characteristics of subject	subject	predicate	subj.	gloss
noun: normal,nominative	*šarrum*	*illik*		the king went
construct,nominative	*šar (mātim)*	*illik*		the k. of the land went
pers.name with inflection	*Gimillum*	*illik*		Gimillum went
invar.: personal name	*Ḫammurapi*	*illik*		Hammurapi went
divine name	*Ištar*	*rabāt*		Ishtar is great
pronoun: indep. pers. subj.	*atta*	*ina bītim*		you are in the house
prefix pers. subj.	*t-*	*-allik*		you went
suffix pers. subj.		*šarr-*	*-āta*	you are a king
interrogative	*mannum*	*illik?*		who went?

63.2 Predicate

Any finite verbal form may occur as predicate, without restrictions. (For restrictions on correlations with the subject see below).

Similarly, any noun may function as a predicate, as follows:

(1) the predicative state is used for an indeterminate predicate;
(2) the normal state of a simple noun is used exceptionally for a determinate predicate (note that in this and the following two cases there is no discord between subject and predicate);
(3) the normal state followed by the enclitic *-ma* is used regularly for a determinate predicate;
(3) the normal state of a noun followed by an attribute or attributive clause is used for either a determinate or an indeterminate predicate;
(4) the construct state of a noun followed by a construent is also used for either a determinate or an indeterminate predicate.

Examples for the various types of the nominal predicate follow:

inflectional characteristics of nominal pred.	subject	predicate	subj.	gloss
predicative state	*Ḫamm.*	*šar*		Hamm. is king
" "		*šarr-*	*āku*	I am king
(normal state	*Ḫamm.*	*šarrum*		Hamm. is the king)
normal st. + *ma*	*Ḫamm.*	*šarrum-ma*		Hamm. is the king
normal st. + attrib.	*Ḫamm.*	*šarrum dannum*		Hamm. is a/the mighty king
nrml st. + attr.cl.	*Ḫamm.*	*šarrum ša ina šarrī šūturu*		Hamm. is a/the king who stands out among kings
constr. st. + cnstrnt	*Ḫamm.*	*šar mātim*		H. is a/the k. of the land

Pronouns occur rarely as predicates, and in every case they are, of course, independent pronouns, not suffixes, see for example

annū šū "this is him"
šiptu ul yuttun "the incantation is not mine."[1]

In other cases the pronoun may be interpreted better as a subject than as a predicate, e.g.,

bēlī atta "you are my lord," rather than "my lord, it's you."

With inversion of the predicate, see

ša dūāki anāku, lā ša balluṭi anāku
"I am one to be killed, not to be kept alive."[2]

[1] Biggs, *Šà-zi-ga*, pp. 38-39, with discussion.

[2] *ABL* 620:4 (Neo-Assyrian!).

Of the invariables, personal names and divine names could conceivably occur as predicates in such a sentence as

šū Ḫammurapi "he is Hammurapi,"

but I do not know of such instances. Adverbs, on the other hand, are attested, e.g.,

šarru ēkā "where is the king?"[3]
inanna anumma dīšum "spring is now here"[4].

Relatively frequent is the use of prepositional phrases to express the predicate, e.g.,

ana ālim šulmum "peace is to the city = the city is at peace"
ina šēp šarrim anāku
"I am in the foot of the king = I am on the king's business"[5]
ālānu šunū ša Qabrā "those cities are of Qabra."[6]

63.3 Nominal sentence and permansive

Traditionally, it is assumed that the normal pattern of the Akkadian nominal sentence is of the type which I have identified as exceptional in the paradigm given in the preceding paragraph, namely a sentence of the type:

šū šarrum "he is king."

This view is expressed for instance by LANDSBERGER.[7] In point of fact, this sentence pattern, which seems to be otherwise common in Semitic (but see presently), is the exception in Akkadian. The normal state is regular only when the predicate includes *-ma* or an attribute, as stated in the preceding paragraph (e.g., *šū šarrum-ma*, *šū šarrum dannum*). Only very rarely may the single nominal predicate occur in the normal state without *-ma* (once also in the absolute state, see the first example below); in such cases the special construction used expresses an intermediate degree of determination (for which see presently, 63.6):

[3] *CT* 22 248:21 (NB).

[4] G. DOSSIN, "Les archives économiques du Palais de Mari," *Syria* 20 (1939) 124, with inversion of the predicate.

[5] *ABL* 455:7 = *CAD B* 249 b, s.v. *bīrū* (Neo-Assyrian!).

[6] *ARM* 1 121:7-8.

[7] LANDSBERGER 1926 "Prinzipienfragen" p. 971, n.1: "Normalerweise heisst es (im Akkadischen) wie in den anderen (Semitischen) Sprachen: *wardum anāku*."

anāku lū amat[8] (instead of *amtāku*) "I am indeed the slave girl"
ul martu atti[9] (instead of *marātī*) "you are not the daughter"
šarru atta[10] (instead of *šarrāta*) "you are the king"
ṭābūtu šunū[11] (instead of *ṭābū*, MB) "they have been allies."

The wrong assumption about the type *šū šarrum* being the normal Akkadian equivalent for "he is king" has given rise to the generally accepted interpretation of the permansive as a tense of the verb, an interpretation which is not followed here (see already above, 25.3). The reasoning behind the traditional interpretation goes as follows. Since the standard nominal sentence is assumed to be of the pattern *šū šarrum* (which is assumed to be common in Semitic), and since there is a well attested form of the type *šar* (which happens to be similar in form to a common Semitic verbal form, the perfect), the conclusion is drawn that Akkadian too, like other Semitic languages, has two distinct forms, the nominal sentence of the (alleged) type *šū šarrum* and the (alleged) verbal "tense" of the type *šar*, called permansive.

To such standard interpretation the following may be countered. Given the exceptional nature of sentences of the type *šū šarrum*, it appears that sentences of the type *šū šar* and *šū šarrum dannum* are in complementary distribution, and their difference is purely one of surface structure. In terms of deep structure, the two types are identical and should be so treated. In other words, sentences of the type *šū šar* and *šū šarrum dannum* are structurally identical (in terms of sentence structure) and cannot be separated, so that, if a verb-like paradigm is set up for *šū šar*, the same would have to be done for *šū šarrum dannum*, as follows:

permansive or simple nominal sentence	complex nominal sentence
šarr-āku	*anāku šarrum dannum*
	anāku šarratum dannatum
šarr-āta	*atta šarrum dannum*
šarr-āti	*atti šarratum dannatum*
šar	*šū šarrum dannum*
šarrat	*šī šarratum dannatum*
etc.	etc.

[8] *MAD* 3 51 (OAkk); the predicate *amat* is in the absolute state.

[9] *MDP* 23, 285:18.

[10] *EA* 4:8 (MB: Kadashman-Harbe). This sentence might also be understood with the pronoun as a predicate: "the king is you"; note that it is followed by the sentence *kā libbīka teppuš* "you can do as you like."

[11] *EA* 10:10; see also line 11 (MB: Burnaburiash). The adjective *ṭābūtu* here does not mean "good," but "allied" (see G. BUCCELLATI, "2 Sam. 2, 5-7," *Bibbia e Oriente* 4 (1962) p. 233, with examples from Shemshara), so that the sentence has a different meaning from *ṭābū* "they are good."

Once this fact is clearly understood, the term "permansive" may of course be used as a label for the first paradigm, i.e., for the nominal sentence consisting of the predicative state of the noun and the pronominal suffix in bound form. (The term "constructive" is used in a similar way, see above, 23.1.) But it should be clear that the label is used only for convenience, and that in fact *šū šarrum dannum* or *šū ina bītim* are no less "permansive" than *šū šar*.

By way of a brief comparative excursus, one may note here that the similarity between Akkadian and other Semitic languages is strengthened rather than infirmed by my conclusions. It must however be stated in different, i.e., syntactical, terms. As I have just stated, the similarity is *not* between the two sets

Akkadian	Semitic (Hebrew)
[PN *šarrum*] (not normally a sentence) PN *šar* "PN is king"	PN *melek* "PN is king" PN *mālak* "PN reigned"

Rather, the proper syntactical parallelism is with the (Semitic) set based on the *discord* between determinate and indeterminate forms of the noun; this is especially significant if one remembers that the article came into Semitic toward the end of the second millennium, i.e., much later than the formative period of Akkadian. Accordingly the syntactical correlation between the two sets is to be understood as per the following scheme:

Akkadian	Semitic (Hebrew)
PN *šarrum* "PN, the king" PN *šar* "PN is king" (PN *šarrum*) "PN is the king"	PN *ham-melek* "PN, the king" PN *melek* "PN is king" PN *hū ham-melek* "PN is the king"

63.4 Verbal and nominal predicates

We may now clarify further the typology of the predicate, as first introduced in 63.2. There are two major types of predicate, verbal and nominal. The *verbal* predicate (a) consists of any finite form of the verb, (b) it describes action and (c) it contains reference to time specification (i.e., location in time vis-à-vis the speaker). The *nominal* predicate (a) consists of a noun, (b) it describes condition, and (c) it does not contain reference to time specification.

The distinction between the two types is illustrated by the paradigm on the following page. (For further observations on the concept of finite forms see 29; on the concept of process, subdivided into action and condition, see 70).

63.5 A note on substantives and adjectives

The distinction between substantives and adjectives (subsumed in this grammar under the term "noun") is based both on morphological and syntactical considerations. For the former see above, 20.3; 21.1; 22.1. Syntactically, the difference is to be stated in terms of predication: a substantive may occur as either subject or predicate, whereas an adjective may occur only as predicate. (Adjectives occurring as attributes in nominalization are to be understood transformationally in terms of predication, see below, 81.1-2). Thus the two constituents in the sentence

šarrum dan "the king is powerful"

cannot be inverted, because a sentence of the type

* *dannum šar*

is not possible in the sense of "powerful is king." On the other hand, such a sentence is possible in the sense of "the powerful one is king," whereby the adjective is "substantivized." In this case, the substantivized adjective is the equivalent of a determined predicate (see presently), of the type

šarrum dannum-ma "the king is the powerful one."

This may be represented diagrammatically in the following paradigm:

šarrum dan the king is powerful	*[dannum šar]* [powerful is king]
šarrum dannum-ma the king is the powerful one	*dannum šar* the powerful one is king

63.6 A note on determination and referentiality

One of the major differences between Akkadian and the later Semitic languages is the absence of the article (see already above, 60). There are, however, other means of expressing determination. For a proper understanding of this phe-

	verbal predicate (+ adjunct)	nominal predicate	
		simple	complex
verbal root, intransitive	*imraṣ* he became ill	*(amšalī) maruṣ* (yesterday) he was sick	*(amšalī) šū awīlum marṣum* (yesterday) he was a sick man
	imtaraṣ he then became ill	*(warkānūm) maruṣ* (later) he was sick	*(warkānūm) šū awīlum marṣum* (later) he was a sick man
	imarraṣ he becomes/ will become ill	*(ūmam/urram) maruṣ* (today/tomorrow) he is/ will be sick	*(ūmam/urram) šū awīlum marṣum* (today/tomorrow) he is/ will be a sick man
verbal root, transitive	*iṣṣabat* he was seized, he came to be held	*ṣabit* he was/is/will be in a state of holding	*šū awīlum ṣabtum* he was/is/will be a man being held
primary noun	*awīliš īwē* he became a man	*awīl* he was/is/will be a man	*šū awīlum-ma* he was/is/will be *the* man
prepositional phrase	–	–	*šū ina bītim-(ma)* he was/is/will be (indeed) in the house

SYNOPSIS OF VERBAL AND NOMINAL PREDICATE TYPES

nomenon it must be understood that determination is not a function of a lexical item (the article), but rather a partial component of a larger system of meaning, namely referentiality. Inasmuch as it affects determination, referentiality belongs primarily to discourse analysis: reference is made to something which has been mentioned earlier (within or without outside the boundaries of the current sentence), or which is not even present in the discourse, but is otherwise assumed to be generally known. Thus the definite article in front of the title "president" when used in an American political context would likely refer to the current U.S. president, but would refer instead to a given University president in a given academic context, to a given company president in a given business context, and so on.

The introduction of the article in Semitic languages towards the end of the second millennium[12] may be considered as a major historical shift, which, I submit, is to be placed in relationship to another major shift, namely the loss of case endings. The fact that the loss of case endings did not entail the introduction of any form of determined article is a good indication that Akkadian in the first millennium was indeed becoming more and more a dead language. Leaving aside such historical considerations, we may now consider briefly the varying degrees of Akkadian referentiality within which the phenomenon of determination has to be understood. It is because this topic belongs essentially to discourse analysis that it is treated here only as a brief note.

Depending on the nature of its cross-references to other elements of the discourse or the context, reference belongs to one of the following five types:

1. INDETERMINATE: in this case there is no cross-referencing between the term in question and any other element in the discourse, e.g.,

   Ḫammurapi šar "H. is king (he is royal, belongs to the royal class)"

2. DETERMINATE: there is cross-referencing to an item which is generally known to the speaker, either from the discourse or from the overall extralinguistic context (as in the example of "the president," see also above, 22.3); as mentioned above (63.3), this is rare:

   (*Ḫammurapi šarrum*) "H. is the king (mentioned earlier in the discourse)"

   (*Ḫammurapi šarrum*) "H. is the king (of Babylon; we all know him)"

3. EMPHATIC: there is a marked cross-reference to elements which are implicitly known from the discourse (see below, 66.8-9), e.g.,

   Ḫammurapi šarrum-ma "H. is *the* king (e.g., not just the crown prince)"

[12] It seems possible that the Aramaic article may have derived historically from what appears in Akkadian as the particularizing afformative *-ān-* (see above, 21.3), see for example Akk. *il-ān-um* ~ Aram. *ʾel-āh*, Akk. *nādin-ān-um* ~ Aram. *nāṯn-āʾ*.

4. ANAPHORIC: there is marked cross-reference to elements explicitly known from the discourse (see above, 31.7), e.g.,

   šarrum šū "the above mentioned king"

5. LEXICALLY EXPLICIT: there is a built-in reference to an element which is mentioned explicitly as a distinct lexical item, and which is lexically contiguous, e.g.,

   Ḫammurapi šar Bābilim "H. is (a/the) king of Babylon"
   Ḫammurapi šarrum ša Bābilim "H. is the king of Babylon."

It will appear clearly that the explicit use of case ending is indispensable in distinguishing between indetermination and determination. The first type is the only one to clearly represent indetermination, and is marked by the absence of case endings. The first example of type 5 is ambiguous: it may be either determinate or not, and this depends on the fact that the construct state is not marked for case in the construct state. Even though distributionally it would appear that the two examples given under type 5 might be in mutual opposition, even a cursory analysis of contexts suggests that such is not the case: the first example of type 5 appears indeed to be polyvalent depending on the context.

In this light, we may further comment on the function of mimation. Within predication, it appears that mimation is indeed a marker of determination, as suggested by the paradigm given above. Outside of predication, one may speculate that mimation might possibly have served a similar function in earlier times, but already in Old Akkadian the presence of inflected forms of the normal state without mimation is rare, and we can only "explain" it as a case of free variation (i.e., we do not in fact explain it). In practice, then, mimation appears to be only a redundant element of the normal state, which comes to be dropped regularly, without any compensatory shift, already by the middle of the second millennium.

63.7 A note on the predicative complement

What appears in other languages, such as English, as a predicative complement, introduced by a copula or a linking verb, is not generally found in Akkadian – the reason being that the equivalent of a predicative complement is expressed synthetically by the use of the predicative state, a fientive form of the B stem, or the D stem (see already above, 16.6), e.g.,

šar "he is king"
imraṣ "he became ill"
uddurum "to render someone fearful"

It is interesting to note that in some cases the equivalent of an English predicative complement is expressed by an adjunct, such a terminative adverbial or a prepositional phrase, e.g.,

eqlam ana ilkīšunū idnāšunūšim[13]
"give them a field as their encumbered property"
awīliš īwē[14] "he became a man"
šallatiš amnū; ana šallati amnū[15] "I counted as booty"
itūrā ana ṭiṭṭi[16] "they turned to clay."

Exceptions seem to be extremely rare, as possibly in the following example:

Warḫum ša irrubam Ulūlum šanūm liššaṭar[17]
"let the coming month be registered as the second Ululum-month"

An interpretation that assumes a locative

Ulūlūm šanūm "like a second Ululum-month"

is unlikely, since I do not otherwise know of an attributive agreement between two nouns in a secondary case (see above, 22.6:7); hence the interpretation as a predicative complement appears more probable.

[13] *AbB* 4 24:13-15 (OB).

[14] *Gilg.* P iii 25 (OB).

[15] *CAD Š*/1 249f (SB).

[16] *Gilg.* xi 133 (SB).

[17] *AbB* 2 14:5-6. I am grateful to my student ROGER G. GOOD for alerting me to the difficulty of reading *Ulūlūm šanūm* as an attributive noun phrase with a double locative.

Chapter 64

Subject and Predicate: Concord

On the level of constituent structure, concord occurs only between subject and predicate. (For attributive concord see below, 76.2.) No rule of concord exists between subject or predicate on the one hand and complements or adjuncts on the other.

Concord between subject and predicate is regular for gender and number. (The only case of concord for state and case is for the type *šū šarrum dannum*, see 63.2.) See for example:

subject	predicate		
sg.ms.	sg. common	*šarrum illik*	"the king went"
sg.fm.	sg. common	*šarratum illik*	"the queen went"
pl.ms.	pl.ms.	*šarrū illikū*	"the kings went"
pl.fm.	pl.fm.	*šarrātum illikā*	"the queens went"

The exceptions are well known. They belong in three categories, as follows.

(1) A noun without overt feminine marker may have a feminine predicate, e.g.,

ummum damqat "the mother is good"

Since such nouns are regularly in concord with a feminine predicate, they are considered as feminine nouns without overt feminine markers; such peculiarity cannot be predicted and must be given lexically (see also above, 26.2).

(2) Certain nouns, traditionally known as collectives and singular in form, may have a predicate with either singular or plural concord, e.g.,

ṣābum šū lā ulappatam[1] (singular)
"the above mentioned contingent must not delay."
ṣābum ... ul šutamlū[2] (plural)
"the group ... has not been provided for."

[1] *AbB* 2 23: 5'.

[2] *AbB* 4 25: 5.

(3) When the subject occurs in the dual, the predicate is in the plural, e.g.:

kilallāšunū ... ippalū[3] "both of them will answer."

[3] *CH* §152 rev. ix 59-60.

Chapter 65
Predicate and Complements

65.1 Complements and transitivity

Complements are all adverbial, or ad-predicative,[1] i.e., they occur regularly in a sentence or clause where they serve to "complete" the process described by the predicate (for complements in noun phrases resulting from a nominalizing transformation see below, 79). In the terminology adopted here (see above, 57.7), a complement differs from an adjunct in that it is an essential, or nuclear, part of a sentence, in contradistinction to an adjunct, which is non-essential. Complements consist of either noun phrases or subordinate clauses.

Since they are always adverbial, there is a strict correlation between complements and verbs from which they depend. Verbs from which complements depend are traditionally called transitive verbs, and the complement is also called "direct object." The terms are derived notionally from the imaginary perception that the activity of the verb is directed immediately toward, or has "direct" passage to (Latin *transit*) the object of the action. Thus in the sentence

(1) *bītam ibnī* "he built the house"

bītam is considered as a direct object and *ibnī* as a transitive verb, because the action of "building" is transferred immediately to, as it were, or has a direct effect on, the house.

Two formal tests are possible for the identification of complements and transitive verbs. The first is that a direct object never occurs as a prepositional phrase. Thus sentence (1) *bītam ibnī* cannot alternate with any such sentence as

(1b) **[ana bītim ibnī]*

[1] Complements are in fact only governed by a verbal predicate. Sentences with a nominal predicate like *eqlam ṣabit*, which are generally understood as consisting of a predicate and complement, i.e., with a meaning "he holds a field" are, in my opinion, to be understood differently, i.e., as "he is the owner of a field," see below, 70.7.

or the like. For the sake of contrast, note how the test does not apply where the accusative does not represent a direct object and the verb is not transitive. Thus the following two sentences are equally possible:

(2) *ṣēram irpud*
(2a) *ina ṣērim irpud*
"he ran through the steppe."

This shows that the accusative is not co-terminous with the direct object, since in (2a) it alternates with an adjunct.

The second test is transformational. A sentence contains a transitive verb and a direct object if it can be transformed into a passive sentence, the subject of which corresponds to the object of the active sentence. Thus (1) may be transformed into

(1c) *bītum ibbanī* "the house was built,"

but the same is not true of (2) since

(2b) **[ṣērum irrapud]*

is not possible.

A transitive verb may thus be defined as a verb which (a) requires an essential complement (or direct object), and (b) may undergo a passive transformation. Correspondingly, a direct object may be defined as a noun phrase which (a) may not occur as a prepositional phrase, and (b) appears as the subject if the sentence undergoes a passive transformation.

The array of pertinent distributional classes may be represented as follows:

	transitive		intransitive
	fientive	permansive	
surface level	*bītam ibnī*	*eqlam ṣabit*[2]	*ṣēram irpud*
prep. phrase transf.	**[ina bītim ibnī]*	**[ana eqlim ṣabit]*	*ina ṣērim irpud*
passive transform.	*bītum ibbanī*	*(eqlum ṣabit)*	**[ṣērum irrapud]*

Two additional considerations are in place here. First, transitivity cannot be predicted, and must be given lexically as a feature of the verb; as such it will be further discussed below. Second, transitivity – like every other linguistic feature – must obviously be analyzed in terms of Akkadian only, so that contrasts with, e.g., English, may and do arise. Thus in Akkadian the verb *erēbu* is followed by a prepositional phrase (e.g., *ana bītim*), though the corresponding English "to enter" may be followed by either a direct object ("to enter a house") or a prepositional phrase ("to enter into a house"). The two formal tests mentioned clearly indicate that Akkadian *erēbum* is not a transitive verb.

[2] On this construction see below, 70.7.

65.2 Simple complement ("direct object")

Any transitive finite verbal form[3] may govern a direct object, and this occurs regularly in the accusative, unless it is an invariable. Any substantive, proper name or proper noun, whether animate or inanimate may occur as direct object; adjectives do not normally occur, unless substantivized or lexicalized; nouns of action occur regularly as direct objects if they are substantivized (see below for the notion of internal accusative, 65.3). Examples follow:

animate:		
substantive	*aššatam īḫuz*	"he took a wife"
personal name	*Naramtum īḫuz*	"he married Naramtum"
personal pronoun	*īḫussi*	"he married her"
interr. pronoun	*mannam īḫuz*	"whom did he marry?"
relative pronoun	... *ša īḫuzu*	"whom he married"
inanimate:"		
subst.	*bītam ibnī*	"he built the house"
geographical name	*Bābilim ibnī*	"he built up Babylon"
pronoun	*ibnīši*	"he built it up"
interr. pronoun	*mīnam ibnī*	"what did he build?"
relative pronoun	... *ša ibnū*	"which he built"
nominalized verbal adj.	*banītam īḫuz*	"he married a beautiful (woman)"
same, personalized	*Banītam īḫuz*	"he married Banitum"
nominalized participle	*munnabittam īḫuz*	"he married a fugitive"
noun of description	*dumqa iqbī*	"he put in a good word"
infinitive[4]	*ebēram iddin*	"he gave (made possible) to cross"

[3] For an accusative governed by a deverbal noun in the predicative state see below, 70.7; for a direct object governed by the infinitive in noun phrases see below, 77.4.

[4] Not all constructions with the accusative of the infinitive should be considered as direct objects. In some cases we should consider such an infinitive as representing an adjunct of limitation, as will become apparent if one applies the two tests described above to such a sentence as *alākam ileʾʾī* "he is able to go." (1) The accusative alternates with prepositional phrases and with the terminative-adverbial, e.g., *naparšudiš lā leʾū* "they are unable to escape" (*En.el.* 4 110, see VEENHOF 1986 "Auxiliary" 243) or *ana qabēm ul aqbī* "I did not order to tell" (*VAB* 6 215:16f, see ARO 1961 *Infinitivkonstruktionen* 124). (2) Constructions with the passive are not attested (*alākum *illeʾʾī*) or else the infinitive may be explained otherwise than as the subject (e.g., *ša alakšu qabū* not "whose going has been ordered" but rather "who is under orders as to his going, i.e., who should go," *CH* §26 ix 68 - x 1).

65.3 Indefinite object ("internal accusative")

When the context does not call for the use of a substantive or a pronoun as single complement, the latter is expressed by means of a noun of description derived from the same root of the verb. Since the same root of the predicate is used for the object, the latter is traditionally called the paronomastic, cognate or internal accusative, e.g.,

ḫubtam iḫbut "he stole a stealing."

The precise meaning of this type of object may be gauged by considering that there is in Akkadian no word which can be used in place of the English indefinite pronoun "something." The lack of an Akkadian word for "something" on the one hand and, on the other hand, the absence of a good equivalent that would properly translate the internal accusative, may be viewed as being in complementary distribution, in the sense that the internal accusative serves as a "dummy object." In fact, there is a good "fit" between the two patterns, as in the example given above:

ḫubtam iḫbut "he stole something."

The notion of internal accusative is generally taken to apply only to the direct object, but it is not necessarily so. In a sentence like

ilkam illik,

generally translated "he performed the feudal duty," the noun in the accusative is understood as a direct object, and the verb, which is otherwise intransitive, is understood as functioning in a transitive mode. In fact, I think that the noun in the accusative is best interpreted as an adjunct of limitation (see below, 66.2), i.e., literally "he went as far as the going, he performed as required by a particular circumstance, he carried out whatever responsibility he had" – for a field, this responsibility is cultivating the field and meeting all communal obligations pertaining thereto; for an administrative set-up, the responsibility will be to carry out the administrative duties of the office; and so on.[5]

[5] See for example *tuppātim ša ilkim mala talliku* "the records of the assignments (i.e., administrative assignments, not feudal duties) which you have undertaken" (*AbB* 4 22:4-5). See also the interesting expression *ṣāb lā ilki* which I would understand as "non-professional crew/troop (literally, without a specifically defined task assigned to them)" – in any case, not the crew of the feudal duty! (*CAD I* 79 b, SB).

65.4 Objective clause

The place of the direct object may be taken by a clause, called "objective clause." Such clauses are introduced by the conjunction *kīma* "that" in Old Babylonian, and *kī* "that" in Middle and Neo-Babylonian. Negation is regularly *lā*, and the verb is regularly in the subjunctive. See for example:

Nidnat-Sin, mušaddin puḫādim,
kīma puḫādī nemettaka ana ekallim lā tublam
iqbīam[6]
"Nidnat-Sin, who is in charge of collecting the lambs,
said to me
that you have not yet brought to the palace the lambs (due as) your tax."

65.5 Direct speech

Direct speech may be regarded as a special form of complement, where the predicate governs a complete sentence. Two special markers characterize direct speech: they vary depending on whether the sentence introducing direct speech comes first or else the direct speech itself. If direct speech is first, then the suffix *-mi* may be added to one of the constituents of direct speech (occasionally even more than once if direct speech includes in turn several sentences – but note that the suffix is optional):

'nādinānum-mi iddinam, maḫar šībī-mi ašām' iqtabī[7]
"he has said: 'a seller gave to me, I bought it in front of witnesses'."

If the introductory sentence comes first, then the particle *umma* begins the sentence, and the suffix *-ma* is added to the subject of the introductory sentence:

umma Ḫammurapi-ma
rabiān Medēm aššum ḫibiltīšu ulammidanni[8]
"thus (said) Hammurapi:
'the mayor of Medum has informed me about his loss'."

This is the standard form in Old Babylonian letters (as in the previous example), in which case the entire letter may be considered as a single direct speech.

[6] *VAB* 6 71:4-7.

[7] *CH* §9 vii 9-12; see *CH* rev. xxv 20-40 for a longer direct speech introduced in the same manner.

[8] *VAB* 6 8:3-6.

65.6 A compound complement ("indirect object")?

It is generally assumed that certain verbs require a compound complement, i.e., an indirect object next to a direct object. Consider the following examples, sorted by notional value and within that by surface features:

datival		
pr.sfx.,dative	*kaspam inaddiššim*	"he gives her silver"
pr.sfx.,accus.	*ebēram ul iddinšu*	"he did not allow him to cross"
noun,accus.	*kaspam šamallām iqīp*	"he entrusted silver to the assistant"
prep.phrase	*kirāšu ana šanīm iddinū*	"they gave his orchard to another"
ablatival		
pron.,accus.	*ittalakniāti*	"he then went away from us"
noun,accus.	*kussā likimšu*	"may he oust him from the throne"
prep.phrase	*ṣuḫārī ina qātīya īḫuz*	"he took my boy from my hand"

One may be able to apply a deletion test by showing that whenever the indirect object is omitted in a test, it is implied, and thus replaceable, through the context. Notionally this seems plausible: the action of "giving" would seem to require an indirect object (to someone) as well as a direct object (something). But then this might be done with other verbs and other categories as well. For instance the acts of "covering" or of "filling" might seem to require an instrumental complement (with something) as well as the direct object (something), e.g.,

ina ṣubātim iktumšu "he covered him with a garment"
karpatam šamnam mullū "to fill a vessel with oil."

It is difficult to see, then, which verbs would fit exactly in this category. In addition, it is difficult to identify formal deletion criteria for these verbs. So the deletion test proves to be inadequate.

A condition which seems to restrict the use of both the datival and the ablatival indirect object is that either one can occur only with transitive verbs, i.e., in connection with a direct object. But this is too tenuous a condition to suffice for the identification of a required indirect object.

A clearer substitution test may on the other hand be possible for the datival construction.[9] A datival prepositional phrase may be replaced by a dative pronoun, whereas other prepositional phrases, though outwardly construed in the same way, may not. In other words, a datival complement would only be possible with verbs

[9] This possibility first suggested itself as a result of some pertinent remarks made by my student TIEN FOCK LEONG.

for which it can be shown that they govern a dative pronominal suffix. This is illustrated by the following examples:

datival	*ana awīlim nidintam iddin*	"he gave something to the man"
– >	*nidintam iddinšum*	"he gave something to him"

as opposed to

motion	*ana ālim illik*	"he went to the city"
– >	[**illikšum*	"he went to it"].[10]

If further research were to confirm such a distribution, then one might indeed assume a special status at least for the dativa l indirect object.

For the time being, we will not recognize the separate existence of a compound complement, i.e., an indirect object, and will consider datives and ablatives as non-required adjuncts (see below, 66, especially 66.2).

65.7 Direct object embedded in verbal form

The reflexive stem of the verb (see above, 16.5), may be understood as a case of built-in reference to a direct object, where the object is the same as the subject of the verb (expressed lexically in English by the word "self"). Since Akkadian, like English, can also express with a separate lexical item the notion of "self" (*ramānu*), two alternative forms may be viewed as being mutually exclusive, one with *ramānu* as the direct object expressed lexically and the transitive verb in the B stem; the other without the direct object, and with the verb in the Bt stem, e.g.,

EXPLICIT DIRECT OBJECT	REFLEXIVE
ramanšu ipaṭṭar[11]	*iptaṭṭar*
"he will ransom his own self"	"he will ransom himself."

For a similar argument pertaining to the embedding of adjunctivation see below, 66.6.

[10] If there is a form which seems to fill this slot, it is the ventive *illikam* "he went in a certain (mentioned or assumed) direction." Similarly, the separative *ittalak* "he went away from a certain (mentioned or assumed) direction" may be considered as the equivalent of a sentence with an explicit ablatival adjunct. See below, 66.6.

[11] *CH* §32 xi 23-24.

Chapter 66

Predicate and Adjuncts

66.1 Formal structure

From a formal point of view, five types of adjuncts may be distinguished. The first and the second are commonly recognized for what they are: they consist of either noun phrases (including pronouns; for adverbs see above, 33.4) or verbal clauses. The remaining three types, instead, are not traditionally considered as adjuncts – when they are included at all within syntax. They consist of a coordinated sentence (belonging to the special category of hendiadys), a distinct morpheme embedded within the predicate of the sentence, and a lexically undifferentiated element, which is either paronomastic or neutral (belonging to the special categories of indefiniteness and emphasis). These five types may be summarized as follows:

TYPE OF ADJUNCT	TYPE OF MARKER			
	LEXICAL	MORPH.	PARONOM.	NEUTRAL
nominal	prepos. phrase noun, pronoun adverb	–	–	–
subordinate	clause	–	–	–
coordinate (hendiadys)	sentence	–	–	–
embedded	–	stem mood	–	–
undifferentiated (indefinite; emphasis)	–	–	repetition	inversion enclitic stress

Adjuncts are cumulative, i.e., more than one adjunct may occur in any sentence. Note that an adjunct in the accusative may occur in the same sentence next to the direct object complement, also in the accusative: this is the so-called double accusative,[1] where it must be noted, however, that similarity in the inflection is only one of surface, and does not reflect identity of structure at a deeper level. Thus in the sentence

ṣubātam qaqqad-ka kuttim[2]
"cover your head by means of a cloth"

only the second accusative (*qaqqad*) is a complement, while the first one (*ṣubātam*) is a non-essential adjunct, on the same level as other possible accusative adjuncts which could be added to the sentence, e.g.:

ūmam ṣubātam qaqqad-ka kuttim
"today cover your head by means of a cloth."

To speak of a triple accusative in this case (as of a double accusative elsewhere) is of course correct as a statement of surface facts, but it is less meaningful than to distinguish between one essential complement on the one hand and one or more adjuncts on the other.

In what follows, I will use the term "adjunctivation" to refer to the process whereby adjuncts are produced.

66.2 Nominal adjunctivation

Two major subtypes may be distinguished. The first is complex or analytical, and consists of a prepositional phrase or construct state. The second is simple or synthetic, and is expressed by inflectional means applied to a single word (noun or pronoun). The choice between types is unpredictable, and only some mechanism are attested for each notional category.

The relevant markers of the synthetic adjuncts are:

(1) the accusative either in the normal or in the construct state, as in *ūmam* "today," *ūm ḫidūti* "on the day of happiness" (see also above, 65.3, and below, 66.7, for the notion of internal accusative);
(2) the gerundive (*-ī*, historically derived from **ay*) as in *amšalī* "yesterday";
(3) the locative (*-ūm*) as in *warkānūm* "afterwards" or in the "absolute infinitive" (see presently);
(4) the terminative (*-iš*), occasionally combined with the accusative (*-iš-am*), as in *šapliš* "below" or *šattišam* "yearly";

[1] See already above, 57.1; and see VON SODEN 1952 *Grundriss* §145 c-d.

[2] *CT* 17 19: 35.

(5) the absolute state, as in *kayyān* "constantly";
(6) adverbs, as in *annikīʾam* "here."

The rich notional range of Akkadian nouns and prepositional phrases occurring as adjuncts has never been explored to any depth. A study in this direction is now greatly facilitated by the abundant documentation which is being gathered in the two major dictionaries (especially VON SODEN's) under the entries for prepositions and verbs. The most useful overview still remains the section on the "particles" in VON SODEN's morphology.[3]

While it seems possible that adjuncts of all notional categories could have been expressed both analytically (prepositional phrases or construct state) and synthetically (simple nouns), in fact the first type is the most common, and the only one attested for all notional categories. I will not give here a detailed analysis, and will limit myself instead to a list of the most distinctive notional categories, with some pertinent examples for each. The following list is meant to emphasize the correlation between the analytical and synthetic subtypes: note that prepositional phrases which may be correlated to a genitive are treated separately as part of the nominal transformation (see below, p.432 f.). As already discussed above (65.6), dative and ablative are included among adjuncts instead of being considered as complements.

ANALYTICAL (PREPOSITIONAL PHRASES)	SYNTHETICAL (SINGLE NOUNS AND PRONOUNS)
Causal	
aššumīya "for my sake"	–
Comitative	
ittīya "with me"	–
qadu ummānīšunū[4] "with their troops"	
Comparative (of similarity)	
kīma rīmi "like a steer"	*rīmāniš* "like a steer"
Dative	
(See above, 65.6)	
Distributive	
šatta ana šatti[5] "yearly, year after year, every year"	*šattišam* "yearly"

[3] VON SODEN 1952 *Grundriss* pp. 161-176.

[4] See VON SODEN 1952 *Grundriss* §147 d.

[5] *Gilg.* VI 47 (SB).

Exceptive
balum šībī "without witnesses" –
ezib še'im "except for the barley"

Final (of purpose)
ana aššūtim "for the purpose of marriage" *amāriš* "in order to see"
aššum lā naparšudī-šu[6] "in order not to let him escape"

Instrumental
ina eperē katāmum[7] "to cover with dust" *ṣubātam katāmum* "to cover with a cloth"

Limitative[8]
aššum eqlim...ul adabbub[9] "I will not complain with regard to the field" *eqlam...mayyārī imaḫḫaṣ*[10] "he will break the field with respect to the field furrows = he will plow"
ina dīn idīnu enēm ukannū-šu[11] "they will convict him with respect to altering the verdict he had issued"
ištu...ina ḫerēm tagdamru[12] "after you have finished with respect to digging (the canal)"
ana šīmātim...ša Enlil...išīmu[13] "with respect to the decrees which Enlil has decreed"

Locative, ablative (with animates)
ina qāti šābī...leqīā[14] "take from the wine sellers..." *atallaqē-šunūti*[15] "I will receive from them"

[6] *TCL* 3 33 (Sargon, SB).

[7] Cf. *AHw* 464 s.v. *katāmu*.

[8] Traditionally called "of relation," a term which seems too vague. I prefer the term "limitative" because it describes the fact that the adjunct "limits" the range of effectiveness of the predicate. For another example with paronomastic accusative see below, 66.7.

[9] *Sumer* 14 15:16 (OB letter).

[10] *CH* §43 xiii 11-13, and often, cf. *AHw* 587 b. See also Von Soden 1952 *Grundriss* §147 a.

[11] *CH* §5 vi 15-17.

[12] *AbB* 2 4:6'-7'.

[13] *CT* 37 2: 26-29.

[14] *VAB* 6 76:12 (OB).

[15] *ARM* 4 68:9.

ša itti tamkārim ilqū[16] "which he received from the merchant" *ittallak-niāti* "he is going away from us"

Locative, departitive (with inanimates)
ištu bītim "from the house" –
ultu bītim "from the house"

Locative, directive or allative
ana bītim "toward the house" *ullišam* "there to"
ana ilānī "to the gods" *iliš tikal* "trust in god"
adi bītim "as far as the house"

Locative, intrative (contrast with separative)
ina libbi ālim "within the city" –
ina qirib ālim "within the city"

Locative, separative (contrast with intrative)
ša...ina qātēšunū īkinu[17] "from whom he took..." *līkim-šu*[18] "may he take away from him"

Locative, stationary
ina bītim "in the house" *annikī'am* "here"
eli bītim "on the house" *annānūm* "here"
maḫar bītim "in front of the house" *ašrānūm* "there"
warki bītim "behind the house"

Modal
eqla...ina danāni īkim[19] "he took away the field forcefully" *rēqussu*[20] "in his emptiness (empty-handed)"
ana gamrim "completely" *kayyān* "constantly"
ana anzilli[21] "unlawfully" *damqiš* "well"
bāmāt bāmāt "half and half" *bāmā* "in halves"
kīma ḫidūtim "joyfully" *ḫadīš* "joyfully"
ana tanādātim šūṣā[22] "they are brought out in praise"

[16] *CH* §49 xiv 39-40.

[17] *VS* 6 52:6 (NB).

[18] *OIP* 2 vi 83 (Sennacherib, SB).

[19] *BBSt* 3 iv 15 (MB).

[20] I.e., *rēqū-šu*, cf. Von Soden 1952 *Grundriss* §147 b-c.

[21] *OIP* 2 ii 77 (Sennacherib, SB).

[22] *CH* rev. xxvi 1.

Reflexive
ana ramānīšu ippetī[23] –
"it was opened by itself"

Telic (of advantage)
elīšu ṭāb "it is good for him" *tappūtī illik*[24] "she came to my help"
ana emqim...šūṣā[25]
"they are brought out for the wise"

Temporal, ablative
ištu šattim "from the year" –

Temporal, directive
adi šattim "until the year" –

Temporal, stationary
ina šattim "in the year" *ūmam* "today"
warki šattim "after the year" *umakkal* "everyday"
lāma šattim "before the year" *amšalī* "yesterday"

66.3 Subordinate adjunctivation

The place of an adjunct may be taken by a subordinate clause, which is regularly introduced by a conjunction, and is characterized by the predicate in the subjunctive and, where pertinent, the negative particle *lā* (rather than *ul*). The notional content of the clause is partly determined by the conjunction, though some of them are ambiguous as to their meaning. From such a notional point of view, adjunct clauses overlap with some of the categories listed in the preceding section, such as the following:

Causal
aššum ... uldu[26] "because she gave birth"

Comparative
kīma ša anāku allikam[27] "as if I came in person"

[23] *OIP* 2 p.81: 30f (Sennacherib, SB).
[24] *RA* 8 (1911) 65-67 ii 2-3 (Ašdunierim, OB).
[25] *CH* rev. xxv 105.
[26] *CH* §142 rev. viii 52.
[27] *AbB* 2 92: 15.

Final
aššum ... lā išebbirū[28] "in order that they may not break"

Locative
ašar iqabbū[29] "where they will say"

Modal
kīma tīdū[30] "as you know"

Temporal, ablative
ištu allikam "since I came"

Temporal, directive
adi allikam "until I came"

Temporal, punctual
kīma illikam "when he came"

Temporal, stative[31]
enūma elīš lā nabū šamāmu "when the heavens were without a name above"

Adjunct clauses are only one type of subordinate clauses, i.e., clauses which correspond transformationally to a distinct constituent of the sentence. Other types include objective clauses, which are treated above, 65.4, and attributive and consecutive clauses, which will be treated below, 76.1.

Note that in some cases an adjunct clause may be analyzed as consisting of a nominal adjunct (the conjunction) followed by an attributive clause (for which see below, 81). This is particularly plausible in a case like the following:

ašar iqabbū kaspam luddin[32]
"let me deposit the silver at the place they designate"

In this sentence *ašar* "at the place in which" may be considered as a non-prepositional adjunct of place, followed by the attributive clause *iqabbū* "(which) they designate." Syntactically there is no distinction between the preceding clause and others such as:

[28] *ARM* 2 131: 34-35.
[29] *VAB* 6 209: 15 (OB).
[30] *ABPh.* 16: 12 (OB).
[31] The difference between stative and punctual temporal clauses may be compared to the Hebrew use of *b* and *k* respectively in analogous clauses (following a suggestion of my student Robert Wexler).
[32] *AbB* 2 105: 12-13.

inūma iqabbū kaspam luddin
"I will deposit the silver when they say (to do so),"
kīma iqabbū kaspam luddin
"I will deposit the silver as they say (to do).

Since, however, the two words *inūma* and *kīma* cannot be analyzed in the same manner as *ašar*, i.e., not as nouns in the construct state, they are normally considered as invariables with a conjunctive function, i.e., as conjunctions.

66.4 Constraints on the use of tenses

What is traditionally known as "consecutio temporum," i.e., a set "sequence of tenses" between a main sentence and its adjunct clause, does not have a pervasive application in Akkadian. It seems to occur only with temporal clauses, in such a way that, for instance, a preterite in the main clause requires a preterite or perfect in the subordinate clause, a present – a perfect or present, an imperative – a present.

Examples[33] for each type, and with a variety of conjunctions, are given below (arrows indicate direction of government):

(1) *inūma niš'umu ..., nilqē* pret < – pret
"when we bought, we took"
ištu ērubam, šīrī matīma ul iṭīb
"since I have arrived, I have never begun to get well"
kīma aḫatni ana šimtīša illiku, nuba''ī
"as soon as our sister died, we started searching"

(2) *inūma ītaplūninni, ašapparakkim* perf < – pres
"when they will have paid me, I will write to you"
ištu ātapluka, nillak
"as soon as I have paid you, I will go"
kī ūmū iṭṭibū, ušebbela
"as soon as things get better, I will send"

(3) *inūma irrubū, dayyānū iparrasū* pres < – pres
"when the judges enter, they will judge"
kīma šarrum illakam, allakam
"as soon as the king comes, I will come too"

(4) *ištu tallakā, annakām šērībā* pres < – iptv
"as soon as you go, bring the tin."

[33] All from VON SODEN 1952 *Grundriss* §169-174, where one will find the references.

Other combinations may also occur, but they are rare; thus, for instance, a preterite in the adjunct clause corresponding to a present in the main sentence:

ištu šarru ipqidanni, anaṣṣar
"since the king appointed me, I watch over."

Note that if the predicate of the main sentence is nominal, there is no proper "consecutio," because the nominal predicate may govern any predicate in the subordinate, e.g.:

inūma ašpurakkum, umma anāku-ma
"when I wrote to you, this is what I said"
inūma ašapparakkum, umma anāku-ma
"when I write to you, this is what I will say"

66.5 Coordinate adjunctivation (hendiadys)

I propose to consider as a special form of adjunctivation a type of coordination (for which see below, 84.1) which is generally known as "hendiadys." The etymological value of this term, which is derived from Greek *hen dia duoin* "(expressing) one (notion) through two (notions)," is indicative of the standard interpretation of this phenomonenon in traditional grammar.[34] As in the case of emphasis, for which see presently, traditional interpretation focuses more on aspects of surface than deep structure, and leaves much to the realm of intuitive, rather than analytical, explanation – analyzing, as it were, the translation into a modern language rather than the Akkadian construction. I will propose here some specific formal criteria which, on the one hand, severely limit the range of constructions which can properly, in my view, be considered as examples of hendiadys, and, on the other hand, assign their treatment to the category of adjunctivation; it should be noted that it is sufficient for only one of these criteria to apply in order to identify a proper case of hendiadys. I will first review such criteria; I will then review examples which should be interpreted otherwise than as hendiadys; and I will finally explain my definition and address the question of terminology.

The first formal criterion is that an intransitive verb may be in such close juncture with a coordinated transitive verb that it results in an apparent incongruence in the application of government rules. Note the following examples:

[34] The traditional interpretation has been followed in KRAUS 1987 *Koppelungen*, where one will find a long list of "couplings," as he calls these constructions, for which however no real criterion for proper formal discrimination is offered; the very complex typology he develops is based on criteria which belong to surface structure.

tāḫazam išni²ā-ma iškunā[35]
"a battle they became second and then took up"
bītam ... ānaḫ-ma ... ēpuš[36]
"the temple I became tired and then I made"

Such word by word translations serve to point out the fact that the intransitive verbs "to become second" (*šanū*) and "to become tired" (*anāḫu*) seem to govern the direct objects "battle" (*tāḫazam*) and "temple" (*bītam*), since they occur in the same sentence; in fact, however, the intransitive verb is in such close juncture with the following transitive verb that they form a single constructive, much as in the case of the nominal constructive (for which see above, especially 6.3). Accordingly, the two verbs form a single predicate ("they became second in taking up," "I became tired in building"), and as a result the direct object is in fact governed by the second verb ("in taking up the battle," "in building the temple"). The sentences must therefore be understood as

"they met in battle for a second time"
"I built the temple with great effort."

The second formal criterion is that the semantic value of a verb is affected by its position relative to that of the verb with which it is coordinated. Take the following symmetrically opposed pair of coordinated sentences:

īmur-ma illik "he saw and then he went"
illik-ma īmur "he went and then he saw."

The semantic value of each verb remains exactly the same regardless of whether it occurs in first or second position (though obviously the meaning of the coordinated set changes). Now take the following pair:

illik-ma itūr "he went and then he returned (e.g., to the point of origin)"
itūr-ma illik *["he returned (to a given point) and then he went."]

The second sentence does not occur in the meaning indicated in square brackets. In the first instance, the verb *itūr* has a properly locative meaning, which is juxtaposed to the equally locative meaning of *illik*: "he went and he came back." In the second instance, instead, the verb *itūr* does not have a locative value, but rather a modal value affecting the value of the second verb, *illik*:

itūr-ma illik "he revolved in going," i.e., "he went again."

The formal aspect of this criterion lies in the substitution test proposed: the inversion of the verbs affects the semantic range of one of the two. As a result, here,

[35] *FAOS* 7, p.168:9-11 (OAkk); cf. KRAUS 1987 *Koppelungen* p. 13, for more examples.

[36] *AOB* 1 122:13/19 (MB; see KRAUS 1987 *Koppelungen* p.4; see also VON SODEN 1952 *Grundriss* §143 d, where it is suggested that the intransitive verb becomes transitive).

too, we can conclude that there is a special type of close juncture between the two verbs.[37]

As a third criterion we can consider another substitution test. Where there is such a case of close juncture, the first verb can be expressed by a noun phrase adjunct, whereas in other cases it cannot. In both instances discussed above, the first verb may be replaced by the adjunct *šanītam*, which means "a second time, again." But consider the following two sentences:

marṣāku-ma ul annamer[38] "I was so ill that I could not appear for a visit"
aššum murṣim ul annamer "I did not appear on account of illness."

The verb in the first sentence, however the translation may read, is not in close juncture with the second verb, and cannot properly be considered as equivalent of the second sentence. In the first sentence, *marṣāku* has an autonomous verbal status (verifiable by the fact that it retains the full semantic force it has when placed after *ul annamer*): the stress in the whole tone of the text is in the writer's having been truly so sick that he could not appear in front of his superior; in other words, the writer is not providing a statement of fact to the effect that he had not appeared (which is properly conveyed by the second sentence *aššum murṣim ul annamer*); rather, he is stressing in the first place that he has been suffering from a serious illness.

A proper definition is conditioned by an assessment of the criteria just stated. The very close juncture between two verbal forms is the hallmark of this phenomenon: it is such that it affects the rules of syntactic government and the consistency of semantic ranges. Such an effective loss, on the part of a verbal form, of its full autonomy can best be understood, I submit, as a type of adjunctivation. The many other cases of coordination will have to be considered as just that, coordination, and not hendiadys.

As for the term "hendiadys" itself, the etymological value of the word implies something which the phenomenon as here understood does not quite have. We are still, in fact, expressing "two" things, an adjunct and a verb. On the other hand, the significance attached to the notion of close juncture gives a certain validity to the notion of "oneness" conveyed by the term – and to this extent it may well be retained in use. If so understood, the concept of hendiadys is indeed analogous (as mentioned at the beginning of this section) to that of the nominal constructive: in both cases, the notional "oneness" is underscored by the formal aspect of close

[37] This is similar to what happens in English with the so-called "helping verbs." In a sentence like "he keeps coming back," the verb "keep" differs semantically from the same verb as found in "he comes back keeping (something in his possession)" or "he keeps (something) and he comes back."

[38] *AbB* 1 18:14f. See KRAUS 1987 *Koppelungen* p. 13, for more examples, some of which are translated as consecutive sentences.

juncture which, in one case, is the implicit equivalent of word composition (see above, 6.3), while, in the other, it is the implicit equivalent of adjunctivation.

66.6 Embedded adjunctivation

The "synthetic" type of adjuncts described earlier refers to the fact that a single noun or pronoun may be used as the equivalent of a more complex prepositional phrase. There is yet another type of adjuncts which is even more synthetic in that the expression of adjunctivation is embedded in the verbal form itself by means of given morphological markers. Such embedded adjunctivation is similar to the embedding of the direct object in the verbal form, for which see above, 65.7. (Since there is an unequivocal correlation between morpheme and type of adjunct, this may be considered as explicit adjunctivation, in contrast with what I call implicit adjunctivation, which will be treated presently under the heading of emphasis.) I will mention here five such types of embdedded adjunctivation – the ventive, the separative, the reflexive, the reciprocal and the iterative.

(1) The VENTIVE mood (see above, 28.5; 29.3) and (2) the SEPARATIVE stem (see above, 16.4, with n. 6) are very closely interrelated in terms of their notional values. In my understanding, both forms contain a built-in reference to a locative adjunct which is in fact often given elsewhere in the sentence – the adjunct being allative in the case of the ventive, and departitive in the case of the separative. Where an explicit adjunct is missing, the verbal form often retains a generic locative function, which on occasion can be rendered lexically in English. In the examples given below, the presence of an analytical adjunct is marked as underlined italics.

ana ālim illikam "to the city he went – to"
~ *illikam* "he went to(wards), he came"
ina ālim ittalak "from the city he went – from"
~ *ittalak* "he went away from, he left"

The separative meaning is found properly with intransitive roots expressing movement, otherwise it acquires different nuances, as in the following examples:

ina ṣābīšunū išīēn awīlam ilteqī[39]
"he took out one man from their troops" (transitive)
~ *ibtellī*[40]
"it will finish away, it will disappear" (intransitive)

[39] *TCL* 17 12:7-8.

[40] *CT* 5 22446: Rev. 57.

(3) The BT STEM (see above, 16.4) may be used not only to express the embedding of a direct object (see above, 65.7), but also (with intransitive verbs) the embedding of a reflexive (or modal) adjunct, e.g.:

ana ramānišu īrub "he entered by himself"
~ *īterub* "he entered-by-himself."

(4) The BT STEM may also be used to express a reciprocal action which affects at alternatively the subject and another party, the latter corresponding to an adjunct of company, e.g.:

imtagrū[41] "they agreed with each other" (mutual agreement by both parties).
~ *imgurū* "they agreed, assented" (referring to one party only)

ritkabanni[42] "mount together with me!" = "copulate with me!"
~ *rikab* "ride!, mount!"

That the pronominal suffix in the last example is not of the direct object, but of an adjunct of company, is shown by the use of a prepositional phrase in the following example where a transitive verb is used:

itti-šunū amdaḫaṣ[43] "I struck together with them" = "we fought together."
~ *amḫassunūti* "I struck them"

The full reciprocal force of the Bt stem seems to have been lost in the later periods of Babylonian, for in these periods adverbs such as *aḫāmeš* "together, mutually" come to be used more and more either in place of, or next to, verbal forms of the Bt stem. This development is in line with the general tendency of the language from a synthetic to a more analytical direction. As examples one may quote:

ṣalta ... aḫāmeš īpušū[44] (plain B) "they made battle together"
aḫāmeš iddūkū[45] (Bt) "they killed each other."

(5) The TN STEMS (see above, 16.4) are used regularly to express the embedding of an adjunct for which no proper Akkadian equivalent noun phrase may be quoted:

ittanallak "he goes repeatedly, he keeps going, he roams around."

[41] *MDP* 22 160: 37.

[42] BIGGS, *Šà-zi-ga*, p. 31: 47.

[43] WEIDNER, *Tukulti-Ninurta I* (*AfO Beih.* 12), p. 2, 1 ii 29 (=*RIMA* A.0.78.1).

[44] WISEMAN, *Chronicles*, p. 54: 12.

[45] *ABL* 349: 12-13 (NB).

A special notional subtype of the iterative transformation is one with habitual or frequentative meaning, whereby repetition of the same action implies regular, continuous or habitual performance (occasionally also with distributive value). In either case, the result of the transformation corresponds to a sentence with an adverb of time meaning "often, always," such as *kayyān, kayyantam*. See for example:

iterative *itti nammašte tattanallak ṣēram*[46]
"you walk back and forth in the steppe with the animals"

habitual *kayyantam illakūnim*[47]
"they come regularly"
erišširya attanallak[48]
"I am running around naked"

distributive *aran dīnim šuāti ittanaššī*[49]
"he shall carry proportionately (= be liable for) whichever penalty (is appropriate for) that case"

Note that the iterative adjunctivation, unlike the reciprocal, remains operative and productive down through the later stages of the language, without being replaced by an analytical construction.

66.7 Undifferentiated adjunctivation (paronomastic adjunct)

We have already seen (see above, 65.3) how the direct object may occur as a "dummy object" rendered by a paronomastic accusative, and how certain accusatives traditionally interpreted as direct objects (e.g., *ilkam alākum*) should in fact be considered as adjuncts. As with the paronomastic direct object, I suggest that the paronomastic adjunct serves to express an indefinite notion rendered in English by an indefinite adjective, e.g.:

mūt šimtīšu imāt[50]
"he will die with regard to his death of destiny"
"he will die some form of natural death."

[46] *Gilg.* P ii 12-13 (OB).

[47] *ARM* 3 12:12.

[48] *AbB* 9 106:17.

[49] *CH* §4 vi 3-5.

[50] *YOS* 10 41:29 (OB).

66.8 Undifferentiated adjunctivation (emphasis)

We will consider as a special type of adjunct a linguistic phenomenon which is normally either relegated vaguely to a section on style or just disregarded – emphasis. Traditionally, emphasis is described as a strengthening, a stressing, an intensification of an element which is otherwise already present in the sentence; its expressive function is often considered one of redundancy; and its grammatical definition is left in abeyance, with the various manifestations of emphasis left scattered where they belong in terms of surface structure, or morphological categories. Thus under "infinitive" one will note that the absolute infinitive serves the purposes of emphasis; and similarly in the chapters on the independent pronoun, or on suffix pronoun (used resumptively), or on the phonology of stress or vowel lengthening. The formal aspects of these different types of emphasis are brought together in the paradigm on the following page.[51]

Combinations of some of these devices are also possible (e.g., inversion of word order and enclitic particle), and in some cases they are perhaps even necessary, for instance in the case of stress and enclitic particle.

If one looks more closely at the formal aspect of the devices listed in the paradigm, one notices that they can be subdivided structurally according to the following scheme:

Alteration of existing features:	(1) inversion of word order (2) extraposition
Addition of a feature which is	
– lexically identical to one of existing features, i.e.:	
(a) subject, object or adjunct:	(3) independent personal pronoun (4) cleft sentence
(b) predicate:	(5) absolute infinitive;
(c) any constituent:	(6) lexical repetition;
(d) object or adjunct	(7) resumptive pronoun
– lexically not autonomous:	(8) enclitic particle;
– non-lexical (suprasegmental):	(9) phonological stress.[52]

[51] For anticipatory emphasis see 81.4. See also above, 29.3, and below, 74.1; 76.1. The aspects of extraposition, resumption and anticipation are treated in detail in KAHN 1988 *Studies* pp. 149-195.

[52] See above, 29.3, for the suggestion that the marker of the ventive may, in some cases, be used to provide, as it were, phonological support for extra stress. See also below, 74.1, for some implications concerning emphasis in the use of the passive, and 76.1, for the suggestion that consecutive clauses may have an emphatic function expressed by intonation.

	SUBJECT	OBJECT	ADJUNCT	PREDICATE	OBJ./ ADJ.	TYPE
0		*Abī* my father	*ina bītim* in the house	*īmur.* he saw		SIMPLE OR NON-EMPHATIC
1		*Ina bītim* in the house	*abī* my father	*īmur.* he saw		INVERSION OF WORD ORDER
2		*Ša ṣeḫrim* of the child	*abāšu* his father	*īmur.* he saw		EXTRAPOSITION
3	*Šū* he	*abī* my father *Abām yām* father mine	*ina bītim* in the house *ina bītim* in the house	*īmur.* he saw *īmur.* he saw		INDEPENDENT PERS. PRONOUN (LEXICAL REPET.)
4	*(Šū-ma ša* it's he who	*abī* my father	*ina bītim* in the house	*īmuru.)* he saw		CLEFT SENTENCE
5		*Abī* my father	*amārūm-ma* in seeing-ENCL.	*īmur.* he saw		ABSOLUTE INFINITIVE
6		*Abī* my father	*ina bītim* in the house	*īmur, īmur.* he saw,he saw		LEXICAL REPETITION
7		*Abam* the father	*ina bītim* in the house	*īmur-* he saw	*-šu.* him	RESUMPTIVE PRONOUN
8		*Abī* my father *Ab ṣeḫrim-ma* the father of the child-ENCL.	*ina bītim-ma* in the house-ENCL. *ina bītim* in the house	*īmur.* he saw *īmur.* he saw		ENCLITIC PARTICLE
9		*Abī* my father	*ína bītim* in the house	*īmur.* he saw		PHONOLOGICAL STRESS

FORMAL TYPOLOGY OF EMPHASIS

A trait which is shared in common by all these different patterns of emphasis is that the element which marks the emphasis does in no case enjoy an autonomous and differentiated lexical status. The characteristic emphatic features are either non-lexical (inversion of word order, phonological stress), or lexically identical with other elements in the sentence (independent personal pronoun, cleft sentence, absolute infinitive, lexical repetition), or lexically non-autonomous (enclitic-particle). Thus, for instance, in *amārūm-ma īmur* the predicate *īmur* is qualified by the reduplication of the same verbal root *ʾm/r* – i.e., the qualification does not introduce a lexical differentiation vis-à-vis the predicate, in contrast with a sentence

such as *ina kīnātim īmur*, where the adjunct *ina kīnātim* adds a lexically differentiated qualification, "in truth."

In idiomatic English, the sentences in the paradigm may be translated as follows (underscoring indicates the part of speech being emphasized; italics indicates an extra phonological stress as a marker of emphasis in English):

0. He saw my father in the house.
1. He saw my father *in the house*.
2. He saw the father *of the child*.
3. He himself saw my father in the house. / He saw my very father in the house.
4. It's he who saw my father in the house.
5. He truly saw my father.
6. He really saw my father.
7. He saw *the father* in the house.
8. He saw my father *in the house*. / He saw the father *of the child* in the house.
9. He saw my father *in* the house.

A second trait which is shared in common by all the different patterns of emphatic expression is that the element which is emphasized does not undergo any inflectional alteration. Thus the predicate *īmur* remains the same in all patterns, in contrast with a case such as *ītanammar* "he repeatedly sees," where the equivalent of English adjunctivation is rendered in Akkadian by inflectional means.

In conclusion, then, emphasis may be defined as implicit and undifferentiated adjunctivation, i.e., an adjunctivation which is neutral both lexically and inflectionally vis-à-vis the element to which it refers. This aspect of implicitness carries over also in the realm of notional analysis, which we should consider next.

66.9 Emphasis: notional typology

Given the proposed correlation between emphasis and adjuncts, we may establish a notional typology similar to the one given in 66.2 for explicit nominal adjuncts. The interpretation will have to be based in each case on context, and the conclusion will remain in many cases polyvalent – because, but for a few exceptions, it is not possible to establish a one-to-one correlation between formal devices and notional categories. Underscoring indicates the part of speech being emphasized.

VERIFICATION

(1) *šeʾum ina bītim šāti itaprušūm ittanapraš?*[53]
"is the barley flying away with its own wings (literally: in flying away) from this house?"

[53] *TCL* 18 110: 23-24 (OB); written without mimation. Cf. ARO 1961 *Infinitivkonstruktionen* 4.6.

(2) *anāku meḫret ummānīya aṣbat*[54]
"I myself took the lead of my troops"

(3) *kīma ṣabtū-ma ṣabtū*[55]
"they will hold on (to their property) exactly as they have (in the past)"

In each case the emphatic device provides a qualification concerning the true nature of the element being emphasized, whether this be the predicate (1 and 3) or the subject (2). In (1) the absolute infinitive (*itaprusūm* "in flying away") verifies what would otherwise be an impossibility (barley flying away), adding an intended ironic touch to the statement. In (2) the repetition of the personal pronoun stresses the real participation of the subject in the action (the king personally took part in the campaign) as opposed, for example, to indirect participation through delegation of responsibility. In example (3), where Hammurapi writes to his bureau of land management in Larsa, the emphatic *-ma* verifies the exact meaning of the comparative value of the clause: these particular owners will maintain legal ownership of their field as they did under the previous king.

LIMITATION

(4) *[zikr]a bēlī ša taqbā atta, kīʾam [at]taʾid, anāku eppuš*[56]
"the word which you, my lord, have communicated to me in person, I will thus honor – yes, for my part, I will carry it out"[57]

(5) *anāku barīāku?*[58]
"(who else is hungry in your house?) Should I be the only one to suffer from hunger?"[59]

(6) *ilū-ma itti Šamaš dārīš u[ššabū]*[60]
"only the gods live forever under the sun"[61]

[54] *TCL* 3 331 (Sargon, SB).

[55] *AbB* 4 43: 17'-18', and passim in other Hammurapi letters; also in the legal text *MDP* 23, 173, r.9, with the verb *zāzu* (all OB). Note that the emphatic value of *-ma* after a predicate is rare, since normally it serves, in that environment, as a coordinating particle.

[56] *Gilg.* XI 33f. (SB).

[57] Utnapishtim, who speaks these words, has just received an order, directly and personally (*attā*) from Ea: with equal directness (*anāku*) Utnapishtim answers that he will be personally involved, even if others might not be.

[58] *AbB* 6 45: 11 (OB).

[59] Without emphasis, the sentence would mean: "Should I (as well as others) suffer from hunger?"

[60] *Gilg.* III ii 6 (OB).

[61] The limitation here refers to men and other living beings: while the gods have immortal life, the others (unspecified) do not.

(7) *šūpušūm-ma lišēpišū*[62]
"just have them do the work (which they have to do)"[63]

Several different formal devices are illustrated in these examples: independent pronoun in (4), independent pronoun plus stress (represented by extra long final vowel in the writing) in (5), enclitic *-ma* in (6), absolute infinitive plus enclitic *-ma* in (7). It may be noted that the enclitic *-ma* is more often than not associated with emphasis of limitation, to the point that if we were to look for a single Akkadian word to translate English "only" it would be precisely the enclitic *-ma*.

CONTRAST

This may be viewed as a subtype of emphasis of limitation, namely in such cases where the limitation is specific rather than generic. In the examples just quoted, the emphatic element is singled out of a repertory of elements which are not (and need not be, in the intent of the speaker) specified in any detail. Thus, when it is said that only the gods live forever under the sun, the context does not focus on who does not enjoy the same privilege. Or when a writer complains to his correspondent as to why he alone in the entire household should suffer from hunger, he does not contrast his personal plight with that of other specified individuals. Elsewhere, instead, such a specific contrast is brought out clearly by the context, and may be rendered in English by such expressions as "rather," "instead of." The formal devices used are the independent pronoun and the enclitic *-ma*:

(8) *lū atta lū anāku ... ḫurāṣam addaššum*[64]
"either you (rather than me) or I (rather than you) will give him gold"

(9) *atta ul tamaššaḫ, anīni nimaššaḫ*[65]
"we ourselves will measure the barley instead of you"

(10) *atti tīdē, anāku lā īdū*[66]
"you yourself know, whereas I, for my part, do not"

(11) *iṣam ša ina qištīšu mītu lā inakkisū, iṣam warqam-ma likkisū*[67]
"one should not cut down wood which is already dead on the tree, but rather green wood"

[62] *AbB* 5 136: 9 (OB).

[63] Hammurapi is enjoining a provincial official that certain workmen, especially selected for the building of a dam, ought not to be put on any other job.

[64] *CCT* 4 49 b: 27 (OA; *addam* is Assyrian for *anaddin*).

[65] *YOS* 3 13: 25-26 (NB).

[66] *KAR* 73: 21.

[67] *AbB* 2 56: 20-22 (OB).

(12) *andurār suluppī ina Urim-ma šakin, ina Bābilim ul šakin*[68]
"in Ur rather than in Babylon has a release of (debts payable in) dates has been established."

(13) *awīlum-ma wark[ī eqlīšu] illak*[69]
"it is the man who follows (the assignment of) the field, (not vice versa)"

EXCELLENCE

Just as the emphasis of contrast is a special sub-type of the emphasis of limitation, so is the emphasis of excellence. Here the exclusion of other elements is not total, but rather a matter of degree: it expresses the elative aspect of the comparison, by indicating that the subject which is emphasized surpasses in quality whatever else it is implicitly being compared with. A paradigm may best summarize the differences between the limitative mode and its two sub-types:

anāku ina bītim āmuršu (independent personal pronoun as emphasis)
"I (and not anyone else) saw him in the house" – limitation
"I (rather than you) saw him in the house" – contrast
"I (better than you) saw him in the house" – excellence

The following examples of emphasis of excellence show the use of the independent personal pronoun with enclitic *-ma* (14) and of word order inversion (15-16).

(14) *anāku-ma rē'ūm mušallimum*[70]
"I, more than anyone else, am the shepherd who brings peace"[71]

(15) *ša Šūzubi ... aštakan dabdāšu.*[72]
"of none less than Šuzubu did I cause the defeat."

(16) *ana warkat ūmī, ana matīma ...*[73]
"in the future of days, for ever, ..."[74]

[68] *TCL* 17 14: 4-6 (OB).

[69] *AbB* 2 38: 3'f (OB).

[70] *CH* rev. xxiv 42-43.

[71] Hammurapi claims here a special degree of leadership, vis-à-vis other kings.

[72] *OIP* 2 iii 53-54 (Sennacherib, SB).

[73] *CH* rev. xxv 59-61.

[74] Here the stress is on the temporal dimension, through inversion of word order. Hammurapi's claim to fame is for more than just a short period of time: in contrast with an ephemeral perspective, as might be the case for other kings, Hammurapi's horizon opens into eternity. See below, 68.

ADDITION

The notional converse of contrast (viewed as exclusion) is addition: in this type of emphasis (for which I have noted only the use of *-ma* as a formal device), what is expressed is the participation of the subject in addition to what might otherwise be expected. As such, the enclitic *-ma* may be understood as standing for English "also, too."

(17) *kīma ēpiš ṣibūtim, lā ša šūta'ʾīm, šū-ma ul tīdē?*[75]
"don't you know that he, too, performs a task and is not to be neglected?"

(18) *umma Marduk-qarrad-ma: Anākū-ma appal*[76]
"PN said: 'I too, for my part, will satisfy (my obligation)'."

66.10 A note on ambiguity

The analysis of emphasis as presented here is more detailed than one would normally expect within the bounds of this grammar, but it seemed worthwhile considering how my conclusions lie well beyond the general understanding of the phenomenon. By way of conclusion I wish also to call attention to the relationship between emphasis and ambiguity, and to offer a comment on terminology.

One generally thinks of emphasis as a redundant addition, a discussion of which belongs more properly to style than syntax. As the etymological value of the term would suggest ("to show something within"), emphasis would seem to express something more than one would normally say, though this something is not generally understood as being particularly important, hence its being viewed as redundant. What I have tried to show is that in fact emphasis expresses less rather than more, and that this "less" can be handled with precise syntactical rules. It expresses less, because it takes the place of what could be given as a lexically differentiated adjunct; but it can be handled, because it serves the same function as such differentiated adjuncts.

What remains a function of stylistic analysis, or more properly of discourse analysis, is the more general notion of ambiguity. Just as with referentiality (for which see above, 57.9; 63.6), ambiguity plays a fundamental role in linguistic expression. The more unambigous a discourse is, the more simple and explicit is its level of referentiality. Conversely, an ambiguous discourse increases the referential layers of expression, placing more demands on the attention of the listener, and heightening thereby the tensional factor inherent in the communication and the

[75] *AbB* 4 53: 15-17 (OB).

[76] *AbB* 1 10: 20-21 (OB).

consequent level of interest expected in the exchange. Two poles in this expressive continuum are technical lists on the one hand and poetry on the other. Emphasis is one of the major mechanisms used to express implicit referentiality – and as such we can hardly expect it in economic texts, whereas it abounds in letters or literature. An adjunct is intimated by emphasis, but its full details are left to be understood from the referential dimension of the context. It is a calculated ambiguity, the resolution of which lies within the realm of the immediate discourse. But while the impact of the phenomenon lies on the level of style, a definition of its operational mechanisms can, as I have suggested, be brought back to the level of syntax. And since the term "emphasis" refers quite unequivocally to the phenomenon defined here, it should be retained as such in spite of the etymological quibble raised above.

SECTION B
SEQUENTIAL CORRELATIONS: WORD ORDER

Chapter 67
Absolute Positions

67.1 Absolute and relative positions

Limitations on the sequential juxtaposition of constituents[1] fall into two types, depending on whether a certain sequence of constituents may or may not be interrupted by other intervening words. In the latter case we have an absolute positional value for the words affected by the sequential rule, while in the former the positional value is relative.

Within the absolute positional sequence, we may in turn distinguish cases where words must be in direct contact with each other, from cases where they are at sentence boundary – where we can further distinguish between initial and final positions.

67.2 Contact sequences

The first instance where contact sequences between constituents may clearly be established is found when either the subject or the complement or, more rarely, the adjunct, consist of suffixes: then they always follow the predicate, and are in close juncture with it. Examples:

[1] For word order within noun phrases see below, 82.

suffix	
subject	*šarr-āku* "I am king"
direct object	*āmur-šu* "I saw him"
adjunct	*addin-šum* "I gave to him"
	ēkim-šu "I took away from him"

Complement and adjunct may occur together as suffixes, in which case the adjunct precedes the direct object, e.g.,

addin-šum-šu "I gave it to him."

The only other instance, outside of suffixation, in which a contact sequence seems to obtain is between subject and predicate when the subject is an interrogative pronoun and the predicate a nominal predicate. In the following examples, the contact position between subject and predicate (indicated by the notation ∩) is required in the specific sense that, for instance, a sequence such **Mīnu ina Bābilim ana dummuqīkunū qištakunū?* would seem to be either impossible or emphatic (as would English "What, in Babylon, is your reward ..."):

ina Bābilim ana dummuqīkunū mīnu ∩ qištakunū?[2]
"what is your reward in Babylon for your good behavior?"
mīnu ∩ damqu ina pān ramānīšunū[3]
"what is the favorable thing in their opinion"
lā Išum ālik maḫrīya mīnu ∩ baši-ma?[4]
"were it not for Ishum, my guide, what would exist?"
mannum ∩ banī ina etlē? Mannum ∩ šaruḫ ina zikarī?[5]
"who is (the most) glorious among young men?
who is (the most) eminent among grown-ups?"
ina šamē mannum ∩ ṣīr? Ina erṣetim mannum ∩ ṣīr?[6]
"who is the exhalted one in heaven? who is the exhalted one on earth?"
ayyū ∩ kām Anzī ina ilī mārīka?[7]
"who would be the subduer of Anzu among the gods your children?"

[2] *AbB* 2 88: 7'.

[3] *ABL* 1165: Obv. 10-Rev. 1.

[4] *Irra* (fragm. 1): 16.

[5] *Gilg.* VI 182 f.

[6] IV R 9: 54, 56.

[7] *CT* XV 40: iv 20.

67.3 Sentence (and clause) final

In discontinuous sequences, i.e., sequences in which no contact is required between constituents, rules can be established only for final and initial position. These position rules apply whether the sequence is a sentence or a clause; we treat clauses here together with sentences, even though we are at present dealing only with major constituents, because of the similarity of structure between the two.

Only two elements are normally found in sentence or clause final.

(1) The subject is sentence final when it is an independent personal pronoun and the predicate is not in the predicative state – in which regard one should note the close parallelism with the contact sequence found in the permansive *šarr-āku* ~ *šarrum dannum anāku*[8]. Examples:

ina Bābilim warad ekallim anāku[9]
"in Babylon I was a servant of the palace"
kī yātī-ma atta[10]
"you are exactly like me."

Note that *-ma* in the latter example reinforces the interpretation of *kī yāti* as the predicate. In sentences like

bēlī atta
"you are my lord"
ul abī atta[11]
"you are *not* my father";

one may consider the possibility that *atta* is in fact the predicate, in which case the translation would be:

"my lord is you."

But since normally the predicate is the most generalizing element, the traditional interpretation seems better.

Clear exceptions to this word order rule (identifiable because of the *-ma* after the predicate) are not frequent, e.g.,

[8] See HUEHNERGARD 1986 "Verbless."

[9] *AbB* 4 118: 8. Generally, however, the free forms of the subject personal pronoun tend to occur either in initial position or immediately before the verb, see GOODNICK-WESTENHOLZ 1971 *Aspects* pp. 23-24 and pp.25-29.

[10] *Gilg.* XI 3.

[11] *CH* §192 rev. xvii 6.

anāku wēdišīya-ma[12]
"I, for my part, am all alone."

(2) In all other cases, and that means in the vast majority of the cases, sentence final is normally occupied by the predicate, be it verbal or nominal, e.g.:

verb. pred.: *šarrum illik* "The king went"
nom. pred.: *bītum annūm bīt-ka*[13] "This house is your house."

Exceptions are not infrequent, especially in poetry and political literature (royal inscriptions). They seem to occur mostly for euphonic and stylistic reasons, and may be divided in two groups accordingly.

(a) The predicate occurs in penult rather than final position in order for the sentence to end with a syllabic sequence consisting of long and short syllables with stress on the first ("trochaic clause"),[14] which is a preferred prosodic feature for sentence final, e.g.:

išpura rakbūšu[15]
"he sent his messengers";

with the predicate in final position, the sentence would end with a dactyl rather than a trochee:

rakbūšu íšpura.

Often, however, the inversion occurs even without any effect on prosody, and one may perhaps conclude that, especially in political literature, a new sentence final sequence had become acceptable, namely the sequence predicate – direct object, at least when the direct object consists of a single word ending in a trochee, e.g.,

uṣaḫḫir massu[16]
"I reduced his country."

(b) Another common exception obtains when inversion in the normal order of constituents is meant for emphasis, in which case the predicate tends to occur in initial position (see above 66.8-9 for the notion of emphasis). This occurs both with nominal predicate:

[12] *TCL* 17 38: 11.

[13] *ARM* 5 20: 25. 35.

[14] This is the traditional term. In point of fact, a "spondaic clause" (two long syllables with stress on the first) is also avoided. The rule should thus be understood as referring to a sequence of two syllables with stress on the first.

[15] *OIP* 2 iii 49 (Sennachierib).

[16] *OIP* 2 iii 34 (Sennacherib).

ana nawēm ša Hana ... šulmum[17]
"for the encampment of the Haneans there is peace"
i.e., "as for the encampment of the Haneans, it is at peace."
rēš qānīya mīnum[18]
"what was the original length of my reed?";

and with verbal predicate:

tuštamriṣ libbī[19]
"you have really embittered my heart"
ul tīdē kīma mātum kalūša ša Marduk u Samsuiluna?[20]
"don't you know that the whole land belongs to Marduk and Samsuiluna?"
i.e., "You ought to know very well that ..."

The latter sentence is to be contrasted with a regular sequence such as:

kīma numātum ša ittanabbalū numātī-ma ul tīdī[21]
"don't you know that the furniture they keep taking is my furniture?"

67.4 Sentence initial

No limitations apply to sentences with regard to initial position, whereas there are limitations for clauses (see below, 81).

[17] *ARM* 2 59: 11-13.

[18] *RA* 23 (1936) 81, cf. Jacobsen 1960 "*Ittallak*" 103.

[19] *VAB* 6 210: 6, cf. Von Soden 1952 *Grundriss* §130d.

[20] *TCL* 17 55: 6-7.

[21] *TCL* 17 53: 8-9.

Chapter 68

Relative Positions

No firm rule seems to govern the relative sequence of constituents in a sentence or clause, i.e., no rank may be assigned to the relative position of subject, object, predicate and adjunct. (The case is different with the constituents of phrase as resulting from nominalization, see below 83.) Certain trends, however, may be pointed out, the validity of which still needs to be tested statistically on a representative body of texts. In general, we may state that Akkadian is of the SOV type (Subject – Object – Verb), though in the terminology used here this may rather be expressed as Subject – Complement – Adjunct – Predicate. The trends may be stated as follows.

(1) The subject tends to occur before the direct object, e.g.,

dayyānum dīnam idīn[1]
"the judge has issued a verdict"

(2) The direct object tends to occur before adjuncts, e.g.,

ūmam ana mūšim līter[2]
"may he turn the day into a night"

(3) The major emphasis (see 66.8) tends to fall on the element which is farther away from the predicate, toward the beginning of the sentence or clause, e.g.:

ana warkāt ūmī, ana matīma	(adjunct of time)
šarrum (ša ina mātim ibbaššū)	(subject + attributive clause)
awāt mīšarim (ša ina nārīya ašṭuru)	(object + attrib.clause)
liṣṣur[3]	

"In the future, forever,
the king who will be in the land,
the words of justice, which I wrote in my stela,
let him keep."

[1] *CH* §5 vi 6-7.

[2] *CH* rev. xxvii 88-89.

[3] *CH* rev. xxv 59-67.

SECTION C

SEMANTIC CORRELATIONS: FEATURE ANALYSIS

Chapter 69

Syntax and Lexicon

While the most outstanding feature of the lexicon is the attribution of specific semantic meanings to the words of the language, it also has direct relevance for grammar. In terms of morphology, it provides the base form out of which all inflectional variations may be derived. In terms of syntax, the lexicon provides for each entry a set of distinctive features which are essential in correlating words with each other. In other words, just like the basic form of the word as given in the entry determines the specific paradigmatic variations (as described in the morphology), thus the possible range of syntagmatic relations with other words and enclitics in any context (as described in the syntax) is equally determined by a listing in the lexicon. The lexicon provides the information which allows to predict the variations and contextual occurrences of the word.

The limitations on syntagmatic relationships of words are determined not only by inflectional and taxemic considerations (government, concord and word order, as described above), but also by specific idiosyncrasies inherent in specific words. These idiosyncrasies are represented formally by clusters of features which divide the lexicon into classes of words – every class comprising words characterized by the same features. Features are normally identified by means of notional terms, such as "animate" or "human," but they may be analyzed distributionally. To give an example, words like *bītum* "house," *gišimmarum* "palm tree" or *kalbum* "dog" share the (distributional) feature of never occurring as subjects of verbs like *qabūm* "to speak" or *ḫasāsum* "to think" (except for very special contexts and genres such as fables). The feature which ties together the nouns mentioned may

be defined negatively as "non-human," a notional term due to the fact that no noun referring to humans occurs in the same class; conversely, nouns which may occur as subjects of those verbs, such as *awīlum* "man" or *šarratum* "queen," may be said to share the opposite feature "human." The words *bītum* and *gišimmarum*, on the one hand, will not occur as subjects of other verbs such as *alākum* "to go" or *akālum* "to eat," while on the other hand such correlation is possible for nouns like *kalbum*, *awīlum* or *šarratum*. The feature common to the latter group of nouns may be defined as "animate," while *bītum* and *gišimmarum* will be said to share the feature "non animate."

Features describing lexical classes of this type are expressed regularly by means of a binary system, whereby, if an inventory of features is drawn up, every word may be defined as either having or not having such feature. It must be noted that certain features automatically presuppose other features, e.g., the feature "human" automatically comprises the feature "animate," and conversely the feature "non animate" comprises the feature "non human." The opposite correlations, however, are not true, i.e., the feature "animate" is *not* coterminous with the feature "human," for it has a much wider range; in other words, a noun may have the feature "animate," but not "human" (e.g., *kalbum*). The same would apply to the feature "non human" which is wider than "non animate" (again with the same example, *kalbum*).

The general convention used to indicate presence or absence of a given feature is to mark the feature with either a plus or minus: each feature is enclosed in pointed brackets, and a cluster (or segment) of features is enclosed in long square brackets, e.g.,

bītum [<+ noun>
<- human>
<- animate>]
etc.

Note that <+ noun> excludes a verb, <- human> excludes <+ human>, and so on. While I will not use this formalization here, I will discuss in some detail (in the next chapter) certain substantive aspects of feature analysis which are often discussed in traditional grammar outside of a formal approach like the one proposed here.

In the dictionaries, only a few such features are in fact indicated overtly, and then without any consistent formalization. For example, in *CAD* nouns and verbs are regularly and explicitly identified as such, but the feature of gender is indicated only exceptionally. Other features are present only covertly in the semantic definition: thus *bītum* is implicitly defined as <- animate> because the same feature is intuitively present to a speaker of English in the word "house" which is given as

the semantic equivalent of *bītum*. In cases where a discrepancy occurs between Akkadian and English, this is often indicated either by a special translation, or by some other device such as capitalization: thus *šamšum* is both the "sun" (with feature <- animate>, written with lower case initial) and the "Sun(-god)" (with feature <+ animate>, written with upper case initial).

Chapter 70
Feature Inventory

70.1 Nouns: notional categories

The main features of the Akkadian noun may first be listed as discrete categories on the basis of a notional understanding of the value of each category. Thus the feature "animate" may be understood as referring to living beings, "concrete" to a tangible element, "common" to the undifferentiated member of a generic class, "count" to elements which are susceptible of being counted, "masculine" to sexual definition as physical male or simply gender definition as morphological masculine. Such categories are listed here without further comment, since they are self-explanatory. The format of the listing below gives first the name of the category, which coincides in every case with the positive pole of the binary pair; where the negative pole is known under a separate definition, this is indicated in parenthesis in the second column; where a category is automatically subsumed under another one, this is indicated by an equation in the next column (+animate = +concrete means that every animate noun is also concrete).

animate	+	= concrete	*awīlum, kalbum*
	- (inanimate)		*bītum*
human	+	= animate, concrete	*awīlum*
	-		*kalbum, bītum*
concrete	+		*awīlum, bītum, kalbum*
	- (abstract)		*dumqum, ilūtum*
common	+		*kalbum*
	- (proper)		*Ḫammurapi*
count	+ (sing./plur)		*bītum, kalbum*
	- (sing. only)		*dumqum, ṣēnum*
masculine	+		*kalbum*
	- (feminine)		*kalbatum, ummum, ṭabtum*

It may be noted that application of feature analysis to the two classes of subject nouns and description nouns, distinguished as such in morphology on the basis of inflectional categories, confirms their basic difference, as pointed out by the following chart:

	subject of action and condition, and primary nouns	description of action and condition
animate	+/-	-
human	+/-	-
concrete	+	-
common	+/-	+
count	+/-	-
masc.	+/-	+/-

70.2 Formal correlation to verbs: partial restrictions

The features of gender and count impose restrictions of inflectional nature on the correlation between nouns and verbs. The element in the correlation for which the feature is not predictable (i.e., is given lexically) is called the head of the construction. Thus in the sentence

awīlum illik "the man went"

one may say that *awīlum* is the "head," and that as such it "governs" *illik* because the feature +masculine is specified in the lexicon for *awīlum*, not for *alākum*, which is indifferent to the feature masculine.

Similarly with an attribute, resulting from the nominalizing transformation described below in chapter 77, the attribute itself is governed by the noun with regard to number and gender, e.g.,

ummum damiqtum "the good mother,"

where *ummum*, with the feature -masculine and +count, determines the inflection, i.e., governs the attribute *damiqtum*.

These correlations may be defined as *partial* restrictions because the range of possible correlations of this type is not defined by the semantic value of the verb. In the first example above, the use of the masculine singular for *alāku* is conditioned by its correlation to a masculine singular subject, and is not built into the semantic value of the verb; in other words, the verb *alāku* obviously admits of

being inflected for any gender and any number, given all correlations with an appropriate subject.

70.3 Formal correlation to verbs: total restrictions

Total restriction obtains in the correlation between noun and verb when such a restriction is built into the semantic range of the verb. For instance, the verb *alāku* admits only of animate subjects, hence

awīlum illik

is a correct sentence, but

**bītum illik*

is not. Most verbs remain indifferent to the features count, gender and common, meaning that generally any verb will admit plural or singular, masculine or feminine, common or proper subjects (though occasionally such restrictions are in fact applicable, see for example a verb like verb *walādum* "to bear" which admits primarily feminine subjects[1]). But with regard to the other features, the restrictions in the correlation between nouns and verbs are complete. This means that if verbs and nouns have different features, they may not be correlated under any circumstance as subject and predicate respectively – hence the following two sentences are not possible:

**bītum*	*iqbī*
-human	+human
"the house	spoke"

**bītum*	*illik*
-animate	+animate
"the house	came."

Feature analysis defines also the use of complements in two ways. First, verbs may be differentiated as to whether or not they govern a direct object; this is known as transitivity, and may be represented as follows using the convention introduced above:

transitive {	+	= fientive	*ṣabātu*
	- (intransitive)		*damāqu, alāku.*

(Transitivity has already been discussed in connection with the direct object, see above, 65.1; and see 65.6 for the notion of compound complement).

[1] A male subject is presented as a monstrous portent, see *CAD A*/1 290 a. With the meaning "to beget" the verb occurs also with male subjects (as my student JAMAL OMAR has pointed out to me, this is the case in Arabic with the same root), but only rarely, see *CAD A*/1 292.

Second, a further distinction obtains within transitivity itself for some verbs. Restrictions of the type noted at the beginning of this paragraph are common with nouns as subjects, but they are also found, less frequently, with the noun as object. For instance the verb *dāku* only governs animate objects, so that

awīlam	*idūk*
+animate	+animate/obj.
"a man	he killed"

is a correct sentence, but

**bītam*	*idūk*
-animate	+animate/obj.
"a house	he killed"

is not.

Finally, there are correlations which are limited to certain specific semantic ranges of the same verb. For instance, *dannum* has the meaning "powerful" when correlated to the feature "human," but the meaning "harsh" when correlated to the feature non-human:

šarrum dan "the king is powerful"
ūmum dan "the weather is bad"

70.4 Action and condition: notional categories

One of the fundamental distinctions in Akkadian is that between roots of action and roots of condition. This may be considered a lexical feature:

action {	+ (fientive)		*alāku, ṣabātu*
	- (stative)	= intransitive	*damāqu*

The correlation between action and condition (which is subsumed under the lexical feature of +/- action) is referred to in this grammar by the term "scope"; on the other hand, an actual form is referred to by the term "process" (this term, then, remains neutral with regard to the specification of action or condition, since it subsumes both). In this grammar I use the term "fientive" to refer to a root of action (since the adjective "active" has a different specialized meaning) and the term "stative" to refer to a root of state or condition (since the adjective "conditional" has a different specialized meaning; also, it should be noted that I use the term "permansive" instead of "stative" to refer to a simple or bound nominal sentence, see 25.3). The term "fientive" is common in the field of Akkadian studies, and is derived etymologically from Latin *fieri* "to become"; the equivalent term in general linguistics is "dynamic." See also above, 16.3.

The notional value of roots of action and condition seems at first apparent on the intuitive basis of a translation into English, but this can be quite deceptive. The distinction between action and condition, which is fundamental for Akkadian grammar, is in fact missing as a category of grammar in English. It should be stressed, however, that it is missing only as a distinctive grammatical mechanism, and is otherwise present through a wide ranging set of grammatical and lexical categories,[2] some of which are listed here:

1. copula plus adjective
2. lexical
3. periphrasis
4. passive (finite form)
5. adverbial qualification

The following table gives some examples:

	Akkadian nom.sent.	English	catg.	Akkadian finite form	English	catg.
stative	*damqāta*	you are good	1	*tadammiq*	you get well	3
	peṣī	he is white	1	*ipteṣī*	he turned white	3
	maruṣ	he is sick	1	*imraṣ*	he fell ill	3
	wasim	it is fitting	1	*issim*	it happens to fit	3
	wašbat	she is sitting	1	*ūšib*	(s)he sat down	5
trans.	*ṣabit*	he holds	2	*iṣbat*	he seized	2
	petī	it is open	1	*ippettī*	it is opened	4

The asymmetry between Akkadian and English makes it all the more imperative to seek a rigorous definition of the notion of process, the term which I use to subsume both action and condition. A useful category in this regard appears to be the temporal framing of the process itself, i.e., its beginning and its end. In this perspective, state may be viewed as a process which excludes any built-in reference to beginning, duration or end, while conversely action may be viewed as a process which contains such a built-in reference. An expression of state such as *damiq* "he is good" is simply neutral with regard to any such temporal framing, whereas an expression such as *izakkar* "he speaks" implies a type of unfolding which has a beginning and moves towards an end.

[2] In some cases, however, there is a lack of differentiation which results in ambiguity, see for example: "he drives" (fientive, meaning "he is driving a car right now, do not disturb him") vs. "he drives" (stative, meaning "he knows how to drive a car, he is a driver," or even "he owns a car"). – The lexical contrast in English may be found even outside of the verbal sphere, e.g., "wedding" (fientive) vs. "marriage" (stative).

Such a characterization of the scope of the process may seem incorrect in the case of roots of state, since from them one can derive forms which are clearly "fientive" in nature, i.e., the finite forms (and participle) of the B, D and Š stems. But these forms have a special value, and this reinforces the interpretation proposed here. The B and Š stems have an ingressive value whereby a secondary reference accrues to the verbal form: the subject is viewed as "entering" the state, and fientivity applies to this secondary reference, not to the primary semantic range of the root. In other words, the fientive aspect is used to express "entrance" into the state on the part of the subject, and not the beginning of the state as such. Similarly with the D stem, where the secondary reference that accrues to the verbal form is factitive: the fientive aspect is used to express an outside intervention which produces the state, without however setting in motion the state as such.

Such considerations may appear purely speculative and subjective, but fortunately they are not critical for a definition of the categories of state or condition, because there are some extensive and rigorous formal criteria that establish beyond doubt the distinction. To these we will now turn our attention.

70.5 Action and condition: formal criteria

A root of condition, or stative, is distinguished, in Akkadian, from a root of action, or fientive, because of the particular configuration which each type of root exhibits in the use of verbal forms and nominal patterns. Such a formal distinction is based on six criteria:

(1) In the B stem, statives do not occur in the participle and occur rarely in finite forms, and then with an ingressive aspect only; conversely, only a few intransitive fientives have a verbal adjective (square brackets indicate a non-existing form, parentheses indicate a rare form):[3]

		finite form	vb.adj.	part.
fientive	intr.	*illik* "he went"	[**alku*] (*maqtu* "fallen")	*āliku* "goer"
	trans.	*iṣbat* "he seized"	*ṣabtu* "held"	*ṣābitu* "seizer"
stative		(*idmiq*) ("he became good")	*damqu* "good"	[**dāmiqu*]

[3] Two additional limitations have been noted by VON SODEN 1952 *Grundriss*. In §101 d he notes that the verbal adjective B of geminate roots (see above, 39.3) is built on the pattern PARR for stative roots, and the pattern PARIS for fientive roots. And in §103 b he suggests that the biradical treatment of the roots first *w* (see above, 43.6) applies to fientive roots only.

(2) In the N stem, statives do not occur, and fientive intransitives occur with an inchoative value only, e.g., *ibbašī* "he came into existence, he began to exist":[4]

fientive	intr.	(*innabit* "he started fleeing, ran away")
	trans.	*iṣṣabat* "he was seized"
stative		[**iddamiq*]

(3) In the D stem, statives and transitive fientives occur with a factitive meaning, while intransitive fientives either do not occur or have a special meaning:

fientive	intr.	[**ullak*];[5] *gullutu* "to make anxious" (*galātu* "to twitch")
	trans.	*uṣabbat* "he makes held (keeps in bonds)"
stative		*udammaq* "he makes good"

(4) In the Š stem, statives occur rarely in the participle and finite forms, and then with an ingressive meaning only.

fientive	intr.	*ušallak* "he causes to go"
	trans.	*ušaṣbat* "he causes to seize"
stative		(*ušadmaq* "he causes to become good")

(5) Statives are always intransitives.[6]

(6) Certain nominal patterns seem to occur only with certain types of root; a fuller study is required to indicate clearly what the distributional limitations might be, but the following array suggests, by way of an example, that the pattern PARRA:S is not used with stative roots, and the pattern TAPRI:S is not used with fientive intransitive roots:

		PARRA:S	TAPRI:S
fientive	intr.	*errēbu* "intruder"	[**tēribtu*] (*tarkibtum* "fertilization"[7])
	trans.	*errēšu* "cultivator"	*taḫsistu* "remembrance"
stative		[**eddēšu*[8]]	*tēdištu* "renewal"

[4] For an example with the idiomatic value "to materialize" see below, 79.5 n.9. – An inchoative value is otherwise also expressed, I submit, through periphrastic idioms expressing two slightly different degrees of inchoativeness, as in *alākam epēšum* "to make going, i.e., to get going" (contiguity between preparation and action) and *ana alākim qātam šakānum* "to set hand to going, to set one's mind to go" (non-contiguity).

[5] Exceptions include special lexicalized meanings like *urrubu* "to register (on a tablet)," only once in OB, *CAD E* 269 a.

[6] This refers only to stative roots in the B stem, e.g., *damiq*. The D stem, e.g., *udammiq*, is transitive by virtue of the double reference built into the stem, just as with the Š stem of a fientive intransitive, e.g., *ušālik*, see above 16.3. For the permansive of transitive fientives see below, 70.7.

[7] A rare use of the root in a restricted, lexicalized meaning, applicable only to date palms.

[8] I interpret the word *eddešū* (mostly SB) "constantly renewing itself" as from the pattern PARRAS.

It may be noted that since all statives are intransitives, and all transitives are fientive, one may use the following abbreviated terminology:

transitive	= fientive transitive	e.g., *ṣabātu*
intransitive	= fientive intransitive	e.g., *alāku*
stative	= stative intransitive	e.g., *damāqu*.

The distribution of ingressive[9] vs. non-ingressive forms is of particular interest, because of some unsuspected symmetries which emerge when one includes periphrastic formations in the paradigm. In the following chart I also include primary nouns:[10]

type of word	permansive	non-ingressive	ingressive
fientive root intransitive	–	*illik* "he went"	*ana alākim qātam iškun* "he set his mind to go" *alākam īpuš* "he set out to go" *innabit* "he started fleeing"
fientive root transitive	*ṣabit* "he holds"	*iṣbat* "he seized"	*ana ṣabātim qātam iškun* "he set his mind to seize" *ṣabātam īpuš* "he started seizing"
stative root	*damiq* "he is good"	*dumqa īpuš*[11] "he did good"	*idmiq* "he became good"
primary noun	*awīl* "he is a man"	*āšipūtam īpuš*[12] "he performed the office of exorcist"	*awīliš īwē*[13] "he became like a man" *itūrā ana titti*[14] "they turned to clay"

[9] I generally use the term "ingressive" to refer to forms which express entry into state (e.g., *idammiq* "he becomes good"), and "inchoative" to refer to forms which express beginning of action (e.g., *ibbašši* "he comes into existence"). However, for the sake of brevity, I also use "ingressive" as a generic term to subsume both ingressive and inchoative.

[10] For further details see BUCCELLATI 1988 "State" 180-84, where I use the term "performative" to subsume both fientive finite forms and periphrastic expressions denoting a non-ingressive action derived from a stative root.

[11] Cf. *CAD E* 208; idiomatically, this may be translated: "he did a good turn, a favor."

The configuration resulting from the application of the six rules given above is rendered in tabular form in the chart on the following page (▪ indicates that forms are common, ¤ indicates that forms are ingressive or inchoative, - indicates that forms are rare or non-existent):

		inf	vdj	ptc	iptv	pret	perf	pres	PARRA:S	TAPRI:S
fientive transitive e.g., *ṣabātu*	B	▪	▪	▪	▪	▪	▪	▪	▪	-
	N	▪	▪	▪	▪	▪	▪	▪	-	-
	D	▪	▪	▪	▪	▪	▪	▪	-	▪
	Š	▪	▪	▪	▪	▪	▪	▪	-	-
fientive intransitive e.g., *alāku*	B	▪	-	▪	▪	▪	▪	▪	▪	-
	N	-	¤	¤	¤	¤	¤	¤	-	-
	D	-	-	-	-	-	-	-	-	-
	Š	▪	▪	▪	▪	▪	▪	▪	-	-
stative intransitive e.g., *damāqu*	B	▪	▪	-	¤	¤	¤	¤	-	-
	N	-	-	-	-	-	-	-	-	-
	D	▪	▪	▪	▪	▪	▪	▪	-	▪
	Š	¤	-	¤	¤	¤	¤	¤	-	-

70.6 A note on analytical vs. analogical definitions

The distributional limitations described above allow us to define the semantic nature of the roots according to precise formal criteria, rather than according to intuitive correlations. The latter tend to be analogically based on a common sense extrapolation from a given translation, rather than analytically derived from verifiable sets of variables. While in most cases such an analogical understanding may well hold true, it is important to apply the formal tests here described whenever in doubt. A few examples of interesting contrasts that result from the application of such tests follow.

[12] Cf. *CAD A/2* 435. Note that the expression *āšipūtam īpuš* "he performed the office of exorcist (whether or not he is in fact an exorcist)" is in opposition to *āšip* "he was/is an exorcist (whether or not he performs his duties)."

[13] *Gilg.* P iii 25 (OB); this is said of Enkidu.

[14] *Gilg.* XI 133 (SB).

A verb like *ḫalāqu* is normally understood as an intransitive fientive "to disappear." However, since it regularly occurs in the B verbal adjective and the D stem (contrary to the distributional properties of an intransitive fientive), it should in fact be understood by virtue of its distribution as a stative with the meaning "to be missing." For the same distributional reasons, *elū* is not an intransitive with meaning "to go up" but rather a stative with meaning "to be/become high"; similarly, *wašābu* is a stative with meaning "to be settled,"[15] *wāru* is a stative with meaning "to be in motion" (and the D stem *wu>>uru* means "to make moved," hence "to order"), and *tāru* a stative with meaning "to be in reverse motion."

Conversely a verb like *bašū* is generally interpreted as a stative "to exist," but should instead be understood as a fientive intransitive, occurring regularly in the N stem with ingressive value (see above, 70.5:2 n.4), but not in either the B verbal adjective (forms which are so interpreted should instead be derived from the participle *bāšī-*) or the D stem.

70.7 A note on the permansive of transitive fientives

The permansive of transitive fientives seems at first to occur with a double meaning, depending on whether or not it governs the accusative:

(a) *eqlum ṣabit* "the field is held"
(b) *eqlam ṣabit* "he holds a field."

The first construction (a) looks like a passive transformation (for which see below, 74.1) of the second (b), just as in the following pair (c) is a passive transformation of (d):

(c) *eqlum iṣṣabat* "the field was seized"
(d) *eqlam iṣbat* "he seized a field."

The problem which arises is that the two predicate forms in (a) and (b) are identical in form (*ṣabit*), and yet seem to have two contrasting meanings ("is held" vs. "holds"). Since the main adjectival value of *ṣabtum* (from which *ṣabit* is derived) seems at face value to be a passive with the meaning "held," an explanation has been proposed suggesting that this "passive" verbal adjective be considered a different form altogether, for which the term "pseudo-verb" could be used.[16]

I prefer to analyze these forms in quite a different manner, whereby the predicate in (a) is not a passive (see below, 74.1; 77.1), and the noun in (b) is not a

[15] The presence of a verbal adjective *wašbu* and the lack of an ingressive N stem preclude considering it an intransitive fientive; the finite forms have the ingressive value "to become settled," hence "to sit down, to take up dwelling." The participle B *wāsibu* is only a late development.

[16] Huehnergard 1987 "Stative." For a more detailed discussion of this topic see Buccellati 1988 "State" 175-80. For the nominalized equivalent see below, 74.2.

direct object. My understanding may be rendered by the following translations:

(a) *eqlum ṣabit* "the field is in a state of control (it belongs to someone)"
(b) *eqlam ṣabit* "he is in a state of control with regard to the field"
i.e., "he has title to the field," "he is the owner of the field."

According to this interpretation, the predicate retains a purely stative and intransitive connotation in either example: the meaning is essentially neutral (or ambiguous) with regard to any possible object, i.e., it is properly intransitive, and, conversely, no correlative passive transformation is possible. Hence the translation "in a state of control," which in English conveys an intransitive connotation whether or not it is directed at something other than the subject. But clearly it is not just a matter of finding a suitable English translation. The distributional argument behind this conclusion may be formulated as follows.

Let us consider another transitive root, such as *gamāru* "to finish." The permansive *gamir* would in principle also have a neutral meaning "in a state of thoroughness," from which then one ought to expect the double meaning "is thoroughly done, is complete" (not governing a noun in the accusative) and "is thorough with regard to, is completing" (governing a noun in the accusative). But, significantly, such a double value of the permansive is restricted to a limited range of lexically defined items, pertaining to the general notion of "taking"[17] – and thus is not found, for instance, with a root like *gamāru*. Inasmuch as it is a permansive, a sentence like (b) *eqlam ṣabit* does not refer fientively to the event of "acquiring" as such, but rather to the attendant result, i.e., to the (static) concept of ownership or property which ensues the acquisition.

Given such a basically intransitive value of the stative root, the accusative in (b) should be considered as denoting not the direct object, but an adjunct, so that the following would be structurally equivalent:

ṣēram irpud "he ran through the steppe"
eqlam ṣabit "he holds title to the field"

(see above, 65.1; 65.3; 66.2). In the first example, the adjunct quality of the accusative is derived from the intransitive nature of the roots, while in the second it is derived from what appears to be the essentially intransitive function of the permansive. If so, rather than of a pseudo-verb, we may speak of a pseudo-transitive: this term would refer not to the root, but only to the permansive of transitive roots as a grammatical category. Such a category, however, need not acquire any special grammatical status.

[17] Expressed primarily by *ṣabātu, leqū, maḫāru, našū*, see ROWTON 1962 "Permansive" especially p.235. Rowton stresses the concept of control with reference to these verbs (p. 238 f.), and suggests the possibility that the active permansive may best be called "agentive" permansive.

70.8 Dimension of the action: punctual and durative

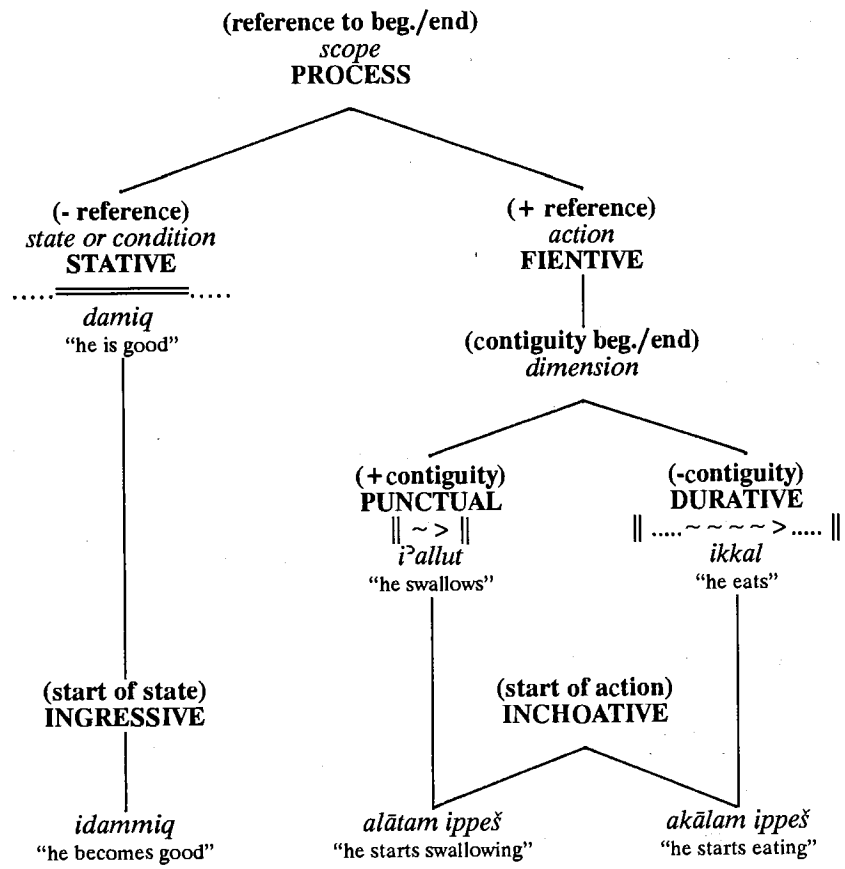
Fientive roots may further be subdivided depending on what I call the "dimension"[18] of the action. The terms used for the two categories subsumed under this dimension are "punctual" and "durative," which would appear to be self-evident in meaning. Yet here, too, it is useful to go beyond the image projected by the term (the "point") and to define in analytical terms the nature of the phenomenon envisaged. I do so by introducing the concept of a built-in reference to contiguity of beginning and end, or the lack thereof. In the case of a punctual such as *iʾallut* "he swallows," it is in the nature of the action that its end should be contiguous with its beginning, so that they are perceptually simultaneous. An expression such as *īkul* "he ate," on the other hand, does not entail such contiguity or perceptual simultaneity – in fact, the reference to either beginning or end is only implicit: the person may have started eating and be no longer eating, or may still be eating now. The same is not true of swallowing: if he swallowed at some point in the past, that particular act of swallowing can no longer be continuing now. The inchoative of a punctual makes of the latter an iterative ("he starts a series of acts of swallowing").

Such distinctions may appear subjective, but that is of no great consequence to us here because the category of dimension is practically irrelevant in Akkadian grammar,[19] and can therefore be ignored. There are, in my view, no Akkadian *grammatical* categories that can be linked with the dimension of the action, so that the distinction is at best semantic: the use of the preterite does not make *īkul* a punctual any more than the use of the present makes *iʾallut* a durative. It is true that some roots are bivalent as to dimension. For example *iṣabbat* may be viewed as either punctual ("he seizes in one instant, he grabs with his hands") or durative ("he is in the process of seizing over a period of time"). But the difference is context-bound, i.e., is not conveyed by specific mechanisms, whether lexical (as with *iʾallut*) or grammatical (the same present form stands for both punctual and durative).

To conclude, it may be useful to show in diagrammatic form the relationships among the various categories discussed. In the diagram on the next page, bold lower case denotes the pertinent factors, italics denote the conceptual definition of the node that subsumes a binary pair, bold upper case denotes the term used to define a given form; a straight double line is used as a symbol for state, a wavy arrow for action, a double vertical bar for beginning and end of the action.

[18] This term is used in this grammar in place of the German *Aktionsart*, see above, 16.3, where one will find a discussion of the points raised here from the point of view of the notional categories of verbal patterns.

[19] A possible exception is the use of the participle in the predicative state, see above, 25.4. See also above, 16.3.



70.9 Correlations between semantic and morphological criteria

The charts given here imply a correlation between semantic values intrinsic to roots (and expressed as lexical features) on the one hand and, on the other, further semantic values expressed periphrastically (e.g., *alākam ipuš* "he sets out to go") or meaning functions expressed through grammatical mechanisms (e.g., *idammiq* "he becomes good"). Thus I have defined a stative root as one which refers (notionally) to a process unbounded as to beginning or end, and (formally) to a lexical item which admits only a specific configuration of grammatical classes.

From such correlation it appears that some of these grammatical classes are specialized in expressing certain semantic values. Thus a permansive or a nominal sentence are only stative (they can only express condition), while a participle or a finite form are only fientive (they can only express action). Only the distinction of-

dimension between punctual and durative is not, in my view, correlated to grammatical forms in Akkadian, although the distinction itself is applicable to fientive forms.

A fuller set of such correlations is given above in chapter 16, where one will find a discussion of such categories as those of tense, aspect, simple or double external reference (derived stems).

It must be stressed that while many expressive functions are served by a variety of mechanisms, there is no necessary or unequivocal correlation between functions on the one hand and mechanisms on the other. By way of illustration, we may cosider some of these correlations, considering alternatives for forms that are morphologically impossible (marked by an asterisk), in order to emphasize how some of these mechanisms compensate for others when they are not available. For instance, while there is no factitive D stem from the verb *bašū*, such as **ubaššī* "he makes existing," the verb *epēšu* "to make" may be considered as a lexical equivalent (see below, 73.5); similarly, in lieu of an impossible factitive from a primary noun, a periphrastic form with *turru* may be used;[20] on the other hand, one of the rare denominative verbs of Akkadian, *šunnū* "to double" (from *šanū* "two") uses the factitive D stem. Some examples are shown in tabular form in the chart on the following page, where I exclude context-bound examples, which are properly to be treated at the level of the discourse.

[20] See for example *kišubbā iptī-ma ana eqlim utīr* "he opened up fallow land and turned it into a (regularly cultivated) field" *KAR* 392 r.8 (SB).

function	mechanism		
	finite form	lexical	periphrastic
factitive	*udammiq* he made good *ušannī* he made second **ubašši* [he made existent] –	– *īpuš* he made –	– – *ana eqlim utīr* he made into a field
ingressive	*idammiq* he became good – –	– – –	– *awīliš īwe* he became like a man *ana titti itūrā* they turned to clay
inchoative	*innabit* he started fleeing –	– –	*alākam īpuš* he started going *ana alākim qātam iškun* he set out to go
punctual	–	*iʾallut* he swallows	–

CORRELATION BETWEEN SEMANTIC AND MORPHOLOGICAL CRITERIA IN THE EXPRESSION OF ACTION AND CONDITION

PART II
TRANSFORMATIONS

Chapter 71
Introductory

71.1 Concepts and terms

In actuality, syntax is not limited to constituents as described in part I. To deal with those elements of the sentence which cannot simply be explained as constituents, we use formal mechanisms which permit us to reduce everything else to the level of constituents. Such mechanisms are called "transformations": as such, they "transform" the deep structure into the configuration it assumes on the surface (see already above, chapter 59). The goal of syntactical analysis will then be to identify patterns of regularity in such correlations.

Clearly, one should not visualize such a procedure as one which presupposes either a temporal or a causal sequence of any sort. Rather, transformations are purely statements of correlation which rewrite, when necessary, any given linguistic segment in terms of constituent structure. In other words, transformations are purely explicatory devices which give us the means to express through a precise and transparent formal argument our understanding of the levels of immediacy among words (see above, 57.2).

In and of itself, the notion of transformation is neutral as to the direction in which the transformation is applied. Conventionally, we understand a transformation to operate in a direction going from the deep to the surface structure; hence the grammatical procedure is also called "generative." It must however, be stressed that this is not to be understood in any way other than as a logical sequencing of alternative renderings of the same reality. Hence, the reverse proce-

dure would also be just as applicable, whereby the process would be one of reduction from the surface to the deep structure.

The specific construction of deep structure which is viewed as underlying the surface constellation of elements is called "kernel." And the specific construction which is viewed, on the surface, as the target of the transformation is called "transform."

71.2 A note on the use of transformations

A proper application of the concepts just outlined would entail that every sentence in the language be considered as resulting from transformational processes. In other words, no actual sentence would consists of pure immediate constituents, since, for example, the choice of an appropriate verbal tense is not present in deep structure and would instead depend on a transformational choice.

My presentation is, however, hybrid in this respect, since only certain types of transformation will be dealt with below, while others have been covered within morphology (see for instance above, 16.3, with regard to the notional value of the tenses).

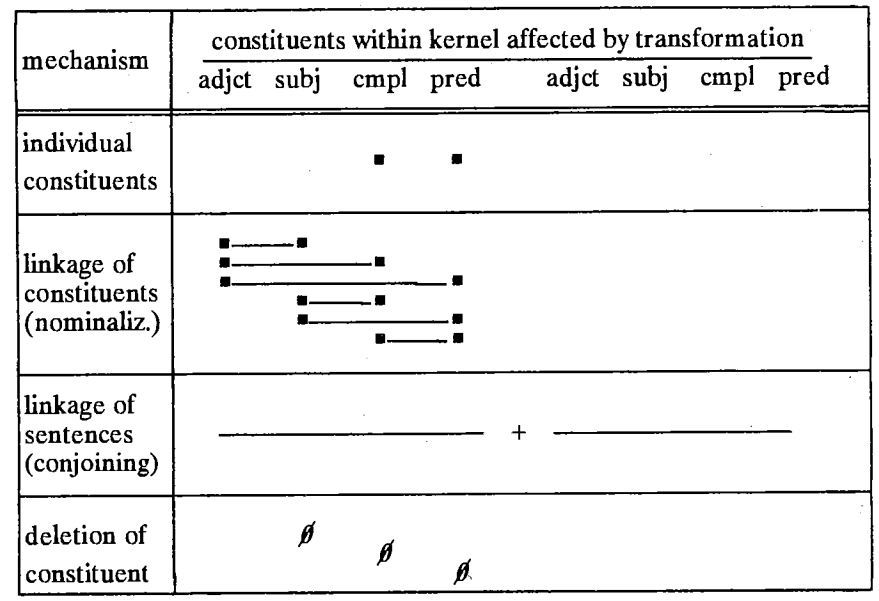
The degree of formalization is also minimal in this grammar, since kernel sentences are given as actual sentences in an effort to show intuitively the applicable correlations without the precision of a more abstract notation. An example of the procedure used is provided by the chart listing the various types of nominalization (see below, 75.2), where the constructions labeled as "deep structure" represent in fact an intermediate degree of surface structure.

71.3 Criteria of organization

I have organized the various types of transformations under four headings, sorted on the basis of the surface configuration of the transform; each of these four headings will be treated under a separate section. (1) The resulting transform is a simple sentence, and the underlying kernel is affected through the alteration of individual constituents, for the most part the predicate. (2) The resulting transform is a noun phrase (hence the transformation is also called "nominalization"), and the underlying kernel is affected through the linkage of any two constituents. (3) The resulting transform consists of two sentences which are linked together (hence the term "conjoining"), and the underlying kernel is affected with regard to the degree of reversibility between the two sentences. (4) The resulting transform

is either a sentence or a noun phrase, and the underlying kernel is affected through the "deletion" of a major constituent.

The overall configuration may be indicated diagrammatically as follows:



SECTION A
INDIVIDUAL CONSTITUENTS

Chapter 72
Introductory

The predicate assumes one of several possible surface characteristics depending on a variety of possible ways in which one can understand either the nature of the process or the role envisaged for elements other than the process.

First I will consider the way in which the process itself is affected by the transformation.

If the process is being qualified as to the degree of factuality, we have three types of transformation: interrogative, if the process is being questioned; negative, if it is denied; and potential, if it is considered possible. The potential is further differentiated depending on whether its actual realization is within range (simple potential) or not (unrealizable potential).

If an additional process is built into the primary process, we have two types of transformation – causative and factitive. In both, the primary process is presented as being produced by means of a secondary process: if the primary process is expressed by a fientive root, we have a causative transformation; if by a stative root, a factitive transformation.

The second type is the one in which the transformation depends on an element other than the process – the object of a transitive verb, or the interlocutors, i.e., the speaker or the listener.

Foregrounding of the object of a transitive verb results in the passive transformation: the target of the action appears as the subject, the predicate is realized in the passive form, and the agent of the verb is omitted altogether.

If the speaker issues a command or expresses a wish, the verb on the surface level is transformed into the imperative or the desiderative.

If the time frame of the action is switched from the position of the speaker to that of the listener (or the addressee in the case of a written text), the preterite may be used to refer to an action which would normally be rendered with the present (the present being contemporary with the speaker's position in time, and the preterite referring to the action as past by the time it reaches the listener, or addressee). This is called performative.

The mechanisms employed are for the most part inflectional in nature, but two additional ones are also used: intonation and special particles.

The following chart summarizes the various types in diagrammatic form.

				surface characteristics	
				inflectional	non-inflectional
transformations affecting:	process	qualification of factuality	interrogative		intonation
			negative		particle
			potential	desiderative +	intonation
			unrealiz.potent.		particle
		additional process	fientive root	causative	
			stative root	factitive	
	other elements	object	foregrounding	passive	
		speaker	command	imperative	
			wish	desiderative	
		listener	performative	preterite	

Chapter 73
Transformations Affecting Process

73.1 Interrogative

A change in intonation, and perhaps in stress, is apparently the only marker of the interrogative transformation in Akkadian. The regularity, and even the precise nature, of this marker cannot be determined because no consistent indication of it is given in the writing. Only occasionally does one find an extra vowel sign to mark a syllable which is not morphemically long: the additional vowel is likely to indicate stressed syllable, presumably with secondary lengthening and with change of intonation to signal an interrogative tone. Whenever indicated in such manner, stress seems to fall on the last syllable of the word, e.g.,

šarr'ānū išlimū "the kings have made peace"
šarrān'ū išlimū?[1] "have the kings made peace?"
eql'ūm dūrum matīma innekkim?[2]
"has a homestead field ever been alienated?"

It is possible, on the other hand, that no stress or intonation shift occurred when the interrogative sentence included an interrogative pronoun, since this served sufficiently as interrogative marker:

mīnam īkulū? "what did they eat?"

It should be noted explicitly that no change in word order occurs.

73.2 Negative

A sentence is transformed into its negative counterpart by the insertion of a negative particle in front of the predicate. The particles are: *ul* in main sentences

[1] *RA* 42, p. 129: 17-21; cf. Von Soden 1952 *Grundriss* §153 d. Presumably pronounced *šarrān'ū*, but unmarked in this particular writing.

[2] *AbB* 4 16: 13-14 (cf. also 20: 22-24); note the extra length on the word *eql'ūm*, marked by an extra sign in this particular writing.

and in interrogative sentences without other interrogative pronouns or particles; *lā* in the prohibitive, all subordinate sentences (i.e., objective, adjunct, attributive, conditional) and in interrogative sentences with interrogative pronouns or particles; *ayy-* and *ēt-* for the desiderative (see above, 28.3):

(main) *ina dīnim ul uššab*[3] "he will not sit in judgement"
(interr.) *qaqqadka ul kabit*[4] "isn't your head honored?"
(prohib.) *lā tapallaḫ* "do not fear!"
(subord.) *šumma lā uktinšu* "if he has not proven it"
aššu lā imtalku[5] "because he did not take counsel"
(interr.) *mannu lā išīṭ?*[6] "who has not sinned?"
(desider.) *ayy-illikam* "may he not come!"

It should be noted explicitly that no other change (such as word order or government) occurs as a result of the negative transformation. Note that the prohibitive is derived transformationally not from the positive imperative, but rather from the kernel sentence with the predicate in the indicative.

73.3 Potential

The desiderative mood in an interrogative sentence is used to render a potential transformation, in which the speaker envisages simply the possibility of a process (see also below, 78.2; 79.1):

ša kīma yāti...mannum liddin?[7] "who could produce the like of me?"

73.4 Unrealizable potential

The enclitic *-man* (see above, 6.3) is used to indicate unrealizable potentiality (also known by the Latin term "irrealis"), either referring to the past (then with the preterite of the verb) or to the future (then normally with the present); the enclitic may be added to the predicate or to a noun. It may occur after any element in the sentence, and no other change occurs as a result of the transformation:

[3] *CH* §5 vi 29-30.

[4] *AbB* 6 139: 6-7, cf. Von Soden 1952 *Grundriss* §153 f.

[5] *Gilg.* XI 168.

[6] King, *Babylonian Magic and Sorcery*, 11: 10, cf. Von Soden 1952 *Grundriss* §153 c.

[7] *AbB* 9 141: 5-7, cf. Von Soden 1952 *Grundriss* §153 g.

aṣēḫ-kum-man "I would have laughed at you"
ana kaspim-man ašapparam[8] "I could write for silver"

73.5 Causative and factitive

A sentence with a transitive verb for predicate may be transformed into a causative sentence by changing the verb to the Š stem, and placing the subject in the accusative, e.g.:

ṣēnum eqlam īkul "the flock pastured in the field"
eqlam ṣēnam uštākil[9] "he then let the flock pasture in that very field"

nārūtam īḫuzā "they (the girls) learnt the art of singing"
nārūtam līšāḫizū-šināti[10] "let them teach them (the girls) the art of singing."

The two accusatives resulting from the causative transformation correspond to the subject and object of the underlying kernel sentence, and thus they reflect a structure completely different from the one obtaining with other cases of "double accusative."

A sentence with an intransitive-fientive verb is transfomed into a causative sentence in the same manner; the resulting sentence includes only one accusative, which corresponds to the subject of the kernel sentence:

awīlum ana maḫrīya īrub "the man came to my presence"
awīlam ana maḫrīya ušēribūnim[11] "one has brought the man to my presence."

A sentence with an intransitive-stative verb is transformed into a factitive sentence by placing the verb in the D stem, and the subject in the accusative, e.g.,

balṭāta "you are in good health"
lūballiṭka "may (Shamash) keep you in good health."

The causative of verbs of condition is often called a factitive, from Latin facere "to make." Note that both "facere" and "to make" are but lexical causatives of "to be," in the sense that "to make" may be understood as "to cause to be." Hence

[8] For both examples, and more, see Von Soden 1952 *Grundriss* §152 d; 162 a.

[9] *CH* §57 xv 52-53 = §58 xv 73-74. My student Chang-Bae Lee has pointed out the unusual inversion of word order, in lieu of the expected sequence *ṣēnam eqlam* as, e.g., with *mātim ūsim*, see below, 81.5: 4. The context does in fact justify an emphatic sense, as rendered in the translation, because the shepherd leads his flock to the field in spite of the express disagreement of the owner of the field.

[10] *ARM* 1 64: r.7.

[11] Cf. *AbB* 2 2: 6-7.

the term "factitive" refers appropriately to a special "causative," i.e., that which "makes" a condition, or causes a condition to exist. Since the verb governs an accusative as a result of the causative transformation, the verb of the transform as such becomes transitive; this is often underscored by the fact that in translation a different, transitive verb may often be used, e.g.:

palḫāku "I am afraid"
upalliḫanni "he frightens me."

Here English uses what may be called a lexical causative ("to frighten"), i.e., a verb from a different root, or lexical entry, than the verb of the kernel sentence ("to be afraid"). In these particular examples, on the other hand, Akkadian uses the same root (*plaḫ*) for the predicate of both the kernel and the causative sentence, and uses inflectional means (the D stem) to produce a causative transformation. It should be noted that Akkadian, too, uses lexical causatives, but to a lesser degree than other languages such as English, see for instance *kullumu* "to show" (also in the D stem, without corresponding B stem), or perhaps *epēšu* "to make," if this may be considered a causative of "to be." Because of the relative scarcity of lexical causatives in Akkadian, the translation of causative stems in English or other modern languages will often show a vast difference from the original meaning of the root; see for example how the causative *šūḫuzum*, from *aḫāzum* "to take," has the meanings "to teach; to incite; to kindle a fire."

Some of the few Akkadian verbs which may be considered as denominative, i.e., as derived from nouns, are factitives; thus the verb *duššupum* was probably derived, historically, from the noun *dišpum* "honey," with the original meaning "to make honeylike," or "as sweet as honey," and then simply "to sweeten."

Chapter 74

Transformations Affecting Elements Other than Process

74.1 Passive

The passive transformation transposes the direction of the syntactical government of a transitive verb, whereby the object of the kernel sentence is realized as the grammatical subject of the transform, the verb undergoes an inflectional alteration, and the subject of the kernel sentence is omitted altogether.[1] As a result, there is a foregrounding of the object which is in some way equivalent to the notion of emphasis described above (66.8). Note the following paradigm of possible examples:

(1) *šarrum awīlam idāk* "the king will kill the man"
(2) *šarrum awīlam-ma idāk* "the king will kill *the man*"
(3) *awīlum iddāk* "the man will be killed."

Sentence (2) adds an implicit adjunct of verification and exclusion to (1), by indicating that the target of the action will indeed be the man, not someone else. Sentence (3), on the other hand, does not properly exclude another possible target of the action, or verify the nature of such target; it simply indicates that the nature of the agent is indifferent to the statement. In this sense, the omission of the agent is not properly a deletion (see below, 89.2), because the agent need not be inferred from the discourse. Hence, the passive appears as a way of avoiding deletion when the agent, which as subject is grammatically necessary, is in fact not known or not relevant. For this reason, the foregrounding of the object (which becomes the subject in the passive transformation) does not seem to be properly a case of emphasis, and is therefore treated within the present section on transformations.

I will discuss now the different types of inflectional variation which the passive transformation exhibits, noting in particular that it may be cumulative with the causative and factititve transformations.

[1] For the alleged occurrence of an agentive with noun phrases, see below, 77.1.

A kernel sentence with a transitive verb in the B stem for predicate may be transformed into a passive sentence by placing the predicate in the N stem:

igarum imḫas-su "the wall struck him down"
immaḫiṣ "he was struck [by the wall]"

A causative sentence, with a predicate in the Š or D stem, may be transformed into a passive sentence by changing the predicate in the Št or Dt stems respectively. The Št and Dt stems are used when the object of the kernel sentence (i.e., the object of the verb "to cause" in the English translation) remains the object of the transform (in the English translation, only the verb governed by "to cause" is in the passive):

alpī iṣabbat "he will seize the oxen"
alpī ušaṣbat "I will cause someone to seize the oxen."
alpī uštaṣabbat[2] "I will cause the oxen to be seized [by someone]"
= "I will collect the oxen" (not: "I am caused to seize the oxen").

The permansive of a transitive root is generally understood as a passive. For reasons explained above (70.7), I prefer to consider the permansive as expressing instead a condition. The verbal adjective of a causative, on the other hand, may express passivity of the secondary (causative) process. I interpret accordingly the following two examples:

maḫṣam igarim "hurt through the collapse of a wall"
nēpešū šūbulū[3] "the tools are on their way" (literally, "caused to be brought").

The correlation among the various forms may be rendered diagrammatically as follows:

eqlam iṣabbat		he seizes	the field		he seizes the field
eqlum iṣṣabbat		is seized	the field		the field is seized
eqlam ušaṣbat	I cause:	he seizes	the field		I cause him to seize the field
eqlam uštaṣbat	I cause:	is seized	the field	[by him]	I cause the field to be seized
eqlum ṣabit		is held	the field		the field is held
eqlum šuṣbut	is caused:	is held	the field		the field is caused to be held

Note that adjuncts are not transformable, and that the accusative found in such sentences is always an adjunct accusative, e.g.,

[2] *ARM* 3 33: 9-10. The present of the Št2 stem does not seem in this case to conform to the notional types described in 16.4:2.

[3] *YOS* 6 146:1.

kīma eqlum šū mayyaram maḫṣu[4]
"that the field in question is broken up in furrows = is plowed"

74.2 Imperative and desiderative

A sentence with a verbal predicate in the second person may be transformed into an expression of command by placing the verb in the imperative; the subject is normally deleted as a result of transformation (see below, 88.1), but the other constituents of the sentence remain inalterate:

ana Ešnunna tallakā-ma ṭemkunū maḫar ekallim tašakkanānim
"you will go to Eshnunna and will make your report to the palace"
ana Ešnunna alkā-ma ṭemkunū maḫar ekallim šuknānim[5]
"go to Eshnunna and make etc."

Similarly, a verbal predicate may be changed into a desiderative, to express wish on the part of the speaker, without transforming any other constituent.

ilū ana šurkēni illakūnim "the gods will come to the offering"
ilū lillikūnim ana šurkēni[6] "may the gods come to the offering."

The subject may be of any person, and need not be deleted; as indicated above in 28.3, the desiderative of the second person does not entail inflectional variation, but simply the addition of the particle *lū* in front of the permansive. For example:

lū balṭāta "may you be in good health."

74.3 Performative

When the speaker refers to an action which he is performing at the same time in which he states it, a sentence with the present tense may be transformed by placing the verb in the preterite. (This is different from English and other modern languages, where normally the present occurs, so that special attention has to be paid in the translation.) See for example:

ina qabē awīlim ašpurakkum[7]
"on the command of the lord I am writing to you."

[4] *AbB* 9 243: 7. Several examples of this type are collected by Rowton 1962 "Permansive" 279.

[5] *Sumer* 14 p. 19, N. 3: 13-16 (Harmal).

[6] *Gilg.* XI 166.

[7] *AbB* 1 42:5.

The performative is used especially in solemn statements, such as in oaths, e.g.

šarram atmā...[8] "by the king I swear: ...(words of the oath)."

[8] *VAB* 6 207: 21. This category has been identified by HEIMPEL and GUIDI 1969 "Koinzidenzfall" where these and more examples are to be found.

SECTION B
NOMINALIZATION

Chapter 75
Introductory

75.1 Types of nominalizing transformation

Nominalization is a transform based on the linkage of two constituents and resulting in a noun phrase. Transforms of this type are as productive and varied in English as they are in Akkadian. Thus "sick ward" is a room *where* sick people lay in bed, "coffee break" is a period of time *during which* one has a cup of coffee, "time span" is a particular segment *within* a longer time duration, and so on.

The nominalization processes in Akkadian may be reduced to two fundamental types. In the first, the predicate of the kernel sentence is retained as a finite verb, while in the second the kernel sentence is realized as a noun phrase without a finite verb.

(1) The nominalized transform is a SENTENCE MARKED BY AFFIXATION that retains the predicate as a finite verb, so that the sentence as a whole is nominalized (we may call this "semi-nominalization"). The transformation may occur in one of two ways.

(a) The afformative *-um* is added at the end of the sentence. This subtype occurs only with personal names (see above, 21.5), and will not be treated further in this grammar. See for example:

{Ikšud}-um "The one (called) He-reached"
{Ab-ī-ṭāb}-um "The one (called) My-father-is-good."

(b) An attributive clause is used (as discussed below, 76), with possible deletion of the relative pronoun (see below, 89.4):

šarrum illik "the king came"
> *šarrum ša illiku* ... "the king, the one who came, ..."
~ *šar illiku* ... "the king who came ..."

(2) The nominalized transform is a NOUN PHRASE that does not retain the predicate as a finite verb, so that kernel sentence is completely nominalized (nominalization proper). Here, too, the transformation may occur in one of two ways.

(a) TWO-PLACE NOUN-PHRASE. Two, and only two, of the constituents from the deep structure may be retained in the noun phrase. The term "head" is used to refer to the element which occurs first in the noun phrase, and the term "modifier" to refer to the element which occurs second; the mechanisms which link together the elements of the noun phrase are annexation, attribution and adnominal adjunctivation. From the standpoint of deep structure, the classification is based on the combinatorial possibilities of the two constituents (out of the possible total of four – predicate, subject, complement, adjunct). An overview of these types is given in 75.2, with the accompanying chart on pp. 432-3. Each type will then be discussed in detail in chapters 77-80; the following two chapters 81-82 will address specific issues of surface structure.

(b) MULTI-PLACE NOUN PHRASE. The predicate of the kernel sentence is realized as an infinitive, and the subject and/or object are retained in the nominative and accusative (hence a multi-place noun phrase behaves much like a relative clause). This subtype is integrated in the typology of noun phrases with only two constituents, and is listed on the accompanying chart given on pp. 432-3, and at the pertinent place in the following chapters. For a comparison of forms with an equivalent kernel sentence but different "emphatic" values see below, 81.4.

75.2 Nominalization proper: types of deep structure

The typology based on deep structure subsumes as many as eighteen different types of kernel sentences. Such proliferation is due to the multiplicity of combinatorial configurations that are possible. Of the four constituents in any kernel sentence, any one can occur as head of the resulting transform, in combination with any one of the others as modifier. In addition, the resulting types are further differentiated among themselves depending on whether the predicate of the kernel sentence is stative, fientive/intransitive or fientive/transitive.

The chart on pp. 432-3 gives in tabular form the complete paradigm of possible transforms; these transforms are then taken up in detail in the following chapters.

The chart is to be read as follows. The first major subdivision (represented by the rows within double lines in the chart) is based on whether the head of the resulting noun phrase corresponds to the predicate of the kernel sentence (which corresponds to chapter 77 below), the subject (78), the complement (79) or the adjunct (80). Within each of these subdivisions, the data are listed according to the nature of the modifier in the resulting noun phrase (e.g., subject, adjunct or complement when the head is a predicate). The second major subdivision (represented by the three major columns in the chart) is based on whether the predicate of the kernel sentence is stative, fientive/intransitive or fientive/transitive.

In the chart, numbers in bold face refer to the sequence of types: they are given in the same order in the chapters that follow. The long dashes refer to types which are impossible, such as the complement with statives or intransitives: this highlights patterns of complementarity in the overall distributional array. Type numbers followed by a letter index refer to substantive variants intrinsic to deep structure, whereas surface variants are given one above the other without further indexing. Because of the imprecision inherent in the type of formalization used here, some of these correlations are not immediately apparent. For instance, types 5a and 5b differ through the fact that in 5a the predicate is nominalized as a noun of description (e.g., *alāk idīya*) and in 5b as a noun of subject (e.g., *ālik idīya*); and within 5a and 5b there is respectively a distinction made depending on whether annexation (e.g., *ālik idīya*) or adnominal adjunctivation (e.g., *ālikum ina idīya*) is used. Translations are obviously paradigmatic in nature, and therefore not necessarily idiomatic; proper translations will be found in the chapters that follow.

The classification proposed here can only be considered preliminary, and certainly much could be added by way of exemplification, as well as typological differentiation. Within these limits, it should serve a useful purpose as an indication of both the richness of Akkadian in this domain of syntax and the effectiveness of the method as an insight into the nuances of the language. Chapters follow the sequence given in the paradigm, referring in the title to both the structure of the noun phrase and its notional value.

75.3 Nominalization proper: types of surface structure

(1) TWO-PLACE NOUN PHRASES may appear in one of three possible configurations with regard to surface structure: annexation, attribution, and adnominal adjunct. They are described briefly here, while more details will be found below, chapters 81-82.

(a) annexation includes the vast majority of nominalization types; they are characterized, in their surface structure, by the use of a constructive, i.e., a noun in the construct state followed by another noun in the genitive case, e.g.:

qištam inaddin "he gives a gift"
> *nādin qištim* "giver of a gift"
~ *qišti nadānim* "the gift of giving, i.e., the gift one ought to give."

TRANSFORMS SORTED BY UNDERLYING CONSTITUENTS (HEAD + MODIFIER)		KERNEL SENTENCE SORTED: stative *nišū ina ālim dannā* the people in the city are strong
predicate +	subject	**1** *dunni nišī* the strength of the people
	adjunct	**4** *dannāt ālim* the strong ones in the city *dannātum ina ālim* " "
	complement	–
subject +	predicate	**7a** *nišū dannātum* the strong people **7b** *nišū dunnim* the people of strength
	adjunct	**10** *nišū ālim* the people of the city *nišū ina ālim* the people in the city
	complement	–
complement +	predicate	–
	adjunct	–
	subject	–
adjunct +	predicate	**16** *āl dunnim* the city of strength
	complement	–
	subject	–

PARADIGM OF NOMINALIZATION TYPES
(left side)

BY TYPE OF PREDICATE				
intransitive			transitive	
awīlum ina idīya illik the man went at my side			*šarrum ana wardim qištam iddin* the king gave a gift to the slave	
2 *alāk awīlim*	going of the man		**3a** *nadān šarrim* **3b** *nadin šarrim*	giving by the king given by the king
5a *alāk idīya* *ina idīya alākum* **5b** *ālik idīya* *ālikum ina idīya*	going at my side " " goer at my side " "		–	
–			**6a** *nadān qištim* **6b** *nādin qištim*	giving of a gift the giver of a gift
8a *awīlum ālikum* **8b** *awīl alākim* *awīlum ina alākim*	the going man the man of going in the man's going		**9a** *šarrum nādinum* **9b** *šar nadānim* **9c** *šarrum ina nadānim*	the giving king the king of giving in the king's giving
11 *awīl idīya* *awīlum ana idīya*	the man of my side the man at my side		–	
–			**12** *šar qištim*	the king of the gift
–			**13a** *qišti nadānim* **13b** *qištam ina nadānim* **13c** *qištum nadintum* **13d** *qišti nādinim*	the gift of giving in giving the gift the given gift the gift of the giver
–			**14** *qišti wardim*	the gift to a slave
–			**15** *qišti šarrim*	the gift of the king
17 *id alākim*	the side of going		**18** *warad nadānim*	the slave of giving
–			–	
–			–	

PARADIGM OF NOMINALIZATION TYPES
(right side)

The internal variability of annexation types depends on the multiplicity of possible kernel sentences underlying the various transforms.

(b) Attribution is a type of transform in which the modifier is an adjective, which occurs in agreement with the head. If the adjective is derived from a fientive root, the modifier is the equivalent of a relative clause (NP = noun phrase):

awīlum damiq "the man is good" (kernel sentence with stative root)
> *awīlum damqum* "the good man" (NP with adjective as attribute)

awīlum illak "the man goes" (kernel sentence with fientive intransitive)
> *awīlum ālikum* "the going man" (NP with participle as attribute)
~ *awīlum ša illaku* "the man who goes" (NP with attributive clause)

awīlum (qištam) inaddin "the man gives (a gift)" (kernel with fient. trans.)
> *awīlum nādin (qištim)* "the man giver (of a gift)" (NP with participle)
~ *awīlum ša (qištam) inaddinu* "the man who gives (a gift)" (NP with cl.)

In contrast with the multiplicity of possible kernel sentences in the case of annexation, in the case of attribution there is a one-to-one correspondence between deep and surface structure, in the sense that (a) the nominalization of kernel sentences which predicate a quality of the subject is always attributive, and that (b) the converse is also true, i.e., all attributive noun phrases correspond to kernel sentences that predicate a quality of the subject. Hence attribution occurs only for types 7a, 8a, 9a, 13c.

As I will point out in detail below (78.2; 79.1; 80.1), I do not consider defensible the generally accepted notion of an "attributive genitive," because in the cases that have been so interpreted the modifier does not in fact predicate a quality of the head, as an attribute would.

Note how annexation and attribution can properly be described only in transformational terms, i.e., through derivation from deep structure. In other words, neither attributes nor genitival relationships are part of constituent structure. As a result, the study of the uses of the genitive is on quite a different level, syntactically, from the study of the uses of nominative and accusative, since the latter can be described in terms of constituent structure – a difference obscured by the traditional, non-transformational approach, which generally considers all cases together under the misleading heading of a "syntax of the cases."

(c) An adnominal adjunct occurs when a prepositional adjunct in the kernel sentence is retained in its prepositional form, instead of being transformed into a genitive (which is the standard type of nominalization, and which is also possible). The head, in this case, occurs in the normal, and not in the construct, state. Adnominal adjuncts are found only with types 5, 10 and 11. See, for example:

ḫarrānum ina Mari illakam "the road comes from Mari"
> *ḫarrān Mari* "the Mari road" (annexation)
~ *ḫarrānum ina Mari* "the road from Mari" (adnominal adjunctivation).

(2) MULTI-PLACE NOUN PHRASES can occur only with the infinitive, and in specialized constructions (see below, 81.5): the subject of the kernel sentence is retained in the nominative, and/or the direct object is retained in the accusative, instead of being transformed into a genitive (which is the standard type of nominalization). The co-occurrent constituent can only be the predicate, which appears in the infinitive. Adnominal subjects are found only as type 9c, adnominal complements only as type 13b. See for example:

šarrum inaddin "the king gives"
> *nadān šarrim* "the giving by the king"
~ *šarrum ina nadānim* "in the king's giving" (adnominal subject)

qištam inaddin "he gives a gift"
> *nadān qištim* "the giving of a gift"
~ *qištam ina nadānim* "in the giving of a gift" (adnominal object)

~ *šarrum qištam ina nadānim* "in the king's giving of a gift."

Chapter 76
Relative Clauses

76.1 Attributive and consecutive clauses

Relative clauses are characterized by the presence of a relative pronoun (see below, 89.4, for deletion of the pronoun) and the retention of the predicate as a finite verb in the subjunctive. Notionally, they may be subdivided into attributive and consecutive clauses.

Attributive clauses are so called because they are the deep structure equivalent of an attribute, e.g.,

awīlum ana idīya illak "the man goes at my side"
> *awīlum ālik idīya* "the man going at my side" (attributive noun phrase)
~ *awīlum ša ana idīya illaku* "the man who goes at my side" (attribut. clause).

Consecutive clauses express a consequence inherent in, or deriving from, the head of the attributive phrase. It is likely that a different intonation (not indicated in writing) would have distinguished a consecutive from an attributive clause, since they are otherwise identical: presumably, the predicate of the consecutive clause would be stressed or raised. In this sense, a consecutive clause performs a function similar to that provided by emphasis (see above, 66.8). Thus, while the attributive clause given above simply conveys information about "the man" (namely, that he goes at my side), a consecutive would contain a built-in assumption that something special is being said about the man:

awīlum ša ana idīya illaku "such a man that he might go at my side."

In the following examples, the first translation renders a normal attributive understanding, that simply conveys information, while the second renders a consecutive understanding; the consecutive value was presumably marked by a special intonation affecting the predicate in Akkadian, which is not indicated here:

10 ṣābum ša abullātim inaṣṣaru ul mād[1]
"ten men who protect the gates are not too many" (attributive)
"ten men are not too many to do service at the gates" (consecutive).

[1] *TCL* 18 77: 8-9 (cf. *CAD Ṣ* 47 b).

ittum mīnu-ma ša še'am ana bītim lā tanaddinu?[2]
"what is the sign by which you did not give barley to the house?" (attr.)
"what is the meaning of the failure to give barley to the house?" (cons.)

ayyū arku ša ana šamē illū? ayyū rapšu ša erṣeta ugammeru?[3]
"who is the tall one who becomes high to the heaven,
who is the broad one who encompasses the earth?" (attributive)
"who is tall enough to scale heaven,
who broad enough to encompass the earth?" (consecutive)

mannu ibrī elū ša [...]*?*[4]
"who, my friend, is the tall one who ..." (attributive)
"who has been so high that..." (consecutive)

mīnu šar Aššur ša mār šiprīka ikallū?[5]
"what is the king of Assyria who holds back your messengers?" (attributive)
"who is the king of A. that he should hold back your messengers?"
i.e., "who does the king of Assyria think he is, to the point that he should hold back your messengers?" (consecutive)

76.2 Government and concord in relative clauses

A kernel sentence is transformed into the corresponding relative by introducing the relative pronoun *ša* "who, which" or *mala* "whatever," and by placing the predicate in the subjunctive; no other constituent is affected by the transformation, except that negation is with *lā*. For restrictive and non-restrictive attributive clauses see below, 84-86.

The element of concord in an attributive clause is provided by the relative pronoun. Even though concord is not immediately apparent because the relative pronouns are undeclinable, it does however show through other constituents which are in turn in concord with the relative pronoun. See for instance:

šarrum (ms. sg.) *ša išpuru* (ms. sg.) "the king who sent"
šarrū (ms. pl.) *ša išpurū* (ms. pl.) "the kings who sent"
šarrātum (fm. pl.) *ša išpurā* (fm. pl.) "the queens who sent"

As for case, concord is normally shown by a sort of SUPPLETIVE INFLECTION using a "resumptive" personal pronoun, as it is traditionally called. The rules for the use of the resumptive pronoun are as follows:

[2] *Sumer* 14 30-31, 12: 12-14 (OB).

[3] *BWL* p. 148: 83 f. (cf. *CAD A*/1 236).

[4] *Gilg.* III 140 (*YOSR* 4 3).

[5] *KBO* 1 10 – *KUB* 3 72: 47.

(1) when the relative pronoun is the subject of the attributive clause, the resumptive pronoun never occurs;
(2) when the relative is the direct object, the resumptive may or may not occur as *-šu*, i.e., it is optional;
(3) when the relative is the indirect object (corresponding to English "to whom"), the resumptive is obligatory and occurs as *-šum*;
(4) when the relative is the modifier within annexation (corresponding to English "whose") the resumptive is obligatory and occurs as *-šu*;
(5) when the relative is governed by a preposition, and the preposition *cannot* govern a pronominal suffix, the resumptive does not occur and the preposition is deleted;
(6) when the relative is governed by a preposition, and the preposition *may* govern a pronominal suffix, the resumptive occurs as *-šu* after the prepositon.

The resulting paradigm is given below. Note that type 2b is especially frequent when the object to which the pronominal suffix refers is not inflectionally explicit, such as most PN's[6]. The resumptive pronoun is underscored.

	HEAD	RELATIVE CLAUSE				MAIN SENT. PRED.	RESUMPT. PRONOUN
		REL.PRON.	SUBJECT	OBJECT OR ADJUNCT	PREDICATE		
1	(*awīlam*)	*ša* (nom.)	[**šū*]	*ṭuppam*	*išpuru*	(*āmur*)	excluded
2a	(*awīlam*)	*ša* (acc.)	*šarrum*		*išpuru*	(*āmur*)	optional
b	(*awīlam*)	*ša* (acc.)	*šarrum*		*išpuru-šu*	(*āmur*)	optional
3	(*awīlam*)	*ša* (dat.)	*šarrum*	*bītam*	*iddinušum*	(*āmur*)	required
4a	(*awīlam*)	*ša* (gen.)	*mārūšu*	*ṭuppam*	*išpurū*	(*āmur*)	required
b	(*awīlam*)	*ša* (gen.)		*ina bītišu*	*wašbāta*	(*āmur*)	required
5	(*bītam*)	*ša* (gen.)		[*ina* + *šu*]	*wašbāta*	(*āmur*)	excluded
6	(*awīlam*)	*ša* (gen.)		*ittišu*	*wašbāta*	(*āmur*)	required

1 "I saw the man who sent the tablet"
2 " " " whom the king sent"
3 " " " to whom the king gave the house"
4 " " " whose sons sent the tablet"
" " " in whose house you dwell"
5 " the house in which you dwell"
6 " the man with whom you dwell"

[6] See GOODNICK-WESTENHOLZ 1971 *Some Aspects*, p.70.

While the predicate of all the examples quoted above is verbal, nominal predicates may occur in all the same environments. Here only two examples will be quoted, the first with, the second without the predicate in the predicative state:

ša mārū-šu ṣeḫḫerū[7] "whose children are small"
šūr šamā'ī ša napšat kala nišī išti-ka[8]
"oh bull of heaven, by whom the life of all people is."

[7] *CH* §177 xiv rev. 23-24.

[8] *CT* XV 4: 3f., cf. VON SODEN 1952 *Grundriss* §167 a.

Chapter 77

Noun Phrases with Predicate as Head

77.1 Types 1-3: predicate and subject (subjective genitive)

PARADIGMATIC FORMS[1]

1 *dunni nišī* strength of people	**2** *alāk awīlim* going of man	**3a** *nadān šarrim* giving of king **3b** *nadin šarrim* given of king
< *nišū dannā* people are strong	< *awīlum illik* man went	< *šarrum iddin* king gave

Any verbal predicate (whether stative, intransitive/fientive or transitive/fientive) and its correlative subject may be nominalized by transforming the predicate into a corresponding noun of description in the construct state, and the subject into a dependent genitive. The noun of description may be either an infinitive or a deverbal noun.

stative	*(šū) dan* "he is powerful"
> deverbal noun	> *dunnašu* "his strength"
intrans.	*(šū) illak* "he goes"
> infinitive	> *alakšu* "his going"
transitive	*(šū) inaṣṣar* "he watches"
> deverbal noun	> *maṣṣartašu* "his watch"

In every case the genitive is a subjective genitive in that it stands for the subject of the kernel sentence; as mentioned earlier (59.1), the recognition of the subjective genitive is one of the transformational insights that was already present in traditional grammar.

[1] At the beginning of each subsection I will give a synoptic review of the applicable paradigmatic forms. They duplicate, with minor variations, the forms given in the chart on pp. 432-433. I retain the tripartite division for stative, intransitive and transitive roots, even when there is no corresponding form for one or more of the types. I have added in the lower register the abbreviated kernel sentence from which the noun phrases derive.

With transitive verbs, the head of the noun phrase may be a noun of subject as well as a noun of description, e.g.:

nadin-Ištar[2] "given-of-Ishtar" (personal name)
maḫṣam igarim "struck of wall"

At first, this construction would appear to be the equivalent of a passive with expression of the agentive, with meanings "given-by-Ishtar" and "struck by the wall," respectively. If so, this would be the only instance in which the agentive is expressed in Akkadian (see above, 74.1). However, two considerations favor the retention of the essentially stative nature of the verbal adjective (see also above, 70.7, and below, 79.3).

(1) Semantically, a stative understanding is just as plausible as a passive one, and is made more likely by structural comparison with related constructions, e.g.:

nadin-Ištar "the-gift-of-Ishtar"
maḫṣam igarim "hurt through (the collapse of) a wall"

compared with other instances in which the head is a primary noun or a stative adjective such as

damiq-ilīšu "the-good-thing-(coming-from)-his-god" (personal name)
kasap-Ištar[3] "(ransom)-money-(coming-from)-Ishtar" (personal name).

As indicated, this use is found particularly in personal names.

(2) Outside of personal names, the construct state of the adjective occurs often with the ending *-a(m)* (see above, 23.5), as in one of the examples quoted above. It is tempting to suggest that the construct state in *-a(m)* may serve the special function of identifying explicitly the adjective as stative, and that this may be the same morpheme which is occasionally found in the Old Akkadian predicative state as a suffix of the third person (see above, 25.1).[4]

[2] Attested only as a personal name, see STAMM 1939 *Namengebung* p. 258, with other similar examples, like the ones quoted immediately below.

[3] STAMM 1939 *Namengebung* p. 301f.

[4] As a historical note, one may also suggest that this morpheme may eventually have given rise to the West Semitic perfect, as in Amorite *ḏakura-el* (transitive) and *ṭāba-el* (stative), see GELB 1965 "*qatala* morpheme" 72-80.

77.2 Type 4: stative plus adjunct (limitative, superlative, partitive)

4 *dannāt ālim* strong ones of the city *dannātum ina ālim* strong ones in the city		
< *ina ālim dannā* they are strong in the city		

A transformational analysis of the nominalized construct

ṣalmāt qaqqadim "the black (ones) of head"

presupposes an underlying sentence such as

nišū qaqqadam ṣalmā "the people are black as to the head."

(Actual sentences of this type are less frequent than corresponding sentences with extraposition:

nišū qaqqadūšinā ṣalmū "the people – their heads are black.")

Notionally, this serves as the nominalization of an adjunct of limitation (traditionally called "of relation," see above 66.2), in that it limits the range of applicability of the predicate (the people are black only with regard to their heads).

An adjective followed by the genitive of limitation is attested a few times in the special construct form *-am* (for which see above, 23.5), as in

damqam īnim "good of eyes."

But the regular construct state is also found,[5] not only in a plural such as *ṣalmāt qaqqadim*, but also in the singular:

kabit kaspim[6] "heavy in silver"
gamir emūqi[7] "perfect in strength"
naʾid qabli[8] "famous in battle"
ṭābat rigmi[9] "good of voice"
leʾū qabli[10] "strong in battle"

[5] Differently from REINER 1966 *Analysis* 126 f.

[6] *VAB* 2 11: r. 23, cf. VON SODEN 1952 *Grundriss* § 136 i.

[7] *Gilg.* VI 51.

[8] *Gilg.* VI 53.

[9] *Gilg.* XI 117 (written *rig-ma*).

Another special case in which an adjective is followed by a genitive is a phrase of the type:

leʾū leʾūti[11] "strong in strength," "very strong."

this should perhaps be explained as the nominalization of a sentence with a paronomastic absolute infinitive (see above, 65.3), such as

leʾūm-ma leʾī "being strong he is strong."

In some cases, the adjunct is not placed in the genitive, but is retained in the original form as in the kernel sentence; the head in this case is of course not in the construct, but in the normal state. Notionally, this type seems to be especially frequent to express the superlative, as in

dannum ina ilī[12] "strong among the gods, i.e., the strongest of the gods"
ina šarrī šūturu[13] "excellent among kings, i.e., the best of kings."

The superlative connotation is brought out especially by the use of a prepositional phrase with *eli* in the kernel sentence: its normal equivalent in terms of a nominalized transformation is a genitive corresponding to the prepositional phrase:

eli gimir ilī leʾāt[14] "she is the most powerful over all the gods"
> *leʾāt gimir ilī*[15] "most powerful of all the gods"

elīšunū šaliṭ "he is mighty over them"
> *šalissunū*[16] "mightiest among them."

This superlative nominalization with the genitive is possible only when the noun corresponding to the adjunct includes the feature <+ count>, and is in fact in the plural; hence no genitival nominalization is possible from a sentence like the following:

eli dišpim u karānim ṭābū[17] "they are sweeter than honey and wine."

[10] See *AHw* I 548 a.

[11] *En. El.* i 80.

[12] *CH* rev. xxviii 25.

[13] In the predicative *in šarrī šūtur*, *CH* rev. xxiv 79-80.

[14] Cf. *qardat el kala ilātim* "she is the most warlike of all the gods," *VS* 10 214: vi 22 (cf. *AHw* I 201).

[15] BEZOLD, *Catalogue*, 779: 6321 (cf. *AHw* I 548).

[16] *En. el.* i 17.

[17] *CT* 15 1: 3 (RÖMER, *WO* 4/1, 12).

The partitive is a construction where the adjunct limits the range of the subject. The resulting transforms may be either of the annexion, or of the adnominal adjunctivation type. Thus, from a kernel sentence like

ina wardī šarrim istēn-ma "he is one among the servants of the king";

the corresponding nominalizations may be:

ištēn ina wardī šarrim[18] "one of the king's servants"
or *ištēn wardī šarrim* " "

Sentences of the second type are rare, and for Babylonian I can only quote examples with pronominal suffixes, e.g.,

šaluššu[19] "one third of it."

Examples with a noun seem to be only Assyrian:

ištēn alānīya[20] "one of my cities"
ištēn manzaz panīšu[21] "one of his attendants"
adi mannīšunu[22] "up to whom among them?"

Note also that an apposition may be used instead of the genitive to express a partitive, e.g.:

ištēn aḫūšunu[23] "one brother of theirs," "one of their brothers."

77.3 Type 5: intransitive plus adjunct (locative)

	5a *alāk idīya* going of my side *ina idīya alākum* to go at my side **5b** *ālik idīya* goer of my side *ālikum ina idīya* goer at my side	
	< *ina idīya illik* he went at my side	

[18] *RA* 35, p. 2 ii 11.

[19] WATERMAN, *Business Documents*, 1: r. 1.

[20] *ABL* 1070: 10.

[21] *ABL* 415: r. 9-10.

[22] *ABL* 358: r.18.

The paradigmatic form *ālik idi* is well attested, as are other constructions with the verb *alāku*:

ina idi ummānīya illakū[24] "they go at the side of my army"
> *ālik idi*[25] "the one who goes at the side, attendant, helper"

77.4 Type 6: transitive plus complement (objective)

		6a *nadān qištim* giving of the gift **6b** *nādin qištim* giver of the gift
		< *qištam iddin* he gave a gift

This is a frequent type, with either the infinitive or the participle, see for example:

nadanšu iqbīam[26] "he told me to give it"
ubbub ṣābim ul tele>>ī[27] "you are not able to muster the troops"
ēpiš šiprim[28] "maker of work, i.e., workman."

[23] *En. el.* vi 13.

[24] *YOS* 10 17:37 (OB).

[25] See *CAD A*/1 343; one will find there several other idiomatic constructions of a similar type derived from the same verb.

[26] *UM* 7 26:19-20.

[27] *ARM* 1 42: 18; see for more examples ARO 1961 *Infinitivkonstruktionen* pp.98-103; 105f; 183-200; 232-36; 250; 274-75; 314-22. For constructions with the complement in the accusative, and for the so-called "attraction of the genitive," see below, 78.2; 82.4.

[28] *CAD E* 239, where several other similar terms are quoted.

Chapter 78

Noun Phrases with Subject as Head

78.1 Types 7a-9a: subject and predicate (attribution)

7a *nišū dannātum* strong people	**8a** *awīlum ālikum* going man	**9a** *šarrum nādinum* giving king
< *nišū dannā* people are strong	< *awīlum illik* man went	< *šarrum iddin* king gave

These three types (7-9) of noun phrases behave uniformly, regardless of whether the predicate is stative, intransitive/fientive or transitive/fientive. They correspond to the typical attributive construction (see 75.3) of substantive and adjective. Given the vast amount of adjectives from stative and transitive roots, these two types may well constitute the most productive single category of noun phrases; and note that stative adjectives include also adjectives derived adnominally from primary nouns (21.1). Intransitive fientives, on the other hand, are not frequently attested because the only possible adjectival form is the participle, and this does not occur often in an attributive position. Here are some examples:

stative root	*šarrum dannum* "the mighty king"
primary noun	*awīlū Urukūtum* "the Urukean men"
intr./fientive	*maḫīru ālikum* "the going price"
transitive	*awīlum ṣābitum* "the man who seizes"

Note that the attributive function of the adjective implies that the the modifier predicates an actual quality for the head, hence *awīlū Urukūtum* refers to the Urukean quality of these individuals, rather than just to an accidental act of residing there (which would be expressed by *awīlū ina Uruk* " the men in Uruk"). For special lexical qualifications that have to be taken into consideration with a (rare) form like *ālum dannum* see below, 81.1.

78.2 Types 7b-9b: subject and predicate (potential); the case against the so-called "attributive genitive"

7b *nišū dunnim* people of strength	**8b** *awīl alākim* man of going	**9b** *šar nadānim* king of giving
< *nišū dannā* people are strong	< *awīlum illik* man went	< *šarrum iddin* king gave

A common noun phrase, which is quite characteristic of Semitic and, with some special variation, of Akkadian, consists of what has been called the "attributive genitive." On the face of it, this term seems appropriate because it would appear that the genitive corresponds to the predicate of the kernel sentence, and the head to the subject – hence a noun phrase like *āl dannūtim* "city of strength" would seem to be equivalent to *ālum dannum* "strong city." Such an equivalence is is assumed on the basis of a kernel sentence *ālum dan* "the city is strong," which is implicitly presumed to be common to both noun phrases. In point of fact, the distribution of these forms is much more complex than it seems at first, and the traditional interpretation is essentially incorrect in two respects.[1]

(1) Noun phrases ot the type *āl dannūtim* do not, in most cases, correspond to a kernel sentence of the type *ālum dan*, but rather to a sentence of the type *(nišū) ina ālim dannā*. This can be shown distributionally when the nouns are correlated to their proper lexical features: a sentence of the type *ālum dan*, and an attributive phrase of the type *ālum dannum* do not occur, at least not with the meaning "the city is strong," because this meaning of the root *dnin* is restricted to personal subjects. Note that *šarrum dan* and *šarrum dannum* are common – but not, conversely, *šar dannūtim*. Hence, the type *āl dannūtim* is *not* attributive, because the genitive does not express an attribute of the head of the noun phrases, but rather the attribute of some other subject (which is present only implicitly in the noun phrase), while the head is in fact the complement or the adjunct of the predicate corresponding to the genitive. Accordingly, this type will be treated below as types 13 and 16, under 79.1 and 80.1.

(2) In the rarer cases[2] where the head of a noun phrase of the type *awīl alākim* corresponds in fact to the subject of the kernel sentence, the verb in the sentence does not appear to be declarative, but rather potential or desiderative. This is proposed on the basis of a complementary distribution pattern which suggests that the

[1] For a fuller elaboration of this argument, with attendant documentation, see BUCCELLATI 1972 "Infinitive"; 1976 "Genitive."

[2] For the documentation, see BUCCELLATI 1972 "Infinitive" pp.21f.

construct with the genitive corresponds to a relativization of a sentence with the desiderative (used potentially) – a form for which the subjunctive required by relativization is morphologically not allowed. Such a complementary distribution pattern may be tabulated as follows (square brackets refer to non-existing, and round parentheses to rare, forms):

NOUN PHRASE	RELATIVE PHRASE	KERNEL SENTENCE
(awīlum ālikum)	*awīlum ša illaku*	*awīlum illak*
the going man	the man who goes	the man goes
awīl alākim	**[awīlum ša lilliku]*	*awīlum lillik*
the man who might /should go	[the man who should go]	let the man go

The genitive in these noun phrases may be any noun of description, including of course the infinitive. Some examples follow:

stative	*awīlum ul ša balāṭim*	"the man is not one of living, the man is not fit to live"
intr./fientive	*ṭēm ḫamāṭim*	"a decision of hurrying, a decision one ought to take quickly"

This construction is very frequent in Akkadian, perhaps even more than in other Semitic languages. The reason for this preference is immediately clear in cases when the genitive consists of a noun which is not derived from a verbal root; for then the only means available in Akkadian to form adjectives is the denominal afformative *-ī* (21.1), and while this afformative is productive, it is by no means of universal application (see above, 20.6). Hence instead of an adjective, the genitive of the corresponding abstract noun is used. Thus, for example, no adjective **il-ī-u* is derived from the primary noun *il-um* (an adjective *il-ān-ī-u* does exist, with the meaning "blessed by god, prosperous," but is late and quite rare in usage). The genitive of *ilūtum* "divinity, divine power" is used instead. But it should be noted that such a genitive is not in any case attributive because it does not predicate a quality, as the attribute would: an adjectival construction of the type *šubtum *ilītum* (were it to exist) would indicate that the dwelling has a divine quality, whereas an expression such as *šubat ilūti*[3] refers to a "dwelling where the gods live." The fact that in English this may be properly translated as "divine abode" does not of course tell us anything about Akkadian; and yet it would seem that the use of the term "attributive genitive" has come precisely from the possibility of such understanding in modern languages.

[3] Cf. *CAD I* 105.

78.3 Type 9c: subject and infinitive

		9c *šarrum ina nadānim* in the king's giving
		< *šarrum iddin* king gave

The construction which I called a "multi-place nominalization" (see above, 75.1) admits, by definition, more than two constituents. For our current purposes, I will deal with examples which include in fact only two constituents; later (81.5), I will consider examples which have more constituents. Constructions of this type occur primarily[4] when the infinitive is in the accusative or in the genitive with a governing preposition. See, for example:

Gilgameš erēbam ul iddin[5] "he did not allow Gilgamesh to enter"
mū ina maqātim[6] "in the waters' coming down"

78.4 Types 10-11: subject and adjunct

10 *nišū ālim* people of city *nišū ina ālim* people in the city	**11** *awīl idīya* man of my side *awīlum ina idīya* man at my side	
< *nišū ina ālim* people in the city	< *awīlum ina idīya* man at my side	

Nominalizations of this type presuppose an intransitive predicate, which may be either fientive or stative depending on the nature of the adjunct. The type given in the paradigm

awīl idīya "the man of my side," i.e., "attendant, assistant"

[4] For detailed documentation see ARO 1961 *Infinitivkonstruktionen* pp. 89; 146f; 221-23; 311-13. An example of the type *šarrum nadānum* "the king's giving" seems to be extremely rare, see, e.g., *AbB* 2 14:7-9: *ašar igisūm ... sanāqum iqqabū ...* "whereas the coming of the tax has been ordered...," i.e., "it has been ordered that the tax should arrive (in Babylon by a certain date)." I am grateful to my student CHANG BAE LEE for alerting me to the difficulty presented by this passage.

[5] *Gilg.* P vi 10 (OB).

[6] *AbB* 9 215: 9.

is one such example, since it can best be correlated to a sentence of the type

awīlum ana idīya illak "the man goes at my side."

A typical Akkadian (and Semitic) construct may be assigned to this category, namely a phrase of the type *šar šarrī*, "king of kings." This phrase has a superlative connotation, which may be understood in relationship to a phrase of the type

šarrum ina šarrī šūtur (see above 77.2).

A specific predicate like *šūtur* is suggested in the example just quoted by the semantic context of subject and adjunct – and as it happens it is actually attested in a given text. But in several cases the predicate that is implied is so generic that it may in fact be represented simply the adjunct itself used as a nominal predicate. Let us consider the following example:

nišū ālim "the people of the city"

may be correlated to any one of the following three sentences:

(1) *nišū ina ālim wašbā* "the people dwell in the city"
(2) *nišū ina ālim-ma* "the people are in the city"
(3) *ina ālim nišū-ma* "in the city there are people."

In the first case we would assign the phrase *nišū ālim* to type 10 (subject as head, adjunct as modifier), in the second to type 7 (subject as head, predicate as modifier), and in the third to type 4 (subject as predicate, adjunct as modifier). A choice between the three types is in fact irrelevant, since the contrast is practically nonexistent; here I assign the phrase to type 10, and accordingly suggest verbal predicates which seem pertinent, but it must be understood that this is purely a way to indicate my understanding of each phrase with a slightly higher level of specificity.

Phrases of this type abound, corresponding to a varied notional typology, see for example

locative

ālum ina pāṭim-ma (šaknat, wašbat) "the city is at the border"
āl pāṭim[7] "border city"

temporal

maṣṣartum ina mūši-ma (šaknat) "the watch is at night"
maṣṣarat mūši[8] "the night watch"

final

ṭēmum ana kāti-ma (nadin) "the command is (given) to you"

[7] *YOS* 10 26 ii 29 OB).

[8] *En. El.* V 46.

ṭemka[9] "a command to you"
akālum ana ḫarrānim-ma (wasim, nadin) "the food is (fitting for, given for) the road"
akāl ḫarrānim[10] "travel provisions"

modal

karpatum karānam malāt "the jar is full of wine"
karpat karānim[11] "a jar of wine."

Another interpretation which is applicable in the last example is to consider the nominalized transform as deriving from a kernel sentence with transitive predicate such as:

karānam ina karpatim itbukū "they pour wine in the jar."

In this case, the direct object becomes the modifier, and the adjunct the head of the nominalized transform (type 18).

Also attested, but perhaps less frequently, is a noun phrase in which the modifier is represented by a prepositional phrase attached adnominally to a noun in the normal state, see for example:

ḫarrānum ištu Mari[12] "the road from Mari"
ḫarrān Mari "the road of Mari"

both correlated to a sentence like

ḫarrānum ištu Mari illakam "the road comes from Mari."

78.5 Type 12: subject and complement (possessive)

		12 *šar qištim* king of the gift
		< *šarrum qištam* [] king a gift []

The existence of this type is presupposed on the assumption that a verb indicating possession (either physical or referential) is present in the underlying sentence, and is signaled by the nature of the noun that occurs as head (generally the word

[9] *AbB* 3 11: 50.

[10] *AbB* 2 27: 10; cf. *CAD A*/1 239.

[11] Cf. *AHw* I 449.

[12] See *girru ištu Mari*, ARO 1963 "Präpositionale" p. 398.

bēlum "lord, master"). This is a common type, known as "possessive genitive," where the genitive refers to the thing possessed (see 79.6 for the possessive referring to the possessor). Examples are:

bēl bītim[13] "lord of the house."
bēl arnim[14] "lord of guilt," "guilty man"

Both examples may be understood as correlated to sentences with a predicate such as *išū* "he has":

bēlum bītam išū "the lord has a house"
bēlum arnam išū[15] "the lord has guilt" = "he is guilty."

[13] *CAD B* 196 b.

[14] *CAD A/2* 294 b.

[15] Cf. *CH* §142 rev. viii: 1.

Chapter 79

Noun Phrases with Complement as Head

79.1 Type 13a: complement and predicate (potential)

		13a *qišti nadānim* gift of giving
		< *qištam iddin* a gift he gave

The so-called "attributive genitive," which is in fact to be understood as potential (for which see 78.2), is found with a transitive verb, which may appear in the noun phrase either as an infinitive or as a noun of description, e.g.:

qabal lā maḫārim[1] "a battle which one could not withstand, irresistible battle"
awīl ṣebūtim[2] "a man of needing, a man one may need."

These noun phrases may be correlated to sentences like:

qablam ayyimḫurū? "could they resist the battle?"
awīlam liṣbū? "may they need a man?"

79.2 Type 13b: complement and predicate (infinitive phrase)

		13b *qištam ina nadānim* in giving the gift
		< *qištam iddin* a gift he gave

[1] *CH* iii 71-72, see *CAD M/1* 62 b, and Aro 1961 *Infinitivkonstruktionen* pp. 31-67 for more examples.

[2] *AbB* 6 57: 10.

An alternative type of nominalization does not result in a constructive noun phrase, but rather retains the complement in the accusative and places the predicate in the infinitive:

ṭēmam turram iqbū[3] "they said to send back a message"

This construction is especially frequent when the infinitive is governed by a preposition, e.g.:

ṭuppī annīʾam ina amārim[4] "upon seeing this tablet of mine."

If the complement occurs between the preposition and the infinitive, it appears regularly in the genitive instead of the accusative (a phenomenon which is called "attraction of the genitive"):

ana ṣābim ṭarādim[5] (instead of *ṣābam ana ṭarādim*)
"in order to send the troops."

These constructions are also correlative to the type where the complement occurs as a modifier in the genitive (type 6a, see above, 77.4). For a discussion of the differences which may be suggested for their respective meanings, see below, 82.4.

79.3 Type 13c: complement and predicate (attributive)

		13c *qištum nadintum* the given gift
		< *qištam iddin* a gift he gave

The proper attributive noun phrase consists of a verbal adjective corresponding to the predicate in attribution with a noun corresponding to the complement. In spite of the transitive nature of the predicate, the resulting adjective does not seem to have a properly passive value (see already above, 77.1), since neither does the adjective convey a fientive value, nor is there any convincing attestation of an agent being expressed. I assume therefore that the verbal adjectives derived from transitive verbs have primarily a stative function:

[3] *UM* 5 100 ii 7-8; see ARO 1961 *Infinitivkonstruktionen* pp.90-98 for more examples.

[4] Often in OB letters, see ARO 1961 *Infinitivkonstruktionen* p.228; see pp. 171-181; 228f; 269-273 for more examples.

[5] *ARM* 2 23 Rev. 10'; see ARO 1961 *Infinitivkonstruktionen* pp. 151-171; 229-232; 269-273 for more examples.

ana gišimmarim naksim bēl kirīm ītanappal[6]
"he will compensate the owner of the orchard for every date palm that is found to be felled"
ana šīmim gamrim[7] "for its full price"
qaqqarum nadūm[8] "an abandoned, i.e., a fallow plot of land"

79.4 Type 13d: complement and predicate (subjective)

		13d *qišti nādinim* the gift of the giver
		< *qištam iddin* a gift he gave

I cannot quote an actual example, and it may be that such a type is regularly subsumed either under a relative clause

qišti inaddinu "the gift which he gave"

or under type 15, whereby the nominalization of the predicate corresponds in fact to the subject.

79.5 Type 14: complement and adjunct (dativa l)

		14 *qišti wardim* the gift for the slave
		< *qištam ana wardim* [] a gift to the slave []

This construction may in most cases be analyzed as type 10. If in some instances one may opt for the existence of a possible type 14, it is in function of the assumed compound complement (see above, 65.6) which presupposes a predicate of the type

[6] *BIN* 2 77: 18-21; cf. *CAD N*/1 196 a, with more examples, all of which refer to the state resulting from having been cut off or felled, and not to an action being inflicted by a particular agent at this particular point in time.

[7] See various examples in *CAD G* 37: here, too, the adjective does not refer passively to the action of finishing the payment, but rather to the state of the amount paid as being whole and complete.

[8] *BIN* 7 170:1; see *CAD N*/1 66-68 for more examples.

nadānum "to give," whereby the function of the genitive would be specifically dival; see for example:

qištaka[9] "a gift for you."

79.6 Type 15: complement and subject (possessive; agentive)

		14 *qišti šarrim* the gift of the king
		< *šarrum qištam* [] the king a gift []

In some cases the presumed kernel sentence can best be explained as corresponding to the complement and subject of a sentence for which we must presuppose a specific transitive predicate.

A very common variety of this type of nominalization is found when the transitive verb presupposed in the kernel sentence refers to possession, such as, for instance, the verb *išū* "to have." In this case, the resulting noun phrase is qualified as having a possessive genitive, in the sense that the genitive refers to the possessor (in contradistinction to the case envisaged above, 78.5), e.g.:

awīlum bītam išū "the man has a house"
> *bīt awīlim* "the house of the man."[10]

In other instances the head of the noun phrase is a deverbal noun derived from a root from which the predicate may also be derived, e.g.,

nidinti šarrim[11] "a grant (given by) the king"
< *šarrum nidintam iddin* "the king gave a grant."

In a case like this, the noun *nidintum* is not properly a noun of description meaning "the act of giving" (in which case it could be analyzed as type 3a); it rather refers to something concrete which results from the act of giving, hence the need to presuppose a distinct transitive verb. This construction is the closest approximation we find in Akkadian to the rendering of the agentive.

[9] *AbB* 9 126: 15. I think the letter has an ironic twist and may be understood as follows: "Concerning the copper you sent: why? The copper will be sent back (*uterram* pres. Dt) to you! Send seed and fodder (instead) – and (keep) the farming goods as your gift. (Even) the chickpeas you wrote about did not materialize (*ibbašīā*, N stem with ingressive value, see above, 70.5:2 n.4)."

[10] The construction of the type *mār awīlim* "son of man," "member of the *awīlum* class" (see above, 20.6) would seem to belong here, though the semantic implications are not clear to me ("the *awīlum* class counts this individual as its son"?).

[11] See several examples in *CAD N*/2 206-8.

Chapter 80
Noun Phrases with Adjunct as Head

80.1 Type 16-18: adjunct and predicate (potential)

16 *āl dunnim* city of strength	**17** *id alākim* side of going	**18** *warad nadānim* slave of giving
< *ina ālim dannā* in the city they are strong	< *ina idi illik* at the side he went	< *ana wardim iddin* to the slave he gave

The remarks made above (78.2; 79.1) are applicable here as well: when the predicate of the kernel sentence appears as the modifier of the noun phrase (in the genitive), it does not serve an attributive, but rather a potential, function. As already indicated in 78.2, the common expression

āl dannūtim[1] "city of strength"

does not predicate strength for the city,[2] but rather for the people who live in it, hence it corresponds properly to a presumed kernel sentence

ina ālim nišū dannā "in the city people are strong."

Analogously, with fientive intransitive and transitive roots:

ašar atlukim[3] "a place from which one may leave"
ašar lā ʾāri[4] "a place to which one should not go"
ūmū buqqumim[5] "the days in which one ought to pluck (the sheep)."

[1] See *CAD D* 100 for citations.

[2] This is apparent in this particular case because the root *dnin* with the meaning "to be strong" is restricted to animate subjects. With inanimate subjects, the meaning is "to be big, hard": hence *ālum dannum* would properly mean "big city," in contrast to *āl dannūtim* "city in which the people may be strong, may feel secure."

[3] *ARM* 4 22:23.

[4] See *CAD A*/2 319 for various examples.

[5] *ARM* 2 140:27. See Aro 1961 *Infinitivkonstruktionen* pp. 31-67 for more examples.

Chapter 81

Government and Agreement in Noun Phrases

81.1 Head and modifier

As mentioned briefly above (75.1), the two elements of either annexation or attribution are called head and modifier.

The head of an attributive phrase corresponds to the subject of the corresponding kernel sentence:

šarrum dan "the king is powerful"
šarrum dannum "the powerful king"

where *šarrum* is the head, *dannum* the modifier. Normally, the head is a substantive. In terms of surface structure the distinction between head and modifier is normally made clear by word order, the head preceding in most cases the modifier (see the following chapter).

The head phrase does not show an unequivocal correspondence with any single constituent of the kernel sentence, as is obvious from the complex distribution of alternatives summarized in the chart on pp. 432-433. On the other hand, the surface structure of annexation is more rigid than for attribution, so that the head always precedes a modifier (see next chapter) and, when declinable, it always occurs in the construct state. Apparent exceptions are found in the cases of the determinative pronoun and of anticipatory emphasis, for which see below, 81.5-6.

81.2 Attribution and apposition

Strictly speaking, attribution should be regarded as the nominalization of a sentence which predicates quality for a given subject. In this sense, attribution occurs only with adjectives as modifiers.

Apposition, on the other hand (see also above, 6.3), may be regarded as a special type of attribution, i.e., as the nominalization of a sentence which predicates identity between a substantive or pronoun and a given subject, e.g.,

PN *šakkanakku*[1] "PN, the governor"
awīlum šū "this (i.e., the above mentioned) man."

The rules of agreement are similar for both apposition and attribution. Where morphologically possible, concord is normally complete between head and modifier. (It is assumed that two nouns inflected for a secondary case cannot occur in an attributive or appositional relationship, see above, 22.6:7 and 63.7 n. 17.) Concord is partial with invariables, such as proper names, and with collectives, e.g.,

ṣābu šunū ul ubbub[2] "these people have not been cleared,"

where the attribute *šunū* is plural while the (collective) noun *ṣābu* (as well as the predicate *ubbub*) is singular. This may be contrasted with

ṣābum šū lā ulappatam[3] "this group must not delay"

where both the attribute *šū* and noun *ṣābum* (as well as the predicate *ulappatam*) are in the singular.

Concord for gender is regular even with unmarked feminines, e.g.,

ummum damiqtum "the good mother."

Occasionally, a feminine substantive may be in apposition with a masculine substantive, and in this case further attributive elements may occur in the feminine, e.g.,

šū tarbīt "he is an adopted child"
> *tarbītum šī*[4] "the above mentioned adopted child"

A pronoun may occur as either head or modifier, and in either case concord is complete:

atta Gilgameš "you are Gilgamesh"
> *atta Gilgameš* "you, Gilgamesh"
> *ana kāta Gilgameš* "to you, Gilgamesh."

It should be noted that Akkadian uses attribution in place of annexation (as in English) for cities and materials, as in the following:

ālum Bābilim "the city of Babylon" (lit. "the city Babylon")
kilīlum kaspum "the crown of silver" (lit. "the crown silver").

On the other hand the notion of totality is expressed not by attribution, but by annexation, using one of the following words meaning totality: *kalūm*, *napḫarum*,

[1] *CAD Š*/1 170 (OB), generally followed by the genitive of the city or province under his jurisdiction.

[2] *ARM* 1 36: 28-29.

[3] *AbB* 2 23: 5'.

[4] *CH* §186 rev. xvi 47.

gimrum, gimirtum, kullatum, nagbum, e.g.,

gimir ilāni "all the gods" (lit. "all of the gods").

81.3 Attribution with cardinal numerals as modifiers

The rules of agreement are quite different from those stated for attribution in general when the modifier is a cardinal numeral. In this case there is normally discord of state and (for the numerals from 3 to 19) of gender, and concord only of number. Usually, the head noun is in the normal state (and consequently the numeral is in the absolute state); if the reverse is true, then the numeral has the force of determination. The basic paradigm is as follows:

	state	gender	number
1 and 2	discord	concord	concord
3 through 19	discord	discord	discord

Examples:

1, 2 *ištēn šarrum* "one king"
ištīat šarratum "one queen"
(*ištēnum šarrum* "the one king")

3-19 *šalāšat šarrū* "three kings"
šalāš šarrātum "three queens"
(*šalāšum šarrū* "the three kings").

81.4 Anticipatory emphasis

The modifier of a nominalized transform resulting in annexation may be placed in the nominative before the head, and then be replaced by a pronominal suffix in the noun phrase itself. The general purpose of this device is to serve for emphasis, as described above, 66.8-9. It is especially frequent with the possessive genitive when the head is the subject of a sentence, e.g.:

aḫum aššassu ṭābat "the brother, his wife is good"
< *aššat aḫim ṭābat* "the wife of the brother is good"

šumma awīlum šarassu ... ṣalmat[5] "if a man, his hair is black"
< *šumma šārat awīlim ... ṣalmat* "if the hair of a man is black"

In terms of normal government rules, this is an anacolouthon, since the noun in extraposition (e.g., *aḫum, šārat awīlim*) does not properly govern any predicate

[5] *AfO* 18 66: ii 37 (OB omen).

though it is in the nominative. Such a construction is known by the Latin term "casus pendens," i.e., "hanging case," which refers to the fact that the nominative is not in this case the marker of the subject, since there is no predicate referring to it, and thus gives the impression of a construction that hangs unresolved.

The noun which is placed in front of the noun phrase may also occur (other than in the nominative) in the genitive preceded by the determinative pronoun, e.g.:

ša ardati damiqti inibša[6] "of the pretty girl, her attractiveness"
~ *inib ardati damiqti* "the attractiveness of the pretty girl."

A special case of anticipation is found with phrases indicating certain types of kin relationship, such as the following:

mār aḫātīšu ša PN "the son of his sister, that of PN"
< *mār aḫāt PN* "the son of the sister of PN," i.e., " PN's nephew."

In this phrase, the anticipation is expressed by the pronominal suffix *-šu*, while the phrase with determinative pronoun *ša PN* resumes the entire phrase *aḫātīšu*.

81.5 Government with multi-place noun phrases

Multi-place noun phrases with infinitives[7] (defined above, 75.1 and 75.3) have briefly been described with regard to deep structure in 78.3 and 79.2. A variety of different environments should be distinguished.

(1) When the subject or the object are a pronoun, this occurs regularly as a suffix in the genitive, e.g.,

balum šālīya "without asking me" or "without my asking"
< *iš'alanni* "he asked me" (objective genitive)
or < *aš'al* "I asked" (subjective genitive).

(2) When the subject or the object are a noun and the infinitive is *not* governed by a preposition, the subject or object tend to be in the genitive:

[6] *Maqlû* III 8 f.

[7] It seems possible that there may be a multi-place noun phrase with the participle, as in *muštašḫir melemmē Emeteursag* (*CH* ii 60-62) "the one who surrounds with splendor Emeteursag (a temple)": Hammurapi is the subject, and he is said to surround the temple (direct object) with splendor (adjunct). In the noun phrase, *melemmē* is in the genitive; *Emeteursag* is not declined because it is a proper name, but it seems inescapable to assume that it corresponds to an accusative – since the construct *muštašḫir* cannot govern two genitives, and notionally *muštašḫir* requires a direct object.

šulput mātīšu "the destruction of his land" (objective genitive)
< *massu ušalpit* "I destroyed his land"

alāk awīlim "the man's going" (subjective genitive)
< *awīlum illik* "the man went."

(3) When the subject or the object are a noun and the infinitive *is* governed by a preposition, the subject or object may occur in one of three different ways, which may be represented paradigmatically as follows:

(a) *ina amār ṭuppim* "in the seeing of the tablet"
(b) *šarrum ṭuppam ina amārim* "the king the tablet in seeing"
(c) *ina ṭuppim amārim* "in the tablet seeing."

While type (a) represents the standard nominalization with construct state and genitive, type (b) is closer to the verbal quality of the infinitive by giving the object in the accusative. This verbal quality is particularly evident when the subject also appears in the noun phrase, as in the entry above, though it is possible to have only the subject or only the object:

(b′) *šarrum ina amārim* "the king in seeing"
(b″) *ṭuppam ina amārim* "the tablet in seeing."

Type (c) is traditionally known as "attraction of the genitive," meaning that the complement is attracted by the preceding preposition into the genitive, even though the complement is governed by the following infinitive. This is the only case in which a noun (the infinitive) governing a genitive is not in the construct state. In type (c) one further peculiarity may occur, in that an adjunct may be included, expressed by means of a prepositional phrase. The only examples I know exhibit the same preposition as governing both the infinitive and the prepositional phrase, with the preposition of the prepositional phrase being deleted:

(c′) *ina eqlim šiprim epēšim*[8] "in doing the work in the field"
< *ina eqlim šipram īpuš* "he did the work in the field."

It is not immediately apparent what may be the difference in meaning if any, among the three types. One may tentatively speculate that the difference may have been one of emphasis, which would in turn have been marked through stress or intonation, perhaps along these lines:

[8] *CH* §42 xii 67 - xiii 1; the deletion (for which see below, 89.7) may be understood as following: *ina [ina] eqlim šiprim epēšim*: *[ina] eqlim* is the adjunct, *šiprim* is the direct object, in the genitive because of attraction.

ina amār ṭuppim "at *seeing the tablet*" – emphasis on the whole phrase[9]
ṭuppam ina amārim "at seeing *the tablet*" – emphasis on the object
ina ṭuppim amārim "at *seeing* the tablet" – emphasis on the verb

Note that the first type is essentially a two-place noun phrase, so that a phrase of the type **šarrum ina amār ṭuppim* seems excluded.

It is important to stress that through embedding of clauses and noun phrases the resulting structure may at times be rather complex as in the following example:

aššum mārī iššakki ša ina bāb ekallim izzazzū eqlim apālim iššapparakkum[10]
"it has been written to you concerning the (need to) satisfy the members of the farming class, who are in attendance at the palace, with regard to the real estate (requirements)."

(4) Note that the causative stem behaves in the same manner as the B stem. If the nominalized transform includes only the complement, this is placed in the genitive after the infinitive:

ana šūpuš elippēti[11] "to construct the boats"
< *elippēti ušēpiš* "he had someone build boats"

ana šūtēšur nīši[12] "to lead the people straight."

If, on the other hand, both the subject and the direct object of the kernel sentence are included in the nominalized transform, they are regularly placed either in the accusative before, or in the genitive after the preposition, e.g.,

ana mātim ūsim šūḫuzim[13] "to cause the country to take right path"
< *mātam ūsam ušāḫiz* "he caused the country to take the right path."

(5) With a double complement, if the direct object occurs in the genitive after the infinitive, the indirect object is normally not expressed:

nadān mandatti "the giving of the tribute"
< *mandattam ana yāti iddin* "he gave the tribute to me"

[9] This interpretation was suggested by my student CHANG-BAE LEE.

[10] *AbB* 4 8: 4-7. The preposition *aššum* governs the infinitive *apālim*, which in turn governs the direct object *eqlim* (with attraction of the genitive) and the secondary complement *mārī iššakki*, which is in turn qualified by the relative clause *ša ... izzazzū*.

[11] *OIP* 2 v 67 (Sennacherib).

[12] *CH* v 16.

[13] *CH* v 17.

If on the other hand both complements are expressed, then they occur as accusative and prepositional phrase respectively before the infinitive:

bītam ana PN lā nadānam aqbī[14] "I ordered not to give the house to PN"
< *bītam ana PN iddin* "he gave the house to PN"

[14] Cf. *VAB* 6 241: 13-14.

Chapter 82

Word Order in Noun Phrases and Clauses

82.1 Contact sequences

There are three instances of obligatory contact sequences: annexation, prepositional phrases, and the modifier's position in front of the head.

(1) Within annexation, the modifier (in the genitive) follows immediately the head (in the construct state), e.g.,

ekal šarrim "the palace of the king."

Four exceptions may be noted.

(a) The particle *lā*, if negating the modifier, interrupts the sequence and occurs immediately before the genitive (alternatively, the phrase with *lā* may be understood as a compound noun, in which case the modifier would still be in contact with its head, see above, 6.3), e.g.,

dabāb lā kittim "speech of non-truth, false speech"

(b) When the modifier is an infinitive, complements or adjuncts may occur between head and modifier, e.g.:

ša ina aplūtim nasāḫim[1]
"that of removing from sonship," i.e., "sufficient to remove the son from his inheritance status"

(c) When through conjoining and deletion transformations (for which see the following chapters), there results a series of one head and several modifiers, all modifiers but the first are separated from the head by the other modifier(s):

ilik eqlim u ilik kirīm u ilik bītim
> *ilik eqlim kirīm u bītim* (see above, 6.3)
"the service obligation pertaining to field, house and orchard"

[1] *CH* §168 rev. xii 19-20.

(d) The converse (i.e., several heads with only one modifier) is extremely rare:

šakkanakkū, rubū u nišū Amqarruna[2]
"the military, the nobles and the people of Ekron."

Normally, the latter construction is resolved by means of the determinative pronoun, for which see 82.3.

(2) A preposition is followed immediately by the noun it governs, e.g.,
ana šarrim "to the king"
ana ekal šarrim "to the palace of the king."

Two exceptions may be noted (besides those listed above for annexation; for prepositions governing an infinitive see above, 81.5).

(a) When the noun governed by the preposition is a transitive infinitive, the direct object (in the genitive) may interrupt the sequence (see below, 82.4).

ana šanītim aḫāzim "in order to marry another (wife)."

(b) If there is a coordinating conjunction governing a string of nouns, only the first needs to be in contact, e.g.,

ana šarrim u šarratim "to the king and the queen"

(3) When a modifier precedes the head, the two must also be in contact, e.g.:

ana damqim dīn Šamaš[3] "to the good decision of Shamash"
ša aḫḫīya rabūti aḫšunū ṣeḫru[4] "the small one among my older brothers."

82.2 Attributional chains

Appositions and attributes are cumulative, in the sense that more than one modifier can both be appended to the same head and/or nested within other modifiers.

To explain this construction I will use two paradigmatic examples.

(a) *nidinti šarrim damiqtum ša wardīšu ša ūmam iddinušum*
"the good present of the king, for the slave, which he gave him today"

(b) *nidinti šarrim damqim ša Bābilim ša ūmam illikam*
"the present of the good king of Babylon who came today"

[2] *OIP* 2 ii 13 (Sennacherib).

[3] *TCL* 3 121 (Sargon, SB), instead of *ana dīnim damqim ša Šamaš*.

[4] BORGER, *Esarhaddon* p. 40:8 (SB).

In (a) there is a sequence of attributes and appositions, each one modifying the head *nidinti*; in (b) there is a nested sequence of attributes and appositions, each one modifying *šarrim*, which in turn modifies *nidinti*.

In the following two sections we will consider different rules which are applicable to such attributional chains.

82.3 Appositional phrase with determinative pronoun as head

A special type of apposition consists of a noun phrase with the determinative pronoun (see above, 30.2; 32) as head and another noun phrase as modifier; when inflected, the modifier is in the genitive.

This construction is required when the same modifier is applied to different heads, and the modifier is not repeated in each case, but is only added at the end of the chain of heads, e.g.:

(a) *ina eqel ilkīša u ina bīt ilkīša*
(b) *ina eqlim u bītim ša ilkīša*
"in the field and house encumbered by her service obligation."

Note how an expression with double construct state (such as **ina eqel u bīt ilkīša*) is impossible in Akkadian, so that the formulation with determinative pronoun, as in (b), is practically required in order to avoid the repetition of *ilkīša* as in (a).

For the most part, however, this type of construction is used to break up an attributional chain. The following subtypes may be distinguished.

(1) To make explicit different degrees of annexation:

(a) *šerikti bīt abīša* "her father's house gift"
(b) *šeriktum ša bīt abīša* "the gift of her father's house"
(c) *šerikti bītim ša abīša* "the house gift of her father"

Note how in (a) the degree of annexation among modifiers is left implicit and undifferentiated, while in (b) *bīt abīša* is a close unit juxtaposed to *šeriktum*, and in (c) *šerikti bītim* is a closer unit juxtaposed to *abīša*.

(2) To allow a closer relationship between the head and an attribute:

(a) *mār Ekur reštū* "the first son of Ekur"
(b) *mārum reštūm ša Ekur* "the first son, of Ekur"

Note how in (a) the adjective *reštū* qualifies the noun phrase as a whole (because of the sequential rules stated below, 82.4), while in (b) the adjective is linked directly to the head of the noun phrase.

(3) To place more emphasis on the head, especially when it is monosyllabic:

ab baṭulti "the young girl's father"
abum ša baṭulti "the father of the young girl"

(4) To clearly identify head or modifier when either is not clearly defined morphologically (e.g., with undeclinable proper names):

ūmī šattim or *ūmī ša šattim* "the days of the year"
nišū Uruk or *nišū ša Uruk* "the people of Uruk."

82.4 Relative order within attributional chains

Since the elements of the attributive chain are cumulative, they are discontinuous, in the sense they can be separated from the head by other elements – with the obvious exception of contact cases (see above, 82.1).

This means that there can only be one of the elements which are in contact for any given chain, i.e., only one annexation and one modifier in front of the head. As for the others, a relative sequential order obtains, according to which the various elements may be ranked as follows in terms of preferred progressive distance from the head:

(1) annexation: *nidinti šarrim* "the gift of the king"

(2a) attribution: *nidintum damiqtum* "a nice gift"
ina palīya damqim[5] "in my good reign"
aban šadī dannu[6] "solid limestone block"

(2b) apposition: *Ḫammurapi šarrum* "Hammurapi the king"

(3a) appositional phrase: *nidintum ša nadānim* " a gift to be given"

(3b) prepositional adjunct: *girru ištu Mari* "road from Mari"
akāl ṣābi mādum ana ḫarrānim "the soldiers' many provisions for the road"

(4) relative clause: *nidintum ša šarrum išpuru* "a gift which the king sent"

In the examples just quoted the modifier is given in contact with the head because no other modifier occurs in the same phrase. But the sequence may be interrupted in each case by additional modifiers, and it is in such cases that the sequential rank emerges.

A schematic representation of the sequential order of ranks is given on the following page.

[5] *PBS* 7 133 ii 56 (Hammurapi).

[6] BORGER, *Esarhaddon* 60 v 52.

SEQUENTIAL ORDER OF ELEMENTS WITHIN A NOUN PHRASE

modifiers (left)						modifiers (right)	
				discontinuous			
head							
	contact						
contact							
type of association							
-1	0	1	2	3a	3b	4	
– attribute attrib.phrase prep.adjunct attrib.clause		annex.	attribute	attr.phrase	prep.adjunct	attrib.clause	
(*damiqtum*) (*ša wardīšu*) [see note 6] (*ša ūmam ...*)	*nidinti* " " " "	*šarrim* " " " "	*damiqtum* " " " "	*ša wardīšu* " "	*ana ḫarrānim* "	*ša ūmam iddinušum*	
examples							

82.5 Word order in clauses

Only two elements can occur in clause initial, namely conjunctions and relative pronouns; they are also mutually exclusive, as they can never occur together in the same clause. For examples with conjunctions, see above 65.4; 66.3; for relative pronouns see above, 76. An apparent exception to the clause initial rule stated here results from the deletion of the relative pronoun, see below, 89.4.

Similarly, the subject, object or adjunct of a non-pronominal attributive clause can only occur in clause initial when they are the same as the head from which the attributive clause depends, see below,

Exceptions are very rare, and possibly also due to reasons of emphasis, e.g.:

Naram-Sīn ... ištu tāḫazī šunūti iš>aru, u šarrīšunū ikmī[7]
"Naram-Sin since he won these battles, then he bound their kings"

PN išti PN šumma ettāmar[8]
"PN with PN if he is seen,..."

awīlum kīma ana šūta>>īm lā ireddū ul tīdē?[9]
"don't you know that the man should not be slighted?"

This peculiar word order may be compared to the one which is standard in noun phrases consisting of a preposition and an infinitive, for which see above, 81.5.

[7] *FAOS* 7: p. 89 (OAkk). The conjunction *u* marks the beginning of the apodosis.

[8] *TCL* 21 253: 16 (OA!).

[9] *AbB* 4 55: 6-8.

Chapter 83
Review of Nominalization Types

83.1 Index by notional categories

Since there is no one-to-one correlation between formal types and notional categories, it will be useful to provide an index by notional categories.

NOTIONAL CATEGORY	TYPE	EXAMPLE
agentive	15	*nidinti šarrim*
attributive	7a-9a	*šarrum dannum*
attributive	13c	*ana šīmim gamrim*
datival	14	*qištaka*
final	10	*akāl ḫarrānim*
limitative	4	*ṣalmāt qaqqadim*
locative	5,10	*ālik idīya*
modal	10	*karpat karānim*
objective	6	*nadān qištim*
partitive	4	*ištēn ālānīya*
possessive	12	*bēl bītim*
possessive	15	*bīt awīlim*
potential	7b-9b	*ṭēm ḫamātim*
potential	13a	*qabal lā mahārim*
potential	16-18	*ašar lā >āri*
subjective genitive	1-3	*alāk awīlim*
superlative	4	*le>ūm le>ūti*
temporal	10	*maṣṣarat mūši*

83.2 Surface ambiguity

It is readily apparent that most transforms are identical in their surface structure. This leads occasionally to ambiguity as in the following paradigmatic example (numbers refer to the list of types summarized above, pp. 432-433).

nidinti wardim

= *nidintum ana wardim-ma* (10 or 14)	"the gift is for the slave"
= *wardum nidintam išū* (15)	"the slave has a gift"
= *nadin wardim* (3b)	"given of slave"
= *wardam iddin* (6a)	"(someone) gave the slave"

However, ambiguities of this type are relatively infrequent, because of lexical and contextual considerations which allow, in most cases, a correct transformational understanding of specific cases of annexation. Thus if the genitive following *nidinti* is inanimate, interpretations (3a) and (12) are ruled out simply on the basis of data derived from feature analysis. In turn if the inanimate noun is *ḫarrānum*, semantic considerations will make (10) the most likely interpretation:

nidinti ḫarrānim = *nidintum ana ḫarrānim-ma* "the present is for the trip."

If, on the other hand, the inanimate noun is *ṭuppum* then the same considerations will make (6a) the most likely interpretation:

nidinti ṭuppim = *ṭuppam iddin* "(someone) gave the tablet"

Similarly, the phrase

nidinti šarrim

can hardly be interpreted as

šarram iddin "(someone) gave the king"

because of semantic reasons. Contextual considerations will make only one choice likely, namely

šarrum iddin "the king gave."

This is a good example of the advantage inherent in a transformational approach. Transformations relate in a precise and controllable manner what appears (on the surface) to be total indistinctiveness to what is actually (i.e., in terms of deep structure) a very diversified picture. At least, they give us a precise formal handle on the formulation of our understanding of surface structures.

The fact that ambiguity plays an important role in the surface structure of noun phrases may be attributed to reasons which operate beyond the realm of syntax, i.e., in the realm of discourse analysis: ambiguity creates a certain tension in the listener, or reader, by avoiding the dull articulation of every element of the discourse (see also above, 76.10).

SECTION C
CONJOINING

Chapter 84
Introductory

84.1 Subordination and coordination

The traditional distinction between coordination and subordination in Akkadian may be summarized briefly as follows:

(1) coordination is characterized either by the presence of certain conjunctions, or else by simple juxtaposition of sentences (asyndeton);
(2) subordination is characterized by certain other conjunctions which introduce specific constraints on mood, tense and negation;
(3) a special type of coordination is considered as virtual subordination because in meaning it is the equivalent of subordinate sentences.

Such distinctions are valid, and they are reflected in the treatment given in this grammar to these types of sentence. Yet our present treatment introduces some significant differences with respect to the traditional presentation. In the first place, the arrangement is here based not on the introductory particles (conjunctions) as distinguishing keywords, but rather on a consideration of the sentence as a structural whole. Thus clauses which are substituted for a direct object have been considered objective clauses, and treated above in 65.4; clauses which are substituted for a predicative adjunct have been considered adjunct clauses, and are treated above in 66.3; clauses which may be substituted for attributes have been considered attributive clauses, and are treated above in 76. Clauses which cannot be substituted in the same manner (though similar transformations are possible) consist in fact of compound sentences, and will be treated in the present chapter. The term "subordination" refers to all clauses treated previously, i.e., to clauses

which are embedded in other sentences rather than being compounded or conjoined with them.

The second main difference with respect to traditional theory is that attributive and compound sentences are treated here in a transformational key – as the result of the nominalizing and conjoining transformation respectively. Transformational notions are already implicit in the traditional concept of "virtual subordination" or "coordination in place of subordination." As in other such cases before, here too I will try to develop more fully and more explicitly such transformational trends occurring in traditional theory, making them the basis of a system of interpretation.

Essentially, a conjoining transformation links two or more kernel sentences through some formal device. While very simple on the surface, the results of the conjoining transformation are rather complex as soon as one tries to investigate the deeper underlying structure. What remains to be seen now are the transformational criteria which can be used to allow an insight into the deep structure.

84.2 Reversibility and irreversibility

The main criterion for a structural analysis of conjoined transforms is that of reversibility. The following sentence

īkul u ištī "he ate and drank"

may be interpreted in two distinct ways. Either the actions are simultaneous, in the sense that the subject ate and drank at the same time (though obviously by alternating the two actions), or in the sense that first he ate, and then he drank. In the first case, the two verbs are interchangeable, i.e., reversible:

ištī u īkul "he drank and he ate"

having the same meaning as

īkul u ištī "he ate and he drank."

In the second interpretation, on the other hand, the two verbs are not interchangeable, i.e., they are irreversible; for the sequence indicates, in that case, which action comes first, so that

īkul u ištī "he ate and (then) he drank"

has a different meaning from

ištī u īkul "he drank and (then) he ate."

In cases like this, the choice between reversibility and irreversibility has to be based on contextual meaning. In other cases, certain features of surface structure

determine the choice overtly, as will be shown in the following chapters. It is clear that the transformational test just proposed is also notional in that it is based on the meaning of the sentence as understood by the reader. But it must be emphasized that the transformational interpretation is not meant as a heuristic device, i.e., as a procedure for formal discovery of deep structure. Rather it is a descriptive device, i.e., a procedure whereby our previously acquired understanding of structure is spelled out in clearly relatable terms. Thus while a transformational test does not serve the role of a *deus ex machina* for the determination of meaning, it is a useful tool of linguistic description.

Chapter 85
Reversible Sequences

85.1 Surface reversibility: disjunctives

Only two types of conjoined sentences may be recognized as reversible in terms of surface structure, i.e., by means of specific markers. The first type includes the disjunctive sentences, i.e., sentences which are notionally mutually exclusive. They are characterized formally either by the particles *ū* or *ū lū* "or" occurring between the two sentences, or by the particles *lū...lū*, *šumma...šumma* "whether...or," "either...or," with one particle occurring in front of either sentence. Sentences of this type, namely

īkul ū ištī "he ate or drank"
= *ištī ū īkul* "he drank or ate,"

are always reversible. Examples are:

ū *šumma ṣābītum ana šīm šikārim še'am lā imtaḫar,*
ina abnim rabītim kaspam imtaḫar,
ū maḫīr šikārim ana maḫīr še'im umtaṭī...[1]
"if an inn-keeper has not received barley in payment for beer
and has received instead silver by the heavy weight,
or has reduced the value of beer in relation to the value of barley..."

ū lū *šumma...eqlam Adad irtaḫis ū lū bibbulum itbal...*[2]
"if either a winter storm has inundated the field or a spring flood has carried it away..."

lū ... lū *lū šarrum lū iššakkum*[3]
"whether a king or a governor"

[1] *CH* §108 rev. ii 15-21.

[2] *CH* §45 xiii 41-44.

[3] *RA* 33 50 iii 8 (Mari: Yahdun-Lim).

lū ... ū lū *lū kaspam lū ḫurāṣam lū wardam lū amtam ... ū lū mimma šumšu*[4]
"whether silver or gold or a male slave or a female slave ... or anything else"

šumma... šumma *šumma kisām ilqī-ma ittalak šumma maḫrīkunū...*[5]
"whether he took the purse and went away, or he is still with you..."

85.2 Deep reversibility: cumulatives and adversatives

Apart from the instances listed in the preceding section, reversibility is not signaled in surface structure by any other unequivocal markers. Reversibility may be indicated by the marker *u* "and, but" (note the difference in vowel quantity from the particle *ū* "or"), but the same marker may also indicate irreversibility, as will be seen in the following chapter. In the case of conjoined sentences characterized by *u*, therefore, notional grounds will determine whether it is reversible or not. Notionally, deep reversibility may be described as either mutually cumulative or adversative (as indicated by the double translation given above for the particle *u*). An example follows:

u *šayyāmānu...šībī ša ina maḫrīšunū išāmu itbalam*
u bēl ḫulqim šībī mūdī ḫulqim itbalam[6]
"the buyer will produce witnesses in front of whom he made the purchase,
and the owner of the lost property will produce witnesses who know about the lost property."

[4] *CH* §7 vi 42-47

[5] *VAB* 6 131: 11-12.

[6] *CH* §9 vii 18-26.

Chapter 86

Irreversible Sequences

86.1 Introductory

Of the two sentences constituting an irreversible sequence, only one may be introduced by a conjunctive particle. As already mentioned (84.1) we will not consider here those types which have already been treated elsewhere. Adjunct clauses in particular are in fact irreversible sequences of the type

aššum illiku īmur "he saw because he came"

However, because of their structural role as adjuncts, they have been considered together with adjuncts in 66.3. Accordingly, here we will view only two types, the conditionals (for which no correlative noun phrase adjunct is available) and the so-called virtual subordination. The two subtypes are also characterized according to whether the particle precedes or follows the first predicate.

86.2 Conjunction before first sentence: conditionals

A sentence introduced by *šumma* "if" occurs regularly first in a conjoined transform. This first sentence is known as "protasis," while the second is known as "apodosis," e.g.:

protasis: *šumma awīlum šinni awīlim meḫrīšu ittadī*
apodosis: *sinnašu inaddū*[1]
"If a man knocked out the tooth of a man who is his peer,
they will knock out his tooth."

The protasis and apodosis are properly two conjoined sentences rather than a subordinate and main sentence: the protasis, in fact, does not correspond to any other constituent of the sentence, such as complement and adjunct, or of the phrase, such as attribute. For instance, a noun phrase of the type *ina parāsim* cannot replace the conditional sentence *šumma iprus*. The latter is rather an irreducible sentence which may only be analyzed as the result of a conjoining transformation that combines two separate sentences.[2]

[1] *CH* §200 rev. xvii 66-70.

Negation in the protasis occurs with the particle *lā* as with subordinate clauses, rather than *ul* as with main sentences:

šumma nukarribum eqlam ina zaqāpim lā igmur...[3]
"if a fruit grower has not finished planting a plot of land..."

Only seldom is the negation *ul* employed, and then in a potential sense, apparently to reduce the strength of negation when the speaker hopes that the negative hypothesis may not come true:

šumma GN ul ikšudū ṭuppam līšakšidū-šu[4]
"should they not (be able to) reach GN (as I hope they will)
one should have (at least) the letter reach him."

The most common tense in the protasis is the preterite (as in the examples given so far). The preterite does not stand necessarily for past action, but rather for a general hypothesis without regard to temporal connections. The perfect is normally used for a secondary condition, contingent upon the primary one expressed by the preterite; this may normally be understood in terms of temporal succession (the first mentioned condition being first, the second second). In Middle Babylonian, however, the perfect has replaced the preterite even for primary conditions in positive clauses. Otherwise the perfect is normally used even in Old Babylonian in a potential sense for positive clauses:

šumma amtaqut[5] "should I die."

86.3 Conjunction after the first predicate: virtual subordination

The traditional term "virtual" or "logical" subordination expresses a transformational reality, i.e., a fact of deep structure: sentences which appear to be

[2] Note how other Semitic languages introduce the apodosis with the standard coordinating conjunction, e.g., *ū* in Hebrew and *fa* in Arabic. – One may tentatively suggest that at the origin of the Akkadian particle *šumma* lies the nominal predicate *šū-ma*, the subject of which would be the entire sentence that follows, e.g., " 'The man knocked out the tooth' is it: they will knock out his tooth." A formal correlative in English would be a sentence of the type: "Suppose a man knocks out ..." This might explain the use of the negative particle *lā*, namely on the assumption that the protasis was originally understood as a nominalized subject of a nominal sentence: *šumma lā ittadī* would mean: "Not 'he – knocked – out' is it," hence: "If he did not knock out." – For the expression of condition contrary to fact, with enclitic *-man*, see above, 73.4.

[3] *CH* §61 xvi 27-29.

[4] *ARM* 1 45: 16-19, see Von Soden 1952 *Grundriss* § 161 b.

[5] *Gilg.* Y iv 13 (OB).

coordinated in terms of surface structure consist in fact, i.e., in terms of deep structure, of a sentence with an adjunct clause embedded in it. Another term that could be used to express the same reality is "undifferentiated" subordination, in the sense that the conjoined transform may include any type of adjunct clause, such as temporal, final, causal, etc. (note however that this is restricted to adjunct clauses only, and does not apply to objective and attributive clauses).

The conjoining particle may be the same as the one used to express reversibility, *u* "and, but"; much more frequently, however, the enclitic *-ma* is used, with the same basic meaning. The latter particle is very distinctive in that it never allows reversibility. Thus the sentence

illik-ma īmur "he went and saw,"
"he went in order to see,"
"if he went, he saw," etc.

is never reversible, i.e., is not identical in meaning to

īmur-ma illik "he saw and went," "he saw in order to go," etc.

As indicated by the various translations given for the last two sentences, as well as by the term "undifferentiated" subordination suggested above, irreversible coordination with *-ma* (or with *u*) may be used to express a wide range of notional categories, which are not always easily distinguishable. Normally contextual criteria are the only ones that help determine which choice is best. See for example:

temporal/consecutive
šumma awīlum...ina karīšu pītum itteptē u ugāram mē uštābil[6]
"if a breach opened up in somebody's dam so that then as a result he causes the waters to carry off (the agricultural soil of) the irrigation basin..."

temporal/final
ittīšunū alik-ma alpī u ṣēna ša lītīka piqid[7]
"go with them in order to examine the cattle and sheep of your jurisdiction"

temporal
āmuršu-ma itarrurā išdāya[8]
"when I saw him (Nergal) my stance was unsteady"

[6] *CH* §53 xv 7-15.

[7] *VAB* 6 55: 12-14.

[8] *ZA* 43, p. 17: r. 54 (*CAD I* 240).

consecutive or causal
šumma maršu ṣeḫir-ma ilik abīšu alākam lā ilī[9]
"if his son is too small to be able to perform his father's service obligation"
or "his son is not able to perform his father's service obligation because he is too small"

consecutive or causal or temporal
urḫa ruqta illikam-ma īniḫ[10]
"such distant roads did he travel that he was tired"
or "he was tired because he travelled..."
or "he was tired after he travelled..."

modal/temporal (gerundium)
uktammis-ma attašab abakkī[11]
"bowing down I sat weeping."

[9] *CH* §29 x 41-45.

[10] *Gilg.* I 7.

[11] *Gilg.* XI 136.

SECTION D
DELETION

Chapter 87
Introductory

By definition, an adjunct is not required as a necessary constituent of a sentence (57.7): hence the presence or absence of an adjunct is not regulated by syntactical considerations, but is simply derived from the nature of the discourse.

The absence of a major constituent, on the other hand, is a phenomenon which must be accounted for syntactically, since by definition (57.7) a major constituent must otherwise be present in a sentence. The rules of deletion provide just such an explanation, i.e., they articulate the conditions under which a major constituent may be omitted. In general, the underlying principle is that a deleted major constituent can be supplied on the basis of information which has already been conveyed in the discourse: hence the term "deletion" refers to surface omission of an element which is in fact present, and identifiably so, in terms of deep structure.

As indicated, the absence of a minor constituent, or adjunct, is not a deletion of information which is otherwise known, but pure and simple lack of information. Thus a temporal qualification, for instance, is not required syntactically, and, if omitted in the discourse, it is irrelevant (syntactically) whether or not it can be supplied from the context. It is important to note that the concept of "major" and "minor" constituents is a purely *syntactical* one; thus, for example, a temporal qualification may well be of major significance for the message conveyed in the discourse, and its omission from the discourse would therefore withold major information, even if syntactically such an adjunct would remain a minor constituent.

As noted in other instances, there is a polarity in the discourse between degrees of explicitness and degrees of ambiguity: the tensional factor resulting from ambiguity elicits the interest of the listener/reader, but may result in obscurity; on

the other hand the redundancy resulting from explicitness tends to dull the interest, but may be necessary for the sake of clarity.

A traditional concept which has a bearing on the concept of deletion is that of "pronoun" – when it applies to the third person. As the etymology suggests, a pronoun stands in place of a noun: it is used to replace a noun when repetition would be redundant. As such, a pronoun stands half-way, as it were, between deletion and the full presence of all the constituents. It is not full deletion, but rather the replacement of a specific constituent (the noun) by means of a generic one (the pronoun). We will see that similar considerations apply also for the indefinite pronoun.

Chapter 88

Sentence Level

88.1 Subject

With a nominal predicate the subject may only be deleted if it is of the third person (of course, the subject must otherwise be known from the context). See for instance:

nukurtum-ma[1] "(the event described) is a case of hostility"
ana bēlīšu-ma[2] "(the loss that occurred) is of (i.e., is imputed to) its owner"

The subject is normally deleted with the imperative, since, as a rule, a command is addressed to a person immediately present to the speaker; if the subject is retained for emphasis, it may be considered in the vocative:

attunū...ana Bābilim alkā[3] "you, leave for Babylon!"

Deletion of an explicit subject with the indicative is regular under certain conditions; in every case, the subject is expressed by the corresponding pronominal affix. Such conditions include cases in which the topic of discussion has been explicitly mentioned in the immediate context and is not repeated (in the following examples square brackets indicate deletion of the explicit subject):

anumma Sīn-ayyabāš, ištēn guzalā u šatammī...uwa'eram... –
inūma [Sīn-ayyabāš, guzalūm u šatammū] issanqūnikkum, ittīšunū alik[4]
"now I have sent S., one servant and the managers;
when they have come to you, go with them."

Similarly the subject is deleted when an adjunct clause has the same subject as the main clause in which it is embedded, in which case deletion affects normally the subject not of the first, but of the subsequent sentence:

[1] *AbB* 6 64:16.

[2] *CH* §244 rev. xxi 5.

[3] *TCL* 12 152: 17 f. (NB).

[4] *VAB* 6 55: 12-14.

deletion

inūma aḫḫū izuzzū – ina makkūr bīt abim ana aḫīšunū ṣehrim... kasap terḫatim [aḫḫū] išakkanūšum[5]
"when the brothers divide (the inheritance), –
they will set aside the bride price from the family estate for their younger brother."

no deletion (emphasis?)

ištu bēlī...lā iddinam – bēlī...liddinam[6]
"since my lord did not give (before), –
let my lord give (now)."

A special case of subject deletion is found with the "impersonal" predicate, i.e., a predicate in the third plural with generic subject, normally translated in English with "one" and the third singular, e.g.,

iqabbū... "one says (that)..."

88.2 Complement

Deletion of a single complement is less frequent than subject deletion, but is similarly conditioned by contextual environment; if not repeated literally, the object is normally present at least in the form of a pronominal suffix. (Object deletion is more frequent on the level of the nominalizing and conjoining transforms, for which see the following chapter.)

A special case of object deletion is known as "lexical" deletion, i.e., a deletion which occurs regardless of context and only with reference to a specific object which is assumed to be generally known. Thus for example *šaqālum* "to weigh" has become lexicalized with meaning "to pay" whether or not it governs an object such as *kaspam* "silver."

88.3 Predicate

Deletion of predicate is very rare, and is always conditioned by a special contextual situation. See for instance how in the following sentence the predicate is to be supplied from the previous sentence:

[5] *CH* §166 rev. xi 61-71.

[6] *ABPh* 107: 25-7 (OB).

...mimmāšu halqam irtabbū-šum
šumma napištum [ḫalqat]
ālum u rabīānum 1 mana kaspam...išaqqalū[7]
"whatever of his was lost they will return to him.
If it's a life (that was lost),
the city and the mayor will pay one mina of silver."

Only in one instance is the deletion of the predicate regular, namely in the introductory sentence in front of direct speech, where the standard formula calls only for the name of the speaker, with regular deletion of a verb for saying or speaking:

umma Ḫammurapi-ma [iqbī]
"thus Hammurapi [spoke/said]."

[7] *CH* §§23-24 ix 43-50.

Chapter 89
Transform Level

89.1 Object deletion with causatives

Lexical object deletion is regular as the result of the causative transformation. Deletion is obligatory in the sense that there cannot be a "double accusative": its equivalent is rather to be assumed either lexically or contextually. The "object" is the transformational equivalent of the subject of the kernel sentence, as with *šūpušu* "to have [someone] build something," e.g.:

bītam šāti [itinnam]...ušēpiš[1] "I had (the builder) build that house."

89.2 Agentive deletion with passives

As indicated above in 70.7 and 74.1, the agentive in Akkadian is never expressed in a passive sentence, but only in the nominalized transform derived from such a sentence. The lack of agentive in the sentence may be considered as obligatory deletion.

89.3 Subject, object or predicate deletion with nominalization

One of the three major constituents is always deleted as the result of a two-place nominalization, since only two constituents may appear in any given transform (see above, 75.1).

In some cases more than one constituent may be deleted, sometimes as the result of a lexical deletion, e.g.,

nādinānum "seller" (without specific reference to what is being sold).

[1] *VAB* 4 138: ix 30, and see *CAD E* 232 f.

89.4 Pronoun deletion with attributive clauses

While all other deletions do not entail any other transformation in the sentence besides deletion itself, pronoun deletion with attributive clauses also transforms the head of the attributive clause from the normal into the construct state, e.g.,

awātum ša iqbū ul uktīn "the man, who spoke, did not establish..."
awāt iqbū ul uktīn[2] "the man who spoke did not establish..."

Either all or some of the following rules normally condition deletion of the relative pronoun:

(1) the predicate must be verbal;
(2) the attributive clause must be restrictive (see presently);
(3) the head noun must be in direct contact with the attributive clause, i.e., there may be no other modifier (whether genitive, attribute or attributive phrase) besides the attributive clause itself (no such sentence as **awīl damqum illiku* is possible, but only *awīlum damqum ša illiku* "the good man who came");
(4) frequently the head noun and the predicate are in contact, though one may also find major constituents and adjuncts between the head noun and the predicate, e.g.,

qišti šarrum ana rēdīm iddinu[3]
"the gift the king gave to the soldier."

The notion of a restrictive clause needs to be elaborated here. A restrictive clause restricts or reduces the range of meaning of the head noun which it modifies, while a non-restrictive clause introduces a statement which may stand by itself next to the main sentence without changing the meaning of the sentence as a whole. In other words, a non-restrictive attributive clause and its main sentence correspond to reversible conjoined sentences, whereas a restrictive sentence does not. Now a pronominal attributive clause may not be restrictive, while a non-pronominal attributive clause may only be restrictive. Thus the sentence

(1) *awīlum ša še'am išāmu agrī īgur*
"the man who bought the barley hired the workmen"

may be interpreted as corresponding either to a reversible conjoined sentence:

(2) *awīlum še'am išām u agrī īgur*
"the man bought the barley and hired the workmen,"

[2] *CH* §3 v 62-63.

[3] *CH* §34 xi 59-60.

or to an irreversible conjoined sentence:

(3) *awīlum še'am išām-ma agrī īgur*
"having bought the barley, the man hired the workmen."

On the other hand a non pronominal clause

(4) *awīl še'am išāmu agrī īgur*

can only be interpreted as (3), i.e., as corresponding to an irreversible conjoined sentence.

It may be noted that the use of the construct state in addition to pronoun deletion has a parallel in English intonation in that a restrictive clause is usually pronounced in very close contact with the head noun, whereas a pause intervenes in the case of a non-restrictive clause – a fact indicated in writing by the presence (for non-restrictive) or omission (for restrictive clause) of a comma between head noun and clause:

restrictive: "the man who bought the barley, hired the workmen";
non-restrictive: "the man, who bought the barley, hired the workmen."

It is further of interest that English, too, has a non-pronominal attributive clause (though with a more limited distribution), and that in English as in Akkadian this type of clause is only restrictive, e.g.,

"the man I saw gave me a book."

The paradigm of non-pronominal attributive clauses follows. A straight arrow indicates a subject governing a predicate, a wavy arrow a predicate governing a direct object, and a dotted arrow a predicate governing an adjunct; parentheses enclose the attributive clause:

head noun =
subject of clause *awīl (illiku) āmur* "I saw the man who came"

awīl (illiku) damiq "the man who came is good"

object of clause *awīl (āmuru) illik* "the man I saw came"

awīl (āmuru) aš'al "I asked the man I saw"

prep. phrase *ana bīt (tērubu) damiqta šukun*[4] "do good to the house in which you enter"

ūm (tuppī tammaru) alkam "come on the day in which you see my tablet"

89.5 Constituent deletion with conjoined sentences and phrases

Any one or more of the major constituents are easily deleted when they are identical and occur in the same conjoined sentence, as in the following examples (where a case with deletion is compared to one without):

subject *šumma awīlum mār awīlim ṣeḫram ištariq*
[awīlum šū] iddāk[5]
"if a man kidnaps the small son of another man, he will die"

compare: *šumma awīlum makkūr ilim u ekallim išriq*
awīlum šu iddāk[6]
"if a man steals the property of god or palace, that man will die"

object *šumma ina bit awīlim išātum innapiḫ-ma*
awīlum ša [išātām] ana bullīm illiku...[7]
"if fire starts out in the house of a man, and the man who came to extinguish (it)..."

šumma awīlum lū wardam lū amtam ḫalqam ša ekallim
ū lū muškēnim ina bītīšu irtaqī-ma
ana šisīt nāgirim lā uštēṣiam-[šu]...[8]
"if a man has harbored in his house the lost slave or slave-girl of the palace or of a commoner, and has not delivered (him) at the call of the herald..."

compare: *šumma awīlum lū wardam lū amtam ḫalqam ina ṣērim iṣbat-ma*
ana bēlīšu irtēdīaššu...[9]
"if a man has caught a lost slave or slave-girl in the open country and has returned him to his master..."

[4] *KAR* 58: 19, cf. Von Soden 1952 *Grundriss* §166 b.

[5] *CH* §14 viii 25-29.

[6] *CH* §6 vi 31-36.

[7] *CH* §25 ix 51-56.

[8] *CH* §16 viii 37-46.

[9] *CH* §17 viii 49-55.

predicate *eqelšu [utarrū]*
u kirāšu utarrūšum[10]
"they will return his field and his orchard to him"

compare: *šayyāmānu...šībī ša ina maḫrīšunū išāmu itbalam*
u bēl ḫulqim šībī mūdī ḫulqim itbalam[11]
"the buyer will produce the witness in front of whom he has made the purchase and the owner of the lost property will also produce witnesses who know about the lost property."

Note how in the last example repetition (i.e., non-deletion) of the predicate results in an emphasis which is best rendered in English by the addition of "also."

The constituent deleted need not serve the same function in both sentences, e.g., it may be the subject in one sentence and the object in another:

šumma awīlum aššatam īḫuz-ma
mārī [aššatum] ulissum[12]
"if a man has taken wife, and she bore him children..."

eleppam, ša ummidūšī-ma
[ša] libnātim izbilu,...[13]
"the boat which they loaded and which carried bricks..."

When several constituents are identical in each of the conjoined sentences, they all may, and normally are, deleted; this is for instance the case in a sentence quoted above:

šumma awīlum lū wardam [ḫalqam ina ṣērim iṣbat]
lū amtam ḫalqam ina ṣērim iṣbat...[14]
"if a man caught a lost slave (in the open country) or (caught a lost) slave-girl in the open country..."

The same deletions noted for sentences occur also frequently with noun phrases resulting from the nominalizing transformation, e.g.,

Baba sinniš u Baba damqat
"Baba is a woman and Baba is good"

[10] *CH* §27 x 26-27.

[11] *CH* §9 vii 18-26.

[12] *CH* §167 rev. xi 74-77.

[13] *VAB* 6 263: 4 f., cf. Von Soden 1952 *Grundriss* § 165 b.

[14] *CH* §17 viii 49-54. Note that masculine agreement prevails (*ḫalqam* instead of *ḫaliqtam*), even though the feminine substantive is in close juncture with the adjective.

> *Baba sinništum u Baba damiqtum*
"Baba the woman and the good Baba"

> *Baba sinništum damiqtum*
"Baba the good woman."

89.6 Particle deletion with conjoined sentences

When the direct speech consists of only a few words, and the introductory sentence follows the direct speech, the particle *-mi* may be deleted as marker of direct speech, e.g.,

ul ummī attī-[mi] iqtabī[15]
"he has said: 'you are not my mother'."

Especially frequent is the deletion of either *u* or *-ma* with reversible and irreversible conjoined sentences. The resulting sentence is traditionally known as "asyndeton," a Greek word meaning "non-conjoined." No clear rule can be given for the occurrence of the deletion transformation, see for instance the following contrasting pair of two conjoined sentences occurring within the same law of the Code of Hammurapi, the first one asyndetic, the second syndetic:

dīnam idin[-ma]
purussām iprus[-ma]
kunukkam ušēzib[16]
"he judged the case, issued a verdict and filed a tablet";

rugummām...inaddin u ina puḫrim ina kussī dayyānūtīšu ušetbūšu-ma
ul itār-ma itti dayyānī ina dīnim ul uššab[17]
"he will pay...the claim and they will remove him from judicial chair in the assembly and he will not return and with the judges will not sit in judgement."

In certain cases the conjoining particle cannot be deleted, e.g., when as a result of previous deletion transformations two genitives would remain in contact:

makkūr ilim [išriq] u
[makkūr] ekallim išriq[18]
"he stole the treasure of god and [stole the treasure] of the palace."

[15] *CH* §192 rev. xvii 7.

[16] *CH* §5 vi 7-11.

[17] *CH* §5 vi 18-30.

[18] *CH* §6 vi 32-34.

89.7 Preposition deletion within nominalization

When two identical prepositions follow one another as part of a multi-place noun phrase (see above, 81.6, n.8), one preposition is deleted:

ina [ina] eqlim šiprim epēšim[19]
"in making work in the field."

89.8 Sentence deletion with subordinate clause: oath formulae

Oath formulae consist of elliptic sentences, in which a sentence component has been deleted. Two types are recognized: in the first, the sentence governing an objective clause has been deleted, and in the second the apodosis of a conjoined conditional sentence. The deletion is obligatory, and given the special nature of these sentences it may be considered lexical in nature.

Type 1 is characterized by a self-standing subjunctive: deletion affects a sentence which includes as predicate a verb for speaking or swearing in the first person, and it also affects the introductory conjunction *kīma*:

aprusu
= *[kīma] aprusu [atammū]*
"(I swear that) I separated"

As a result, a plain subjunctive remains in an environment where regularly the indicative is found; negation is with *lā*. The preterite normally occurs for an assertory oath (referring to the past), and the present for a promissory oath (referring to the future).

Type 2 is characterized by a self-standing *šumma* clause: deletion affect the apodosis which is expected as a consequence of the conditional sentence. As with type 1, the content of the deleted sentence is to be assumed lexically, and it corresponds to a sentence of the type *lūmut* "may I die" or the like. The conditional protasis will thus express the opposite of what the speaker wants to promise or assert: for if what he says is untrue, then protasis calls for some kind of punishment on the speaker himself. In translation, therefore, a negative protasis (with *lā*) will appear as positive oath, and vice versa a positive protasis as negative oath:

šumma lā aprus [lūmut]
"(may I die) if I did not separate = (by God) I separated"

[19] *CH* §42 xii 67 - xiii 1. The first *ina* governs the infinitive *epēšim* ("in making"); the second *ina* (deleted) is part of the preposition phrase *ina eqlim* ("in the field"); and *šiprim* ("work") is the direct object of the infinitive, in the genitive because of attraction.

šumma aprus [lūmut]
"(may I die) if I did separate = (by God) I did not separate."

The complete paradigm for both types is as follows:

	TYPE 1 SUBJUNCTIVE	TYPE 2 CONDITIONAL	
assertory	*aprusu*	*šumma lā aprus*	"(by God) I separated"
	lā aprusu	*šumma aprus*	"(by God) I did not separate"
promissory	*aparrasu*	*šumma lā aparras*	"(by God) I will separate"
	lā aparrasu	*šumma aparras*	"(by God) I will not separate"

GLOSSARY OF GRAMMATICAL TERMS

Included here are some selected terms which are either used with a special meaning in this grammar, or present some ambiguity in how they are used in traditional grammar. References to pertinent sections of this volume are given in the Subject Index that follows.

TERM:	DEFINITION:
this grammar *elsewhere*	this grammar *elsewhere*
action	A type of root, also described by the adjective **fientive** (see there). – Subsumed under **process**.
adverb	1. Morphologically: a type of invariable. *2. Syntactically: a qualification of the verb, called "adjunct" in this grammar.*
affix	General term subsuming prefixes, postfixes, suffixes.
Aktionsart	*A traditional term which is replaced in this grammar by* **dimension**.
aspect	A category which distinguishes fientive verbal forms depending on whether or not they contain reference to the completion of action. Marked morphologically in WSem, and absent in Akkadian. – Subsumes **perfect** and **imperfect**.
condition	A type of root, also described by the adjective **stative** (see there). – Subsumed under **process**. *In traditional grammar, the term "state" is used as equivalent of "condition."*

core — The element resulting from the process of internal inflection, through which a root is motivated by a pattern. – May be subsumed under the term **base**.

deverbal — A category of nouns which exhibits full internal inflection and can govern both the genitive and tha accusative. – Subsumes infinitive, verbal adjective and participle.

Neither the category nor the term of deverbal nouns is recognized in traditional grammar.

dimension *Aktionsart* — A category which distinguishes fientive verbal forms depending on whether or not they contain a reference to the contiguity between beginning and end of action. – Subsumed under **process**. Subsumes **punctual** and **durative**

durative — Form of fientive verb that contains a built-in reference to the beginning and the end of the action as non-contiguous; no distinct morphological category in Akkadian (but see 25.4 n.6). – Subsumed under **dimension**.

fientive — A root which (notionally) includes reference to beginning or end of the process and which is characterized (formally) by specific traits which differ depending on whether the root is transitive or intransitive. – The term is common in traditional Akkadian grammar, and corresponds to the term "dynamic" of general linguistics.

motivated (noun) — Motivation is a process whereby the semantic meaning of a root is defined (i.e., motivated) according to morphological patterns; used especially of nouns motivated through internal inflection as opposed to unmotivated nouns which do not exhibit internal inflection.

perfect — 1. A verbal fientive form with double reference to (a) another tense (the action expressed takes place either in the past after another action, or in the future before another action), and (b) the dimension of an action (the action expressed has a built-in reference to its own beginning). – It must be noted, however, that strong reasons militate against the actual existence of such a form in Akkadian (though it is retained in this grammar). If omitted from the verbal system, the pertinent forms are to be reinterpreted as preterites of *t* stems.

2. A verbal fientive form which describes result deriving from completion of an action. This function is rare in Akkadian, but common in West Semitic. – Subsumed under **aspect**.

permansive *stative* — Nominal sentence with predicate in the predicative state and a pronominal suffix as subject.

In traditional grammar the permansive is considered a finite form of both verbs and nouns (though it is recognized that nouns cannot inflect for any other verbal form).

postfix *suffix* — Modifiers of external inflection, added to the right of the base. – The term *suffix* is used in traditional grammar to refer to both postfixes as defined here and suffixes in the strict sense described below.

process — The verbal nature of a root viewed without reference to either action or condition. – Subsumes **action** and **condition**.

punctual — Form of fientive verb that contains a built-in reference to the beginning and the end of the action as contiguous. – Subsumed under **dimension**.

range — The logical node which subsumes the varying degrees of temporal position for verbal forms. – Subsumes **finite forms**.

The category of "range" considered as a node subsuming finite forms is missing in traditional grammar.

stative — A root which (notionally) excludes reference to beginning or end of the process and which is characterized (formally) by the following traits: no B participle; no N stem; ingressive value for B finite forms (rare); ingressive value for Š finite forms (rare).

The term "stative" is also used in traditional grammar to refer to the permansive.

suffix — A term used in this grammar to refer exclusively to elements added to other words without being part of that word's inflection.

In traditional grammar this term is also used to include what in this grammar is referred to as **postfix.**

unmotivated — Cf. motivated (noun). – Subsumes primary nouns and loanwords.

TEXTS CITED

This index contains a brief selection of texts for which a particular interpretation has been proposed in the *Grammar*.

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